

The persuasiveness of British accents:  
Enhancing parental self-efficacy to manage children's oral health  
behaviours

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## Abstract

This interdisciplinary research builds on Pine et al.'s (2016) oral health intervention, 'Bedtime Brush and Read Together to Sleep' (BBaRTS), conducted among families in Tayside, Kent and Newham. It uses children's storybooks to improve parents' self-efficacy to manage their child's oral health behaviours. The storybooks are being adapted into animated cartoons with voice-overs. Therefore, my research question is: What are the persuasive effects of British accents in each BBaRTS trial area?

Study one tests the persuasiveness of six British accents (Received Pronunciation (RP), Multicultural London English (MLE), Yorkshire English, Dundee English, Irish English and Estuary English) among 114 parents (Tayside,  $n = 46$ ; Kent,  $n = 34$ ; Newham,  $n = 34$ ). It was hypothesised that there would be a persuasive effect of accent, which differs by area. Participants completed an accent identification task, along with implicit and explicit measurement procedures. In Tayside, Estuary English was more persuasive than MLE ( $p = 0.002$ ). In Newham, MLE was more persuasive than Dundee English ( $p = 0.001$ ), Yorkshire English ( $p = 0.011$ ) and RP ( $p = 0.011$ ). In Kent, there was no persuasive effect of accent. Findings are examined in the context of Gawronski and Bodenhausen's (2006, 2011) Associative-Propositional Evaluation model. This study also explores individual differences and reaction time in relation to accent persuasiveness, but results suggest that neither factor plays a fundamental role.

Study two applies the most and least persuasive accent in Newham (MLE and Dundee English) to animated versions of the BBaRTS storybooks. 37 participants from Tower Hamlets – a demographically similar East London borough – completed an experiment based on the self-validation hypothesis (Petty et al. 2002). It was hypothesised that accent would affect participants' confidence in their thoughts about the oral health messages, and in turn their attitudes. MLE was indeed associated with higher thought confidence than Dundee English ( $p = 0.001$ ), but not with more favourable attitudes to the oral health messages. Results are discussed in relation to the participants' English proficiency.

This research contributes to the growing work on implicit cognition in sociolinguistics, and furthers our understanding of how accent interacts with persuasion. Crucially, it emphasizes the value of interdisciplinary research by connecting linguistics and public health.

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# List of contents

<b>Abstract</b> .....	2
<b>Acknowledgements</b> .....	3
<b>List of contents</b> .....	4
<b>List of tables</b> .....	9
<b>List of figures</b> .....	13
<b>List of abbreviations</b> .....	15
<b>1 Introduction</b> .....	16
<i>1.1 Introduction</i> .....	16
<i>1.2 Structure of thesis</i> .....	18
<b>2 Public Health: Dental caries and the BBaRTS trial</b> .....	21
<i>2.1 Overview</i> .....	21
<i>2.2 Health communication</i> .....	22
<i>2.3 The problem</i> .....	22
<i>2.3.1 Sugar</i> .....	22
<i>2.3.2 Fluoride</i> .....	23
<i>2.3.3 Dental caries</i> .....	24
<i>2.4 Solutions: An ecological framework</i> .....	24
<i>2.5 Health models</i> .....	25
<i>2.5.1 Health belief model</i> .....	26
<i>2.5.2 Transtheoretical model</i> .....	27
<i>2.5.3 Nudge theory</i> .....	28
<i>2.5.4 Self-efficacy</i> .....	28
<i>2.6 Self-efficacy and dental caries</i> .....	30
<i>2.7 BBaRTS intervention</i> .....	30
<i>2.8 Summary</i> .....	32
<b>3 Language attitudes and persuasion</b> .....	34
<i>3.1 Overview</i> .....	34
<i>3.2 Language attitudes in Britain</i> .....	34
<i>3.3 Persuasion</i> .....	41
<i>3.3.1 History</i> .....	42
<i>3.3.2 Models of persuasion</i> .....	43
<i>3.3.3 Recipient factors</i> .....	45
<i>3.3.4 Communicator factors</i> .....	46
<i>3.4 Attitudes</i> .....	48
<i>3.4.1 Definition</i> .....	48

3.4.2	<i>Associative-Propositional Evaluation model</i> .....	54
3.4.3	<i>Explicit measurement procedures</i> .....	59
3.4.4	<i>Implicit measurement procedures</i> .....	61
3.4.5	<i>Implicit measurement procedures in sociolinguistics</i> .....	63
3.5	<i>Stereotypes and prejudice</i> .....	68
3.5.1	<i>Stereotypes</i> .....	68
3.5.2	<i>Prejudice</i> .....	69
3.5.3	<i>Automaticity vs. control</i> .....	69
3.6	<i>Summary</i> .....	72
<b>4</b>	<b>Accents</b> .....	<b>73</b>
4.1	<i>Overview</i> .....	73
4.2	<i>Accent selection</i> .....	73
4.3	<i>Accent description</i> .....	74
4.3.1	<i>Received Pronunciation</i> .....	74
4.3.2	<i>Estuary English</i> .....	75
4.3.3	<i>Multicultural London English</i> .....	76
4.3.4	<i>Yorkshire English</i> .....	77
4.3.5	<i>Dundee English</i> .....	77
4.3.6	<i>Irish English</i> .....	78
4.4	<i>Speech stimuli</i> .....	79
<b>5</b>	<b>Study one: Accent identification task</b> .....	<b>82</b>
5.1	<i>Overview</i> .....	82
5.2	<i>Perceptual dialectology: a brief summary</i> .....	84
5.3	<i>Methodology</i> .....	86
5.3.1	<i>Participants</i> .....	86
5.3.2	<i>Research instrument</i> .....	90
5.3.3	<i>Procedure</i> .....	90
5.4	<i>Results</i> .....	90
5.4.1	<i>RP</i> .....	91
5.4.2	<i>Estuary English</i> .....	95
5.4.4	<i>Yorkshire English</i> .....	104
5.4.5	<i>Dundee English</i> .....	108
5.4.6	<i>Irish English</i> .....	110
5.5	<i>Summary</i> .....	111
<b>6</b>	<b>Study one: Implicit measurement procedure and individual differences...</b>	<b>113</b>
6.1	<i>Overview</i> .....	113
6.2	<i>Methodology</i> .....	115

6.2.1 Research instrument: Implicit measurement procedure .....	115
6.2.2 Research instrument: Individual differences questionnaires.....	119
6.2.3 Procedure .....	121
6.2.4 Measuring implicitness .....	122
6.3 Implicit attitude results .....	123
6.3.1 Data Processing.....	123
6.3.2 Data analysis.....	123
6.3.3 Signal detection theory .....	124
6.3.4 Tayside.....	125
6.3.5 Newham.....	129
6.3.6 Kent .....	133
6.3.7 Summary.....	136
6.4 Reaction time results.....	137
6.4.1. Data processing.....	137
6.4.2 Data analysis.....	137
6.4.3 Tayside.....	137
6.4.5 Kent .....	140
6.4.6 Summary.....	141
6.5 Individual differences results.....	142
6.5.1 Data analysis.....	142
6.5.2 Tayside.....	143
6.5.3 Newham.....	143
6.5.4 Kent .....	145
6.5.5 Summary.....	147
<b>7 Study one: Explicit attitude task.....</b>	<b>149</b>
7.1 Overview .....	149
7.2 Method.....	149
7.2.1 Research instrument.....	149
7.2.2 Procedure .....	150
7.2.3 Measuring explicitness.....	151
7.3 Results .....	152
7.3.1 Data analysis.....	152
7.3.2 Tayside: Descriptive analysis.....	152
7.3.3 Tayside: Discussion .....	156
7.3.4 Newham: Descriptive analysis.....	161
7.3.5 Newham: Inferential analysis.....	162
7.3.6 Newham: Discussion .....	164

7.3.7 Kent: Descriptive analysis .....	169
7.3.8 Kent: Inferential analysis .....	170
7.3.9 Kent: Discussion .....	171
7.4 Summary .....	175
8.1 Overview .....	177
8.2 Self-validation.....	178
8.2.1 Credibility.....	180
8.2.2 Similarity .....	183
8.2.3 Power.....	184
8.2.4 Summary of the existing research.....	186
8.3 Methodology.....	186
8.3.1 Research site and participants.....	187
8.3.2 Non-native speakers of English: social salience or cognitive salience?.....	188
8.3.3 Research instrument: BBaRTS storybooks.....	189
8.3.4 Research instrument: Accent selection .....	192
8.3.5 Research instrument: Self validation .....	193
8.3.6 Procedure.....	193
8.4 Results .....	194
8.4.1 Data processing.....	194
8.4.2 H1: Thought favourability by argument condition .....	195
8.4.3 H2: Attitudes by argument condition.....	197
8.4.4 H3: Thought confidence .....	199
8.4.5 H4 and H5: Self-validation .....	202
8.4.6 Attitudes to accent .....	205
8.5 Discussion.....	207
8.5.1 Proficiency of participants.....	207
8.5.2 Future modifications.....	209
8.5.3 Measurements: thought valence, thought confidence and attitudes .....	212
8.5.4 Study one and study two.....	215
8.5.5 Summary.....	216
<b>9 Conclusion .....</b>	<b>219</b>
9.1 Summary.....	219
9.2 Limitations.....	220
9.3 Future research.....	223
9.4 Implications .....	224
<b>Appendices .....</b>	<b>226</b>
Appendix A. Written questionnaire.....	226



<i>Appendix B. Matched guise test passages</i> .....	229
<i>Appendix C.1: Mood questionnaire</i> .....	230
<i>Appendix C.2: Self-monitor questionnaire</i> .....	231
<i>Appendix C.3: Self-esteem questionnaire</i> .....	232
<i>Appendix C.4: Need for cognition questionnaire</i> .....	233
<i>Appendix C.5: Dogmatism questionnaire</i> .....	234
<b>References</b> .....	<b>235</b>

## List of tables

Table 1.1	Order of tasks and number of questions for study one.....	18
Table 5.1	Order of tasks and number of questions for study one.....	82
Table 5.2	Tayside participants' responses for RP (n = 46).....	92
Table 5.3	Newham participants' responses for RP (n=34).....	92
Table 5.4	Kent participants' responses for RP (n=34).....	93
Table 5.5	Tayside participants' responses for Estuary English (n = 46).....	96
Table 5.6	Newham participants' responses for Estuary English (n=34).....	96
Table 5.7	Kent participants' responses for Estuary English (n=34).....	97
Table 5.8	Tayside participants' responses for MLE (n = 46).....	100
Table 5.9	Newham participants' responses for MLE (n=34).....	100
Table 5.10	Kent participants' responses for MLE (n=34).....	101
Table 5.11	Tayside participants' responses for Yorkshire English (n = 46).....	105
Table 5.12	Newham participants' responses for Yorkshire English (n=34).....	105
Table 5.13	Kent participants' responses for Yorkshire English (n=34).....	105
Table 5.14	Tayside participants' responses for Dundee English (n = 46).....	108
Table 5.15	Newham participants' responses for Dundee English (n=34).....	108
Table 5.16	Kent participants' responses for Dundee English. (n=34) .....	108
Table 5.17	Tayside participants' responses for Irish English (n = 46).....	110
Table 5.18	Newham participants' responses for Irish English (n=34).....	111
Table 5.19	Kent participants' responses for Irish English (n=34).....	111
Table 6.1	Order of tasks and number of questions for study one.....	114
Table 6.2	Persuasive effects combining prior belief and current belief.....	117
Table 6.3	Persuasive effects resulting from different combinations between prior belief, current belief, and reaction time.....	118
Table 6.4	Experimental layout.....	121
Table 6.5	Response options for signal detection analysis.....	124
Table 6.6	d' values for signal detection analysis among Tayside participants (n = 46).....	125
Table 6.7	Logistic regression summary of accent and prior belief on current belief among Tayside participants (n = 46).....	126
Table 6.8	Pairwise comparisons for logistic regression of accent and prior belief on current belief among Tayside participants (n = 46).....	127
Table 6.9	d' values for signal detection analysis among Newham participants (n = 34)...	130

Table 6.10	Logistic regression summary of accent and prior belief on current belief among Newham participants (n = 34).....	131
Table 6.11	Pairwise comparisons for logistic regression of accent and prior belief on current belief among Newham participants (n = 34).....	132
Table 6.12	d' values for signal detection analysis among Kent participants (n = 34).....	134
Table 6.13	Logistic regression summary of accent and prior belief on current belief among Kent participants (n = 34).....	135
Table 6.14	Linear regression summary of accent and prior belief on reaction time among Tayside participants (n = 46).....	138
Table 6.15	Linear regression summary of accent and prior belief on reaction time among Newham participants (n = 34).....	140
Table 6.16	Linear regression summary of accent and prior belief on reaction time among Kent participants (n = 34).....	141
Table 6.17	Correlation matrix between individual differences among Tayside Participants (n = 46).....	143
Table 6.18	Factor loading (Method: Principal components with Varimax rotation) among Tayside participants (n = 46).....	143
Table 6.19	Correlation matrix between individual differences among Newham Participants (n = 34).....	144
Table 6.20	Factor loading (Method: Principal components with Varimax rotation) among Newham participants (n = 34).....	144
Table 6.21	Logistic regression summary of accent, prior belief, and individual differences on current belief among Newham participants (n = 34).....	145
Table 6.22	Pairwise comparisons for logistic regression of accent, prior belief, and individual differences on current belief among Newham participants (n = 34).	145
Table 6.23	Correlation matrix between individual differences among Kent Participants (n = 34).....	146
Table 6.24	Factor loading (Method: Principal components with Varimax rotation) among Kent participants (n = 34).....	146
Table 6.25	Logistic regression summary of accent, prior belief, and individual differences on current belief among Kent participants (n = 34).....	146
Table 6.26	Pairwise comparisons for logistic regression of accent, prior belief and individual differences on current belief among Kent participants (n = 34).....	147
Table 7.1	Order of tasks and number of questions for study one.....	149
Table 7.2	Linear regression summary of accent on likelihood to follow health advice among Tayside participants (n = 46).....	154
Table 7.3	Pairwise comparisons for linear regression of accent on likelihood to follow health advice among Tayside participants (n = 46).....	154
Table 7.4	Linear regression summary of accent on likelihood to follow neutral advice among Tayside participants (n = 46).....	155

Table 7.5	Pairwise comparisons for linear regression of accent on likelihood to follow neutral advice among Tayside participants (n = 46).....	156
Table 7.6	Linear regression summary of accent on likelihood to follow health advice among Newham participants (n = 34).....	162
Table 7.7	Pairwise comparisons for linear regression of accent on likelihood to follow health advice among Newham participants (n = 34).....	163
Table 7.8	Linear regression summary of accent on likelihood to follow neutral advice among Newham participants (n = 34).....	164
Table 7.9	Pairwise comparisons for linear regression of accent on likelihood to follow neutral advice among Newham participants (n = 34).....	164
Table 7.10	Linear regression summary of accent on likelihood to follow health advice among Kent participants (n = 34).....	170
Table 7.11	Linear regression of accent on likelihood to follow neutral advice among Kent participants (n = 34).....	171
Table 7.12	Pairwise comparisons for linear regression of accent on likelihood to follow health advice among Kent participants (n = 34).....	171
Table 7.13	Pairwise comparisons for linear regression of accent on likelihood to follow neutral advice among Kent participants (n = 34).....	171
Table 8.1	Order and description of tasks for each group.....	194
Table 8.2	Median, mean and standard deviation for thought favourability in strong and weak argument condition (n = 30).....	196
Table 8.3	Linear regression summary of thought favourability by argument condition (n = 30).....	197
Table 8.4	Median, mean and standard deviation for attitude measurements in the strong argument condition (n = 18).....	197
Table 8.5	Median, mean and standard deviation for attitude measurements in the weak argument condition (n = 19).....	197
Table 8.6	Linear regression of negative-positive attitudes by argument condition (N = 37).....	199
Table 8.7	Linear regression of bad-good attitudes by argument condition (N = 37).....	199
Table 8.8	Linear regression of difficult-easy attitudes by argument condition (N = 37).....	199
Table 8.9	Median, mean and standard deviation of thought confidence by accent (N = 37).....	199
Table 8.10	Linear regression of interaction between accent and argument condition on thought confidence (N = 37).....	201
Table 8.11	Median, mean and standard deviation for attitude measurements by accent in the strong argument condition (n = 18).....	202
Table 8.12	Median, mean and standard deviation for attitude measurements by accent in the weak argument condition (n = 19).....	204

Table 8.13	Linear regression of negative-positive attitudes by accent and argument condition (N = 37).....	205
Table 8.14	Linear regression of bad-good attitudes to by accent and argument condition (N = 37).....	205
Table 8.15	Linear regression of difficult-easy attitudes by accent and argument condition (N = 37).....	205
Table 8.16	Median, mean and standard deviation for attitudes to Dundee English (n = 19).....	206
Table 8.17	Median, mean and standard deviation for attitudes to MLE (n = 18).....	206
Table 8.18	Linear regression summary of trustworthy attitudes to narrator by accent (N = 37).....	207
Table 8.19	Linear regression summary of authoritative attitudes to narrator by accent (N = 37).....	207
Table 8.20	Linear regression summary of similarity attitudes to narrator by accent (N = 37).....	207

## List of figures

Figure 2.1	Dalgreen and Whitehead's (1991) socioeconomic model of health.....	25
Figure 2.2	Screenshot of BBaRTS storybook Hop and Shop with Zip and Pop.....	31
Figure 5.1	A procedural account of language regard — production, noticing, classifying, imbuing, and responding (Niedzielski and Preston 2003: xi in Preston (2010)).....	85
Figure 6.1	Proportion of prior belief responses and current belief responses by accent among Tayside participants (n = 46).....	126
Figure 6.2	Proportion of prior belief responses and current belief responses by accent among Newham participants (n = 34).....	131
Figure 6.3	Proportion of prior belief responses and current belief responses by accent among Kent participants.....	134
Figure 6.4	Mean reaction time and standard error for each accent among Tayside participants (n = 46).....	138
Figure 6.5	Mean reaction time and standard error for each accent among Newham participants (n = 34).....	139
Figure 6.6	Mean reaction time and standard error for each accent among Kent participants (n = 34).....	141
Figure 7.1	Mean and standard error of likelihood to follow advice in health context among Tayside participants (n = 46).....	153
Figure 7.2	Mean and standard error of likelihood to follow advice in health context among Tayside participants (n = 46).....	153
Figure 7.3	TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Tayside participants (n = 46).....	155
Figure 7.4	TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Tayside participants (n = 46).....	156
Figure 7.5	Mean and standard error of likelihood to follow advice in health context among Newham participants (n = 34).....	161
Figure 7.6	Mean and standard error of likelihood to follow advice in neutral context among Newham participants (n = 34).....	162
Figure 7.7	TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Newham (n = 34).....	163
Figure 7.8	TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Newham participants (n = 34).....	165
Figure 7.9	Mean and standard error of likelihood to follow advice in health context among Kent participants (n = 34).....	169
Figure 7.10	Mean and standard error of likelihood to follow advice in neutral context among Kent participants (n = 34).....	170

Figure 7.11	TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Kent participants (n = 34).....	172
Figure 7.12	TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Kent participants (n = 34).....	172
Figure 8.1	Screenshot of the test version of 'Hop and Shop with Zip and Pop'.....	191
Figure 8.2	Screenshot of the test version of 'Splish and Splash with Zip and Pop'.....	191
Figure 8.3	Boxplot of thought favourability by argument condition (n = 30).....	196
Figure 8.4	Boxplot of attitudes to storybook 2 by argument condition (N = 37).....	198
Figure 8.5	Boxplot of thought confidence by accent (N = 37).....	200
Figure 8.6	Boxplot of thought confidence by accent by argument condition (N = 37).....	201
Figure 8.7	Boxplot of attitudes by accent in strong argument condition (n = 18).....	203
Figure 8.8	Boxplot of attitudes by accent in weak argument condition (n = 19).....	204
Figure 8.9	Boxplot of attitudes to narrator by accent (N = 37).....	206

## List of abbreviations

APE	Associative-Propositional Evaluation
BBaRTS	Bedtime Brush and Read Together to Sleep
ELM	Elaboration Likelihood Model
HSM	Heuristic-Systematic Model
IAT	Implicit Association Test
MLE	Multicultural London English
NFC	Need for Cognition
RP	Received Pronunciation
WHO	World Health Organisation



# 1 Introduction

*“Everyone has a doctor in him or her; we just have to help it in its work” (Hippocrates, 460–377BC).*

## *1.1 Introduction*

“Some of the big challenges that we face, both societal and scientific, are just not solvable by people sitting in their single-discipline silos – bringing those disciplines together in the long term is what provides the big, big breakthroughs,” says Kedar Pandya of the Engineering and Physical Research Council (O’Neil 2011). This thesis aims to bridge the gap between public health, social cognition and sociolinguistics. Specifically, I draw on theories from social cognition to understand the persuasiveness of one aspect of an oral health intervention message: accent.

The motivation behind this research is the prevention of childhood dental caries, which is more commonly known as tooth decay. The disease is a worldwide issue which has received attention from international organisations, such as the World Health Organisation, to local governments, for example the London borough of Tower Hamlets has set up an initiative called ‘Brushing for Life’. Unfortunately, despite efforts, the statistics are still not positive. The financial burden on governments and health implications for the child are concerning. In a bid to understand the precise nature of the problem, a large study was conducted in 17 countries (Pine et al. 2004a). To the researchers’ surprise, the key predictor of dental caries was *not* the child’s oral-health related behaviour, such as sugar consumption and a lack of toothbrushing, but the parents’ perceived ability to effectively manage these behaviours, known as the Brushing Parental Efficacy Factor. Pine et al. (2016) developed a nationwide intervention called ‘Bedtime Brush and Read Together to Sleep’ (BBaRTS) involving families from Tayside (East Scotland), Newham (East London), and Kent (South-East England). The intervention uses a series of children’s storybooks that contain behaviour change techniques to increase parental self-efficacy, which are now being drafted into animated cartoons with a voice-over. In this doctoral research, I conduct an exploratory

investigation of the following question: What are the persuasive effects of accent in each BBaRTS trial area? I present two experiments on the relationship between persuasion and accent, which will not only inform the production of the BBaRTS animated cartoons, but also this understudied area of sociolinguistics.

The first study comprised 10 tasks, which are outlined in Table 1.1. The main aim of this study was to measure the persuasiveness of six British accents: Estuary English, Multicultural London English (MLE), Dundee English, Received Pronunciation (RP), Irish English, and Yorkshire English. The first three accents were chosen as these are spoken in the three BBaRTS trial areas, and the last three accents were selected because language attitude research suggests that they are associated with persuasive traits, such as trustworthiness and expertise (e.g. Coupland and Bishop 2007; Hiraga 2005). It was hypothesised that there would be a persuasive effect of accent, which varies by BBaRTS trial area. This prediction was investigated broadly by two methods. The first method was an implicit measurement procedure (task 2), which was complimented by a written form questionnaire (task 9). This revealed the persuasive effects of each accent. There were two further hypotheses relating to this first method. Focusing on task 2, it was hypothesised that accent persuasiveness would affect reaction time. In addition, research suggests that certain personality traits determine how persuasive a recipient will perceive a message to be: mood; self-monitor; self-esteem; need for cognition (NFC); and dogmatism. Tasks 1, 3, 4, 5, and 6 measured these traits, which were then analysed along with tasks 2 and 9 to examine the hypothesis that individual differences influence accent persuasiveness.

The second method elicited explicit attitudes to the six accents in the form of two matched-guide tests (task 7), which uncover more thoughtful attitudes to British accents in the modern linguistic landscape. Results of the implicit and explicit measurement procedures are explored in the context of the Associative Propositional-Evaluation (APE) model (Gawronski and Bodenhausen 2006, 2011), which offers a sophisticated approach to understanding the consistencies between these two attitudes. In addition, this discussion is also informed by findings from an accent identification task (task 8), adapted from the perceptual dialectology literature. This was initially used to verify the accuracy of the guises, but yielded some fascinating results. Taken together, study one builds on the current work on implicit cognition in sociolinguistics (Campbell-Kibler 2012; Kristiansen 2009; McKenzie and Carrie 2018; Redinger 2010; Robertson 2015; Pantos and Perkins 2013).

The second, smaller, study focuses on the results of the first study from East London. It adopts a unique methodology which is rooted in a recent wave of persuasion research, the self-validation hypothesis (Petty et al. 2002). This posits that an individual will not be persuaded by a message unless they feel confident in the thoughts that they

have generated about that message. Using the results from Newham, the most and least persuasive accents (MLE and Dundee English) were applied to animated versions of the BBaRTS storybooks to see how they affected people's confidence in their thoughts about the oral health messages in the stories. For the storybooks, there were test versions containing oral health messages (strong argument), and control versions containing no oral health messages (weak argument). For the strong argument condition, it was hypothesised that MLE would increase participants' confidence in their thoughts about the oral health messages and, in turn, their attitudes, but Dundee English would decrease participants' confidence in their thoughts about the oral health messages, and in turn, their attitudes. For the weak argument condition, it was hypothesised that MLE would decrease participants' confidence in their thoughts about the oral health messages and, in turn, their attitudes, but Dundee English would increase participants' confidence in their thoughts about the oral health messages, and in turn, their attitudes. Many participants were non-native speakers of English, and so this study advances our understanding, not just of metacognitive process like self-validation, but also of how to conduct sociolinguistic experiments with non-native speakers of a given community.

*Table 1.1 Order of tasks and number of questions for study one*

Task number	Task	Number of questions/trials
1	Brief mood questionnaire	1
2	Implicit attitude test	126
3	Self-monitor questionnaire	18
4	Self-esteem questionnaire	10
5	Need for cognition questionnaire	18
6	Dogmatism questionnaire	20
7	Explicit attitude test	1
8	Accent identification task	6
9	Written form questionnaire	120
10	Demographic questionnaire	6

### *1.2 Structure of thesis*

In chapter 2, I present the motivation for the thesis, which is the issue of dental caries. The social, physical and financial consequences of the disease are discussed, alongside two key risk factors: sugar consumption and fluoride. Potential solutions are offered by critiquing prominent health models, such as the Health Belief Model (Rosenstock 1974), the Transtheoretical Model (Prochaska and DiClemente 1983) and most importantly, the notion of self-efficacy (Bandura 1977, 1982). This final approach to

behaviour change lays the foundations of the BBaRTS intervention, which justifies the current investigation on accent persuasiveness.

In chapter 3, I discuss the relevant literature, beginning with an overview of how the English language superseded French and Latin in Britain, and the development of British accents. Most crucially, I detail the emergence of RP as a standard model of English pronunciation, and how it came to be associated with traits such as authority and competence, while regional accents were perceived as more dynamic and trustworthy (Giles 1971). This dichotomy, as revealed in language attitude studies, poses an interesting dilemma for persuasion, because attitude change relies on a communicator who displays both sets of qualities. I then explore media representations of British accents, which further complicate the picture, in that all British accents have at some point been criticised and praised. This raises the possibility that people may monitor their explicit attitudes due to concerns over expressing the ‘correct’ bias. Moving onto persuasion research, I state a working definition of persuasion, and present a history of the field alongside prominent models of persuasion, most notably the Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986). Particular attention is paid to personality traits which mediate how persuasive a recipient will regard a message, such as dogmatism, and factors which affect the persuasiveness of a communicator, such as credibility. My attention then turns to the attitude literature where I outline three pivotal debates: (1) whether attitudes are stable or malleable; (2) how to define the term ‘implicit’; and (3) whether or not implicit and explicit attitudes operate under the same process. I review the most influential attitude models, with a focus on the APE model, which is the chosen theoretical model for this research. A review of explicit and implicit measurement procedures is presented with reference to seminal works on implicit cognition from sociolinguists (e.g. Álvarez-Mosquera and Marín-Gutiérrez 2018; McKenzie and Carrie 2018; Pantos and Perkins 2013; Redinger 2010; Rosseel et al. 2018). The remainder of the chapter is dedicated to a discussion of the literature on stereotypes and prejudice, specifically what triggers automatic activation and more elaborate person perception.

Chapter 4 provides an explanation of the accent selection procedure for the stimuli used in both studies. I then describe a brief history and key phonetic features of each accent, before addressing the issues surrounding linguistic experiments with multiple guises.

Chapter 5 examines the accent identification task of study one. This was originally designed to confirm the validity of the accents under investigation. In asking participants to state the perceived origin of the speaker, a perceptual dialectology study emerged which informs the implicit and explicit attitude results of study one. I contextualise existing perceptual dialectology research, and outline the participant

demographics and recruitment procedure for study one. A qualitative analysis is then presented for all six accents by each trial area, with particular reference to Montgomery's (2012) notions of *bare proximity* and *cultural prominence*.

Continuing study one, Chapter 6 is dedicated to the implicit measure which evaluated the persuasiveness of the accents under investigation. I discuss the rationale for the unique design of this procedure and introduce the statistical methods used for the analysis. Data is interpreted using signal detection theory, which explains how we make decisions and is therefore a useful tool for understanding the persuasive effects of British accents. These accent effects are examined separately for each area and situated in relation to the APE model. The data suggest that accent persuasiveness differs by area, due to the varying impact of media, social, and historical factors in those areas. The chapter concludes with a brief analysis of how reaction time and individual differences interact with accent persuasiveness.

Following closely on from chapter 6, in chapter 7, I first present the procedure and statistical methods of the explicit measurement procedure, which complemented the implicit measurement procedure. Using the APE model, I provide a holistic picture of implicit and explicit attitudes to each accent by area, and consider possible reasons for correlations or lack thereof. I argue that a rejection or acceptance of people's gut reactions to accents is governed by self-presentation concerns. Such concerns are rooted in the perceived social risk of expressing their gut reaction to the accent. Implications for attitude stability are discussed.

Chapter 8 discusses study two, which builds on the results of study one. I introduce the self-validation hypothesis, which stems from a recent wave of persuasion research on metacognition. Previous self-validation studies are reviewed, and I state the utility of this theory in understanding accent persuasiveness in an oral health context. Due to the complexity of the experimental design, particular attention is paid to outlining the participants, research instrument, hypotheses and procedure. While unforeseen issues relating to the non-nativeness of participants presented theoretical and methodological problems, it provides the opportunity to recommend how future research can progress in such circumstances.

The thesis closes with a summary of the findings, limitations of the research, suggestions for future studies and implications. In particular, I focus on the importance of interdisciplinary research, methodological improvements for the study of implicit attitudes, and some factors to take into account when conducting linguistic experiments.

## 2 Public Health: Dental caries and the BBaRTS trial

### *2.1 Overview*

This chapter aims to contextualise the research, by first discussing the health problem which this study seeks to tackle: childhood dental caries. Specifically, I explain that young children from disadvantaged communities are a vulnerable population, and are dependent on parents and carers for healthy routines and access to healthcare systems. Prevention of dental caries depends on controlling the intake of dietary sugar and, in the absence of water fluoridation, on brushing teeth twice daily with a fluoridated toothpaste. Both of these interventions are dependent on effective parenting routines that provide healthy food and drinks, and establish and maintain daily hygiene routines for children. Methods of enhancing oral health promotion will be outlined from four perspectives: (1) public policy (e.g. regulations, media advertising); (2) community (e.g. food availability in shops, socioeconomic characteristics); (3) interpersonal (e.g. culture, social support); and (4) intrapersonal (e.g. age, motivation). One way of comparing the effectiveness of these approaches is examining health theory, so this chapter will then discuss the most prominent health models in the field. There will be a strong emphasis on Bandura's (1977) notion of self-efficacy, which is an individual's confidence to perform an action. The reason for this focus is because a lack of parental self-efficacy to undertake the two main preventative behaviours for their children has proved to be a key determinant of whether dental caries develops in young children from underserved areas (Pine et al. 2004a). I will conclude by summarising the BBaRTS intervention which emerged from Pine et al.'s (2004a) research in a bid to increase parental self-efficacy to effectively manage their child's toothbrush routine and sugar intake. This trial forms the basis of my current work, and led to an exploration of the persuasiveness of British accents, synthesising research from public health, social cognition and language attitudes.

## *2.2 Health communication*

In her recent book, *Health communication: From theory to practice*, Schiavo (2014) makes two key points which are important for the forthcoming discussion. First, she argues that one of the main aims of health communication is to “engage, empower, and influence individuals and communities” (Schiavo 2014: 5). In particular, it seeks to enable those from vulnerable populations, who are at a higher risk of poor mental and physical health. She argues that this places high importance on health equity, which means providing every individual with the same opportunity to stay healthy. Ensuring that everyone remains in good health, regardless of age, ethnicity or other social factors, requires the dissemination of information that is understood and absorbed by all (whilst recognising that information alone is often insufficient to ensure healthy behaviours are initiated and maintained). The alternative to primary prevention is to provide consistently effective healthcare for underserved populations at the global, national, community and individual level, which is undoubtedly an extremely challenging and costly undertaking. This is perhaps why the range of verbs defining health communication is so large, for example, ‘changing’, ‘sharing’, ‘motivating’, ‘achieving’, ‘exchanging’, ‘informing’, ‘engaging’, and ‘supporting’ (Schiavo 2014). While the challenge seems insurmountable, the need for effective health communication is evident given that global spending on health is expected to increase from \$7.83 trillion dollars in 2013 to \$18.28 trillion dollars in 2040 (Dieleman et al. 2016).

## *2.3 The problem*

### *2.3.1 Sugar*

Each year, the World Health Organization (WHO) publishes reports and annual reviews on key health issues. In 2014, the WHO began drafting a guideline on sugar intake, which recommended that sugar should be less than 10% of our total energy intake per day (WHO March 2014). In March 2015, the guideline was published, calling for countries to reduce sugar intake among adults and children. The guideline also advised that consuming below 5% per day would provide additional health benefits (WHO March 2015). In April 2016, the WHO called for global action to stop the rise in diabetes, which is linked to sugar intake, and improve care for those diagnosed with the condition (WHO April 2016). Along similar lines, another report later in the year recommended a tax on sugar drinks to avoid the negative impact of diabetes, obesity and dental caries (WHO October 2016).

It is not only governmental organizations who have been paying attention to the problem of sugar consumption. The media coverage of the effects of sugar on health has been steadily increasing over the years with articles promoting a sugar-free diet, providing tips on how to quit sugar, and revealing the dangers of sugar. Most importantly, in November 2017, it came to light that the sugar industry may have hidden the effects of sucrose. A report published in PLOS Biology explained that funding for Project 259 was halted in the 1960s in the USA, because initial results suggested that excess sucrose was linked to heart disease and cancer in humans (Kearns et al. 2017). These findings would have led to alterations in the regulations of sugar, which would counter the commercial interests of the industry. Unfortunately, this evidence was not revealed until it was too late, by which time the sugar industry had soared, and it has not slowed down since. In the last five years, global sugar consumption has risen from 165 million metric tons, to 174 million metric tons (US Department of Agriculture 2009-2016). In a British context, the National Diet and Nutrition Survey (Public Health England 2014) showed that 13.4% of children's daily intake was from added sugars, which is far above the recommended allowance.

### *2.3.2 Fluoride*

While it is more specific, another key topic of health research in Britain is fluoride. According to Marinho et al. (2003: 1), fluoride is a mineral that prevents dental caries, and fluoride toothpastes have been a “benchmark intervention” for three decades in reducing the disease. Fluoride naturally exists in water at varying levels of concentration, and areas with fluoridated water have been known to help reduce dental caries (Whelton et al. 2004). Increasing fluoride levels is especially helpful for disadvantaged areas where dental caries are more common due to social inequalities, such as poor nutrition and oral health behaviours. For example, McGrady et al. (2012) explored tooth decay in 11-13 year olds from different social groups in non-fluoridated Manchester and fluoridated Newcastle. They found that children from Manchester displayed more decayed teeth compared with children from the same social group in Newcastle, and concluded: “The results support the existing evidence from other studies conducted in the UK that water fluoridation reduces inequalities in health by reducing the social gradient between deprivation and dental caries” (McGrady et al. 2012: 12). In another study, Riley et al. (1999) also observed that water fluoridation has a larger impact in reducing dental caries among disadvantaged communities than in affluent communities.



### *2.3.3 Dental caries*

Attention has been paid to both fluoride and sugar consumption in great detail as researchers seek to understand how best to improve our well-being. Taking the focal point of this research, dental caries, Bagramian et al. (2009) claim that while reports suggest that the battle against tooth decay is being won, the reality is quite the opposite. They observe an increase in dental caries, in both children and adults, which indicates that we are facing a “pending public health crisis” (2009: 3). Public Health England (2018) highlight the severity and susceptibility of the disease, such that tooth decay was the most common reason that five to nine-year-olds were admitted to hospital in 2012-2013, and a quarter of five year olds will have tooth decay when they start school. Dental caries is expensive to treat, with the NHS spending £3.4 billion per year on primary and secondary dental care. The consequences of dental caries are also costly from a time perspective, because children with dental pain and abscesses may be absent from school, and parents have to take time off work to look after them or take them for treatment. It is evident that the health and financial consequences of dental caries are considerable, and efforts should be focused on finding a long-term solution.

### *2.4 Solutions: An ecological framework*

In terms of solutions, Dahlgreen and Whitehead (1991) developed a highly useful socioeconomic model of health, which explains the various influences on health (Figure 2.1). At the inner level are individual lifestyle factors, then social and community networks, and finally socioeconomic, cultural and environmental influences. Patrick et al.’s (2006) ecological framework provides a more nuanced description of the barriers which specifically prevent good oral health. At the proximal level, individual factors consist of individual psychology, such as a taste preference for sugar and a fear of dental treatments. Health behaviours also fall into this category, whereby an individual may have a high sugar intake, and poor oral hygiene practice, as well as a delay in seeking dental care. At the immediate level, there are interpersonal factors, which include stressors, for example, those with cognitive impairment, as well as social integration and support, such as family and school influences on oral health practices. Moving up to the intermediate level, the authors identify the following community influences on oral health disparities: physical environment, for example, location of dental services and vending machines; social environment, such as the school curriculum and social stigma; cultural environment, which includes beliefs about oral health, and, finally, access to oral health care. Factors at the most distal level are: natural environment, for example, natural fluoride levels; macrosocial factors, including

legislation and advertising surrounding sugar products; inequalities; and organization and delivery of services, whereby supplies of dentists and dental insurance may differ.

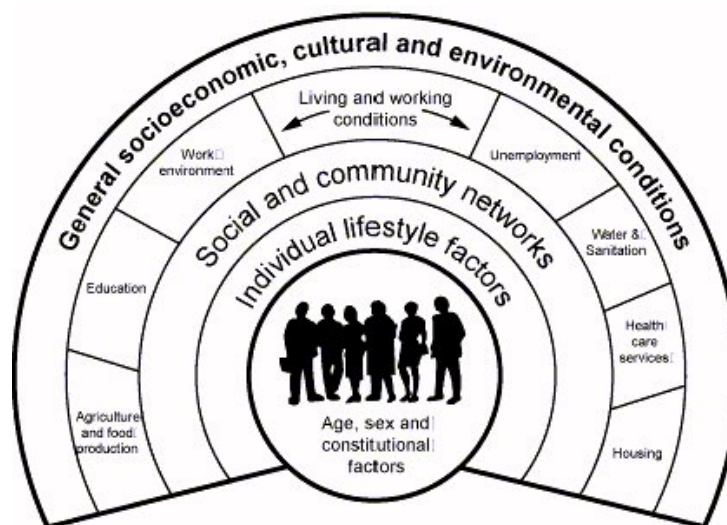


Figure 2.1 Dalgren and Whitehead's (1991) socioeconomic model of health

One example which shows how these factors can be positively influenced is Childsmile – an NHS Scotland initiative that began in 2008 with the aim of improving children's dental health. The programme is divided into three areas: Childsmile Core; Childsmile Practice; and Childsmile Nursery and Childsmile School. At the population level, which forms part of Childsmile Core, the programme provides every child with free daily supervised toothbrushing in nursery, as well as free dental packs to support toothbrushing at home. Childsmile Practice operates at the individual level, and provides enhanced care programmes in primary care dental services. Each family is contacted by a dental health support worker when their child is three months old, and receives oral health support, such as assistance with making a first appointment. From six months, each child is provided with a tailored oral health programme including advice, and annual dental check-ups. Childsmile Nursery and School also work with the individual by delivering fluoride varnishing for children aged three onwards who are living in the most deprived areas. This programme is a sound example of how one can target multiple influences on health, but such initiatives are only effective when they are motivated by an appropriate health model.

## 2.5 Health models

Encouraging an individual to adopt a certain behaviour requires an understanding of human behaviour, and, in particular, why people and communities make unhealthy choices rather than healthy ones. The value of health theories lies exactly in this

domain. According to Raingruber (2010), health theories explore how psychological, organizational, cultural, community-level, political, and social factors influence health. This information can then be used to design, implement and evaluate initiatives (Raingruber 2010). Green et al. (2010) further emphasize the value of these theories:

The role of theory is to untangle and simplify for human comprehension the complexities of human nature. Once the critical components of a complex problem are illuminated by theory, practical applications become possible (Green et al. 2010: 398).

There are a multitude of health theories, but it is crucial to select the most appropriate theory for the situation in question. While one theory may be best for informing an individual intervention, another may be suitable for a community-level intervention (Raingruber 2010). This section will review the most important theories in health communication, before outlining parental self-efficacy, which Pine et al. (2004a) suggest lies at the heart of dental caries development in young children from low socio-economic areas. The models discussed are based on their popularity in public health interventions. In Glanz and Bishop's (2010) review of journal articles between 2000 and 2005, they found that the most cited theories were those outlined below. Other prominent health models, which will not be discussed, are the Theory of Reasoned Action (Fishbein and Ajzen 1975) and the Theory of Planned Behaviour (Ajzen 1991).

### *2.5.1 Health belief model*

With a focus on the individual, the Health Belief Model (HBM) (Rosenstock 1974) was developed after Hochbaum (1958) found that people refused preventatives and screening programmes for tuberculosis. It was one of the first theories of health behaviour, and continues to play a significant role in public health interventions (Glanz and Bishop 2010). The model's starting point is that diseases are regions of negative valence in a person's life space. In order to take health-related action, a person must believe that: (1) they are susceptible to the disease; (2) the negative impact of the disease is severe; (3) the benefits of the recommended action are high; and (4) the barriers to performing this action are low, for example, embarrassment or pain. Two additional variables are cues to action and, particularly relevant for this research, self-efficacy (Rosenstock et al. 1988). Carpenter (2010) conducted a comprehensive meta-analysis of the effectiveness of the model, and found that the benefits and barriers were strong predictors of behaviour. On the other hand, severity and susceptibility were much weaker predictors, and, for this reason, he does not recommend the HBM. Champion and Skinner (2008) highlight that the model does not account for the emotional component of human behaviour. They note Witte's (1992) assertion that fear is at the

heart of health behaviour, but it is not included in the HBM. Additionally, Stroebe and de Wit (1996) observe that the model does not explicitly discuss how the four key variables are related, and it is merely assumed that a threat is a result of an additive effect of susceptibility and severity. They also argue that social influence and positive effects of negative behaviours are overlooked, despite being fundamental determinants of health behaviour.

### *2.5.2 Transtheoretical model*

Another individual-centred model is the Transtheoretical Model (TTM), which was developed by Prochaska and DiClemente (1982), and draws on different theories from behaviour change and psychotherapy. The model emerged after its proponents observed that smokers used different strategies at various points in their journey towards giving up smoking. The model comprises six stages of change: (1) pre-contemplation, whereby people are not intending to take action; (2) contemplation, where change is intended within the next six months; (3) preparation, in which people are planning to take action immediately; (4) action, which involves people making modifications to the behaviour in question; (5) maintenance, where the individual aims to avoid relapse; and (6) termination, where self-efficacy is high, and there is no temptation to relapse. It not only explains the stages of change, but also the cognitive, affective, and behavioural processes involved in transitioning from one stage to another. One example of these processes is consciousness raising, which involves increasing an individual's awareness of causes, consequences or cues for a problematic behaviour, and uses interventions such as feedback and education. The model has been praised for allowing health practitioners to tailor the appropriate intervention depending on the individual's stage of change; for example, consciousness raising can let smokers know the dangers of health problems associated with the behaviour (Hollister and Anema 2004). Buchanan and Coulson (2007) applied the model to the consumption of carbonated drinks by adolescents, and found significant associations between stage of change and self-efficacy. They concluded that the model was a useful framework which can help design tailored interventions. Other researchers, however, have not found the model as effective. For example, Bandura (1997) argues that human behaviour is too complex to be categorized into discrete stages. Along similar lines, Sutton (1996) claims that behaviour change is best conceptualised as a continuum. Macnee and McCabe (2008) criticise the applicability of the model, claiming that it does not account for cultural differences where the behaviours of a specific community may be spread across the stages differently compared to a national sample.

### 2.5.3 Nudge theory

Nudge theory was not in Glanz and Bishop's (2010) review because it is a more recent addition to health theory research, but its popularity merits our attention. The 2017 Nobel Prize was awarded to Richard Thaler for his contributions to behavioural economics. Thaler and Sunstein (2008) wrote: *Nudge: Improving decisions about health, wealth, and happiness*, which popularized Nudge Theory. The theory is guided by a philosophy known as *libertarian paternalism*, which seeks to guide an individual's choices, whilst also maintaining their freedom. According to Thaler and Sunstein (2008), the reasoning behind this ethos is that we often try to make controlled and objective decisions, but our capacity and motivation to do so are limited. This is often due to our environment, which means that we do not act rationally, but make impulsive decisions that can be self-destructive. The authors argue that an effective model of behaviour change should adopt a more realistic view of these human tendencies. In this way, nudge theory focuses on the design of choices, or *choice architecture*, by avoiding more direct techniques, such as enforcing restriction, and instead employing softer nudges, such as making a choice more salient to encourage behaviour change. In their book, Thaler and Sunstein (2008: 6) note that a nudge "must be easy and cheap to avoid", for example, "putting fruit at eye level counts as a nudge. Banning junk food does not". Nudges therefore make minimal demands on the chooser. Nudge theory received huge interest from governments and policy makers around the world. In the UK, there is the Behavioural Insights Team, otherwise known as the Nudge Unit, which applies this theory to various issues. For example, in 2016, Burd and Hallsworth released a report *Behavioural factors in person- and community-centre approaches for health and wellbeing*. This work discusses the role of self-efficacy in healthcare, which we will explore shortly, and forms the core of the motivation for this research. However, nudge theory has also been criticized. Hausman and Welch (2010: 136) argue that the model's "libertarian credentials are questionable", and nudge theory threatens "an agent's control over her own deliberation". Aside from ethical issues, another critique relates to whether nudging leads to long-term behaviour change. Goodwin (2012) believes that it is ineffective in addressing large scale problems, and is therefore unfit for solving "society's major ills" (2012: 86). In the context of oral health, which affects many young children in Britain, nudge theory does not seem to be an appropriate solution.

### 2.5.4 Self-efficacy

Bandura (1977: 193) took a different stance on behaviour change, and believed that “expectations of personal mastery affect both initiation and persistence of coping behaviour”. This perceived confidence in performing an action is defined as self-efficacy. Self-efficacy forms a pivotal role in Bandura’s (1986) Social Cognitive Model, which posits that our behaviour can be explained in terms of personal, environmental, and behavioural factors. In this way, the model advocates “reciprocal determinism”, and views humans as interactive agents (Bandura 1989: 2). The interaction between these factors depends on five capabilities: (1) symbolizing; (2) forethought; (3) observational; (4) self-regulatory; and (5) self-reflective; which refers to self-efficacy beliefs. Bandura claims that those with low self-efficacy are less likely to perform a perceived threatening activity, which means that they do not counteract their self-debilitating expectations, and fears remain for a long time. On the other hand, those with high self-efficacy show stronger efforts to engage with the activity, which means that they “gain corrective experiences”, and they learn that the activity is safe (Bandura 1977: 194).

Bandura (1977) clarifies that self-efficacy alone is not sufficient to produce behaviour change, and must be accompanied by capability and incentives. He outlines four sources of information which influence self-efficacy. The first is performance accomplishments, which are crucial because success increases our expectations that we can perform a behaviour, while failures decrease these expectations, especially if these occur in the early stages of the activity. The next source of self-efficacy is witnessing others engage in threatening activities without negative consequences, otherwise known as vicarious experiences. These experiences make the observer believe that they too can perform the activity if they persist, particularly when the model succeeds in the face of temporary distress, and the model is similar to the observer in other characteristics (Kazdin 1974). Verbal persuasion also influences self-efficacy, in that people who are led to believe that they can successfully perform the threatening behaviour are more likely to exert more effort. Finally, we have emotional and cognitive processes. Emotional arousal in a situation can provide information that guides an individual’s evaluation of their competency. If a behaviour results in anxiety or stress, they will use this experience as evidence that they are not likely to succeed. In this way, self-efficacy is also affected by how individuals cognitively appraise information, and “to a large extent determines the level and direction of motivational inducements to action” (Bandura 1977: 199). Self-efficacy is more likely to increase if an individual attributes a successful activity to their own skill, rather than fortuitous circumstances. Further still, they must believe that it was due to their ability, as opposed to their efforts, because minimal effort is interpreted as a sign of higher competency.

## *2.6 Self-efficacy and dental caries*

Criticisms have been directed at Bandura's theory; for example, Lee (1989) believes that he does not explain the complex interactions between the variables, which limits its predictive power and practical application. However, self-efficacy has been applied to a plethora of health behaviours with promising results for the behaviours of interest. Studies suggest that it is strongly associated with high consumption of fruit and vegetables (Luszczynska et al. 2007), and oral health behaviours, such as tooth brushing and flossing (Bulgar et al. 2010). Most importantly, parental self-efficacy was found to be the key predictor for dental caries in young children from deprived communities (Pine et al. 2004a). Pine et al.'s research was conducted across 27 sites in 17 countries, involving a total of 2,822 children and families from both advantaged and disadvantaged areas. The aim was to understand the relationship between dental caries in young children, family and cultural beliefs, and oral-health related behaviour. Results revealed that the most important tooth-related behaviour predicting the presence of dental caries was the age at which parents reported starting to brush their child's teeth, and the most important sugar-related behaviour was whether the child drank sugary drinks before bed. However, the researchers also made an unexpected discovery as to the overall predictor for dental caries. They found that "the most significant variable for the whole study population predicting whether children would be caries free was not the children's oral health-related behaviour, but a parents' attitude to their perceived ability to deliver the behaviour (in this case, regular and effective tooth brushing)" (Pine et al. 2004a: 125). This was termed the Brushing Parental Efficacy Factor, which comprises a series of attitudes and beliefs such as "I don't know how to brush my child's teeth properly", "we don't have time to help brush our child's teeth twice a day", and "it is not worth the battle with our child to brush his/her teeth twice a day" (Pine et al. 2004a: 126). Based on these findings, a hypothesis emerged that designing an intervention to improve parental self-efficacy to undertake twice daily toothbrushing and controlling daily sugar intake would prevent dental caries in young children.

## *2.7 BBarTS intervention*

Pine et al. (2016) explore the issue of parental self-efficacy in a randomised controlled trial, which formed the basis of an intervention called 'Bedtime Brush and Read Together to Sleep' (BBarTS). The on-going two-year trial involves five to seven-year-olds and their families from 60 British primary schools in Kent, Newham and Tayside. A focus on bedtime toothbrushing was important because this is the most crucial time to brush with fluoride toothpaste but it is the time of day most often missed, with the

majority brushing in the morning. As national guidance advises: brush daily with a fluoride toothpaste at bedtime and one other time (Public Health England 2017). For families, it is also important to establish healthy bedtime routines for children, which include child toothbrushing and often storytime.

People are aware of what is required to maintain good oral health, but they do not act in accordance with these beliefs for the reasons outlined above. As the behaviours are already known, the trial therefore focuses on how to make an individual internalise a message. The intervention consists of 8 children's storybooks, and for each storybook, there is a control and test version. The test version contains embedded behaviour change techniques, designed to increase parental self-efficacy to carry out twice daily toothbrushing, and control daily sugar intake, whereas the control version is exactly the same but excludes the oral health messages. Storybooks were chosen because a previous proof-of-concept study suggests that this approach can improve parental self-efficacy to undertake the two desired behaviours (O'Malley 2013). They were designed by a clinical psychologist, public health dentist, science educator, children's author and a group of illustrators, with guidance from the Department of Education (Pine et al. 2016). As evidence suggests that six to eight-year-old children prefer cartoons (Hodge and Tripp as cited in Pine et al. 2016), the designers opted for colourful animations with culture-neutral named frogs, Zip and Pop (Figure 2.2). There are also questions at the end for parents to ask their children to make the activity more engaging.

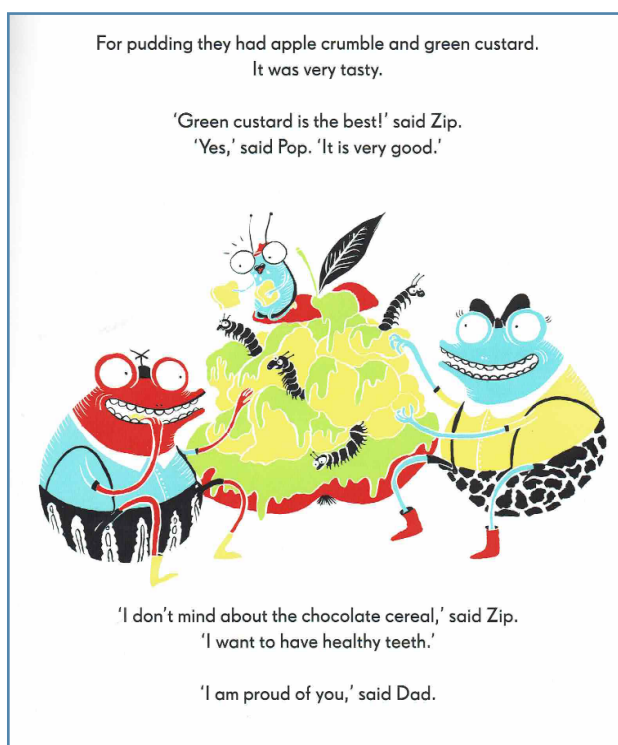


Figure 2.2 Screenshot of BBaRTS storybook 'Hop and Shop with Zip and Pop'.



60 primary schools have been randomised to one of three groups. In the control group, parents of children aged five to six years old receive the control books. In test group one, parents receive the test books; and in test group two, parents receive the test books and the means to deliver the child's toothbrushing by receiving free toothbrushes and toothpaste each term, as well as supervised toothbrushing in school after lunch. Baseline measures for all the children were taken at the beginning of year one for parental self-efficacy, the presence of dental caries in the children, and parental oral health-related beliefs and behaviours. Parents were then given one storybook to read with their child in three-monthly intervals, and repeated the measures at the end of year. The same procedures were conducted in year two. The researchers' main research question asks whether children's oral health improves by using the storybooks to enhance parental self-efficacy to carry out regular toothbrushing and controlling sugar intake. The intervention targets twice-daily toothbrushing with fluoride as well as reduced sugar consumption, so while it is primarily directed at reducing dental caries, it may indirectly also lower rates of other prevalent issues such as diabetes and obesity. The BBaRTS intervention therefore has promising outcomes for several key public health issues. The trial also combines various types of intervention: school-based (for test group two); individual-level, as it is an interactive activity which occurs in the home; and population-level, because three different communities (Kent, Newham and Tayside) are receiving the same health message.

BBaRTS is using the medium of storybooks, but the researchers are now exploring the idea of drafting each storybook into an animated cartoon with a voice-over. Currently, no research has been conducted on how best to improve the persuasiveness of a healthcare message from an aural perspective. In particular, it is not known how different accents may affect the persuasiveness of the health message, which presents an opportunity to develop more tailored interventions that ensure higher success rates. This is the purpose of my research, which will be investigating the persuasiveness of six British accents in Kent, Newham and Tayside to enhance our understanding of what underpins an effective oral health intervention. This multi-faceted approach coincides with Schiavo's (2014: 27) recommendation for health communication that we should "put the public back in public health. Think globally, act locally. Tackle health disparities".

## *2.8 Summary*

Health communication is a complex task, but one which requires persistence if we are to support the development and maintenance of healthy behaviours and reduce global spending. Two problems that demand our attention in particular are sugar intake and

lack of toothbrushing with fluoride, because these can result in major health complications which are affecting millions of people worldwide. A serious and costly consequence of these issues is tooth decay and few populations are exempt from its effects (Pine et al. 2004b). Those most at risk of the disease are young children from communities of low socio-economic status. A global study revealed that, from a health psychology perspective, the main cause of dental caries among this population is parental self-efficacy (Pine et al. 2004a). In other words, parents maintain a negative perception of their own ability to effectively manage their child's oral health. Therefore, while many theories of health communication exist, such as Nudge Theory and the Transtheoretical Model, Bandura's (1977) notion of self-efficacy is an appropriate construct to form the foundation of a multi-faceted intervention on dental caries. The BBaRTS intervention (Pine et al. 2016), which is operating in Tayside, Newham and Kent, uses a series of 8 children's storybooks that have been designed to increase parental self-efficacy. These are being drafted into animated cartoons, which motivates an exploration of how the voice-over may enhance the persuasiveness of the underlying health message in the story - specifically, how different British accents may bring about attitude change in parents, and ultimately alter their behaviour. My research targets exactly this question: What are the persuasive effects of British accents in each BBaRTS trial area? I will draw on theories from social cognition and sociolinguistics to examine the role of accent in improving oral health. In order to bring these disciplines together, I will now discuss the current literature on language attitudes, persuasion, attitudes and stereotypes.

## 3 Language attitudes and persuasion

### *3.1 Overview*

This chapter will begin with an outline of language attitudes in Britain. Specifically, I will touch on the origin of British accents and how they became such a strong social marker, as well as significant language attitude studies. The section will conclude with an important discussion of media representations of accents, which both perpetuate and condemn accent bias. This has significant implications for the study of accent persuasiveness. Due to entrenched social norms, an individual may feel pressure to claim that a certain accent is persuasive or dissuasive, but they may, in fact, be persuaded by a different accent. Next, I will briefly summarize the persuasion literature, important models of persuasion, and recipient and communicator factors which influence persuasion. What emerges from this discussion is that: (1) accent is a powerful heuristic cue in the context of the BBaRTS intervention; (2) credibility is a crucial communicator factor; (3) the notion of attitude is central to the persuasion process. This leads us to the penultimate section which covers attitudes. Here, I will review the controversial debates in the field, such as the stability of attitudes, as well as measurement procedures, and prominent attitude models. The Associative-Propositional Evaluative model (Gawronski and Bodenhausen 2006, 2011) has been selected for this research, because it takes a sophisticated approach to implicit and explicit attitudes, which captures the complexity of language attitudes in Britain. Lastly, the chapter will discuss stereotypes, because of their close connection to both language attitude and attitude studies.

### *3.2 Language attitudes in Britain*

Giles and Billings (2004: 187) allude to the value of language attitude research, claiming that “determining the effects of language on social judgement is an integral part of uncovering the communication process”. The following section will take a chronological perspective to allow for an understanding of how attitudes to British

accents have changed over time, and to help provide a valid linguistic explanation for possible variations in persuasive effects. I will draw heavily on Mugglestone's (2007) *Talking proper: The rise of accent as a social symbol*, because it provides an insightful account of Britain's long-standing fixation with pronunciation differences. First, I will give a simplified view of the development of Standard English and the emergence of British accents, before examining how the introduction of RP in the 18<sup>th</sup> century led to the development of accent as a social symbol. I will then describe how attitudes to accents have changed due to increasing social mobility. Attitudes remain highly complex such that British accents possess different but essential qualities for persuasion, such as trustworthiness and expertise. These findings have implications for determining the persuasiveness of different British accents, an unexplored area in language attitude research. Finally, I will address how media representations have perpetuated ideologies surrounding British accents. It will become apparent that accent bias has been both encouraged and criticized since the emergence of RP. This underlines the potential role of participants' self-presentation concerns in the correlation between their implicit and explicit attitudes to accents.

Momma and Matto's (2008) extensive work on the history of the English language is an ideal starting point for understanding how attitudes to British accents developed. Momma (2008a: 154) notes that in the fifth and sixth centuries, migrants from various Germanic tribes came to Britain, which was the beginning of English as the "language of England". However, English, which was regarded as the vernacular, was still reserved for oral performance, while Latin was used for written composition. Around the 8<sup>th</sup> century, King Alfred decided to promote English by translating a series of texts from Latin into the dialect of his area, which was Early West Saxon English of the South and South-West of England. This triggered a shift in perceptions of English, such that it was now deemed worthy for prose. Early West Saxon English enjoyed high status until the 10<sup>th</sup> century, but the Late West Saxon dialect dominated Standard Old English texts for approximately the next century. However, it is interesting to note that Northumbrian, Mercian, and Kentish were also major dialects at the time (Kornexl 2008). According to Momma (2008b), the Middle English period is said to have existed from the Battle of Hastings in 1066 until the late 15<sup>th</sup> century. The Battle of Hastings marks the beginning of this period, because the last Anglo-Saxon king was defeated by the Normans, which introduced French to the English language. Old Norse also influenced the vernacular due to the large settlement of Scandinavians in northern England. While the majority of the population spoke English, it was still "the lower tier of the language pyramid" (Momma 2008b: 182).

Much like Momma (2008b), Mugglestone (2007) observes that English has not always been the prestigious, powerful language that it is today, and that it was still

regarded as inferior to French, the language of the court, in the 14<sup>th</sup> century. In this way, people could only assert their superiority by selecting one language over another, because all dialects of English were perceived as equal. This equality among Middle English dialects was never attained again, which is exemplified by the liberal stance of phonetician and headmaster Christopher Cooper: “Everyone pronounceth them as himself pleases” (Cooper 1687 as cited in Mugglestone 2007). Over the course of the next century, however, London English became a non-localized, superior, written language; a development that was cemented when all public documents were printed in this single variety of English. London is the origin of pure English as it assumes superiority on political, legal, administrative, commercial and cultural matters (Mugglestone 2007).

In 1712, writer Jonathan Swift, along with others, expressed his concern that this emerging ‘standard’ English was not satisfying the criteria required to be deemed ‘standard’, and proposed an official academy to address the matter. Mugglestone (2007: 10) claims that this movement “hallmarks the era of codification, an important stage in notions of standardization”. Attitudes to language in Britain were further polarized by ideologies advocated by prescriptivists such as Lowth, Archdeacon of Winchester, who said “the principal design of grammar is to teach us to express ourselves with propriety; and to enable us to judge of every phrase and form of construction whether it be right or not” (Lowth 1799: viii). These notions of a ‘standard’ swiftly extended to matters of pronunciation, which began to emerge alongside existing discourses of ‘correct’ written English. However, it was only in the late 18<sup>th</sup> and early 19<sup>th</sup> century when a standard of speech, known as Received Pronunciation, would come to fruition. Thomas Sheridan was the highly influential lexicographer and elocutionist that pushed this idea forward in his writing, arguing that “all other dialects are sure marks, either of a provincial, rustic, pedantic, or mechanic education, and therefore have some degree of disgrace attached to them” (Sheridan 1762: 30). He even associated non-standard pronunciation with evil: “...many pronunciations, which thirty or forty years ago were confined to the vulgar, are gradually gaining ground; and if something be not done to stop this growing evil, and fix a general standard at present, the English is likely to become mere jargon” (Sheridan 1784: 3). His work *A general dictionary of the English language* (1784), along with Walker’s (1791) *Critical pronouncing dictionary* were two of the seminal texts which offered instruction on English pronunciation. Mugglestone (2007) notes that such dictionaries became the cornerstone of the national curriculum, and Walker was a household name for ‘correct’ English.

Crucially, Mugglestone (2007) observes that around this time, ideologies of a ‘standard’ English pronunciation exerted an equal influence throughout Britain. An inevitable consequence of the notion of a superior accent is the notion of inferior, or

substandard accents. For example, *The London Magazine* (1780: 347) recounts the story of Alexander Wedderburn, a Scottish lawyer, who encountered issues in his profession due to his accent: “Accordingly, at a proper age he was called to the bar, but a very singular circumstance, it is said, prevented his success, and made him leave Scotland in disguise. His own countrymen could not bear his provincial dialect which was such broad Scotch, that neither his clients, the court, nor his other auditors, could understand him...” Mr Wedderburn therefore sought the elocution lessons to “remove all impediments in his pronunciation”, and he became very successful as a result. Therefore, while RP represented education by transcending geographical boundaries, the lack of non-localized forms became synonymous with lower social class. Accent had become “one of the most potent social symbols in existence” (Mugglestone 2007: 40). This explains Britain’s heightened sensitivity to pronunciation differences (Giles and Powesland 1975), which is a characteristic that, one could argue, strengthens the persuasive power of certain accents in relation to others. Therefore, accent is likely to have greater potential to persuade British parents compared with other persuasive cues, such as physical attractiveness.

The introduction of the BBC in the 20<sup>th</sup> century strengthened RP’s status as analogous to “talking proper” (Mugglestone 2007: 267). In fact, the first broadcaster Arthur Burrows, who spoke RP, was known as the “man with the golden voice” (BBC Written Archives Centre S236/12 as cited in Mugglestone 2007). However, despite RP’s prestigious status, regional accents were not entirely rejected: “I cannot tell you how delighted I was to hear my own countrymen talking” stated one woman from Aberdeen after a broadcast in 1924 on a regional station (Mrs L.C., *Letters from Listeners’ Radio Times* 1924: 390). RP was seen as the voice of the educated, but regional accents were still associated with comfort which, as we will see shortly, is a binary that echoes the two core components of credibility: expertise and trustworthiness (Perloff 2010). Therefore, RP and regional accents have long been associated with different but essential persuasive qualities; a phenomenon which emphasizes the complexity behind the relationship between persuasion and British accents.

Perhaps sparked by his observations of the discourses surrounding RP, psychologist Thomas Pear published the first significant study on language attitudes in 1931. He asked radio listeners to evaluate a short text read by nine different speakers, such as a minister or an actor, which was broadcast on three evenings in 1927. Listeners were asked to judge the speakers in terms of their gender, age, occupation and place of birth, and whether they felt the speaker was accustomed to lead others. It was one of the first experiments in Britain to conclude that we use linguistic stereotypes to evaluate people, rather than forming such judgements on an individual basis. This period not only saw developments within the field of language attitudes, but social events further

reinforced the dichotomy between regional accents and RP. An illustrative example is when Yorkshire English-born author J. B. Priestley gave a series of patriotic talks during the Second World War. Brome (1988 as cited in Mugglestone 2007: 277-278) noted that “while Churchill spoke with the aggressive personality of a war leader, using the accent and mannerisms of his class,” Priestley seemed to “speak from inside the ranks of the people themselves, using a voice with which they could identify”. It was the introduction of commercial TV in the 1950s which was a significant catalyst for change in language attitudes, because it provided a sharp contrast with the formality of the BBC (Mugglestone 2007). There was a greater variety of presenters with diverse regional accents, which reduced the stigmatization of this way of speaking. Taken together, these shifts confirm Baker’s (1992) affirmation that single events can influence language attitudes in different directions for different people. In other words, it was the increased social attractiveness of regional accents during this period that began the gradual replacement of RP as the default choice for public communication. However, persuasive aspects of RP, such as authority and expertise, had far from disappeared.

From 1960 onwards, researchers continued to focus on the broad distinction between attitudes to RP and regional accents. Their findings are still useful in stressing the problematic interaction of accent and persuasion. Researchers discovered that regional-accented speakers were typically rated highly along the social attractiveness dimension, but scored less well on the status dimension, and the reverse was true for RP speakers (Fishman 1971; Giles 1971). For example, Giles (1971) explored attitudes to accents from South Wales, Somerset and London (RP), and found that RP speakers were perceived as more ambitious, intelligent and confident than regional-accented speakers. Conversely, the regional-accented speakers were evaluated positively along the attractiveness and integrity dimension. Cheyne (1970) took a broader approach, but found a similar contrast in his study on attitudes to English and Scottish English. Both Scottish English and English listeners viewed English speakers as better leaders and more intelligent, but they also perceived Scottish English speakers as more friendly and likeable. In another study, Bourhis et al. (1973) discovered that Welsh listeners, including those who did not see the value of learning Welsh, perceived bilingual speakers more favourably than RP speakers. While RP was associated with confidence, negative traits also prevailed, such as arrogance and snobbery. Finally, Giles (1970) studied the evaluations of secondary school students in the UK to various British and foreign accents of English. He asked subjects to rate the accents in terms of pleasantness, clarity of communication and status using a matched-guise test and a questionnaire. Results revealed that RP and French-accented English were rated most favourably on all three dimensions, but Cockney and Birmingham were perceived as the

most unfavourable. Language attitude research between 1960 and 1980 consistently demonstrated how entrenched attitudes were towards British accents, but also left the issue of accent persuasiveness unresolved.

According to Mugglestone (2007), perceptions of RP began changing around the mid-1980s. Previous generations saw RP as the proper way to talk, but among younger generations, it had become the ‘posh’ way to talk. Garrett et al. (1999) found that in Wales, RP was perceived as unattractive and alien by students. Yet, teachers considered RP speakers to be most like themselves, which points to the shift in RP’s status across generations. Giles et al. (1990) highlight the inevitability of prejudice, with negative attitudes to all ages and accents emerging. In their study, young adult listeners from South Wales judged a passage and the researchers manipulated speech rate, accent, voice quality and age of speaker. Listeners were then asked why they judged the passage the way they did. Young RP speakers were viewed as arrogant, young regional speakers were “trying to impress”, old RP speakers were “living in the past”, and the old regional speaker was “losing his grip.”

The close of the decade saw fewer language attitude studies compared with the abundance of work in previous years. This is interesting given that traditional views of British accents were still shifting – a trend which would continue into the 21<sup>st</sup> century. By the early 2000s, the rise of the regional accent had been cemented, and the perception of RP as the model of English pronunciation was becoming less widespread. According to Kerswill (2007), this was driven by increased social mobility in the second half of the 20<sup>th</sup> century, which meant that non-RP users could hold previously unattainable occupations. The decline in RP led to the increased prominence of Estuary English, a south-eastern, lower-middle class accent which combines phonetic features from RP and Cockney (Kerswill 2007). However, despite RP’s shrinking population, British speakers continued to evaluate the accent somewhat positively. Therefore, precisely as Coupland (2010) stated, modern social order has led to a complex relationship between RP and regional accents. Coupland and Bishop (2007) demonstrated this through an extensive quantitative study of attitudes to 34 different accent labels of English among 5010 British informants from many geographical regions of the UK. Overall, *Queen’s English*, resembling RP, was ranked seventh and first for social attractiveness and prestige respectively, while *A standard accent of English* was ranked first and second. However, there were also significant differences across the groups. Among younger respondents, RP was less popular and ethnically-linked Afro Caribbean, and regionally-linked Black Country and Glasgow accents were more socially attractive. Interestingly, accents belonging to Celtic countries showed the most in-group loyalty, particularly Scottish English. In recent years, British society has not only seen increased social mobility, but also large-scale immigration leading to new



community formations in urban areas. The upshot of these developments is a rise in the number of new accents, such as MLE, and a shift in attitudes to accents, which also vary by age. Specifically, perceptions of the British pronunciation started changing to the extent that Estuary English and RP were both seen as standard.

So far I have briefly explored a history of attitudes to British accents, and key language attitude studies. On the role of the media in language attitudes, Grondelaers and Kristiansen (2013: 12) argue that: "...modern media have developed into major factors in the cognitive and social psychological processes that shape present-day people's language-related values". It is thus equally important to briefly comment on media representations of British accents, which are highly conflicting. For example, RP is simultaneously associated with snobbery: 'She sounds posher than the princes! Viewers complain that they can't understand Kate's VERY plummy accent – while Harry baffles with his use of 'ain't' in film on mental health' (Brennan, Daily Mail 2017), and helping social advancement: 'Speak the Queen's English if you want to sound intelligent and be trusted' (Marsden, The Telegraph 2013). Regional accents are also seen as obstructing social mobility: 'Too Northern for TV? Supermarket dubs over model's Merseyside voice with a posh accent on clothes advert' (Griffiths, Daily Mail 2017), as well as something to be celebrated: 'There's nowt wrong with dialects, nothing broke ass about slang' (Carey, The Guardian 2016). Estuary English is regarded as both disgracing the English language: 'Estuary English is destroying British drama' (Hastings, The Telegraph 2004) and a less pompous alternative to RP: 'Estuary English is smashin' and it's also correct' (Kamm, The Times 2017). MLE is perhaps one of the only accents to receive predominantly negative attention, equated in the following, for example, with Jamaican patois: 'Why are so many middle-class children speaking in Jamaican patois? A father of an 11-year-old girl laments a baffling trend' (Harding, Daily Mail 2013) (see section 4.3.3 for a description of MLE). Taking this one step further, there are comments which directly address the issue of accent discrimination. For example, The Economist published an article scorning the on-going existence of accent-based stereotypes entitled 'The last acceptable prejudice' (R.L.G, The Economist 2013a), while The Telegraph and Huffington Post highlight the impact of accent bias: 'Shut yer face! I'm fed up with being ridiculed for my regional accent in academia' (Edwards, The Telegraph 2014), 'Your anti-northern prejudice is literally killing us' (Morris, Huffington Post 2017).

These views of British accents are highly contradictory. Not only are there conflicting discourses about specific British accents, for example, RP is associated with snobbery and education, but accent discrimination itself is both criticised and prevalent. This suggests that giving people time to consider more thoughtful responses regarding accent persuasiveness, which falls into the realm of explicit attitudes, would not

necessarily shed light on which accent is persuasive. This is because, in actuality, they may hold more automatic responses, which are not revealed for self-presentation concerns. Such responses may be driven by individual differences (see section 3.3.3), life experiences, or these opposing media, social, and historical factors I have discussed. This indicates that it is necessary to explore attitude change on an implicit *and* explicit level, which is in line with McKenzie and Carrie (2018: 11) who conclude that while overt prejudice is less acceptable in Britain, “deeply embedded, biases against particular communities of speakers persist”.

We have seen here that Britain’s preoccupation with accent began with a desire to make English as prestigious as other languages at the time, such as Latin and French. The emergence of RP as the standard model of pronunciation several centuries later meant that accent became a marker of social class, and regional accents were subsequently stigmatized. However, language attitude studies reveal that regional accents are nonetheless associated with warmth, while RP is linked with expertise. The changing linguistic landscape in Britain owing to migration and increased social mobility further complicates attitudes to British accents. If we also take into account media representations of different accents and accent bias, the British linguistic context becomes highly complex, and requires an investigation of accent persuasiveness by measuring explicit and implicit attitudes. In order to contextualize this two-pronged approach, which will be discussed in section 3.4 on attitudes, I will next review the persuasion literature.

### *3.3 Persuasion*

As a subject which dates as far back as Aristotle’s influential piece on the art of rhetoric, there is a wealth of literature on persuasion which highlights its complex, but powerful nature. Here, I will detail definitions of the concept, important models of persuasion, factors affecting the recipient’s acceptance of a persuasive message and, most importantly, factors affecting the persuasiveness of the communicator. We will see that the persuasiveness of an accent can be influenced in many ways, which have been explored for various languages such as English, specifically American dialects (Morales et al. 2012) and Singaporean English (Lalwani et al. 2005), Chinese (Liu et al. 2013), Dutch (Palmen et al. 2012), and German (Mai and Hoffman 2011). However, there is a lack of research exploring the persuasive effects of different English accents in Britain.

While there is an abundance of definitions of persuasion, it appears that very few incorporate all necessary tenets as outlined by Perloff (2010). For example, Olson and Zanna (1993: 135) define the concept as “attitude change resulting from exposure to information from others”. However, this fails to account for the idea that persuasion

involves the communicator's deliberate attempt to change someone's attitude or behaviour (Perloff 2010). Another example which illustrates the difficulty of capturing the complexity of persuasion is Bettinghaus and Cody's definition (1994: 6): "A conscious attempt by one individual to change the attitudes, beliefs or behaviour of another individual or group of individuals through the transmission of some message". Once again, this overlooks two further concepts highlighted by Perloff (2010). First, persuasion cannot be forced, and thus requires self-persuasion. Second, by implication, the individual has free choice. For a complete picture of persuasion, Perloff's definition seems most suitable: "A symbolic process in which communicators try to convince other people to change their attitudes or behaviours regarding an issue through the transmission of a message in an atmosphere of free choice" (Perloff 2010: 12).

It is important to note the value of persuasion research in this study. According to Petty and Briñol (2006: 743): "A comprehensive theory of persuasion should specify the processes by which the numerous source, message, recipient, and context factors known to influence attitudes operate". In other words, the following discussion is crucial in understanding what traits of a source are important to examine from a methodological perspective. More specifically, it explains how accent can affect attitudes to various traits of the communicator, such as trustworthiness or credibility. These attitudes can then be interpreted using research from the field of social cognition, which will be explored in the next section.

### *3.3.1 History*

According to Petty and Briñol (2008), in the earliest stages of persuasion research, ancient Greeks concentrated on the simple question of how single variables, such as expertise or emotion, affect attitude change. This remained a central focus through to the *Oratoria*, a textbook on the theory and practice of rhetoric by Quintilian, from the Italian Renaissance. However, modern day persuasion research was hugely influenced by Hovland et al.'s (1953) work which adopted a cognitive learning model of persuasion. This has been described as the 'Yale' approach; it posited that attitude change depended on the degree to which an individual comprehended and retained a message (Petty and Briñol 2008).

This single effect explanation of persuasion soon encountered complications as one variable, for example trustworthiness, was proven to be persuasive in one context, but not in another. It emerged that a dual process may be more appropriate to account for the multiple effects and consequences of persuasive communication. Hovland and his colleagues started to propose a dual perspective on persuasion, whereby message arguments and simple cues, such as the attractiveness, credibility, or accent of the

source, could operate simultaneously (e.g. Kelman and Hovland 1953). However, according to Petty and Briñol (2008), it was Greenwald's (1968) study which presented an important shift away from single processes and the idea that learning was paramount to persuasion. Instead, Greenwald proposed cognitive response theory, which asserts that "the persuasion situation is usefully regarded as a complex stimulus that evokes in the recipient a complex cognitive response" (Greenwald 1968: 150). Put simply, it is the degree of positive or negative thinking, or elaboration, about the information in the persuasive message which is crucial for attitude change. This paved the way for a new wave of persuasion models with elaboration as their focal point.

### *3.3.2 Models of persuasion*

With a focus on elaboration came two highly influential dual models of persuasion, the Heuristic-Systematic Model (HSM) (Chen and Chaiken 1999) and the Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986). Petty and Briñol (2008) note that the most significant aspect of these contemporary theories was that process and content could operate independently. In other words, earlier theories argued that the role of variables was fixed, for example, a trustworthy source was always a cue but never a message argument. However, the ELM and HSM finally gave variables the flexibility required to explain the complexity of the persuasion process. For instance, this allowed a trustworthy source to be persuasive under certain conditions, but not in others. There was also the unimodel (e.g. Kruglanski and Thompson 1999; Kruglanski et al. 1999), which argued that processing is not separated into message and heuristic cues, as posited by dual processes.

Beginning with the ELM, Petty and Cacioppo's (1986) model sought to consolidate the conflicting literature on how different variables affect persuasion. According to the authors, the ELM "provides a fairly general framework for organizing, categorising, and understanding the basic processes underlying the effectiveness of persuasive communications" (Petty and Cacioppo 1986: 125). The ELM has seven postulates, the second of which focuses on the idea that the extent to which one thinks about the arguments in a persuasive message varies across people and situations. This encapsulates a central idea in their model that there are two routes to persuasion, central and peripheral, and the route one takes depends on two key factors: motivation and ability to process the message. An individual takes the central route when they are engaging in high elaboration of the message arguments or, put simply, they carefully scrutinize the message. This occurs under conditions of high motivation or strong ability to process the message. While it may be in one's best interest to analyse every argument which presents itself, this is both maladaptive and unfeasible. In cases of low

elaboration – when an individual lacks both the motivation and ability to process the message – they take the peripheral route, and more hedonistic evaluations occur based on the positive or negative effect of simple cues, such as accent. However, this does not mean that simple cues are only effective under the peripheral route, and message arguments are only effective under the central route. For example, when both motivation and ability to elaborate are high, simple cues still hold high importance because they may also be analysed for their relevance and strength, alongside argument quality. In other words, variables are flexible in the role they play. Petty and Cacioppo (1986) do argue, however, that attitude change resulting from message arguments is more long-lasting than attitude change resulting from peripheral cues.

The other influential model of persuasion is the HSM (Chen and Chaiken 1999). Much like the ELM, the proponents argue that within any judgemental context, there are two modes of processing which determine a perceiver's attitude: systematic and heuristic. During systematic processing, the individual responds to the content of the information in an analytical and comprehensive fashion. As this type of processing requires strong cognitive ability, a lack of knowledge or time would be obstacles for the systematic route. In cases of weak cognitive ability, one would undertake heuristic processing which responds to cues, such as accent or source expertise, by applying judgemental rules called 'heuristics', which are stored in memory. Chen and Chaiken (1999) propose the *sufficiency principle* which posits that perceivers want to satisfy their motivational concerns, and prioritize effortless processing. In this way, our judgemental confidence lies on a continuum with two points: actual confidence and desired confidence (Chen and Chaiken 1999). Desired confidence is known as the *sufficiency threshold*, which means that perceivers will exert enough cognitive effort until they have reached an acceptable confidence level.

Thus far, we have only reviewed dual process models but, as mentioned above, other researchers advocate the unimodel (e.g. Kruglanski and Thompson 1999; Kruglanski et al. 1999). The unimodel criticizes dual models of persuasion, such as the ELM and HSM, for confounding the cue-message distinction. They argue that this distinction is collapsible, and that the strength of persuasive communication is not related to the type of evidence, as proposed by the ELM and HSM. Instead, alongside the extensiveness of the recipient's processing, they believe that persuasion depends on the quality of the message. Therefore, regardless of message or cue type, if the information is easy to process, then this will be effective even under low cognitive capacity, but information that is hard to process will prevail under high cognitive capacity.

In all three models, reduced cognitive effort places more importance on the cues, because they are easier to process. One cannot predict or control the extent of cognitive

effort parents will exert in the real world when watching the BBaRTS animated cartoons. Yet, Pine et al.'s (2004a) study suggests that they are unlikely to carefully scrutinize the message because they have little knowledge of tooth decay and are susceptible to distraction, due to the presence of their children. This means that their motivation and ability to process the message may be low, and accent will act as a simple cue. The role of accent is therefore strengthened in the persuasive message, further justifying the value of a study on accent persuasiveness.

### *3.3.3 Recipient factors*

Having explored the models of persuasion, it remains to be seen what characteristics, of either the recipient or communicator, can affect accent persuasiveness. Beginning with the recipient, Perloff (2010) claims that self-esteem, need for cognition, self-monitoring and dogmatism all affect the degree to which an individual will be persuaded. Rhodes and Wood's (1992) meta-analytic review revealed that those with moderate self-esteem are the most influenceable. This is because those with high self-esteem do not yield to the message, and those with low self-esteem do not process the message because of self-presentation concerns. This warrants an exploration of how self-esteem relates to accent persuasiveness, not just in the context of attitude change, but also of sociolinguistics.

The second factor is need for cognition (Cacioppo and Petty 1982), which refers to the extent that an individual engages in and enjoys cognitive activity. Research suggests that those with low NFC are more influenced by peripheral cues, such as accent, because they do not engage in effortful thought (e.g. Haugtvedt et al. 1992; Zhang and Buda 1999). Conversely, high NFC individuals are influenced by the argument quality (Cacioppo et al. 1983). In the context of accent, this is significant because individuals who are more influenced by peripheral cues may show a stronger effect of stereotype activation. For example, those with low NFC may be least persuaded by MLE because this accent is very negatively portrayed in the media (Kerswill 2014). On the other hand, those with high NFC would not be as affected by accent, and would focus more on the content of the message.

The third factor is dogmatism, which is the inclination of an individual to assume that their beliefs are correct (Rokeach 1954). Harvey and Hays' (1972) research indicates that dogmatism plays an important role in accent persuasiveness. They found that highly dogmatic individuals, who are more closed-minded, are more susceptible under low elaboration conditions, because they tend to only accept messages from conventional and authoritative sources. In the context of accent, dogmatic participants may be persuaded by voices associated with authority, such as RP. However, low dogmatic individuals, who are more receptive to new ideas, are more persuaded by

strong arguments regardless of source (DeBono and Klein 1993). Participants who are less dogmatic may therefore be more persuaded by accents which are not perceived as authoritative, such as regional accents like Yorkshire English and Irish English. To reiterate, one cannot be certain of the extent to which parents will elaborate on the oral health messages in the BBaRTS animated cartoons, but elaboration should be considered because of its suggested effect on persuasion.

The fourth recipient characteristic that can affect the effectiveness of persuasive communication stems from the theory of self-monitoring. This dictates how much attention an individual pays to a social situation and then changes their behaviour accordingly (Perloff 2010). Regarding persuasion, those with high self-monitors, who are concerned with displaying socially acceptable behaviour, respond well to source expertise whereas people with low self-monitors, who prioritize their core values, are less influenced by experts (DeBono and Harnish 1988). Therefore, RP may result in persuasion for those with a high self-monitor, but not necessarily for those with a low self-monitor.

Lastly, Bless et al. (1990) discovered that the recipient's mood can influence the persuasiveness of a message. More specifically, they found that participants who were in a good mood were less likely to engage in message elaboration than those who were in a bad mood. They argue that this is because when we are in a good mood, we perceive a situation as nonproblematic and so instead of paying attention, we rely on heuristic cues. This means that accent stereotyping may be greater among participants who are in a good mood, thus strengthening accent's potential in persuading or dissuading.

### *3.3.4 Communicator factors*

I will now discuss communicator factors, which can influence persuasion both generally and linguistically speaking. These factors comprise authority, credibility and social attractiveness (Kelman 1958). Beginning with authority, in his famous study, Milgram (1963: 372) commented that “the individual who is commanded by a legitimate authority ordinarily obeys (...) It is a ubiquitous and indispensable feature of social life”. Cialdini (2007) made a similar observation in the context of persuasion, when he commented on American actor Robert Young's convincing role in the advertisement for instant coffee brand Sanka. He noted that the “appearance of authority was enough”, which stemmed from Young's long-standing role as a responsible doctor in the medical drama *Marcus Welby M.D* (Cialdini 2007: 220). Research has been conducted on the authoritativeness of voice, for example, van Bezooijen (1995) found that Dutch and Japanese listeners associated high pitch speakers as shorter, weaker, and more

dependent than low pitch speakers. Furnham and Paltzer's (2010) review also found that across different countries, men were often portrayed as an authority figure in advertisements, and male voice-overs were more common than female voice-overs. However, there is less research documenting how accents are linked to authority. Palmen et al. (2012) examined whether males speaking standard Dutch (high authority) had a greater impact on people's willingness to cooperate in telephone surveys than females speaking a regional accent (low authority). They found no difference between the groups, but this study has not been replicated in Britain where the linguistic context differs greatly. Along with the review of attitudes to British accents in section 3.1, Milroy and Milroy's (1998) book *Authority in language: Investigating standard English* aptly demonstrates that Britain has a deeply entrenched class system that is reflected in the perceived authority of different accents.

The second trait is social attractiveness. This refers to the communicator's likeability, physical attractiveness, and similarity to the recipient (Perloff 2010). Focusing on similarity, McGuire (1969) claims that communicators who are similar to us are persuasive because we believe that they share the same needs and goals. The recipient then concludes that the source has our interests at heart, which, in turn, encourages us to change our attitudes. A select number of studies have explored the relationship between similarity and accent. In a German context, Mai and Hoffman (2011) explored the effect of a salesperson's regional dialect on customers' attitudes, and found that evaluations were more positive when the salesperson used a dialect from the same region as the customer. Similarly, Lalwani et al. (2005) discovered an interaction between accent similarity and effective advertising. They examined the effect of local Singaporean English and 'formal' British English on purchase intentions, spokesperson credibility, and attitudes towards an advert and the brand. Results show that British English outperformed Singaporean English on almost every dimension, which they argued was because participants rated British English higher for perceived accent similarity than Singaporean English. Therefore, similarity of accent between the recipient and communicator is another factor that has the potential to enhance persuasion.

The third communicator factor is credibility, which is a much more complex phenomenon. McCroskey (1997: 87) defined it as: "The attitude toward a source of communication held at a given time by a receiver". Perloff adds that credibility is a dynamic, multidimensional concept predominantly involving expertise, trustworthiness and goodwill, but also dynamism, extroversion and sociability. However, it is worth noting O'Keefe's (2002) definition of credibility, because it offers an important methodological insight into how accent can interact with persuasion. He argues that credibility is "judgments made by a perceiver concerning the believability of a



communicator” (O’Keefe 2002: 181). As we will see in chapter 6, accent plays a significant role in the believability of a speaker. In terms of previous research, Reinares-Lara et al. (2016) studied how a spokesperson’s accent influenced perceived credibility in radio advertising. Comparing a standard accent from Madrid (SA) with a local accent from the Canary Islands (LA), they found that listeners associated SA with higher credibility. Lalwani et al.’s (2005) study also found that British English yielded superior results regarding the spokesperson’s credibility compared with Singaporean English. Despite this informative research, there is a gap in our knowledge about how the perceived credibility, similarity and authority of British accents affect persuasion.

Ever since the Sophists of Ancient Greece began teaching the art of rhetoric, persuasion has been highly prevalent in society. The pervasive nature of persuasion seems to be due to its powerful ability to change attitudes and behaviour. However, persuasion is not an easy task, and I have attempted to summarize the intricate mechanics here. We saw that the likelihood that an individual will accept a message depends on characteristics such as self-esteem and dogmatism, whereas the effectiveness of a communicator varies depending on their credibility, social attractiveness, and authority. Yet, as I have mentioned, despite the vast amount of research, the persuasiveness of British accents has still not been thoroughly examined, which lends motivation to a study that can address this unexplored topic. As attitudes lie at the centre of persuasion, I will now turn my attention to this field of study and outline definitions, conceptual issues, measurement techniques, and my chosen model for this research.

### *3.4 Attitudes*

#### *3.4.1 Definition*

Allport’s (1935: 798) claim that “the concept of attitude is probably the most distinctive and indispensable concept in contemporary American psychology” highlights exactly why the study of attitudes has dominated the field of social cognition. Unfortunately, attitudes are also highly elusive and complex. This means that increasing our understanding of the term makes the task of defining it even more difficult. According to Albarracín et al. (2005), Eagly and Chaiken’s (1993: 1) definition is perhaps the most popular contemporary conceptualization of attitudes: “An attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour”. Albarracín and her colleagues also point out that the notion of evaluation has long been central to the definition of attitudes from very early studies, such as Thurstone (1928), to seminal work on persuasion by Petty and Cacioppo (1986).

However, as more research was conducted, questions arose which forced scholars to reconsider how they characterize attitudes. I will first explain the core controversies which have emerged from social cognition research, and then discuss the various models of attitudes in the literature. This will contextualize my discussion of the APE model (Gawronski and Bodenhausen 2006, 2011), which is the chosen model for this research. I will conclude by reviewing explicit and implicit measurement procedures, and highlight the value of drawing on techniques used in the field of social cognition.

The first issue which proves problematic among attitude theorists is whether attitudes are stable entities, or whether they are constructed entirely in the moment. This maps onto a deeper issue about the mental representation of attitudes. Smith (1996) notes that proponents of the stable-entity camp see attitudes as belonging to a symbolic system, which draws on the intellectual tradition of language and logic. People create different combinations of languagelike symbols to create internal representations. These are then used to encode propositions, such as ‘Multicultural London English is unattractive’. Metaphorically speaking, all of these representations are seen as existing on separate sheets of paper in memory, which in turn is seen as a “static filing cabinet” or “storage bin” (Smith 1996: 895). Many researchers advocate this position, such as Fazio (1995: 247) who argued that attitudes are “an association in memory between a given object and a given summary evaluation of that object”, and Petty et al. (2007a: 659) who claimed they were “attitude objects linked in memory to global evaluative associations”.

Symbolic perspectives on attitudes have been useful in encouraging research in social and cognitive psychology. However, this is not the most useful way of viewing attitudes, primarily because it does not sufficiently account for the observed context effects on attitudes compared with alternative approaches, but also due to its abstract approach. Researchers endorsing the ‘on-the-spot’ construction of attitudes adopt a connectionist perspective, which was first introduced by McClelland and Rumelhart in 1986. Here, there is no fixed location for representations, rather they exist in a connectionist network containing units of evaluative information. These units are joined together by unidirectional links which transmit activation. As they are all interconnected, there is only a single representation, resulting from lots of past experiences (Smith 1996). Ferguson and Bargh (2007: 231) note that connectionism incorporates the idea that every observable behaviour is “a fleeting state of mind wherein all representations are potentially implicated or contributive”. This is more realistic, they argue, because an object is never evaluated in a vacuum, which is implied by symbolic accounts. Their views marry well with constructivist interpretations of attitudes, because connectionist models entail multiple sources of evaluative information. Perhaps the strongest proponents of this idea are Schwarz and Bohner

(2001) who argue that there is, in fact, no such thing as a ‘true’ attitude. Instead, “attitude judgments are constructed on the spot, based on the information and inference rules that are most accessible at that point in time” (Schwarz and Bohner 2001: 442). Another instance of this view is from Conrey and Smith (2007: 718), who assert that attitudes are “time-dependent states of the system rather than static ‘things’ stored in memory”. This approach is more dynamic than the symbolic account, because it helps to explain the observed malleability of implicit and explicit attitudes. This is the idea that the surrounding context of an attitude object affects an individual’s explicit (e.g. Wilson et al. 2000), and implicit attitude to that object (e.g. Barden et al. 2004; Dasgupta and Greenwald 2001; Wittenbrink et al. 2001). Another advantage of constructivism is that it also mirrors the architecture of the brain more closely, and is therefore more neurally plausible (Bassili and Brown 2005). Nonetheless, concerns have been raised regarding the idea that attitudes are constructed independent of representations in memory. Nayakamkuppam et al. (2018) point out that some evaluations must logically be stored in memory. For example, the presentation of ‘ice-cream’ may lead to associations of ‘high calories’, but if there is no evaluation of ‘high calories’ then one needs to find an evaluation of a related concept such as ‘gaining weight’. In other words, evaluative judgements cannot be made entirely independent of memory retrieval, and the constructivist argument does not make it clear when the search for information ends. It is therefore important to select a model of attitudes which can account for the issues raised by both the construction and retrieval perspective.

The second issue revolves around how to define the term ‘implicit’. This problem has been raised in social cognition, but in his talk on implicitness, Pantos (2017) highlighted that it should also be considered when conducting implicit attitude research in sociolinguistics. First, based on De Houwer’s (2009) astute observation, it should be conceded at the outset that ‘implicit measure’ refers to the measurement outcome, whereas ‘implicit measurement procedure’ refers to the procedure used to elicit the outcome. With this in mind, one of the most useful overviews of what ‘implicit’ means from an attitude perspective is by Payne and Gawronski (2010). They observe that studies “include a lot of hyphens and slashes in their key terms”, such as unconscious/automatic/implicit/uncontrollable (Payne and Gawronski 2010: 2). The authors argue that the reason why these terms have become synonymous is because two areas of research, selective attention and implicit memory, have become conflated. Initially, work on implicit social cognition was motivated by studies on short-term memory and selective attention. These discussed the distinction between controlled processes, which required attention and capacity, and automatic processes, which function with little cognitive effort. Fazio et al.’s (1986) work on the automatic

activation of attitudes cemented this relationship between implicit attitudes and automaticity. This then paved the way for sequential priming methods, outlined in section 3.4.4, as an indirect method of eliciting implicit attitudes. Work on automaticity also led Bargh (1994) to examine what exactly constituted ‘automatic’. The first criterion is awareness, which refers to our awareness of a judgement process. The second criterion of automaticity is intention, which refers to people’s ability to stop the beginning of a judgement process, whereas the third criterion, controllability, is one’s ability to stop the process once it has started. The last criterion is efficiency, which refers to the amount of attentional resources used in the judgement process.

Moving away from attention and automaticity, it was Greenwald and Banaji’s (1995) review which introduced an alternative perspective to attitudes from another tradition – implicit memory. They define attitudes as “introspectively unidentified traces of past experience that mediate favourable or unfavourable feeling, thought, or action toward social objects” (Greenwald and Banaji 1995: 8). In other words, implicit attitudes are traces of past experience without conscious awareness. This approach led to the development of the popular Implicit Association Test (IAT), which is discussed in section 3.4.4 along with other methods of measurement. Questions emerged as to exactly what respondents were unaware of, and Gawronski et al. (2006) sought to address this exact problem. Drawing on Bargh (1994), they empirically examined the three ways that an individual can be unaware of their attitudes. First, they may lack awareness of the origin of the attitude (source awareness), for example, people may hold negative implicit attitudes to Irish English without understanding how this attitude developed. However, the authors found that this is not exclusive to implicit attitudes, and people may also be unsure of the origin of their explicit attitudes. Second, people may lack awareness of the attitude itself (content awareness), for example, they may hold a negative implicit attitude to RP, but not realize that this is the case. According to Gawronski et al. (2006), evidence does not support this assumption either, which is often based on claims of a lack of correlation between implicit and explicit attitudes (Banaji 2001; Cunningham et al. 2004; Jost et al. 2002). The correlation actually increases if people are either not motivated to alter their explicit attitudes (Nier 2005), or asked to think carefully about their implicit attitudes. In other words, people are, in fact, conscious of both attitudes, but other factors make it appear as though this is not the case (Gawronski et al. 2006). Third, they may lack awareness of the impact of their attitudes on other mental processes (impact awareness), an argument which does receive support from the literature (e.g. Gawronski et al. 2003). Implicit attitudes are therefore not unconscious per se, just as they are not always unintentional or uncontrollable. Understanding the mechanics which underlie ‘implicit’ can help to ensure that a

measure satisfies the criteria of automaticity as much as possible. This is important because it then validates claims regarding an attitude's implicitness.

The third point of contention is whether implicit and explicit attitudes operate under the same process or different processes, and many models attempt to resolve this problem. The models reviewed here are all dual process models, because the single process models, such as Kruglanski and Thompson's (1999) unimodel, primarily stem from persuasion research, which were discussed earlier. Gawronski and Creighton's (2013) review of dual process theories provides a very comprehensive summary of these models, which I will briefly discuss, before focusing on the chosen model for this research – the APE model.

The first set of dual process models explains attitudes in terms of specific phenomena, and one such phenomenon is attitude-behaviour relations. According to Ajzen and Fishbein (2005), early theorists of attitudes such as Thomas and Znaniecki (1918) defined social cognition as the study of attitudes because it was assumed that attitudes guide behaviour. However, a wave of scepticism soon emerged regarding this basic tenet. LaPiere's (1934) study is perhaps one of the most well cited concerning this issue. He toured America with a Chinese couple, who were refused entry to only one out of 251 hotels even though 92% of the same establishments claimed that they would not accept members of this race. The scepticism continued, and by the late 1960s, 45 separate studies had investigated the attitude-behaviour relationship, and these produced disheartening results (Ajzen and Fishbein 2005). Perhaps one of the most prominent theories aiming to resolve this problem was Fazio's (1990, 2007) MODE model, which stands for motivation and opportunity as determinants of the attitude-behaviour relation. This is a dual model, which distinguishes between deliberative and spontaneous processes, and these are moderated by one's motivation and opportunity to engage in effortful processing when encountering the attitude object. If the attitude is activated automatically, then behaviour is guided by spontaneous processing, which occurs outside of the individual's awareness. Conversely, if individuals have the cognitive resources to scrutinize the attitude object, then their behaviour is guided by deliberative processes. Wilson et al.'s (2000) Dual Model also focuses on the relationship between attitudes and behaviour. The main prediction is that people can hold both implicit and explicit attitudes, but the attitude which is endorsed depends on "cognitive capacity to retrieve the explicit attitude and whether it overrides the implicit attitude" (Wilson et al. 2000: 101).

The next set of models focus on explaining the phenomenon of impression formation, and the conditions in which category-related or person-specific information influences our impressions of an individual. Fiske and Neuberg (1990)'s Continuum Model argues that people categorize others on the basis of salient cues, such as gender,

race, or age. An individual's impression will unintentionally be based solely on these cues if the target person is deemed irrelevant. If the target is relevant, the individual will deliberately consider person-specific attributes and incorporate them into their category-related evaluations. Similar to the Continuum Model, Brewer's (1988) Dual Process Model offers a comparable explanation comprising bottom-up and top-down processing. The former occurs under conditions of cognitive effort, and involves interpersonal orientation whereby an individual examines attributes of the specific target individual. Top-down processing is intergroup focused, and occurs under minimal cognitive elaboration. In other words, the individual categorizes the target in terms of salient features, of the group to which the individual is assumed to belong, which then activates stereotypes.

Gawronski and Creighton (2013) also detail dual models which address the phenomena of stereotyping and prejudice, for example the Dissociation Model (Devine 1989) and, importantly for this project, persuasion models, such as the ELM (Petty and Cacioppo 1986) and the HSM (Chen and Chaiken 1999). According to Petty and Briñol (2006: 743), theories of attitude change "do not replace extant theories of persuasion", so both fields of study make a valuable, yet different, contribution. Kruglanski and Thompson (1999) praise dual process theories for their contribution to the field of persuasion. They argue that such models advanced our understanding of social cognition, for example, why a single variable, such as source trustworthiness, may be persuasive in one context but not another. However, as we saw in section 3.3.2, Gawronski and Creighton (2013) also assert that proponents of these models assume that different contents are due to different processes, when they may actually result from a single process. Other researchers, such as Kruglanski and Thompson (1999), feel that the difference between source and message is superficial, and that these categories share the same structure on a deeper level. Another issue with phenomenon-specific dual process models is that they focus on similar problems, but they do not explain how the information processing that underlies the phenomena operate (Gawronski and Creighton 2013).

Generalized dual models of attitudes were the response to this last issue. These include Epstein's (1994) Cognitive-Experiential Self-Theory, Kahneman's (2003) System 1 and System 2 Processing (2003), Smith and DeCoster's (2000) Associative versus Rule-based Processing, and the Reflective-Impulsive Model or RIM (Strack and Deutsch 2004), which is "one of the most influential dual system theories to date" (Gawronski and Creighton 2013: 298). The RIM argues that the impulsive system is a resource independent store of associations in memory, which fuel our approach or avoidance movements to an object upon activation. The reflective system is, in contrast, conceptualized as a store of short-term memories which operates under conditions of

high cognitive effort. It influences behaviours through reasoned decision, based on the truth-values activated by the associations in the impulsive system. This model influenced Gawronski and Bodenhausen's (2006, 2011) APE model, which will now be discussed in more detail.

### *3.4.2 Associative-Propositional Evaluation model*

In their introduction to the APE model, Gawronski and Bodenhausen (2006) note that the mystery surrounding implicit attitudes is unresolved, and many scholars do not distinguish between implicit and explicit attitudes. However, if these attitudes were from the same construct, then a change in one would lead to a change in the other. The authors observe that for the researchers who do make the distinction, implicit attitudes are seen as stable and robust, while explicit attitudes were temporary and newly acquired. The APE model aims to resolve these inconsistencies by conceiving implicit attitudes as the result of associative processes, and explicit attitudes as the result of propositional processes.

Starting with implicit attitudes, the proponents argue that they are affective gut reactions resulting from associative processes. These processes are defined as “the activation of mental associations in memory, which is assumed to be driven by spatiotemporal contiguity between stimuli and the similarity between the features of the input stimuli and available memory representations” (Gawronski and Bodenhausen 2011: 61). In other words, when we encounter an attitude object, it activates associations which then determine our affective gut reaction. For example, upon hearing a speaker of the youth multi-ethnolect MLE, associations such as ‘teenager’ or ‘London’ may be activated, which lead to a negative gut reaction. The associations which are activated in response to an attitude object depend on the structure of the associations in memory, and the input stimuli. The same attitude object may therefore activate different associations depending on the configuration of input stimuli. As such, the APE model adopts a position which is inbetween the constructivist and memory retrieval stances. This is because it can account for context effects but these are constrained by the pre-existing structure of associations in memory. Another crucial aspect is that associative processes are independent of truth-value, and are activated regardless of accuracy or personal endorsement. Gawronski and Bodenhausen (2006) provide a highly relevant example of Devine's (1989) study which shows that just knowing about a cultural stereotype may lead to automatic negative reactions, even if that reaction is not considered accurate, for example, ‘young black males from London are in gangs’. In the context of accent, which we have seen is a highly socially sensitive attitude object in Britain, individuals may therefore display implicit reactions to the

accent based on negative stereotypes of the speakers, which, in turn, may lead to dissuasion.

Explicit attitudes, on the other hand, are evaluative judgements resulting from propositional processes. According to Gawronski and Bodenhausen (2011: 62), these are defined as “the validation of the information that is implied by activated associations, which is assumed to be guided by the principles of logical consistency”. In other words, the affective gut reaction which arises from associations is translated into a proposition, such as ‘I don’t like the Multicultural London English accent’. This is then either accepted or rejected depending on whether it is consistent with other information that is deemed relevant for a given judgement. According to Jones and Gerard (1967), the relevant information includes: (1) non-evaluative beliefs about the world, such as ‘the Multicultural London English accent belongs to a disadvantaged group’; and (2) propositional evaluations of other attitude objects, for example, ‘negative evaluations of disadvantaged groups are wrong’, which is one’s attitude to the acceptability of discrimination. In this case, we can see that the translated proposition arising from the affective gut reaction is inconsistent with the relevant information. In this case we would see a negative implicit attitude, and a positive explicit attitude. So unlike associative processes, propositional processes rely on truth-values. The default is that the proposition *is* deemed consistent with such relevant information and validated. However, if the proposition is deemed inconsistent, as in the case above, then it is rejected, which leads to a negative correlation between explicit and implicit attitudes.

As a lack of correlation leads to cognitive dissonance (Festinger 1957), individuals can take measures to restore consistency. One can either reverse the subjective truth-value of one of the propositions, such as ‘Multicultural London English does not belong to a disadvantaged group’, or find a new proposition to resolve the inconsistency, for example ‘I don’t care about disadvantaged groups’. In these cases, we would see a correlation between implicit and explicit attitudes. Gawronski et al.’s (2008) study on cognitive consistency in prejudice-related belief systems is extremely insightful. Participants first completed a personalized Implicit Association Test, outlined in section 3.4.4, to elicit implicit attitudes to black and white people. They then completed self-report measures of perceived discrimination, and beliefs about discriminatory behaviour to elicit explicit attitudes, because these beliefs were seen as relevant for showing consistency with implicit attitudes. Gawronski et al. (2008) found that when participants displayed negative implicit attitudes to black people, explicit attitudes were *positively* correlated because either perceptions of discrimination were also high (‘Black people represent a disadvantaged group’), and anti-discriminatory beliefs were weak (‘I don’t care about disadvantaged groups’), or perceptions of discrimination were low (‘Black people don’t represent a disadvantaged group’), and



anti-discriminatory beliefs were strong ('negative evaluations of disadvantaged groups are wrong'). When participants displayed negative implicit attitudes to black people, explicit attitudes were *negatively* correlated because their perceptions of discrimination were high ('Black people represent a disadvantaged group'), and anti-discriminatory beliefs were strong ('negative evaluations of disadvantaged groups are wrong'). In this study, Gawronski et al. (2008) also comment on the role of motivation to control prejudice, and found that motivation only reduced implicit and explicit correlations when minority groups were seen as the target of discrimination. This research is therefore important in explaining why implicit and explicit results may diverge.

Therefore, the APE model acknowledges that motivation plays a crucial role in cognitive consistency. Gawronski and Bodenhausen (2006, 2011) recognize that, at times, people may wish to conceal their implicit attitudes, because they are concerned about self-presentation. However, they also claim that the impact of motivation is less direct, and instead is a function of cognitive processes, which result from consistency between one's gut reaction, and one's propositional evaluations. This work is highly relevant because accent discrimination is very prevalent in Britain, as explored earlier, and "such extreme sensitivity is apparently not paralleled in any other country or even in other parts of the English-speaking world" (Gimson 1970: 83). One should therefore not assume cognitive consistency, and simply rely on explicit attitudes as a measure of accent persuasiveness. It also explains the potential factors underlying negative correlations between implicit and explicit measures, which are very possible given the negativity associated with certain British accents, and potential consequent desire to conceal these attitudes. Equally, it may be that people wish to hide a negative attitude to an accent which is largely regarded as positive.

Gawronski et al.'s (2008) study is an example of a 'bottom-up' process whereby associative processes influence propositions. 'Top-down' processes, on the other hand, are instances where propositional processes influences associations. If an affective gut reaction to an attitude object is activated, for example 'the Yorkshire English accent is ugly', and then rejected, this does not deactivate the association with the attitude object. In fact, Gawronski and Bodenhausen (2011) cite Wegner (1994) and argue that negations can in fact lead to ironic effects whereby the association is actually strengthened between 'ugly' and 'Yorkshire English accent'. In other words, simply reversing the truth-value of an association may enhance, rather than reduce the activation level of the underlying association. The interaction between the associative and propositional processes positions the APE model as a dual-process theory, not a dual-representation or dual-system theory. In other words, it views implicit and explicit attitudes as the result of two different mental processes belonging to one system, rather than two different neurological structures where distinct memory representations of the

same attitude object are stored separately. According to Gawronski and Bodenhausen (2011: 104): “All information is stored in the form of associations, which may or may not pass a propositional assessment of validity”. Therefore, despite this shared storage, the model “stresses the distinct psychological nature of two qualitatively different processes” (Gawronski and Bodenhausen 2006: 715).

Gawronski and Bodenhausen’s (2011) conception of the stability of attitudes is a vital aspect, because it informs the validity of my study. Examining the persuasiveness of an accent on either an implicit or explicit level is a challenge without knowing whether the constructs are robust or temporary. The APE model addresses this issue by beginning with the long-standing assumption in the attitudes literature that implicit attitudes are more stable and resistant to change (e.g. Smith and DeCoster 1999). However, contrary to this assumption, the evidence suggests that implicit attitudes are not only highly context sensitive (e.g. Blair et al. 2001; Dasgupta and Greenwald 1999; Wittenbrink et al. 2001), but also easier to manipulate compared with explicit attitudes (e.g. Fazio and Olson 2003; Gawronski and LeBel 2008). The APE model defines attitudinal stability as “the temporal consistency of associative evaluations or evaluative judgments”, which “depends on both associative structure and contextual factors” (Gawronski and Bodenhausen 2006: 713). This means that the robustness of an attitude is affected by the target object (associative structure) and momentarily present context cues (contextual factors). It is possible that changes in affective gut reactions may not be reflected in explicit evaluations if, for example, explicit evaluations are consistently based on the same information, or if affective gut reactions are always rejected. In such cases, implicit attitudes will show lower temporal consistency than explicit attitudes, which indicates that just because implicit attitudes are unstable, that does not mean explicit attitudes are equally so. However, implicit attitudes can also be very robust if contextual factors are kept constant, because this activates the same pattern of associations each time. Finally, implicit and explicit attitudes will both exhibit high levels of temporary consistency if people consistently base their evaluative judgements on their affective gut reactions, which, in turn, are based on the same underlying associations. Taken together, the APE model argues that implicit and explicit attitudes are constructed in the moment based on associations in memory and salient information, which may influence their temporal consistency. However, the model does not overlook the possibility that implicit and explicit attitudes can also demonstrate stability depending on the pattern of activated associations, and acceptance or rejection of affective gut reactions.

As section 3.2 explored in detail, accent is a salient and controversial attitude object in Britain. I argue that the associative structure (the underlying associations in memory) for British accents are strong, for example RP is associated with ‘posh’, and

'educated'. This may particularly be the case among participants in Tayside and Kent, because it is likely that they have had more experience hearing different British accents compared with participants from Newham. Immigrant populations are more common in this area, and they may not have had as many opportunities to hear different accents, so associations will be weaker. Additionally, as accent is experienced in many areas of one's life, the existence of other associations cannot be ruled out, meaning that the same pattern of associations in memory may not be activated each time. In other words, despite certain strong associations in memory with an accent, contextual cues may activate a different pattern of associations. This is supported by Soukup's (2012: 216) comment that "language attitude research never seems to have bothered much with a quest for singular underlying attitudes". Regarding explicit attitudes, given the sensitivity of the attitude object in question, I will argue that propositional evaluations generated in response to affective gut reactions to some accents will be driven by participants' self-presentation concerns. Underlying these concerns are rigid ideologies, largely reinforced by the media, and so explicit attitudes are therefore likely to show high temporal consistency across contexts. Despite possible context effects on implicit attitudes, the lack of research on implicit attitudes to accent and its relationship to explicit attitudes makes implicit attitudes to British accents a fruitful avenue of research.

Finally, it is important to examine how the APE model is situated in the debates on automaticity which draws heavily on Bargh (1994). Importantly, Gawronski and Bodenhausen (2011) do not assume that attitudes measured through implicit measurement procedures are always implicit and those measured through explicit measurement procedures are always explicit. Starting with awareness, they argue that associative affective reactions are not necessarily unconscious, as Greenwald and Banaji (1995) claim. In fact, correlations between implicit and explicit attitudes increase when people are instructed to focus on their feelings to the attitude object (Gawronski and LeBel 2008). Yet, Gawronski and Bodenhausen (2011) also point out that propositional processes may be unconscious. This would occur when an individual simply validates the propositions arising from an affective gut reaction. Conscious awareness *is* required, however, when the proposition results in inconsistency, because the individual must search for an additional proposition or reverse the truth-value of the proposition in question. In terms of intentionality, the authors accept that the APE model satisfies the second criteria of automaticity because associative affective reactions can emerge unintentionally. It also posits that such processes can occur intentionally, for example, following the search for certain information in memory. Gawronski and Bodenhausen (2011) also found that participants' implicit attitudes to social groups were influenced by the instruction to think about characteristics of social group members beforehand. Similar to awareness, they argue that propositional processes are not necessarily

intentional, such as in cases of validating activating information. On the other hand, an inconsistency will lead people to intentionally reject a proposition or search for an alternative. The APE model's position on efficiency is comparable to that of awareness and intentionality; affective associative reactions generally operate under restricted cognitive resources. However, this is not always the case, just as propositional processes can operate under highly efficient conditions when validation is involved. Nevertheless, propositional processes require more cognitive effort when one is resolving an inconsistency between relevant information and activated information (Gawronski and Bodenhausen 2011). Finally, associative processes are mainly uncontrollable in situations where a translated proposition is validated. On the other hand, when this proposition is negated, then searching for new evaluative information may activate different associations in memory in the direction intended. In this way, associative processes may be controllable. Propositional processes are generally uncontrollable, but if one negates a proposition resulting from an associative affective reaction, then this resolution strategy is controllable due to the effort required.

Taken together, this shows that the APE model does not assume that implicit attitudes are unintentional, unconscious, efficient and uncontrollable, just as explicit attitudes do not equate with intentionality, awareness, inefficiency and controllability. It highlights the precise conditions under which associative and propositional processes operate, thereby accounting for the intricate nature of attitudes. Gawronski and Bodenhausen's model adopts a sophisticated approach to the controversial issues of consistency between and stability of implicit and explicit attitudes.

### *3.4.3 Explicit measurement procedures*

In sociolinguistics, measurement techniques have predominantly focused on ways to elicit explicit attitudes using both direct and indirect methods. Direct methods include asking participants about language evaluation and preference in an overt manner. According to Henerson et al. (1987), data can be collected orally, through interviews, surveys and polls, or in written form, through questionnaires, journals, or attitude-rating scales such as the Thurstone Scale (Thurstone 1928), Semantic Differential Scale (Osgood et al. 1957) or Likert Scale (Likert 1932). The Thurstone Scale involves creating a set of attitude relevant statements, from which judges are asked to rank the favourability of each statement. Statements which result in very different results are discarded, while the remainder represent an attitudinal continuum from highly favourable to highly unfavourable. This is then used to directly elicit explicit attitudes. Semantic differential scales present evaluative adjective pairs on opposite ends of a 7-point scale, for example, 'friendly' and 'unfriendly'. Participants must then place a

check mark at the point on the scale which best represents their attitude to the speaker. Another option is the Likert scale, which infers a participant's attitude from their agreement and disagreement with a statement. Participants are asked to indicate how much they agree or disagree on a 5-point scale.

According to Garrett et al. (2003), one of the earliest examples of a direct approach to language attitudes is in Labov's (1966) seminal study on the stratification of English in New York. He gave respondents two alternative pronunciations, and asked them which they used, and which they believed they should use. Direct approaches have been widely applied in language attitude research, such as Coupland and Bishop's (2007) large-scale survey on British accent preferences, as well as in other contexts, for example, second-language learning (Gardner and Lambert 1972). There are, however, several issues involved with direct techniques; for example, hypothetical questions are often poor predictors of one's behaviour, and double negative questions can lead to ambiguous answers (Garrett et al. 2003).

The most common indirect method of examining explicit attitudes is Lambert et al.'s (1960) Matched-Guise Technique (MGT), which has greatly impacted language attitude research to the extent that it is regarded as synonymous with the field (Garrett et al. 2003). They based their work on the idea that "spoken language is an identifying feature of members of a national or cultural group and any listener's attitude towards members of a particular group should generalize to the language they use" (Lambert et al. 1960: 44). The authors developed the technique because they were interested in attitude change in francophone Canada, and the MGT was designed to elicit attitudes to French and English. Participants were asked to judge different voices along a series of 14 bipolar personality traits, but they were unaware that there was one speaker representing all guises. MGT responses are usually collected via Semantic Differential scales or Likert scales.

The sociolinguistic literature regards the MGT as an indirect measure because the object of study is not revealed to the participant, so they are "caught out" in their gut responses" (Soukup 2012: 214). The use of "gut responses" implies that it is viewed as a measurement procedure to elicit implicit attitudes. However, a handful of sociolinguists have explored implicit attitudes from a psychological perspective using tools such as the Implicit Association Task (Greenwald et al. 1998), which will be discussed in detail below (e.g. Álvarez-Mosquera and Marín-Gutiérrez 2018; McKenzie and Carrie 2018; Pantos and Perkins 2013; Redinger 2010; Rosseel et al. 2018). These newer techniques are seen as implicit measures, because the attitude of interest makes participants respond in an automatic fashion (Gawronski and Hahn 2017). We have seen that an attitude is implicit if the impact of the attitude on a participant's response is efficient, unconscious, unintentional or uncontrollable (Bargh 1994). By this reasoning,

while the goal of the MGT is not made apparent to participants, it allows for more thoughtful reactions to audio stimuli. Indeed, Pantos and Perkins (2013) use the verbal guise approach as a measure of explicit attitudes for this reason (Pantos and Perkins 2013). Further still, McKenzie (2015a) voiced his concern over the verbal-guise technique, which uses a different speaker for each variety, as a way of eliciting implicit attitudes and called for the use of more sophisticated techniques which are more robust. This highlights how sociolinguists can learn from the field of psychology with regards to implicit measurement procedures.

#### *3.4.4 Implicit measurement procedures*

Psychologists have gone to great lengths to try to capture implicit attitudes. Beginning with response-based tasks, there is the Extrinsic Affective Simon Task (EAST) (De Houwer 2003), and the Go/No Go Association Task (GNAT) (Nosek and Banaji 2001). However, these are not as popular as Greenwald et al.'s (1998) Implicit Association Test (IAT), which is perhaps the most common response task in attitude research. It is performed on a computer and comprises six tasks, which require respondents to categorize target items along two dimensions of judgement as quickly as possible. Participants first categorize attributes, such as 'failure', into two opposite categories, for example 'bad' with one key on the keyboard ('E') and 'good' with another key ('I'). They then categorize stimuli, such as an image of a black person, into one of two different categories, for example, 'European American' or 'African American'. In the measurement blocks, one attitude object, 'African American', is paired with the 'bad' category, and the other attitude object, 'European American', is paired with the 'good' category. Individuals then see a series of stimuli, such as black or white faces, or positive or negative words, and have to decide whether each stimulus belongs in the 'African American'/'bad' category or 'European American'/'good' category. This is then reversed with 'African American'/'good', 'European American'/'bad'. The critical measure is which of these four pairs of words produces a faster response. If 'African American'/'bad' produces more rapid response times, one would argue that the association is stronger between 'African American' and 'bad', than 'African American' and 'good', thus suggesting negative implicit attitudes to African American people.

Variations of the IAT emerged later in an attempt to resolve certain criticisms. For example, Olson and Fazio (2004) created the Personalized-IAT (pIAT), which overcomes the problem that the standard IAT seemingly measures cultural associations to attitude objects rather than personal associations. The pIAT resolves this issue by replacing the category labels 'good', and 'bad', with 'I like' and 'I don't like'. This ensures that the elicited attitudes are personal to the individual, and do not merely

represent a cultural norm. Another option is the Autobiographical-IAT (aIAT) (Sartori et al. 2008), which was developed for forensic applications as a possible lie-detection test. Unlike the traditional IAT, it uses a series of complete sentences and asks participants to evaluate which of two contrasting autobiographical events are true. These are divided into true or false sentences, such as 'I'm doing a psychology experiment' (true), and innocent and guilty sentences, such as 'I stole the CD' (guilty). As per the standard IAT, participants categorize true and false sentences, then guilty and innocent sentences. In the first measurement block, true sentences are paired with guilty sentences, and false sentences are paired with innocent sentences. In the second measurement block, this is reversed. If participants respond faster in the true/guilty pairing than in the false/innocent pairing, then associations between the true and guilty sentences are stronger for the participants.

There is also the Implicit Relational Assessment Procedure (IRAP) (Barnes-Holmes et al. 2006), which seeks to address the fact that the IAT focuses on associations, as opposed to relations between stimuli or events. Barnes-Holmes et al. (2006) draw on De Houwer (2002), who argues that the IAT merely implies an association between, for example, 'self' and 'bad', but does not highlight the precise nature of this association. The procedure bears similarity to the IAT, but it gains a deeper understanding of how an attitude and evaluation are related. In their study on attitudes to autism, Barnes-Holmes et al. (2006) asked participants to affirm verbal relations, such as 'autism spectrum disorder-easy-opposite' and 'autism spectrum disorder-difficult-opposite'. If response times are quicker for 'autism spectrum disorder-easy-opposite', which is reflective of a view arguably held by wider society, then this indicates bias. The notion that propositions, not associations, underpin human psychology motivated a similar technique called the Relational Responding Task (RRT) (De Houwer et al. 2015). Similar to comments on the IRAP, De Houwer et al. acknowledge that the RRT seemingly contradicts the idea that implicit attitudes are a result of associative processes, because it measures attitudes to propositions under conditions of automaticity. The authors justify their technique by drawing on Shidlovski et al. (2014) who focus on 'implicit truth', which is the automatic endorsement of propositions. They go further to suggest that the IAT, pIAT and aIAT all reflect beliefs, arguing that while participants are not asked to relate elements such as 'I' and 'good', they may still do so, either implicitly or explicitly. The RRT, however, does have the advantage over the IAT and its variations because it requires participants to relate elements in a more specific manner. Suggesting that propositions underlie implicit attitudes implies that there is a stability between associations, and is perhaps a less flexible view of attitudes than the connectionist tradition. This is somewhat idealistic, and does not fit with the more realistic view proposed by other social psychologists that

associations, not propositions, are central to human cognition. An association-based approach is therefore in line with the APE model.

Moving briefly onto priming tasks, the sequential priming task (Fazio et al. 1986) is another prominent measure in the field. Participants are presented with a prime stimulus, for example, a black face, which is followed by a positive or negative word. They must decide whether the word is positive or negative as quickly as possible. If the participant responds faster to a negative word when primed with a black face, then it is assumed that the black face has stronger associations with negative valence. According to Gawronski (2009), the Affect Misattribution Procedure (Payne et al. 2005), though only recent, has become a popular priming task. Participants are briefly shown a stimulus such as a white face, and then they are presented with a neutral Chinese pictograph. Their task is to ignore the prime stimulus, and decide whether the Chinese pictograph is positive or negative. It is argued that participants have more positive attitudes when primes preceding neutral characters are positively categorized.

This work demonstrates that methods for measuring attitudes have made significant advances, but the complex nature of attitudes must not be forgotten. In Thurstone's (1928: 530) article 'Attitudes can be measured', he said that "it will be conceded at the outset that an attitude is a complex affair which cannot be measured by any single numerical index". This will be kept in mind throughout this thesis, to avoid a restrictive analysis of the persuasiveness of accents.

#### *3.4.5 Implicit measurement procedures in sociolinguistics*

A handful of sociolinguists have sought to elicit implicit attitudes to accents using an array of procedures, which is a promising development in the field of language attitudes. Beginning with Kristiansen's (2009) study, he aimed to tap into conscious and unconscious attitudes to Danish accents. Participants completed a semantic differential survey whereby they were asked to evaluate speech samples containing conservative, modern or regional forms of Danish. Conservative accents were associated with superiority-based attributes, whereas accents with modern features were highly rated for dynamism-related attributes. Regional forms of Danish received low scores on both sets of values compared with modern and conservative forms. He asserts that such attitudes were unconscious, because participants were unable to state that the true aim of the research was to elicit attitudes to Danish dialects. Participants were also asked to rank dialect names, which covered all of Denmark, in terms of preference. Results indicate that "young Danes operate with two systems for valuation of language differences" (Kristiansen 2009: 187). While the subconscious hierarchy of dialect preference was modern > conservative > local, the conscious hierarchy showed a high degree of "local



patriotism” (Kristiansen 2009: 187) with favourable scores for more local dialects, followed by the prestigious variety *rigsdansk* and then modern Copenhagen. His work highlights that explicit and implicit attitudes to accents may not always be consistent, which further motivates a study on both attitudes in a British context.

Not soon after, Redinger (2010) used the IAT to examine attitudes to Luxembourgish and French among secondary school children in Luxembourg. This was one of the earliest uses of the IAT in sociolinguistics. As in a standard IAT, participants first categorized the words ‘Luxembourgish’ and ‘French’ into the relevant category of ‘Luxembourgish’ or ‘French’, which were located in top corners of the computer screen. They then had to sort positive (e.g. ‘beautiful’, ‘nice’) or negative (e.g. ‘annoying’, ‘boring’) attributes to the appropriate category of ‘positive’ or ‘negative’. In the first measurement block, they had to press one key for ‘Luxembourgish’ and ‘positive’, and another key for ‘French’ and ‘negative’. In the second measurement block, these keys were reversed, such that they had to press one key for ‘French’ and ‘positive’ and another for ‘Luxembourgish’ and ‘negative’. By measuring their reaction times, Redinger was able to ascertain that students associated more positive attributes with Luxembourgish than French. This was not corroborated with explicit attitude measures, but he does note that this is in line with affective responses elicited via a questionnaire.

Around a similar time, Pantos (2010: 86) showed that audio stimuli “created the same kinds of measureable automatic reactions as the visual lexical stimuli”. This paved the way for Pantos and Perkins (2013) who used the IAT in the context of the APE model to examine whether participants implicitly favoured U.S. or Korean-accented English, and how this correlated with their self-reported explicit attitudes. The first block was similar to Redinger (2010) and required participants to categorise words of opposing valence. The second category was slightly different, however, as they were asked to sort audio stimuli by a Korean or American physician, into either ‘foreign’ or ‘American’. In the measurement blocks, ‘foreign’ was paired with ‘good’, and the other attitude object, ‘American’, was paired with ‘bad’. Individuals then saw a series of stimuli (e.g. ‘marvellous’, ‘agony’, ‘lovely’, ‘terrible’) and heard a series of stimuli (e.g. ‘It is in my opinion’, ‘probability’, ‘training and experience’). They had to decide whether the stimulus presented belonged in the ‘foreign’/‘good’ category, or ‘American’/‘bad’ category. This was then reversed with ‘foreign’/‘bad’ and ‘American’/‘good’, and the critical measure was which of these four pairs of words produced a faster response. Explicit attitudes were also measured via a verbal-guise test, and results revealed an implicit pro-U.S. bias. Further, those who displayed a stronger implicit pro-U.S. bias showed a stronger explicit pro-Korean bias, suggesting that these participants had rejected the negative propositional evaluations based on their affective gut reactions, and hypercorrected for self-presentation purposes. Pantos and Perkins’

observation regarding social desirability bias will prove to be of great relevance in my research.

Another notable study which used the standard IAT Campbell-Kibler (2012), who carried out three IATs to understand implicit attitudes in an American English context. In the first study, she explored associations between visual tokens of (ING) (e.g. ‘bein’, ‘doin’, ‘sayin’) and three social categories: Northern/Southern states, blue-collar/white-collar professions (e.g. carpenter, banker) and names of country singers/news anchors (e.g. Dolly Parton, Diane Sawyer). As expected, she found that associations were stronger between Northern states, white-collar professions, and visual tokens of /ɪŋ/, and Southern states, blue-collar professions and tokens of /ɪN/. In the second study, she paired audio tokens of (ING) with three further categories: audio versions of Northern/Southern states, /ay/ monophthongization (e.g. ‘my’, ‘eye’), which is linked to the South, and /t/ release (e.g. ‘cat’, ‘bat’), which is associated with education. Results revealed a strong association between Northern states and /ɪŋ/, and Southern states and /ɪN/. There was no significant effect for an association between variations of ING and /t/ release, but there was for /ay/ monophthongization, such that the association was significantly stronger between Northern features /ɪŋ/ and /ah/, and Southern features /ɪN/ and /ay/.

In a final experiment, she carried out two explicit measurement procedures and one implicit measurement procedure. In the first explicit task, she played different realisations of the three variables used in experiment one and two. Participants were asked to choose which realisation of each variable sounded more Southern and educated, and in each case how big the difference was on a 5-point scale. The second explicit task involved presenting participants directly with two sets of forms, such as ‘words like doing or being vs. words like doin’ or bein’’. Participants were asked which of the two forms sounded more Southern and educated, and required to rate the size of the difference on a 5-point scale. Finally, participants completed an IAT which examined relationships between three variables (audio tokens of (ING), /ay/ monophthongization, and /t/ release) and two social categories (Northern/Southern states and blue-collar/white-collar professions). The second explicit task revealed that the speaker producing /ɪN/, /ay/ and not fully pronounced /t/ was seen as significantly more Southern and less educated. However, the first explicit task was less consistent as there was no connection between education, /ay/ and /t/-release. Implicit measures were in line with predictions, such that participants categorised Southern features (/ay/ and /ɪN/) with Southern states and blue-collar professions quicker than Northern states and white-collar professions. /t/-release was more strongly associated with white-collar adjectives, but there is no effect of state was found. Overall, she argues that the IAT is a

useful tool for sociolinguists because “it allows the investigation of implicit sociolinguistic associations with less interference from explicit ideologies” (Campbell-Kibler 2012: 761).

Other uses of the IAT in sociolinguistic research include Álvarez-Mosquera and Marín-Gutiérrez (2018), who used a similar technique to examine attitudes to Afrikaans-accented English and Standard South African English. However, they used pretested neutral sentences for audio stimuli, instead of lexical items and collocations as in Pantos and Perkins (2013). Finally, in a German context, Roessel et al. (2017) conducted a series of experiments using variations of the IAT to compare attitudes between German native and non-native speech.

McKenzie and Carrie (2018) have contributed to our understanding of implicit attitudes in a British context. They employed the IAT to explore attitudes to Northern and Southern English speech among 90 participants from North England. In the first crucial test block, ‘Northern English speech’ was paired with ‘positive’ in one corner of the screen and ‘Southern English speech’ was paired with ‘negative’ in the other corner of the screen. In the second test block, these were reversed, so that ‘Southern English speech’ was paired with ‘positive’ and ‘Northern English speech’ was paired with ‘negative’. Participants were presented with a series of stimuli and had to assign each one to a category. Stimuli included positive traits (e.g. ‘correct’, ‘good’), negative traits (e.g. ‘bad’, ‘not correct’), Northern speech labels (e.g. Newcastle, Liverpool, Manchester), and Southern speech labels (e.g. London, Oxford, Cambridge). They then conducted a self-report questionnaire to elicit explicit attitudes by asking participants to respond to two related statements on an 80-point scale: ‘I like to hear varieties of English spoken in the north of England’, and ‘I like to hear varieties of English spoken in the south of England’. The researchers found that there was an implicit-explicit discrepancy (IED). Specifically, results revealed a pro-Southern English speech bias, which they claim is driven by the media as well as long-standing political and historical dominance in South England. However, participants displayed an explicit pro-Northern English speech bias, which is arguably rooted in a desire to display in-group solidarity. This is the only implicit attitude study in Britain that uses the IAT to investigate attitudes to accents.

Veering away from the standard IAT, the Quantitative Lexicology and Variational Linguistics (QLVL) unit has produced a very promising body of research on implicit attitudes to accents with a variety of techniques. Rosseel et al. (2015) conducted language attitude research on regional varieties of Dutch in Belgium among participants from Antwerp and West Flanders. They employed the personalized IAT (pIAT), which meant that in the crucial measurement blocks, ‘Antwerp’ was paired with ‘I like’, and the other attitude object, ‘Standard Belgian Dutch’ was paired with ‘I don’t like’.

Individuals then saw a series of positive or negative images, and heard a series of stimuli in either Antwerp-accented Dutch or Standard Belgian Dutch. They had to decide whether the stimulus presented belonged in the ‘Antwerp’/‘I like’ category or the ‘Standard Belgian Dutch’/‘I don’t like’ category. As per the standard IAT, the labels were then reversed. Rosseel et al. (2018) have also conducted exploratory work on the potential of the RRT in measuring attitudes to language. They carried out preliminary investigations of attitudes to two varieties of Belgian Dutch in terms of prestige: Standard Belgian Dutch (SBD), and more colloquial *tussentaal*. This technique was used alongside semantic differentials to capture explicit attitudes, and demonstrates an exciting advancement in measuring language attitudes. Another example of their innovative research is Speelman et al. (2013), who used an auditory affective priming procedure to examine attitudes to varieties of Dutch. Participants were presented with auditory primes in either a Standard Dutch, West Flemish, or Antwerp accent, followed by a positive or negative picture. Their task was to categorize the picture as positive or negative as quickly as possible. Attitudes to the accents were gauged by how the accent influenced the categorization of the image. They found that participants from West Flanders displayed more positive attitudes to Standard Dutch than either their own accent or the Antwerp accent. Participants from Antwerp, however, held more positive attitudes to their own variety. The authors concluded that this procedure can be considered “a promising new method for indirectly investigating language attitudes” (2013: 90).

In a British context, Robertson (2015) explored conscious and unconscious reactions to social accents in Glasgow. He used an offline semantic association task, which involved presenting four images to participants: one ‘middle-class’ image, e.g. BMW logo, one ‘working-class’ image, e.g. Ford logo, and two distractor images. Participants had to choose the image which they associated most strongly with a priming word, e.g. ‘car’. Half of the participants heard these instructions in a working-class Glaswegian accent and the other half in a middle-class Glaswegian accent. While there was no significant effect of accent on associations, participants tended to select the working class image when instructed in a working class accent, and a middle class image when instructed in a middle class accent.

Explicit measurement procedures in sociolinguistics have dominated the field of language attitude research. While they are infrequent, there are, however, studies which draw on the wealth of techniques used in psychology to conduct studies on implicit attitudes to accent. My research builds on this body of work in a slightly different manner, by using an implicit measurement procedure to understand accent persuasiveness.

### *3.5 Stereotypes and prejudice*

#### *3.5.1 Stereotypes*

I have previously touched on the significance of stereotypes in my research, but here this will be explored in more detail based on Stangor's (2009) informative chapter on the history of the field.

Lippmann (1922) provided one of the earliest and most prominent definitions of stereotypes, arguing that they are knowledge structures which serve as mental pictures of the group in question. In other words, stereotypes represent the traits that we perceive as typical of a certain social group, or members of those groups (Stangor 2009). They develop at a young age because children have an active interest in learning about social categories, as well as their place in the categorization system (Ruble and Martin 1998). According to Allport (1954: 21), categorization is the underlying mechanism of stereotypes and plays a large role in perception: "The mind tends to categorize environmental events in the grossest manner compatible with action". Macrae and Bodenhausen (2001) provide a review of various explanations for our reliance on categorical knowledge. They point out that humans have been viewed as mental sluggards (Gilbert and Hixon 2001), meaning seekers (Oakes and Turner 1990), and efficiency experts (Macrae et al. 1994). Despite a lack of consensus on the topic, each account highlights the tendency to simplify: "We like to differentiate individuals from different categories from each other and to view individuals within categories as maximally similar" (Stangor 2009: 3).

Stephan et al.'s (2009) work on intergroup threat theory examines groups from a broader perspective, which provides valuable information about the reasons behind stereotype formation. They note Ward's (1959) observation that humans are tribal in nature. Consequently, the relationships between groups are usually negative, because of the benefits of group membership, such as acceptance, collective self-esteem (Crocker and Luhtanen 1990) and distinctiveness from others (Turner et al. 1987). This is an issue because we often automatically use group memberships to categorize others, particularly when motivation and knowledge are low (Fiske and Neuberg 1990). Similar to language attitude and persuasion studies, stereotype research views traits across two dimensions: warmth and competence (Fiske et al. 2002). Unfortunately, however, according to Stangor (2009), stereotypes are most often negative, to the extent that even positive stereotypes are frowned upon. He claims that the heart of the controversy surrounding stereotypes lies in using categorical knowledge to evaluate individuals, which is both unfair and inaccurate. Stereotypes are therefore central to the current

investigation, because they are potentially damaging, but also a natural aspect of perception that can be powerful in persuasion and linguistic contexts.

### *3.5.2 Prejudice*

Prejudice, on the other hand, is a negative attitude toward a group, or its members (Stangor 2009). Stereotypes (cognition) and prejudice (affect) are often interconnected (Dovidio et al. 1996), because affect and cognition feed into the same underlying attitude, and stereotypes are in part rationalizations for our prejudices (Sinclair and Kunda 2000). One of the key forces underlying prejudice is the maintenance of one's self-esteem in the face of competing groups (Abrams and Hogg 1988; Tajfel and Turner 1979). According to Stangor (2009), along with distancing ourselves from threats, we engage in prejudice because those we care about do so too, and it is therefore perceived as appropriate in our social context. Equally relevant, he draws on Schmitt et al. (2002) who found that from the perspective of prejudice targets, minority groups feel rejected if they experience prejudice, and then begin to distrust members of the majority group (e.g. Terrell et al. 1993). This can lead victims of prejudice to believe discrimination is inevitable, because they overestimate the extent of this experience (Pinel 2002). Of course, we also learn our intergroup beliefs from the media, which has been explored in section 3.2. Film, television, and the internet not only dictate who we can and cannot like, but take this further by creating stereotypes (Ruscher 1998). Understanding the dynamics of majority and minority groups may therefore provide an insight into why certain accents are more or less trustworthy, and thus persuasive.

### *3.5.3 Automaticity vs. control*

It was long assumed that stereotypes were inevitable, spontaneous and uncontrollable (Dovidio et al. 1986; Fiske and Neuberg 1990), but, according to Devine and Sharp (2009), other researchers were less inclined to accept the automaticity of stereotypes, and sought to challenge traditional views on the topic. This debate mirrored discussions in cognitive psychology surrounding implicit attitudes, such as Shiffrin and Schneider (1977), and in fact, it was this exact research which inspired Devine (1989) to distinguish between conscious, intentional beliefs, and unconscious, inescapable stereotypes in terms of group-based responses. This was a dual process model whereby automaticity and control operate separately, as outlined earlier, and was highly influential in the field (Devine and Sharp 2009). However, building on Bargh's (1994) conditions of automaticity, Devine and Monteith (1999) recognize the dangers of

assuming a false dichotomy between automatic and controlled processes, and push for a shift away from “either-or reasoning” (Devine and Sharp 2009: 64).

Linking closely to the notion of automaticity are the circumstances in which one resorts to stereotyping and when one engages in more elaborate, effortful person perception. Researchers argue that a pre-condition of automaticity is that the individual must be perceived as a social object (Gilbert and Hixon 1991). According to Stangor (2009), this is because we are more likely to categorize people on the basis of perceptually salient characteristics. He claims that features such as sex, race, age, and physical attractiveness are immediately apparent to us, so we use these to make judgements about an individual before other aspects of their character. Categories become more salient when an individual is the minority (e.g. Cota and Dion 1986). One such category may be ethnicity, because it is highly accessible and it can be easy to perceive others in this way (Stangor 2009).

Another precursor of stereotype activation is context. Wittenbrink et al.’s (2001) seminal study found that participants displayed more automatic bias when viewing black people in a ghetto context than in a church, or barbecue context. In a similar study, Barden et al. (2004) discovered that stereotype activation was higher for Asians in the classroom context and for Blacks in the basketball context. With regards to accent, this is important because certain British accents, such as RP, are more strongly associated with expertise and competence than others, and may fare better in a health setting where these traits are valued.

The degree to which we automatically stereotype is also dependent upon individual differences, specifically, our motivation to control our prejudice (Devine et al. 2002). Fazio et al. (1995) found that there are three types of white people regarding motivation to control racial prejudice, starting with Whites who are ‘truly non-prejudiced’ and do not display automatic negative evaluations against black people. Then, there are Whites who are ‘truly prejudiced’ and display negative evaluations against black people, followed by those who are motivated to control their prejudice, despite automatic negative evaluations. Combining context and motivational factors, Maddux et al. (2005) observed that those with low motivation showed automatic negative evaluations of Blacks in a jail context, whereas those with high motivation showed automatic negative evaluation of Whites, because they suppressed their negative responses to Blacks. Linked closely to this, Stangor (2009) claims that stereotypes are also more likely when we do not know, or care about, the individual (e.g. Brodt and Ross 1998). He notes that stereotype activation is more likely when we are tired or distracted (e.g. Bodenhausen and Macrae 1998), or when the cognitive load is high (Stangor and Duan 1991). This is because using categorical information helps to ease the burden; for example, Macrae and Bodenhausen (2001: 251) assert that “by

providing mental economy, stereotype activation enables perceivers to streamline cognition and increase the intelligibility of an otherwise dauntingly complex social world". As outlined in chapter 2, parents will be watching the BBaRTS animated cartoons with their children, and may therefore be distracted, tired or under a high cognitive load. The person delivering the voice-over of the cartoons will also be unfamiliar to the viewer. As these two factors increase the risk of stereotype activation, stereotypes to British accents merit our attention if we are to understand accent persuasiveness.

In terms of processes involved in more controlled person perception, Devine and Sharp (2009) highlight four influences. The first is individuation, which involves gathering more information about a person to avoid relying on categories. In this way, stereotypes are the default, and individuation is the result of more elaborate processing. Interestingly, Madon et al. (1998) found that when we know an individual well, we may still stereotype, but this effect on our impression will be weak compared with the effect of personal characteristics. The second is correction, whereby an individual attempts to overcome potential bias by regulating their automatic reactions. However, this variable needs several assumptions for it to succeed, including an awareness that bias is operating, motivation to correct the bias, and an understanding of the effect of stereotypes on responses (Devine and Sharp 2009). The third is suppression, or banishing stereotypes from consciousness, which entails replacing the prejudiced thoughts with desirable distracter thoughts. Yet, this strategy often involves a rebound effect whereby the unwanted thoughts become hyperaccessible, and influence later thoughts and actions through an ironic monitoring process (Macrae et al. 1994; Wegner 1994). This echoes the ironic effects documented by Gawronski and Bodenhausen (2006, 2011) whereby an affective gut reaction to an attitude object is rejected, but the association is actually strengthened as a result. The final factor is indirect control strategies, where individuals' automatic stereotyping is reduced without their realising, through processes such as perspective taking. Galinsky and Moskowitz (2000) found a rebound effect for individuals who suppressed their negative thoughts, but this was not evident in those who were asked to consider the perspective of the target person. Finally there is intentional inhibition and replacement, whereby the individual is made aware of their prejudiced reaction, and the resulting guilt helps them to control prejudiced responses in the future (Monteith 1993; Monteith et al. 2002).

In sum, this research is extremely relevant for the current study. Discriminating against accent was once strongly advocated to promote a standard model of English pronunciation, and while accent bias is still common, it is increasingly frowned upon: "There is, for example, an often unacknowledged sense in which it would also now be seen as unacceptable to discriminate, at least formally, on the grounds of speech and



style pronunciation” (Mugglestone 2007: 292). Many people therefore may therefore fall into Fazio et al.’s (1995) third category of motivation, consisting of individuals who wish to control their prejudice but nonetheless hold negative evaluations towards more socially acceptable accents, like RP, and those who wish to express their prejudice but nonetheless hold positive evaluations of certain stigmatised accents, like regional accents. Further, accent is an extremely salient characteristic of an individual, so much so that Kinzler et al. (2010: 586) argue that it should be the fourth social category along with age, race and gender: “Accent, though not visually perceptible, may provide a critical basis for dividing the social world”. This highlights the likelihood of accent stereotyping among British parents, and should therefore be considered when examining persuasion in an oral health context.

### *3.6 Summary*

I have discussed a history of the development of British accents, the study of attitudes to these accents, and relevant media ideologies. What emerges from this review is that people are likely to hold different explicit and implicit attitudes, which has implications for accent persuasiveness. Despite the long history of persuasion research, little work exists on connecting sociolinguistics with this field. Therefore, while there is a public health motivation behind the research question, it also seeks to fill a gap in the social cognition and linguistics literature. The question of accent persuasiveness will be addressed alongside an examination of implicit and explicit attitudes to accents using Gawronski and Bodenhausen’s (2006, 2011) APE model. Work on stereotypes and prejudice demonstrates a close connection with attitudes to accent, and will also help to inform my findings. Hypotheses will be developed and explained in both study one and study two.

## 4 Accents

### 4.1 Overview

This chapter details how the accents were selected for the stimuli used in study one and study two. It then proceeds with a historical and brief phonetic description of the accents, before explaining how the stimuli were recorded and the potential issues that arise when using one speaker for multiple guises.

### 4.2 Accent selection

The accents chosen were Dundee English, Estuary English, Multicultural London English, Yorkshire English, Irish English and Received Pronunciation. The first three accents were selected because these are the accents most strongly associated with the trial group areas. In other words, Dundee English is spoken in Tayside, Estuary English is spoken in Kent, and MLE is spoken in London. Linguistic similarity is a powerful aspect of persuasion that is associated with credibility (Lalwani et al 2005; Nass and Brave 2005). This becomes even more important when the participant has a weaker ability to identify other accents, because it may increase their reliance on their own accent for guidance. Moreover, Coupland and Bishop's (2007) study on attitudes to British accent labels found that *An accent identical to my own* was ranked second for social attractiveness after *A standard accent of English*, and third for prestige after *Queen's English* and *A standard accent of English*. This further justifies the inclusion of these three accents that are associated with each trial area.

The remaining three accents were chosen based on previous research on language attitudes. Hiraga (2005) conducted a study on attitudes to British and US varieties of English. Of the British accents (RP, Yorkshire English and Birmingham), he found that RP was rated highest for status and Yorkshire English for solidarity. Smith and Workman (2008) found similar reactions when they asked volunteers to look at photos of female models, and listen to recordings of women with different accents describing their lives. When asked to rate the models for intelligence, results revealed that Yorkshire English and RP came first and second place respectively. In a report by

Reuters (2009), YouGov found that Queen's English (RP) was rated the most appealing accent with 52% of consumers placing it within their five favourite accents. Yorkshire English was also popular in fourth place, with 24% of consumers rating it within their five favourite accents. In 2014, YouGov repeated the survey, asking British participants to say whether they think each of the twelve main accents of the British Isles are attractive or unattractive. Irish English, RP, Welsh and Yorkshire English were deemed the most attractive (Dahlgreen 2012). Finally, Coupland and Bishop's (2007) study also highlights similar patterns to the above research. They found that Southern Irish was rated third for social attractiveness after *An accent identical to my own* and *A standard accent of English*, and *Queen's English* was deemed the most prestigious. All of these studies measured the association between British accents and traits that are broadly reflected in persuasion: trustworthiness and expertise. Therefore, it was predicted that RP, Irish English and Yorkshire English would have greater persuasive power in relation to other British accents, which did not rate as highly against such criteria.

### 4.3 Accent description

Section 3.2 provided an overview of the dichotomy between RP and regional accents in the context of attitude research. Here, I will outline a more detailed history for each of the chosen accents, and their prominent social and linguistic features.

#### 4.3.1 Received Pronunciation

As section 3.1 focused in detail on the development of attitudes to RP, this discussion will be reserved for a review of how RP's linguistic features have changed. While RP is "non-localized, betraying little (if anything) of the speaker's place of birth" (Mugglestone 2007: 258), it is phonologically a south-eastern accent, as indicated by: its non-rhoticity, /ʌ/ in STRUT, and /ɑ:/ in BATH (Kerswill 2007). RP remains the accent of the upper-classes, but changes have occurred from a linguistic and social perspective. This is due to the previously mentioned increase in social mobility, and a shift in ideology surrounding RP among non-RP users (Kerswill 2007). For example, RP is now often associated with social snobbery and arrogance, which is not how many people wish to project themselves, particularly younger generations (Hughes et al. 2012). Cruttenden (2014) distinguishes between well-established changes (e.g. /ə/ replacing /ɪ/ as in the second vowel of *quality*), near-completion changes (e.g. /dʒ/ replacing /dʒ/ as in *soldier*), and recent innovations (e.g. /ɪə/ is realised as [ɪ:] *beer*).

There are different varieties of RP, which reflect the complex linguistic landscape that has emerged from these changes. Gimson (1970) identified three types of RP: (1)

Conservative RP: RP for the older generations, and certain professions and groups; (2) General RP: typified by the pronunciation of the BBC; and (3) Advanced RP: the future General RP mainly used by young people. On the other hand, in a revised version of Gimson's work, Cruttenden (2014) uses Modern RP to refer to the RP spoken in the late 20<sup>th</sup> century by a wider range of people than in previous years. But he also acknowledges: (1) General British: a replacement of RP that is spoken in South-East England; (2) Conspicuous General British: considered 'posh' and associated with upper-class families; and (3) Regional General British: General British with regional markers. Wells (1982) draws on similar features but, again, categorises RP varieties very differently: Refined RP, Adoptive RP, Near-RP, and Mainstream RP. The project will be using Modern RP (Cruttenden 2014), otherwise known as Mainstream RP (Wells 1982).

It is important to note here that RP is not synonymous with Standard English. According to Trudgill (1999a), the former is an accent which focuses on pronunciation, and the latter is a dialect which refers to grammar and vocabulary. More specifically, he argues that RP is generally regarded as a non-regional social accent of the upper classes, while Standard English is the social dialect of educated classes, but it may display a low level of regional variation.

#### *4.3.2 Estuary English*

Estuary English is a particularly controversial topic in sociolinguistics, because of ambiguity in terms of both its phonetic features and where it is spoken. The term was coined by Rosewarne in 1984 who claimed that rapid changes in RP were due to the emergence of Estuary English, which was developing around "the banks of the Thames and its estuary" (1984: 29). He defined it as a mixture of "non-regional and local south-eastern English pronunciation and intonation", placing it in between Cockney and RP (Rosewarne 1984: 29). This led to a long-standing debate over Estuary English, with little agreement on its definition, features or speaker profile. Altendorf (2003) provides a concise summary on these points of contention. For example, Kerswill (2000) and Crystal (1995) both agree with Rosewarne (1984) that Estuary English is a variety. On the other hand, Coggle (1993) argues that it does not adhere to a clear set of rules, while Trudgill and Hannah (2017) conceptualise it as a group of accents. In terms of the phonetic and phonological characteristics, researchers agree that Estuary English consists particularly of t-glottaling and l-vocalization (Coggle 1993; Rosewarne 1984, 1994; Wells 1998), but there is disagreement regarding *h*-dropping and *th*-fronting. Other problematic areas are the lexicon, syntax, pragmatics, and the supra-segmental levels of language (Altendorf 2003).

Finally, debates arose as to the regional extension of Estuary English. Most researchers are in agreement that it originated around the Thames Estuary, but others contend that it extends to the Home Counties, while some generalise to the South of England (Altendorf 2003). More recently, Kerswill (2007: 50) put forward his definition, which aligned with Trudgill (2001), and argued that it is a “set of levelled (relatively homogenised) regional – as opposed to local – accents or dialects spoken in the south-east of England” by lower-middle classes. In response to the highly debated issue as to whether Estuary English was replacing RP, Kerswill (2007) claimed that the increased social mobility at the end of 20<sup>th</sup> century meant that this accent has become more prominent, and RP is being adopted by fewer people. Importantly, Hughes, et al. (2012) note that, despite little linguistic evidence, Estuary English has been almost universally accepted as the new Standard English, driven by the media’s confidence in RP’s decline. However, it is Altendorf’s (2016) revised contribution to the debate which provides a refreshing perspective. She observes how experts perpetuate an Aristotelian tradition of categorising a linguistic phenomenon, such as Estuary English, without consulting laypeople. She argues for a shift away from viewing this controversial accent as an object that needs to be categorised, to a focus on how the speakers perceive the accent. This perspective forms the basis of the accent identification task in chapter 5.

#### *4.3.3 Multicultural London English*

MLE is a multi-ethnolect that can be traced back to the large influx of immigrant communities in urban areas of London during the 1980s (Kerswill 2014). The earliest work on MLE emerged from a project conducted from 2004-2007 (Kerswill et al. 2004-2007) which compared speech in a multi-ethnic borough of East London, Hackney, with a predominantly monolingual borough in Outer London, Havering, where there was no recent immigration. The second significant project ran from 2007-2010 (Kerswill et al. 2007-2010) and explored speech in a wider area of East and North London. The researchers found a series of innovations in the multi-ethnic boroughs, relating particularly, for phonology, to diphthongs, among both Anglo adolescents, whose families have local roots, and non-Anglo adolescents, who have immigrant backgrounds. It is argued that MLE is specific to multi-ethnic communities, such as Hackney, where adolescents from diverse backgrounds communicate in English from a young age via second-language acquisition (Winford 2003: 235-237). In this way, Cheshire et al. (2011) claim that MLE is best understood using Mufwene’s (2001) concept of the feature pool whereby different input varieties affect the variants available to speakers. Trudgill and Hannah’s (2017: 22) work builds on Cheshire et al.’s (2011) research, describing it as a “lingua franca” which emerged from contact between

African, Caribbean, South Asian English, Cockney, Jamaican Creole, and second-language Englishes. They also note its syllable-time as opposed to stress-timed nature, which “makes a particularly non-native impression” (Trudgill and Hannah 2017: 23; see also Torgersen and Szakay 2012). As it is closely linked to both adolescents and immigrants, MLE has received a lot of British media attention, which is most often negative (Kerswill 2014). This will come to the fore later in the analysis of implicit attitudes.

#### 4.3.4 Yorkshire English

According to the Yorkshire Dialect Society (2018), in the minds of most people, a Yorkshire accent is the “dialect of the heavily industrialised West Riding” (West Yorkshire and South Yorkshire after 1974). They argue that this is due to radio and television programmes which fail to distinguish between other accents in the county. For example, this type of Yorkshire accent differs from the speech of the old North and East Ridings where there is a strong Scandinavian influence. Given that it is the largest county in England (Yorkshire English Dialect Society 2018), this variation is expected. Lodge (2009) notes that it is unrealistic to talk of ‘*the* Yorkshire accent’, because speakers are not homogenous. He asserts that this is particularly the case in the 21<sup>st</sup> century where mobility and interaction are more common, and rural dialects are less stable. It is much easier to aim for ‘*a* Yorkshire accent’ instead, with similar core features occurring in most of the local accents (c.f. Beal 2004; Trudgill 1999b; Wells 1982). As this was the only Northern accent in the stimuli, more refined distinctions were less necessary for the stimuli recordings than with Estuary English, RP and MLE, which are all associated with London. Nonetheless, there are crucial North/South distinctions which were required for the stimuli of this accent. According to Trudgill (1999b), one characteristic feature is the short front /æ/ vowel in BATH, which is typical of Northern speakers. He also observes that FOOT and STRUT vowels are pronounced the same in a Northern accent, unlike in southern accents where these are pronounced /ʊ/ and /ʌ/ respectively. Monophthong [o:~ɔ:] for the GOAT vowel is also characteristic of the West Yorkshire accent (Watt and Tillotson 2002). Finally, the word-final vowel in words such as *city* and *happy* is lax in West Yorkshire as in /ɪ/ (Beal 2004). For this project, a West and South Yorkshire accent was encouraged to ensure the elicitation of attitudes to key northern features.

#### 4.3.5 Dundee English

Dundee English is spoken in a different country from the remaining four accents. It is the accent of a coastal city in East Scotland, which is part of a larger area called Tayside. According to Johnston (2007), Dundee English is also part of the broader Scots dialect, which emerged from a Northumbrian form of Old English between 525 and 633 AD. This dialect arose in south-eastern Scotland before spreading across the Lowlands, which encompasses Tayside, in 1200, and then up to the Northern Isles (Johnston 2007). He notes that Scots was the national language of the country until it became displaced after the political union with England in 1707. According to Hughes et al. (2017: 158), the Lowland Scots dialects are “probably the most unlike Standard English and RP”, and there is even debate as to whether they should be considered varieties of English at all. Therefore, as with the North-South divide in England, it is important to note the wider England-Scotland divide, which has long permeated language ideologies in Britain. Matheson and Matheson (2000) argue that Scotland displays many attributes of a colonised country, for example, the British media and education system overlook its historical and literary heritage, and sometimes attack their native languages. Nonetheless, they note that there has been a recent cultural revival, from music to film, which has reawakened national consciousness. This links closely to Abrams and Hogg (1987), who argue that Scotland can be considered high on ethnolinguistic vitality, which is “what makes a group likely to behave as a distinctive and active collective entity in intergroup situations” (Giles et al. 1977: 308). Abrams and Hogg (1987) believe that the country has both high objective vitality, determined by factors such as demographics, status and institutional support, and subjective validity, which is based on people’s perceptions of their objective vitality of their group.

Key consonant linguistic characteristics of Lowland Scots include rhoticity; dark [ɫ] in all positions; frequent t-glottaling; and retention of /h/ (Johnston 2007). Vowel features consist of, for example, /u/ instead of /au/, e.g. *hoos* for *house*; homophones for *coat* and *cot* as in /kot/ (Hughes et al. 2017). In terms of Dundee English, it belongs to a subdialect called East Central North, which covers other areas such as Fife, Kinross, as well as some of Angus and Perth (Scots Language Centre 2018). There is far less research on this accent compared with the previous accents, but Kirk et al. (2018) observe the following accent-specific characteristics: monophthongization of *mouse* as in /mu:s/ and vowel changes as in /gɫɛsɪz/ for *glasses*.

#### 4.3.6 Irish English

Riagáin (2007) provides an excellent summary of the history of Southern Irish, noting that Old Irish was brought to Ireland by the Celts around the early centuries of the

Christian era who were migrating from Europe. From the 6<sup>th</sup> century to the end of the first millennium, Irish speakers colonised Scotland. This process was facilitated by Irish monks who set up Christian monasteries throughout the country, until it became the common language for both Scotland and Ireland. However, by the 12<sup>th</sup> century, the first English settlers arrived in Ireland, and a shift began in favour of English. Four centuries later, English established a strong presence in eastern Ireland due to the ambitions of the English monarchy, and the importance of English for social advancement becoming increasingly obvious.

Hickey (2007) offers a more linguistic overview of this accent, observing that there are three terms which describe the English spoken in Southern Ireland: Anglo-Irish, Hiberno-English and Irish English. He further comments that the south of Ireland can be broadly divided into two dialect areas, the east coast, which was influenced by English settlers in the late Middle Ages, and the south and west, where the Irish influence survived longest. However, Hickey (2007) argues that despite these accent differences, there are features which are typical in both varieties. Irish English is characterised by: clear /l/ in all environments; lenition of alveolar stops in high sonority positions, e.g. [sɪtʲi] for *city*; retention of syllable-final /r/; and distinction of short vowels before /r/, e.g. [tɛ.ɹm] for *term*. It is equally important to note that *r*-lessness, and *h*-dropping are signs that a speaker definitely is not Irish. The female actor was therefore encouraged to retain all these features when recording the speech stimuli.

#### 4.4 Speech stimuli

It is important to note that the scope of the research only allowed examination of the persuasive effects of accents for one speaker gender. Unfortunately, the majority of work on gender and persuasion has focused on the recipient and there is much less on the persuasiveness of the speaker. Research on gender role stereotyping in British radio advertisements suggests that men often take the narrator role, and are the product authorities compared with women who are the users (Furnham and Schofield 2011). However, this study also found that women are significantly more likely than men to appear in the home and promote products related to bodily health and food. As discussed in section 2.6, the BBarTS intervention material is a series of eight animated storybooks, which centre on the adventures of two frogs called Zip and Pop. The stories incorporate health messages relating to oral hygiene and diet, and every story concludes at Zip and Pop's home. Therefore, one could argue that using a female speaker would match the stereotypes that emerge in the stories and enhance persuasiveness, even when the visual is non-human. Nass et al.'s (1997) study on gender stereotypes and human-robot interaction offers support for this claim, which is relevant given that Zip and Pop



are anthropomorphized animal characters. They found that subjects gender-stereotyped computers, for example the female robot was perceived to be a better teacher when the topic was about love and relationships. For all these reasons, a female speaker was used for this project, but it must be mentioned that this decision was based on the specific parameters of this study, and the relationship between speaker gender and persuasion warrants further exploration in other contexts. A local speaker of each accent was asked to judge the accuracy of a sound clip produced by two female actors. Based on their judgements, the guises were produced by a 21-year-old female actor using a Zoom H2n. She was instructed to record the stimuli with a similar intensity, pitch and personality to control for the strength of the accent. All six guises were then identified blind by three trained linguists who judged these to be comparable. This female actor was also selected because she was runner-up of the 2015 Carlton Hobbs Bursary which looks for “distinctive, versatile radio voices to form the nucleus of new talent” (BBC 2014).

Using a single actor for multiple guises raises issues which have been outlined by Garrett et al. (2003) in their review of the MGT. First, they note the style-authenticity problem which refers to the issue of asking participants to judge decontextualized language as opposed to natural, more meaningful language. My findings will inform the production of the BBarTS animated cartoons whereby an actor will be recorded reading out the story, and then watched by parents and children at home. Therefore, eliciting attitudes to utterances that are “merely voiced” is less problematic, because the experimental environment and natural environment in which the accents are judged is similar. This is particularly the case for study two where the stimuli are the BBarTS storybooks. Garrett et al. (2003) also touch on the accent-authenticity problem which criticises the so-called “advantage” of controlling for speech-related idiosyncrasies, such as rate and voice quality. This is an exploratory investigation of how accent can change one’s mind, and is hopefully the first of other studies to empirically study how language can influence persuasion. Not controlling for other linguistic variables would make it harder to ascertain the effect of differences in pronunciation specifically. The salience problem refers to asking participants to evaluate the same message repeatedly, because this potentially heightens the salience of accent variation far more than would be the case outside of the research environment. While the explicit measurement procedure involved two matched-guise tests, the stimuli used to measure accent persuasiveness incorporated a variety of content, as opposed to repeated message content (see section 7.2). The perception problem relates to how reliably participants have perceived the accents as intended. Chapter 5 addresses this concern through an accent identification task whereby each participant was asked: Where in the United Kingdom is the speaker from? Response labels suggest that accents were largely perceived accurately, which also helps to tackle a more serious issue of

mimicking authenticity. As such, although the stimuli are not necessarily 'native', it is certainly arguable that they are exemplars of the different accents. Finally, Garrett et al. (2003) emphasize that no methodology is without its disadvantages, and it is a question of balance between demands of reliability and validity. I have opted to use a female actor for multiple guises because it allows for a more controlled study of accent persuasiveness.

## 5 Study one: Accent identification task

### 5.1 Overview

In this chapter, I will discuss one aspect of study one: the accent identification task (task 8, Table 5.1). I will first describe the purpose of this task, which was initially to verify the accuracy of the guises. As findings proved very useful from a perceptual dialectology perspective, I briefly review literature from the field to contextualise the results. Participants for study one are described based on the data provided in task 10. The remainder of this chapter focuses on how participants in all three trial areas labelled each accent, and how these labels inform the attitudinal results of study one (chapters 6 and 7).

*Table 5.1 Order of tasks and number of questions for study one*

Task number	Task	Number of questions/trials
1	Brief mood questionnaire	1
2	Implicit attitude test	126
3	Self-monitor questionnaire	18
4	Self-esteem questionnaire	10
5	Need for cognition questionnaire	18
6	Dogmatism questionnaire	20
7	Explicit attitude test	12
<b>8</b>	<b>Accent identification task</b>	<b>6</b>
9	Written form questionnaire	120
<b>10</b>	<b>Demographic questionnaire</b>	<b>6</b>

According to McKenzie (2008a), researchers often assume that the speech stimuli used in language attitude studies are accurately recognised by participants. He argues that if this is not the case, and they are misidentified, then attitudinal results will be harder to interpret. Identifying the speech stimuli is even more important when the participants are non-native speakers of English. The trial area Newham has a large proportion of immigrants whose first language is not English. This accent identification task was therefore crucial for confirming the validity of the speech stimuli, particularly

given that, as stated in section 4.4, using one speaker raises the possibility that certain accents are more linguistically accurate than others.

Measuring the validity of the guises can be approached in two ways. The first is from an objective perspective, and compares the formal linguistic differences of the experimental accents with those of a native speaker. The second is from a subjective perspective and focuses more on whether the accents are *perceived* to be from the correct area. This shift from analysing speaker production to listener perception was endorsed by Altendorf (2016) who argued that objectively categorising a variety is not as informative as exploring how the lay hearer experiences it. Combining these two requirements resulted in a single-item question asking participants: ‘Where in the United Kingdom do you think the speaker is from?’ Asking respondents to listen to an accent and assign each accent to a region is similar to dialect identification (Preston 1999). This technique focuses on how accurately laypeople represent linguistic facts and their distribution (Preston 1996), and is used in perceptual dialectology studies as well as language attitude research (McKenzie 2008a, 2015a). Although it was not the original intention of the study, the experiment ended up making a useful contribution to this area of research, so in this chapter I situate the study within this field, and discuss the results from this perspective.

The discussion in this chapter therefore may sometimes seem more relevant to the field of dialectology than to the specific research questions addressed in this thesis, but understanding whether a participant was able to identify the accents was also important in explaining why a certain accent was persuasive or dissuasive. In section 3.4.2, I described the APE model (Gawronski and Bodenhausen 2006, 2011), which posits that associations are activated upon encountering an attitude object, such as Estuary English. These associations are then translated into a proposition, such as ‘I like Estuary English’, which is accepted or rejected depending on whether it is consistent with other information deemed relevant at the time. The authors use Jones and Gerard’s (1967) observation that the relevant information may be (a) non-evaluative beliefs about the world and (b) propositional evaluations of other attitude objects. This is why asking participants to complete an accent identification task not only examines the validity of the guises, but also sheds light on the possible nature of these associations and relevant information. In turn, this helps us to explain the persuasive effects of different accents. Combining perceptual dialectology and language attitude research also follows from other researchers, such as McKenzie (2015a) who incorporated a similar task into his investigation of implicit and explicit attitudes to English variation to uncover participants’ wider ideologies.

## 5.2 Perceptual dialectology: a brief summary

This sub-branch of folk linguistics owes much of its development to Dennis Preston and has greatly strengthened our understanding of how laypeople perceive linguistic variation. Preston (1999) outlines earlier attempts to systematically study non-linguistic perceptions of language variation, such as Willems (1896) who focused on Low Franconian varieties. However, it was Preston's (1981) series of studies which advanced the field from a methodological angle, employing five different methods. The first of these techniques was draw-a-map (Preston and Howe 1987), which explores respondents' perceptions of regional speech zones by asking them to draw boundaries on a blank, or minimally detailed map. The second is the degree-of-difference method, which measures respondents' perceived degree of dialect difference from their home area on a 4-point (1 = 'same', 4 = 'unintelligibly different'). Third, is when respondents label regions under investigation as 'correct' or 'unpleasant'. This technique bears some similarity to language attitude methods but respondents are basing their judgements on a label rather than a voice. Fourth is dialect identification, where respondents listen to voices on a 'dialect continuum' in a scrambled order and then assign each voice to a region. Fifth is collecting qualitative data in the form of open-ended conversations with respondents about language varieties and their speakers.

Dialect identification was not initially a preferred technique in perceptual dialectology compared with tools such as mental mapping. Despite Preston's claim that mental mapping was more beneficial, he did not entirely reject the utility of responses to voice samples, arguing that they form an "integral part of the perceptual dialectology enterprise" (1999, xxxviii). Additionally, similar to McKenzie (2008a), Preston (1989: 3) argues that excluding dialect identification can hinder interpretations of language attitude results because the researcher does not know how the respondent has classified and identified the voice sample. Given that my research is predominantly rooted in language attitudes, it was important to include this analysis.

Perceptual dialectology is not only useful for measuring accent identification, but it also informs the relationship between lay people's ideas of geographical distribution and language attitudes. Preston (2010) helps to model this linkage through *language regard* (Figure 5.1), a term he prefers to *language attitudes* on the grounds that not all beliefs are evaluative. His model draws on the cognitive mechanisms underpinning this connection between attitudes and geography using Bassili and Brown's (2005) *attitudinal cognitorium*. This model of language attitudes subscribes to the connectionist tradition, which was discussed in chapter 3.

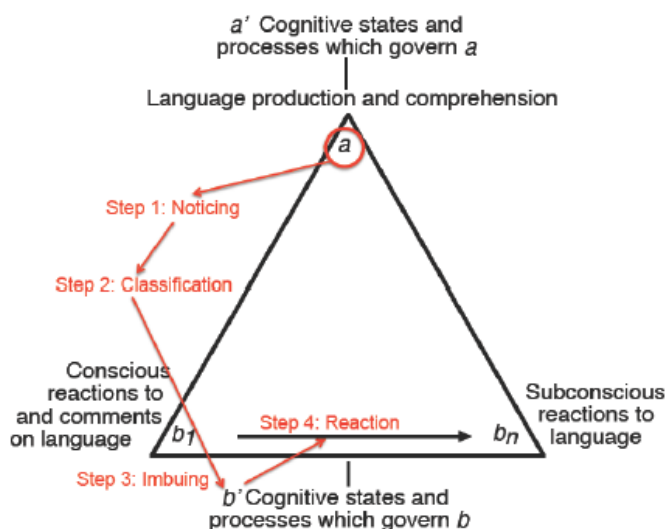


Figure 5.1 A procedural account of language regard — production, noticing, classifying, imbuing, and responding (Niedzielski and Preston 2003: xi in Preston (2010))

In explaining how conscious or subconscious reactions to language production emerge, Preston (2010) argues that upon hearing a language feature ( $a$ ), the listener notices the feature (Step 1) and then classifies it (Step 2) before imbuing it with caricatures of that identity (Step 3). Sometimes, classification is not needed if the listener has frequently encountered this feature in the past, and has therefore already imbued it with characteristics. After imbuing comes reaction, which can be either subconscious (implicit) or conscious (explicit). From the perspective of cognitive mechanisms, noticing takes place via a process called *construal* which is governed by the eliciting conditions, the perceiver's pre-existing knowledge, their procedural capacities and their underlying conceptual structure. In turn, this process is also characterised by the strength of the object-evaluation connection in the cognitorium, as well as the perceiver's experience and frequency of the object. The step after *construal* is activation which finally allows for the emergence of a weighted response between explicit and implicit attitudes.

Another relevant piece of research is Montgomery (2012) who introduces the concept of *bare proximity* in relation to the Scottish-English border and the North-South divide. He builds on Gould and White (1986) and Preston (1999) whose work on perceptual geography suggests that respondents often draw areas local to themselves when asked about dialect boundaries. *Bare proximity* is the notion that people know more information about locations which are closer to them than locations which are further away (Montgomery 2012). This echoes research in social cognition that in-group members are generally more likely to view out-group members as undifferentiated (Tajfel and Turner 1979). However, according to Gould and White (1986), perceived proximity to a location is not static because it is also influenced by our surrounding

information space, which is highly complex. They argue that the flow of information can be limited by barriers other than distance, for example politics or language, which increase the perception of physical distance (Gould and White 1986). Just as perceived proximity to locations can be reduced, it can also be increased through *cultural prominence*, which is a notion that Montgomery (2007) proposed in his research on the relationship between the North and South of England. Cultural prominence is intensified through factors such as media exposure, which Stuart-Smith (2011: 224) argues has an inevitable influence on speakers' "metalinguistic awareness of linguistic varieties and variation, standard and non-standard, and the ideologies surrounding them". For example, Kerswill's (2014: 428) analysis of the objectification of 'Jafaican', the media's label for MLE, demonstrates the powerful influence of the media in attenuating proximity by fostering negative stereotypical beliefs about accents: "By the same token, the media can actually create new concepts which may or may not have been perceived by the public at all". This chapter will draw predominantly on Montgomery's research, particularly the notions of the proximity effect and cultural prominence. These concepts are useful in understanding the persuasive effects of British accents in different areas of the country, and I will draw on the findings here in chapters 6-7. Finally, it must be noted that perceptual dialectology can be the study of dialect variation, which focuses on perceptions of variations in grammar and vocabulary, or the study of accent variation, which concentrates on perceptions of variations in pronunciation. This study will be examining the latter, much like previous work on the phenomenon (c.f. Boula de Mareuil and Bardiaux 2011; Boughton 2006; Leach et al. 2016).

### *5.3 Methodology*

Here I will outline the participants which apply to all sections of study one (chapters 6-7). The procedure, however, refers only to the accent identification task.

#### *5.3.1 Participants*

The criteria for the current BBaRTS trial is that parents should be from Tayside, Newham and Kent with children aged five to seven. Mirroring the criteria of the BBaRTS trial was important in eliciting attitudes that would accurately reflect those of the target population. However, to facilitate recruitment, the age range was slightly altered to include children under eight. 114 parents of children under aged eight participated in total – a relatively small number compared to the target sample size of 150, which will be discussed at the end of this section and in chapter 9. While the age of

the parents was not collected, the age range of participants was estimated on the basis of their appearance and other kinds of information volunteered between 25 and 45 years old.

I will now briefly detail the samples in each area and the recruitment procedures. The demographic information was collected in task 10, which required participants to write down their relation to the child, languages spoken at home, level of education, postcode, occupation, and if they lived with another caregiver, that person's occupation.

In Tayside, 46 parents took part in the study. Of these 46, 11 were from Dundee (East Tayside), two were from Kinross (South Tayside) and the remaining 33 were from Perth (North Tayside). All but three participants only spoke English at home, while two spoke English and Polish and the third spoke English and Czech. As with all three trial areas, most of the participants in Tayside were the child's mother (39/46), but participants also included the child's aunt (2/46), their grandparent (1/46), their father (3/46) and their caregiver (1/46). In terms of education, the majority of participants had further education (44%), while 32% had higher education and 24% had secondary education. This links closely to the occupations held by the participants and their partners. Mothers tended to hold administration and receptionist type roles, as well as positions in hospitals, such as dental nurse and dental technician. Others were homemakers, which was a frequent occupation across all three trial areas. Less common occupations included hospitality and pastoral jobs, for example, childminder, carer, nursery nurse and B&B owner. Equally, the fathers also held a vast range of occupations, but many were vocational, such as scaffolder, ceiling fixer, driver, electrician, roofer, painter and car valet. Other positions were professional, for example, scientist, business consultant, fraud manager, and project engineer. Certainly in terms of socioeconomic status, the sample was therefore composed of individuals from an array of occupations and educational backgrounds.

In order to recruit these participants, I liaised with a member of staff at a dental hospital in Perth and Dundee, who assisted with recruitment of other staff members and patients. Potential participants were contacted by a member of staff two months prior via telephone to gauge their interest in the study. If they agreed to take part after hearing details of the research, the staff member then organised a suitable time with the parent. This was followed by a letter to confirm their appointment, and a reminder text message from the dental hospital the day before their time slot.

In Newham, 34 parents participated who were from different areas of the borough. 20 resided in Central and South East Newham, which comprises neighbourhoods such as Beckton, but just over a quarter of participants lived in North East Newham (9/34). A handful of participants came from South West Newham, in areas such as Canning Town (3/34). Lastly, two participants were from more North



West of the borough, which includes areas such as Stratford. Similar to Tayside, the majority of participants were the child's mother (30/34) but four participants were the child's father. In terms of languages spoken at home, this was the area with by far the most diversity. Only 9/34 participants claimed to speak just English at home. The remaining 25 participants spoke at least one of the following languages in addition to English: Albanian, Italian, Bengali, Gujarati, Malayam, Punjabi, Somali, Tamil, Spanish, Urdu, Telugu, Hindi, Polish, Romanian and Kannada. Of these 25, three participants did not speak English at home and only spoke their native language (Polish, Romanian, or Bengali). Regarding education, 38% of participants had higher education, 38% had further education and 24% had secondary education. This suggests that the sample contains a spread of individuals from different socioeconomic backgrounds, which can be reinforced by the occupational data. The mothers held a variety of posts, but many were closely linked to the school environment, such as midday supervisor, teaching assistant attendance officer, and cleaner. Other jobs included CCTV operator, civil servant, and accountant. As per Tayside, there were a range of vocational professions among the fathers as well such as painter, postman, construction, lift/escalator manager and more professional jobs, for example, Department of Work and Pension, school business manager, IT businessman and administrator. Once again, the sample therefore comprised individuals from a diverse range of occupational, linguistic and educational backgrounds.

Lastly, in Kent, 34 participants took part in the study. 14 of these parents were from North West Kent in the Dartford area, 14 were from East Kent in the Canterbury area, four resided in Medway, which is more North East Kent, and two participants lived in the Tunbridge Wells area of West Kent. Much like Tayside and Newham, the majority of participants were the child's mother (28/34), but five were the child's father and one was their grandmother. Kent was the most homogenous from a linguistic perspective with 32/34 participants speaking only English at home. Alongside English, one participant spoke Welsh and another spoke Danish. Another feature that sets Kent apart from the other trial areas is the educational data. As a more affluent region of Britain, it is perhaps not surprising that 47% of participants had higher education, which is the highest of all three areas. 32% of participants had further education, and 21% of participants had secondary education. This is reflected in the occupations held by the mothers and fathers of the children. Positions held by mothers included roles such as university lecturer, psychologist, commission-based artist, chartered accountant and independent trader. Jobs of the father included medical director, managing director, director of sales, data analyst and business data manager. However, there were also a variety of vocational roles held by fathers too, such as builder, heating engineer, electrician, and plumber. Therefore, even among this sample, we can also see that the

sample included individuals from varying levels of education, as echoed in their occupations.

Parents in Kent and Newham were recruited through two primary schools in each area, which was approximately a six-week process. An initial email was sent to the receptionist inviting the school to take part in the study. This was followed by a phone call after one week asking if they had received the email, and then another phone call one week later. If a response was not heard one week after this, no further attempts were made to recruit that school. Information sheets and consent forms were sent to schools who had agreed to participate and then distributed to all parents with children in the required age group. Depending on advice from the school, a poster or cover note was also enclosed which summarised the research. Each information sheet and poster listed available timeslots per day over a two-week period, and asked parents to contact the school office or researcher in order to arrange an appointment. Once experiments began at the school, participation was encouraged by approaching parents in the playground at the beginning and end of the school day.

It should be noted that there was an uneven number of parents in each area due to recruitment challenges. Initially, I sought to recruit 150 parents in total with 50 parents in each area. This is because six accents were tested, and 50 was deemed adequate for statistical analyses. However, this figure accounted for the possibility of recruitment difficulties. Given that parents with young children are very time-poor, the sample size was just below the target in Tayside and slightly lower in Kent and Newham. I address the consequent issues of generalizability in section 9.2.

Lastly, I did not initially intend to record participant proficiency, but it became clear after several participants that this could provide additional insight into why certain accents may be more persuasive than others. This is because a small number of participants, particularly in Newham, were not highly proficient in English. I recorded their English proficiency on a scale of 1-5, where 1 was low and 5 was high. This was a subjective scale that I applied based on informal conversations between myself and each participant during the experiment. Once I had finished all experiments in one area, I revised the scores such that each proficiency score was relative to other participants in that area. This raises questions regarding the validity and reliability of eliciting judgements from those with proficiency issues. However, while it is unlikely that participants with a lower proficiency of English could access the same stereotypes as those with a higher proficiency, their attitudes are still important from a processing perspective. Dragojevic and Giles (2016) argue that processing fluency is another mechanism, independent of stereotyping, by which language attitudes are formed. They define this additional dimension of judgement as “the ease or difficulty with which

information is processed” (2016: 397). A low proficiency of English may therefore affect how easy it is to process an accent, and influence one’s attitudes towards it.

### *5.3.2 Research instrument*

As will be outlined in chapter 7, there were two matched-guise tests (task 7); one in a neutral context with a set of directions and one in an oral health context offering advice on how to avoid tooth decay. Stimuli from the matched-guise tests were used for the accent identification task rather than new stimuli because this would ensure that any findings could be attributed to participants’ ability to identify the accents rather than differences in experimental material. In line with previous variety identification tasks (McKenzie 2008b, 2015b), participants were asked to write their response to the question ‘where in the United Kingdom do you think the accent is from?’ A pilot study was conducted in February 2016 among 10 university students to evaluate the feasibility of the study, and make improvements where required. University students were therefore recruited as opposed to parents because demographics were not important for the purposes of the pilot study. It emerged that that participants were hesitant to guess an answer unless they were certain that it was correct. It was therefore decided to reassure participants at the beginning of the task that there is no right or wrong answer.

### *5.3.3 Procedure*

Following task 7, a clip of all six speech samples from the oral health matched-guise test were played to participants and they were asked to write down their answer to the accent identification question. Due to the lengthy duration of the experiment, participants were played three sentences from each speech sample as opposed to the entire speech sample. As per McKenzie’s (2015b) study, participants were allowed to listen to the clips only once. On a few occasions, participants struggled, particularly with Estuary English and RP, and so I asked them if they had any associations with the accent to encourage a response. If participants felt that they still did not know the answer, then they left it blank, but all response times were under 30 seconds. After completing task 10, participants were debriefed and paid £10 for their time. In total, the experiment lasted around 45 minutes to an hour.

### *5.4 Results*

Even though the question posed to the participants was designed to elicit a geographical response, many answers were not geographical. This was predominantly the case for

RP, Estuary English, MLE but also Dundee English and Yorkshire English. Based on the responses given, categories emerged for different accents. I am aware that my position as a researcher may lead me to categorise a response, for example, *posh* as class-based, which was not intended by the participant. I therefore attempt to provide a justification for my categorisation decisions and acknowledge possible ambiguity (see section 9.2. for further discussion). Results are presented in Tables 5.2-5.19 containing the response and its frequency. I discuss each accent in turn, focusing on one area at a time, as well as offering insight into why such responses may have occurred. In total, there were six responses per participant, which resulted in a total of 690 responses.

#### 5.4.1 RP

Tables 5.2-5.4 display the responses in order of frequency. Not unexpectedly, the first category to emerge was geographical, which appears in green. This includes precise answers, such as *Cambridgeshire* and *Kent*, as well as broad answers, for example, *England* and *South of the country*. There was an abundance of responses which hint that the accent was perceived to be spoken by upper classes, and these are coded in blue. These include adjectives like *posh* and *snobbish*, as well as occupation-related answers, for example *professional* and *business*, because they draw on RP's associations with education. Responses *polite* and *well-spoken* are slightly trickier, because they are less obviously linked to class. However, they are also, by definition, often used to describe people who are cultured and refined, thus emphasizing associations of class. Lastly, there were a series of responses in purple which highlight RP's geographically neutral nature, such as *not specific*, *generic*, *normal*, and *nothing accent*. By this reasoning, it is regarded as unmarked and possibly seen as a standard accent of English. Labels such as *English* and *British* were also assigned the standardness category, because it suggests that the participant believes that the accent is equivalent to the English language. This is corroborated by participants' comments when answering this question, such as "Well, it's just British", before writing *British* as their response. In addition, responses relating to clarity, such as *clear*, were categorised as standard, because a perceived ease of processing suggests that a participant may also perceive the accent as a model of English pronunciation. Slightly more ambiguous answers are: *proper* and *best*. This is because one could argue that they refer to someone who is from the upper class, much like *well-spoken* and *polite*. However, *proper* and *best* seem to allude more strongly to notions of correctness, and I therefore placed them in the standardness category as well. Similarly, *commercials on TV*, a response by a participant from Newham, implies that RP is potentially viewed as standard English pronunciation reserved for media communication. This is because the same participant also responded *TV* for Yorkshire

English. Given the addition of *commercials*, it suggests the participant differentiated between these two accents, such that RP is reserved for advertising and Yorkshire English has a more specific usage for certain television shows (see section 5.4.4). The final two answers *nice* and *nicely speaking English* are perhaps the hardest to categorise simply because one may regard an accent as nice because it is correct *or* refined. Given the ambiguity, I have left these responses in black to avoid incorrectly imposing my judgement. I have placed *RP* and *Received* in red as these are the only answers which name the accent directly. It should be noted that, on occasion, participants provided a response which contained more than one word, each belonging to a different category. For example, *Central London (posh)* can be seen as both a geographical and a class response, and so *Central London* was coded in green and *(posh)* was coded in blue.

Table 5.2 Tayside participants' responses for RP (n = 46)

Response	Freq	Response	Freq
London	7	Non-descript	1
Posh	5	Northern	1
England	4	Not specific	1
English	2	Nothing accent	1
Posh London	2	Oxfordshire	1
Anywhere in the UK	1	Posh (Downton Abbey)	1
Broad English	1	Posh South	1
Cheshire	1	Private school	1
England posh voice	1	Scotland	1
English polite	1	South England	1
London England	1	Welsh	1
Non accent / posh	1		
No response provided	8		
Total		46	

Table 5.3 Newham participants' responses for RP (n = 34)

Response	Freq	Response	Freq
London	8	North London	1
Clear	2	Nottingham	1
England	2	Oxford	1
British	1	Posh	1
Central and North London, GP and dentist	1	Queens English/Proper	1
Central London (posh)	1	Snobbish, London, professional	1
Commercials on TV	1	South East	1
England (clear)	1	South England (London)	1
Home counties	1	UK	1
Middle class	1	Nice, clean, posh	1
No response provided	5		
Total		34	

Table 5.4 Kent participants' responses for RP (n = 34)

Response	Freq	Response	Freq
London	4	Kent	1
English	3	Nicely speaking English	1
South east	3	Normal	1
Oxford	2	Proper English	1
Southern England	2	Queen's English (RP)	1
Bath	1	RP	1
Business, normal	1	Somerset/Dorset	1
Cambridgeshire	1	South of country	1
Clear, best Surrey	1	South of England	1
Generic South England	1	Southern England (Upper class)	1
Home counties	1	Surrey	1
Home counties (Received)	1	Well spoken	1
Home counties Sussex	1		
Total		34	

The category which appeared most frequently was geographical which is not surprising given the nature of the question. We can see that either *South England*, *London* or *Home Counties* feature across all areas, which is expected given that the origins of RP lay in London and the surrounding area (Hughes et al. 2012; Mugglestone 2007). However, in Tayside, while *London* and *England* appear most frequently, it is very interesting to note the high proportion of negative class-based responses, such as *posh*. This mirrors Montgomery's (2012) findings among participants from North England and the Scottish border, who also labelled the South as 'posh' or 'posher' than the North. This recent development of negative perceptions surrounding RP has been documented, particularly by Mugglestone (2007), who notes that negativity has now been integrated into its complex identity, signalling elitism and exclusivity. Responses such as *private school* are further indications of this negative perception of RP as an accent that upholds in-group and out-group distinctions. Hughes et al.'s (2012) work supports this stereotype, arguing that RP is generally known as the accent of private education, reserved for upper classes who had the financial means to send their children to these schools. There was even one response which drew parallels between RP and *Downton Abbey*, a British period drama about an aristocratic family. This shows how the media reinforce standard ideologies through the use of stereotypes (Mugglestone 2007; Stuart-Smith 2011). While the presence of regional accents on television has increased, there are still shows which serve to perpetuate popular sociocultural stereotypes by reserving RP for serious television such as period dramas. This is also evidence of Montgomery's (2012) cultural prominence, whereby RP is more salient owing to the media exposure. Trudgill (2001) observes that the defining characteristic of this accent is its lack of regionality and association with England, a pattern which is

evident in the Tayside data with responses such as *non descript, anywhere in the UK, nothing accent, and not specific*. It should be noted that eight participants did not provide an answer to this accent, which is the highest compared to the other accents. The prominence of this accent from a social, historical and media perspective makes this result surprising. However, as Tayside participants gave many answers alluding to the non-regionality of RP, one can argue those who did not answer could indeed identify the accent, but could not articulate where it was from. Yet, this is speculative and cannot be verified.

In Newham, there is a large proportion of geographical responses, and while participants from every area included *London* as a response, some Newham participants made a more fine grained distinction by labelling RP as an accent from North or Central London. One likely interpretation is that while the distance between RP speakers and Newham participants is minimal, other barriers such as socioeconomic status may increase the perceived proximity, leading them to assign RP to an area of London which is more affluent. Another intriguing observation is that they seem to position themselves in between the two stances of the Kent and Tayside participants, displaying a small amount of negativity through terms such as *snobbish*, and positive perceptions through terms like *nice* and *proper*. Newham comprises predominantly immigrant populations of low socioeconomic status, so this position may be the result of a conflict, such that they see RP as both a model of English language learning which permits economic advancement and an accent belonging to those who exclude the working classes. As Altendorf (2003: 34) succinctly observes: “RP can be associated with what many strive for, with prestige, money, and power. Seen in a negative light, it can be associated with what many are denied and therefore with social injustice, with elitism and unjustified privilege”. Once again, we also see a proportion of answers which allude to the standardness of RP, for example, *England clear* and *commercials on TV*. Jenkins (2002) observes that RP is often still regarded as a model of pronunciation, which retains a great degree of prestige for foreign learners. This helps to explain why non-native English populations, such as those in Newham, may hold the belief that RP is associated with clarity and television. Additionally, given their potentially reduced exposure to the accents, they were possibly less capable of accessing the deep-rooted attitudes held by native speakers. It is therefore not unexpected that they comment on the processing aspect of the accent compared to geographical, class or other evaluations. Not unsurprisingly, only five participants failed to provide an answer to this accent, which was the lowest of all the accents in the area. This supports the salience of RP in the lives of these participants who are largely non-native English speakers and are likely to be aware of its educational and social status.

Table 5.4 shows that Kent participants did not label RP in terms of class explicitly, except one participant who said *upper class*. Instead, contrary to Tayside participants, they provided many positive evaluations, such as *proper* and *well-spoken*. As RP is associated with South East England, it follows that Kent participants opted to characterise the accent positively. Geographical-based responses were also frequent, as per the other two areas, with a particular focus on South England, London, and Home Counties. Three responses referred to Oxford and Cambridge, which is likely to be rooted in the long-standing association that RP has with the prestigious universities in both cities. Crystal (2002: 18) argues that RP started as the accent of the “cultured classes and especially of the court, the universities and the church in the south-east corner of England in the triangle between London, Oxford and Cambridge”. In fact, Oxford English is a common alternative label for RP (The British Library 2018) which has been propagated through the media in articles such as: ‘How to pass the posh test’ (Jones 2015). This is also the only area to use the word *normal* to describe RP, which again is expected given that the accent is spoken in Kent and the surrounding areas. Overall, Kent participants demonstrated a strong ability to identify the accents. They were all able to offer a response to RP, with only a few answers suggesting that they had not perceived the accent as intended. For example *Somerset/Dorset*, but these areas are still associated with upper-class speakers (Butler 2007), which indicates that they may have gauged the class aspect.

While only three participants said *RP* or *Received*, one could argue that participants in all regions largely associated this accent with features of RP, such as its links with upper classes, South East England origins, and standard-like status. While it is spoken by a small percentage of the population and has developed negative connotations, it appears that its reputation as the benchmark accent against which to evaluate all others has not shifted. Interestingly, different aspects of RP are salient for different people, and these aspects are influenced by their lived experiences of the accent. For example, Tayside participants have more negative perceptions of the accent and will allude to the class aspect more often, whereas Newham participants maintain positive and negative evaluations, because they simultaneously strive to reach native-like proficiency, but also reject the accent’s elitist nature. As we will see, these perceptions are extremely helpful in explaining the persuasive effects of the accent.

#### 5.4.2 Estuary English

We have seen that Estuary English has been an object of controversy in sociolinguistics since Rosewarne first coined the term in 1984. While researchers are not denying its emergence, what fuels the debate are its linguistic features and the social profile of its



speakers (Altendorf 2003). It appears that the ambiguity surrounding this accent extends beyond linguists, given the mixed responses from all three trial areas. Tables 5.5-5.7 show the choice of terms by area. Similar to RP, responses alluding to a geographical location are in green which, once again, range from specific, such as *East London* and *Guildford*, to broad, for example *South East* and *Southern England*. Purple responses refer to the standardness category, for example *normal* and *generic English*. As with RP, I have coded *Cockney* in red as this refers to the name of an accent.

Table 5.5 Tayside participants' responses for Estuary English (n = 46)

Response	Freq	Response	Freq
England	8	South East	1
Essex	7	Surrounding area of London	1
English	6	Kent(ish)	1
London	5	North England	1
South England	2	Lancashire	1
Edinburgh	2	Middle England	1
South	1	Mid-England	1
South Coast England	1		
No response provided	7		
Total		46	

Table 5.6 Newham participants' responses for Estuary English (n = 34)

Response	Freq	Response	Freq
London	15	English London	1
England	2	Normal	1
Local	2	South East	1
Asian	1	Standard English	1
Cockney	1	UK Britain	1
East London	1		
No response provided	7		
Total		34	

In Tayside, there are several responses indicating a lower ability to identify the accent, such as *middle England*, *Lancashire* and *Edinburgh*. However, these account for a small proportion of the overall responses and the majority of participants chose a geographical answer. Of these geographical responses, a large proportion of their answers were *Essex*, which is less frequent in the other two areas. Another intriguing point to note is that eight participants said *England* and six said *English*, which was, in fact, often their answer for the other English accents as well. Inserting *England* into their answers can be seen as a function of an ideological divide between Scotland and England, which will be discussed shortly (see section 5.4.5). However, the use of *England* or *English* was most common for Estuary English, and the latter suggests that it is perceived as a standard English accent in Scotland.

Table 5.7 Kent participants' responses for Estuary English (n = 34)

Response	Freq	Response	Freq
London	4	North Kent/Essex border	1
South East	4	Outer London	1
Essex	2	Round here, South England, Normal	1
Southern England	2	SE (Estuary)	1
Britain	1	SE London or Kent	1
British English	1	South	1
England	1	South East England	1
Generic English London	1	South England	1
Guildford	1	South England/London	1
Inbetween London/Kent	1	Southern	1
Kent	1	Thames Estuary	1
Normal	1		
No response provided	3		
Total		34	

There is slightly less variation in responses from Newham participants, who tended to perceive it as belonging to *London* more than any other location. This is probably because the accent is spoken in this area and, as many participants were non-native English speakers from London, their lived experiences of British accents were not as rich in comparison to Tayside and Kent participants, who associated Estuary English with other geographical regions. Similar to Tayside, seven participants could not answer the question as to where the accent is from, which is intriguing given its prominence in London and the media. This may be due to the lack of associations linked with Estuary English compared with the other accents; for example, while RP is perceived as standard, it also has class-based associations. As Estuary English is more neutral in nature, no single association, whether it was geography- or standardness-related, was salient enough to accurately identify the accent. This is particularly the case among these participants, who are less proficient in English and therefore arguably less exposed to British accents.

Interestingly, the most variation in the geographical criteria comes from participants who are most closely linked to Estuary English (Kent), with 23 different terms, which shows a lack of agreement about its speaker demographics. Some opted for wider scope with terms such as *South East* and *Southern England*, while others were more specific in their answers, for example, *Essex*, *Thames Estuary*, *London* and *Kent*. A handful of participants also suggest that it is perceived as a standard accent, for example *normal* or *British English*. Overall, we can see a strong ability to identify this accent and only three participants did not provide an answer.

The uncertainty of where Estuary English is spoken is echoed in the literature as we saw earlier; for example, Rosewarne (1984: 29) first argued that its origin is the

estuary of the River Thames but also claimed that it was the “most influential accent in the South East England”. Ten years later, he observed its gradual diffusion northwards to Norwich and westwards to Cornwall (1994). On the other hand, Przedlacka’s (2001) study of Essex, Kent, Buckinghamshire and Surrey found that there was not enough levelling to conclude that the inhabitants of these counties are speaking one accent. She did, however, note that old regional variants are less present, which she suggests is evidence for the beginning of levelling. 33 years after the initial conceptualisation of Estuary English, the data here suggests that British people still do not entirely agree on where exactly it is spoken. What should be noted is the lack of responses referring to the Home Counties, except Kent and Essex, which is unlike RP where participants explicitly stated Home Counties, as well as specific areas such as Oxford, Surrey and Cambridge. As such, it appears that Estuary English is perceived as belonging to South or South East England, but only to particular Home Counties (Essex and Kent).

In 1994, Rosewarne also pointed out that the accent was beginning to mask the speaker’s origins. The data here reveal that this continues to be the case for perceivers around Britain as they use the name of the language and country to describe this specific accent (English). In Tayside, this reasoning is marginally weaker as they avoid terms such as *normal* and *standard*, which are used by Kent and Newham participants and are arguably slightly stronger indications of perceived standardness. There are two reasons driving responses alluding to standardness, beginning with the influence of the media. RP initially dominated television, but the introduction of commercial television gave rise to a more informal culture, where non-RP accents like Estuary English became more commonplace (Mugglestone 2007). Despite little linguistic evidence, the media has also cultivated the wide-spread belief that Estuary English is replacing RP (Hughes et al. 2012). The second reason is an increase in dialect contact combined with a shift from local social networks to far reaching social networks (Kerswill 2001). This led to dialect levelling and, in turn, resulted in a rise in Estuary English.

Therefore, Trudgill’s (2001: 178) prediction that Estuary English will not become “anything more than a regional accent, albeit the accent of a rather large region” does not hold entirely true. Estuary English is replacing RP in the sense that it is perceived as standard to some extent. However, Rosewarne’s (1994: 3) prediction is also correct in that it is hard to see Estuary English adopting “an international role with anything like the current prestige of RP”. The class element of RP was very salient among many participants, an aspect which was not evident in Estuary English. One could argue that the positive and negative perceptions of this class aspect (e.g. *English polite* and *snobbish*) confirms the shift in RP from prestigious to pretentious, and the perception of Estuary English as standard highlights the shift from sloppy to standard. It is therefore not entirely unfounded to suggest that in the future Estuary English may be deemed

more prestigious than RP. Either way, it has become apparent that among the various definitions of Estuary English, Coggle's (1993) summary is simultaneously the most vague and accurate representation of the accent:

It should now be clear that Estuary English cannot be pinned down to a rigid set of rules regarding specific features of pronunciation, grammar and special phrases. A speaker at the Cockney end of the spectrum is not so different from a Cockney speaker. And similarly, a speaker at the RP end of the spectrum will not be very different from an RP speaker. Between the two extremes is quite a range of possibilities, many of which, in isolation, would not enable us to identify a person as an Estuary speaker but when several are present together mark out Estuary English distinctively. (Coggle 1993: 70).

While these findings have implications for the on-going debate surrounding the status of Estuary English on an empirical level, they also have theoretical repercussions because they force us to consolidate the perceptions of lay people with linguistic research on Estuary English. Altendorf's (2016) work on Estuary English emphasizes the need to consult non-experts' perceptions of language because they can greatly inform our understanding of language variation. Most crucially, she highlights that fixed categories might not exist; the idea that they exist is a default assumption that is unrealistic when studying ambiguous phenomena like Estuary English. In this way, she urges linguists to avoid the temptation to formalise the accent and not treat speakers as objects by imposing rigid criteria. The data here underlines the importance of this advice, and shows how perceptual dialectology can shed light on contentious issues by illustrating the multi-faceted nature of accents. More crucially, it suggests that there are two competing 'standard' accents, RP and Estuary English, which, as we will see, have an interesting impact on accent persuasiveness, as well as implicit and explicit attitudes.

#### *5.4.3 Multicultural London English*

The next accent is MLE, which produced an array of responses displayed in Tables 5.8-5.10. I argue that these answers can be organised into three categories. Much like RP and Estuary English, many participants' answers were geographical, often referring to an area of London, such as *England East London* or *Inner London*. These are coded in green. Another portion of responses hinted at an awareness of MLE's associations with multi-ethnicity. I therefore coded any term blue if it contained: (1) a reference to what could be considered an ethnicity for example, *Afro-Caribbean*, *Asian* and *Indian*; (2) a reference directly to multi-ethnicity, like *probably not British born* and *mixed*; and (3) geographical locations outside of Britain, such as *Africa* and *Bahamas*. It is important to

note that I deemed *American* geographical as this does not show an awareness of MLE's multi-ethnic nature, but is more likely a result of low exposure to MLE and geographical misidentification. Lastly, there were a handful of responses, coded in purple, which were neither geographical nor multi-ethnic. Instead, these focused on the non-standard element of the accent, such as *slang (common)*, *urban*, and *street*, its links to adolescents, for example, *teenager* and *young*, and stereotypes about the accent like *sarf east* and *innit*.

Table 5.8 Tayside participants' responses for MLE (n = 46)

Response	Freq	Response	Freq
London	12	England South	1
England	5	English possibly from somewhere else	1
Indian	2	Inner London	1
African	2	London (innit)	1
African American	1	London African	1
Afro-Caribbean	1	London mixed	1
Asian/London	1	North London	1
Caribbean	1	Scotland	1
East London	1	South English/London	1
England East London	1	South London	1
England mixed	1	South London	1
England mixed race	1		
No response provided	5		
Total		46	

Table 5.9 Newham participants' responses for MLE (n = 34)

Response	Freq	Response	Freq
London	9	Jamaican slang (common)	1
Africa	1	London/Probably not British born	1
African	1	Midlands	1
African background	1	Newham	1
American	1	Outside London	1
East	1	South London	1
East End	1	Street East London	1
East London	1	UK	1
England	1	Young London	1
No response provided	8		
Total		34	

Starting with Tayside, participants produced the widest range and highest number of labels in the multi-ethnic category compared with Newham and Kent participants. This is perhaps a reflection of their strong awareness of MLE in comparison with other accents because this category, unlike the geographical category, is unique to this accent. We can see that there is disagreement as to which ethnicity is the most strongly linked to accent because some participants felt Africa was more

Table 5.10 Kent participants' responses for MLE (n = 34)

Response	Freq	Response	Freq
London	16	London (Jamaican)	1
African	1	London regional	1
Bahamas	1	Midlands	1
Black	1	Midlands with Indian background	1
Bradford	1	Northern	1
Essex	1	Sarf East London	1
Hackney	1	SE/London	1
Inbetween North/South	1	South East London	1
Indian teenager South East London	1	Urban	1
No response provided	1		
Total		34	

salient while others honed in on the Caribbean or Asia. Some said *mixed* or *English possibly from somewhere else* when they were unsure where exactly the speaker was from, but they wanted to signal that they knew it was a speaker with a non-native English heritage. The second category was geographical, where *London* was the most used term, but several participants opted for more specific areas of London such as *East London* and *Inner London*. Another observation that I have touched on, and will discuss in section 5.4.5, is the insertion of *England* on several occasions, such as *England mixed race* and *England East London*. It seems that they wanted to explicitly state that they perceive this accent as not belonging to Scotland, as a means of distancing themselves due to the widening North–South divide. There is also the very interesting response by one participant of *London innit*, which I will address shortly as part of the youth/slang category. Five participants failed to provide an answer but, aside from *Scotland*, *England* and *England South*, the high proportion of London-centric answers suggests that this accent was perceived as a London variety with an ethnic connotation.

Newham participants were slightly more consistent, focusing predominantly on Africa. It is also intriguing to note that they used this multi-ethnic category less, which may be because ethnicity is not as prominent for them given that they form part of a multi-ethnic population themselves. Participants in this area also focused most on East London, possibly reflecting their relatively sound understanding of the accent, because it indicates that they perceive the accent to be from their own area. The use of *East* as opposed to just *London*, also emphasises the earlier point that they feel a separation between RP and MLE speakers. An additional indication of their ability to identify this accent are participants who alluded to the youth/slang aspect of the third category, with terms *young London*, *street East London* and *Jamaican slang (common)*.

In Kent, only one participant did not answer which, when combined with the responses of the other participants, is further evidence that they have advanced

experiences of British accents compared with those in Tayside and Newham. Excluding *Bradford, Northern, Midlands, Essex* and *in-between North/South*, the remaining geographical responses were *London*. Much like Tayside, there is a variety of terms in the multi-ethnic category, such as *African, Indian* and *Jamaican*, which highlights the perceived diversity of cultural influences on the accent. While there were four responses referring to South East London, one participant wrote *Sarf East* which explicitly refers to the informal nature of the accent. This was therefore placed under the third category, youth/slang, along with terms *urban* and *Indian teenager South East London*.

Having compared and contrasted the responses across all three trial areas, it is worth examining how these criteria emerged. Beginning with the geographical category, the overall prevalence of terms linked to London is not surprising when we examine the discourses surrounding MLE in the media. In Kerswill's (2014) study, 'London' was among the collocations with 'Jafaican', and this association also emerged on several occasions in various news publications, as we see in example (1):

- (1) Playgrounds and housing estates of **London** are alive with the sound of an accent that sounds Jamaican with flavours from West Africa and India (The Evening Standard 2006).

This shows how location may have been fused with the accent in the minds of readers. In turn, it sheds light on how this category has dominated perceptions of MLE from participants throughout the country.

In terms of the multi-ethnic category, we have seen responses that allude to the wide range of cultural influences perceived to be associated to the accent, such as *African* and *Jamaican*. Drawing on his corpus of 58 publications, Kerswill's (2014) research is extremely useful in understanding the prominence of different ethnicities in non-linguists' perceptions of MLE, which is evidenced in example (2). Furthermore, in this corpus, top collocations of 'Jafaican' were 'Jamaican', 'Caribbean' and 'mixture'. Kerswill's findings not only align with the presence of the multi-ethnic category in the participants' answers, but also with the specific ethnicities which emerged.

- (2) There is a new language on the streets of London and other British cities, according to academic research: 'Jafaican', supposedly derived from **Jamaican** and **African** slang, is now way more prevalent than Cockney. (The Independent 2006)

The final category, which was slightly more unforeseen, was youth/slang and further highlights the variety of perceptions surrounding MLE. There are three sub-themes if we examine this category more closely, but there were no distinct patterns by area. The first refers to the notion that this accent is non-standard, belonging to the inner neighbourhoods of London: *Street East London* and *Jamaican slang (Common)*. In example (3), we can see evidence from Kerswill's (2014) corpus which supports MLE's reputation as non-standard. 'Slang' and 'street' also both appeared in the terms which

collocated with ‘Jafaican’, emphasizing how this link between non-standard and MLE may have been formed in the public eye.

(3) They are “**street**” or “Jafaican” expressions which have overtaken Cockney slang terms (The Evening Standard 2010).

The second sub-theme was MLE as an adolescent accent, with responses *Indian teenager South East London* and *young London* from two participants in the dataset. Kerswill (2014) notes that the discourse of ‘Jafaican’ is closely associated with discourse of youthfulness, and he observes that MLE is frequently criticised by authority figures who argue that young black males are unable to codeswitch from MLE to Standard English. This public condemnation of MLE that is directed at youth populations is likely to contribute to the presence of this sub-theme in the data. In conjunction with this, Kerswill (2014) found that media publications further strengthened the correlation between MLE and youth:

(4) It is the first time English Language in the UK has been changed nationally by the **teen age** group (Urban Dictionary 2012).

(5) Despite the name, there is in reality no racial demarcation and a good deal more Ali G posturing here than genuine Jamaican roots, and the chief uniting feature of ‘Jafaican’ speakers is age (**very young**) (Independent 2006).

The final sub-theme draws on the stereotypes of terms within Cockney and MLE: *Sarf East London* and *London (innit)*. The first response is interesting because *Sarf* is actually a closer imitation of Cockney than MLE. The monophthongization of the vowel in ‘South’ (/a:/) is a feature which, according to Wells (1982: 309), “is widely believed to constitute a touchstone for distinguishing between ‘true Cockney’ and popular London”. While the MOUTH vowel in MLE is also a monophthong, the onset for this vowel is lower and more centralised than in Cockney (Kerswill and Torgersen 2008). The response of this speaker may therefore be because they had not heard either accent enough in their life to perceive this difference, particularly given that both accents are non-standard and spoken in London. Finally, one Tayside participant labelled MLE *London innit*, which refers to the discourse-pragmatic innovation widely used in the dialect (Pichler 2016). Kerswill (2014) also draws on examples which contain this term such as example (6).

(6) Jafaikan is the language of British people who talk in a fake Jamaican accent and use word like ‘bizzle’ ‘blad’ ‘shizzle’ ‘**innit**’ etc (Urban Dictionary 2008)

Alongside this, various newspaper articles beyond Kerswill’s work, including ‘Signalling group membership, innit’ (R.L.G, The Economist, 2013b), suggest the enregisterment of MLE in the media (c.f. Agha 2005; Johnstone et al. 2006). The famous satirical fictional character Ali G perhaps also further popularised this phrase in his work, such as the film *Ali G, Innit* released in 1999. Kerswill (2014) notes that both



MLE and Cockney are stereotyped varieties, which provides an explanation for these two responses in the dataset. Overall, the tripartite perception of MLE as a geographical, multi-ethnic, slang accent for young people is a clear consequence of the intense media exposure that has occurred during the past two decades. As we will see, this has significant implications for the persuasive effects of MLE, namely the pressure to conform to norms created by the media.

#### 5.4.4 Yorkshire English

The next accent is Yorkshire English, which was perceived primarily from a geographical perspective but still generated a wide variety of labels (Tables 5.11-5.13). I have coded the response *British* in purple as an indicator of perceived standardness. However, it should be noted that this participant was from Newham and was unable to respond to Estuary English, Irish English and RP, and labelled Dundee English as *Ireland*. This shows that they had a low level of exposure to British accents. I therefore acknowledge that this perceived standardness must be interpreted with caution. The term *common* is also coded in purple because it alludes to standardness in that Yorkshire English is perceived as non-standard. I have also placed three responses, *TV*, in blue, which represent popular culture. Once again, it is useful to examine the other responses of these participants to contextualise this categorisation decision. One Newham participant who provided this response labelled RP as *South England (London)*, and another labelled RP as *commercials on TV*. The Tayside participant labelled RP as *English polite*. This suggests that they do not see the Yorkshire English accent as standard, unlike RP, but have provided *TV* as a response possibly because they associate the accent with popular culture.

Tayside participants produced the greatest variety of answers, but many contained either the term *Yorkshire* or *North*, which shows that they recognised the accent correctly. Several responses suggest that they could not identify the accent, for example *West Country*, *Welsh* and *Devon*, while others demonstrate a slightly more accurate understanding, such as *Liverpool*, *Midlands* and *Birmingham* as these areas are closer to Yorkshire. It is interesting to notice again that some participants said *England* while four others used *England* in conjunction with other areas or phrases, for example, *England Yorkshire*, *England Devon*, and *English TV*. Conversely, *England* only appeared four times in the responses of Newham and Kent combined, which is very telling of the ideology which underpins Tayside perceptions of English. Seven participants did not respond in Tayside, which is nearly as many as RP. I argued that

Table 5.11 Tayside participants' responses for Yorkshire English (n = 46)

Response	Freq	Response	Freq
Yorkshire	8	Leeds	1
England	5	Liverpool	1
Manchester	4	Middlesbrough/Yorkshire	1
Lancashire	2	Midlands	1
Lancashire/Yorkshire	2	North England	1
Birmingham	1	North of England or Yorkshire	1
Bolton	1	North-East Yorkshire	1
Country	1	Northern	1
England Devon	1	Welsh	1
England Yorkshire	1	West Country	1
English TV	1	Yorkshire (Sheffield)	1
Lancashire/N Yorkshire	1		
<i>No response provided</i>	7		
Total		46	

Table 5.12 Newham participants' responses for Yorkshire English (n = 34)

Response	Freq	Response	Freq
London	4	Midlands	1
Yorkshire	4	Northern	1
Newcastle	2	Northern accent	1
North	2	Northern England	1
TV	2	Out of London	1
Australian	1	Outside London	1
British	1	Poland	1
East London (common)	1	Southampton	1
Manchester	1	Up North	1
<i>No response provided</i>	8		
Total		34	

Table 5.13 Kent participants' responses for Yorkshire English (n = 34)

Response	Freq	Response	Freq
Yorkshire	9	Manchester	1
Lancashire	2	NE England	1
Midlands	2	North	1
Northern	2	North West England Yorkshire	1
Birmingham	1	North West	1
Blackpool	1	Northern England	1
Cornwall	1	Northern region	1
Hull	1	Up North	1
Ireland	1	Up North somewhere	1
Leeds	1	Up North Yorkshire	1
<i>No response provided</i>	3		
Total		34	

they may have been able to identify the RP accent, but could not articulate a response due to its non-regional nature. However, the variety of answers for Yorkshire English suggests that they may have struggled to identify this accent, possibly as it is less salient in society compared with, for example, stigmatized MLE and prestigious RP, and it is far away from the participants. Once again, this brings to the fore the important role of the proximity effect and cultural prominence (Montgomery 2012) in laypeople's perceptions of accents.

As anticipated, Newham participants demonstrated the weakest ability to identify the accent, further fortifying the argument that their experiences of British accents are more limited. This is evidenced by answers such as *Australian* and *Poland*, as well as southern cities like *London*, and *Southampton*. However, others were competent at identifying the accent with responses comparable to Tayside, for example *Yorkshire* and *Northern*. In Kent, we can see a similar spread of answers, predominantly those referring to Yorkshire English and the North, as well as other specific Northern cities such as *Blackpool*, *Manchester* and *Hull*. These answers also mirror those of Tayside participants due to the mention of less accurate labels like *Midlands* and *Birmingham*, and even the West Country, *Cornwall*.

The fact that the most common answers in all three areas included either *Yorkshire English*, *North*, or a combination of both, such as *Up North Yorkshire English* warrants further discussion. In her examination of English students' mental maps of English dialects, Inoue (1996) found that the Liverpool area was labelled *Scouse* by some students and *Northern* by others. On this basis, she argued that this was evidence that Scouse was a subdivision of the Northern area and there is a hierarchical system in dialect areas. In the current data, the use of Yorkshire English and Northern seems to show a similar pattern and Yorkshire English is perceived to be a subdivision of Northern. This is substantiated by Hughes et al.'s (2012) claim that regional accents are sometimes discussed in broader terms such as 'Northern' or 'Southern' English, Irish and Welsh. *Up North* also emerged in the areas which are south of Yorkshire: Kent and Newham. Wales' (2000) insightful article on the divide from a social and linguistic perspective helps to explain this term among English participants. Similar to binaries such as 'up' and 'down', she argues that North and South are oppositional, but South England occupies the superior position and North England occupies the inferior position. This divide is reinforced by the dominance of London, which is England's centre of gravity due to its political and cultural power. Popular phrases such as 'North of Watford' highlight the prevalence of this ideology which is further fuelled by the media's othering of North England, for example: 'It's Not Grim oop North' (London Midweek 1997 as cited in Wales 2000). The larger amount of *North* responses from southern participants suggests that there is still a deep-rooted in-group mechanism

which leads them to perceive out-group members who are from a specific area as from a non-specific area.

Across all three trial areas, *Midlands* and *Birmingham* feature in the dataset. This misidentification is most likely because the Yorkshire English accent is spoken in an area that is very far from each of the trial areas, like Irish English, and it is also an accent that is linguistically comparable to accents in the Midlands. In Trudgill's (1999b) classification of English dialects, he incorporates the Midlands into the North, based on features, such as the /u/ in 'but' which is pronounced [bʊt] in both Yorkshire and the Midlands. As this is one of the most prominent markers of the North-South divide (Wales 2006), the large distance between the participants and the accent origin may have created blurred distinctions that did not allow for a more accurate differentiation between a Yorkshire English accent and accents from the Midlands.

The less accurate responses can be broadly subcategorised into South West England (*Cornwall, Devon, West Country*), South East England (*Southampton, East London, London*), North England excluding Yorkshire English (*Blackpool, Liverpool, Newcastle*) and outside of England (*Wales, Poland, Australian, Ireland*). As we will see, this is similar to Irish English, and another example of the proximity effect, whereby increased distance from a location reduces information about the area. Yet, Montgomery's (2012) perceptual dialectology study among those from North England and the Scottish-English border also reveal a lack of consensus. He asked participants to draw lines for different dialect areas on a map and name these areas. Findings revealed that agreement on the Yorkshire English area did not surpass 81%, demonstrating an "unfocused perception" of the area (2012: 651). This unfocused perception is also apparent in the responses of *TV* by three participants and can potentially be traced back to the British soaps which are set in North England, such as *Emmerdale, Hollyoaks* and *Coronation Street*. While the last two programmes are not set in Yorkshire, the conflation of North England and Yorkshire may explain why they perceived the accent to be from the television.

Overall, a large proportion of participants in each trial area recognised that the accent was Yorkshire English or from the North. However, this accent belongs to an area which is farthest from Tayside, Kent and Newham, and, as Montgomery (2012) also discovered, distance from the speaker reduces our knowledge about them. As per previous accents, Kent participants were most able to identify the accent as intended, while Newham participants struggled the most. The distance between participants and Yorkshire English is of notable mention, which emerges in the analysis of attitudes in chapters 6-7.

### 5.4.5 Dundee English

Like Yorkshire English, Dundee English showed less variation with regards to categories compared with RP, Estuary English and MLE. All responses providing a geographical location are in green, and two answers referencing popular culture, *weather girl TV* and *Balamory*, are in purple. Participants' responses to this accent are displayed in Tables 5.14-5.16.

Table 5.14 Tayside participants' responses for Dundee English (n = 46)

Response	Freq	Response	Freq
Scotland	19	Aberdeen	1
Dundee	4	East coast Scotland	1
Edinburgh	4	East Scotland	1
Glasgow	3	Generic	1
Scottish	3	Inverness	1
North Scotland	2	Perth area	1
West coast Scotland	2	Scotland East/Dundee	1
No response provided	2		
Total		46	

Table 5.15 Newham participants' responses for Dundee English (n = 34)

Response	Freq	Response	Freq
Scotland	15	Newcastle	1
Ireland	4	North	1
American	1	Outside London	1
Countryside	1	Poland	1
Italy	1	Yorkshire	1
London	1		
No response provided	6		
Total		34	

Table 5.16 Kent participants' responses for Dundee English (n = 34)

Response	Freq	Response	Freq
Scotland	20	Scotland (Balamory)	1
Scottish	4	Scotland very clear	1
East Coast Scotland	1	South Scotland	1
Edinburgh (Scottish)	1	Wales	1
Scot	1	Weather girl TV Scottish	1
No response provided	2		
Total		34	

Among Tayside participants, the majority of responses were at the country level with *Scotland* or *Scottish*. Eight participants provided more specific, accurate labels, for example *East Scotland*, *Dundee* and *Perth*. There was a proportion of specific, less accurate answers for other cities which were not in Tayside, such as *Aberdeen*,

*Inverness* and *Edinburgh*, and the remainder were other more general, less accurate areas of Scotland, for example, *West Coast Scotland*.

In Newham, we can see that the array of responses from a geographical perspective reflects the participants' weaker ability to identify the Dundee English accent as Scottish. A select number of responses demonstrate that this accent was poorly identified – *Italy*, *Poland* and *American* – but these accounted for a small proportion of the data. A handful of participants confused this accent with other neighbouring British accents, such as those from Ireland and North England: *North*, *Newcastle*, and *Yorkshire English*. Two participants struggled to state the precise area, but could identify that it was not a city accent: *outside London* and *countryside*. However, the majority of participants opted for *Scotland*.

In Kent, all terms also linked to a geographical location with the exception of two participants who made cultural references, *Weather girl TV Scottish* and *Scotland (Balamory)*. The latter is a children's television show that aired in the early 2000s. The weather girl label is most likely a reference to two prominent Scottish presenters on BBC, Judith Ralston and Carol Kirkwood, who have both been the subject of media attention outside of their roles as presenters. For instance, Kirkwood was a contestant in *Strictly Come Dancing* in 2015, which increased her celebrity status, and there have even been comparisons between these two female weather presenters in the media: 'Is this the new Carol Kirkwood? Sexy Scottish presenter competes with BBC Breakfast star' (Warnock, *The Express* 2016). The mention of these stereotypes by non-linguists exemplifies Montgomery's (2012) theory of cultural prominence, and how distance can be minimised as a result of the media. Only two participants did not answer the question, and of those who did provide a response, only one did not say Scotland and perceived the accent to be from Wales.

The use of broader labels from Newham and Kent and specific labels from Tayside participants is in line with Montgomery's (2012) finding that English respondents have a more generalised perception of Scotland. He draws on Tajfel (1978), arguing that English people's sense of belonging to the social category 'English' means that they are more likely to view out-group members as undifferentiated. However, it is also appropriate to mention here that he found Scottish respondents had a more detailed perception of England, which was not the case for the current study. Tayside participants were most likely to use broad labels such as *England* or *English*, and often attached the word *England* when they did provide a more detailed label, for example, *England East London* or *England Devon*. I would argue that this is not motivated in the same way as for the English respondents. In other words, it is unlikely that Tayside participants view English accents as undifferentiated. Instead, their responses seem to epitomise the ideological nature of the North-South divide, which extends beyond

simply geography. They may be aware of the accents at a more detailed level but taking into account the negative perceptions of RP revealed in this study and in the commentary from several participants, they seem to choose generalised responses to signal that they are distancing themselves from England. Broadly speaking, the responses of Tayside participants highlight the utility of perceptual dialectology studies in not merely understanding surface level perceptions but underlying ideologies.

#### 5.4.6 Irish English

Much like Dundee English and Yorkshire English, perceptions of Irish English were limited to a geographical category (Tables 5.17-5.19). 15 participants in Tayside provided specific, accurate labels such as *Dublin* or *Southern Ireland* compared with no participants in Newham and three participants from Kent. This level of detailed perception hints that Tayside participants were more able to accurately identify this accent compared with the other accents, likely due to the long history of Irish settlers in the Dundee (McCready 1998). In Kent, less accurate answers do not display a pattern and range from locations in South West England, such as *Devon* and *Cornwall*, to the Midlands and North England with *Leicestershire* and *Northern*. In Newham, responses were more wide ranging including other countries such as *Spain*, *American* and *Wales*, but the most common response was still *Ireland* or *Irish*. The lack of Irish-based answers and diversity of other geographical areas compared with Tayside participants suggests that this accent was least accurately identified out of all the accents in Newham and Kent. Moreover, the weaker ability to label this accent in Newham, illustrated by the variety of labels, provides further support for the claim that they struggled most overall to identify the accents compared with Tayside and Kent participants.

Table 5.17 Word cloud of Tayside participants' responses for Irish English (n = 46)

Response	Freq	Response	Freq
Ireland	18	Irish (Southern)	1
Dublin	7	Irish South	1
Irish	7	Irish Southern	1
Southern Ireland	3	Northern Ireland	1
Bristol England	1	Scotland	1
England	1	South Ireland	1
Ireland (Southern)	1		
No response provided	2		
Total		46	

Table 5.18 Word cloud of Newham participants' responses for Irish English (n = 34)

Response	Freq	Response	Freq
Ireland	8	Scotland	1
Irish	4	Scottish	1
London	2	South London	1
American	1	Spain	1
Birmingham	1	UK	1
Dorset/Liverpool	1	Wales	1
Leeds	1	Welsh	1
Out of London	1		
<i>No response provided</i>	8		
Total		34	

Table 5.19 Kent participants' responses for Irish English (n = 34)

Response	Freq	Response	Freq
Ireland	13	Norfolk	1
Irish	9	Northern	1
Southern Ireland	2	Plymouth	1
Devon	1	Somerset	1
Dorset/Cornwall	1	Wicklow or Dublin	1
Leicestershire	1		
<i>No response provided</i>	2		
Total		34	

### 5.5 Summary

This chapter was initially dedicated to verifying that the accents under investigation were perceived as intended. For every accent, the majority of responses in each trial area signalled that this was indeed the case. However, participants' ability to identify the accents displayed variation by trial area. For all six accents, participants in Newham found it most difficult to label the speaker's origin, as often indicated by their inability to answer at times, diversity of responses and lack of geographical accuracy. This is arguably rooted in the fact that a large proportion of participants were non-native English speakers whose life experiences most likely reduced their ability to accurately notice the differences between the accents. On the other hand, participants in Kent found it much easier to recognise where the speaker was from, as demonstrated by their strong ability not only to give a response, but also to provide answers which were often geographically accurate. This is perhaps due to Kent's more affluent nature as compared to Newham (and to a slightly lesser extent Tayside), which is in the top 20 local authority districts with the highest level of income deprivation (Department for Communities and Local Government 2015). In other words, participants in Kent perhaps had more opportunities to encounter speakers of different British accents, for example through travel or employment, which allowed them to identify the speaker's



origin with greater accuracy. This coincides with Clopper and Pisoni's (2006) claim that geographical mobility can increase the perceptual distinctiveness of varieties due to greater experience of those varieties. They argue that such exposure helps to develop robust categories and memory of the appropriate label for speakers.

There was also variation by accent. Yorkshire English and Irish English elicited the largest proportion of geographically inaccurate responses, whether this be at the country level, such as *American*, or at the neighbouring city level, for example, *Liverpool*. Conversely, as expected, participants in all three trial areas displayed a strong ability to identify RP and Estuary English. Overall, the accents in question elicited answers which largely suggest accurate identification.

What also emerged alongside these data was a series of valuable yet unforeseen findings, which highlight the utility of perceptual dialectology beyond verifying the validity of guises. This field of research greatly advances our understanding of what underpins attitudes, for example *posh* in response to RP, *TV* for Yorkshire English, *London innit* for MLE, and *normal* for Estuary English. Such responses are rooted in one's life experiences and norms, driven by media, historical and social factors. McKenzie (2015a: 49) also observed the benefit of incorporating laypeople's perceptions of language into attitude research:

It is only through a process of sensitive engagement with the general public, including listening to the opinions, and taking into account the concerns, of non-linguists about language diversity and language change, however discriminatory they may seem, that linguists interested in the social implications of stratified language variation will be able to bring ideological aspects of language to a wider consciousness and ultimately to better understand why non-linguists hold the complex, often contradictory, and frequently prescriptive views about language diversity that they do.

Indeed, what remains to be seen is how these responses influence the persuasiveness of these accents, as well as how they affect implicit and explicit attitudes. The next two chapters will therefore be dedicated to not only measuring the persuasive effects of these accents, but also using these perceptual dialectological findings to explain implicit and explicit attitudes in the context of the Associative-Evaluation Propositional model.

## 6 Study one: Implicit measurement procedure and individual differences

### *6.1 Overview*

Given the exploratory nature of the research, I offer a broad hypothesis that there will be a persuasive effect of accent, which will differ by each trial area. The prediction that this will vary by area is rooted in three observations based on the literature: (1) similarity plays a role in persuasion, meaning people may be swayed by their own accent; (2) the historical dominance of RP, which is an accent associated with Kent, but not with Newham and Tayside; and (3) the media's portrayal of different British accents. The majority of the chapter will be dedicated to the first method used to investigate this prediction: the implicit measurement procedure. It comprised two tasks (2, 9 – Table 6.1) that sought to measure the persuasive effects of the six accents. I will also examine the reaction time element of task 2, and test the hypothesis that reaction time varies as a function of accent persuasiveness. Section 3.3.3 outlined five recipient characteristics which can affect persuasion: mood; self-monitor; self-esteem; need for cognition; and dogmatism. The remainder of the chapter therefore explores the hypothesis that individual differences influence accent persuasiveness. I detail the procedure and findings for the individual differences questionnaires (task 1, 3, 4, 5, 6).

It is important to first justify the use of an implicit measurement procedure in this study, aside from the lack of research on implicit attitudes to British accents. As outlined in section 3.2, accent bias is far less acceptable than in previous years, but under the surface there lies an unspoken prejudice in favour of, and against certain accents. This means that many participants may belong in Fazio et al.'s (1995) third category, which comprises those who are motivated to suppress their prejudice, despite automatic negative evaluations, and vice versa. In other words, when someone is asked about the persuasiveness of a speaker, it is not unlikely that they will formulate their answer so that it is in line with societal expectations of different accents. While these attitudes are an interesting reflection of social norms, it is perhaps more appropriate for

Table 6.1 Order of tasks and number of questions for study one

Task number	Task	Number of questions/trials
1	<b>Brief mood questionnaire</b>	1
2	<b>Implicit attitude test</b>	126
3	<b>Self-monitor questionnaire</b>	18
4	<b>Self-esteem questionnaire</b>	10
5	<b>Need for cognition questionnaire</b>	18
6	<b>Dogmatism questionnaire</b>	20
7	Explicit attitude test	1
8	Accent identification task	6
9	<b>Written form questionnaire</b>	120
10	Demographic questionnaire	6

this research to focus on responses which are more unintentional, uncontrollable, efficient, or unconscious. This is because the BBaRTS animated cartoons will be viewed in the privacy of the parent's home, so there will be no pressure for them to react to the accents in a certain way. In order to replicate the attitudes that would be activated in this scenario as closely as possible, an implicit measure was seen as a more suitable reflection of accent persuasiveness.

Here I have assumed that an implicit measurement procedure is the best way to measure persuasiveness, because self-presentation concerns may lead participants to alter their explicit attitudes. Some research suggests that social desirability bias is not always the sole reason for differences between implicit and explicit attitudes, and in fact, its role in such inconsistencies has been questioned (e.g. Hofmann et al. 2005; Gawronski et al. 2007). Gawronski et al. (2007: 184) assert that the argument of self-presentation is too general to explain "motivational distortions", and individual differences may be more useful in accounting for a lack of correlation between the results of implicit and explicit attitude measurement procedures. For example, as touched on in section 3.3.3, one could imagine a scenario whereby an individual is in a bad mood, and may display a negative implicit attitude to RP because it sounds arrogant. Yet, this would not be revealed in an explicit attitude, because these measurement procedures allow for more thoughtful responses. As will be discussed in the analysis in chapter 7, one can make a strong case that social desirability does play a role in the difference between these attitudes, but given the aforementioned evidence, consideration of more nuanced individual differences is required. In this way, implicit *and* explicit measures of attitudes are important in highlighting the role of self-presentation concerns in accent persuasiveness.

According to Gawronski et al. (2007), many believe that differences between explicit and implicit attitudes may arise because implicit measurement procedures are immune to manipulation, but the authors argue that participants *can* control their

answers more than researchers initially thought. This would render an implicit measurement procedure redundant if there is also an explicit measurement procedure. Gawronski et al. (2007) draw on Conrey et al.'s (2005) work, who assert that overcoming bias is one of four factors that can affect performance on implicit measurement procedures, and relates to the retroactive control of associations. In a study, they found that retroactive control had the biggest impact on participants' task performance, which is evidence that they made successful attempts to control their own response. However, I argue that retroactive control of one's response is not as easy in my implicit task as in Conrey et al.'s (2005) study. Implicit attitudes are often elicited by measuring direct associations between the object, such as a black person, and an attribute, such as 'good'. This perhaps makes the goal of measuring bias more obvious and therefore easier to control. The nature of the current task, which I will explain in detail in section 6.2, made it arguably harder to discern whether bias was the object of measurement, because propositions, as opposed to associations were used. Additionally, the number of trials and complexity of the stimuli created a high cognitive load. In such cases, this leads to higher likelihood of automatic activation of stereotypes (Gilbert and Hixon 1991; Macrae et al. 1994), and fosters conditions to encourage the elicitation of implicit attitudes. Put simply, responses to the implicit measurement procedure used in my study were harder to manipulate, which justifies their use in a study on accent persuasiveness.

## *6.2 Methodology*

Here I will describe the research instrument and procedure for the implicit measurement procedure (task 2 and 9) and the individual differences questionnaires (task 1, 3, 4, 5 and 6). Regarding the former, tasks 2 and 9, attention will also be paid to explaining how exactly the task measures attitude change, and why the task can be regarded as implicit.

### *6.2.1 Research instrument: Implicit measurement procedure*

The first task (task 2) was an implicit measurement procedure, whereby participants had to decide as quickly as possible whether 120 trivia statements, divided into six accents, were true or false, for example *Texas is the largest state in America* (Appendix A). Measuring the association between an accent and the perceived truth-value of a stimulus, such as a trivia statement, provides a window of insight into persuasion. This is because believability is often equated with credibility (e.g. O'Keefe 2002); for example, Kaufman et al. (1999) found that a high credibility source was rated as more

believable, factual and true than a low credibility source. Given that credibility comprises trustworthiness, expertise, goodwill, extroversion, sociability and dynamism (Perloff 2010), it taps into persuasion more directly as compared with measuring the separate associations between an accent and expertise, trustworthiness and so on. I should briefly mention that, as outlined in section 3.4.4, according to Barnes-Holmes et al. (2006) propositions are at the heart of human cognition rather than associations. This view does not align with APE model, which is grounded in associative, rather than propositional, processes. While trivia statements are propositions, the point of interest was not the perceived truth-value of the proposition per se, but the perceived truth-value of the proposition *as mediated by* associations with the accent. Put simply, one's judgement of the perceived truth-value of a statement can provide insights into whether a certain accent is more strongly associated with believability.

Measuring how accent affects the perceived truth-value of a statement is not indicative of accent persuasiveness unless we also measure the perceived truth-value of a statement without accent. This links back to a crucial aspect of Perloff's (2010: 12) definition of persuasion: "A symbolic process in which communicators try to convince other people to *change* their attitudes or behaviours regarding an issue through the transmission of a message in an atmosphere of free choice." In other words, it is only by knowing responses to the same information both with and without an accent which allows us to measure change. Therefore, task (9), which was completed after the other experimental tasks (3-8), involved answering the same trivia statements again, but this time in a less pressurised environment, and on paper where there was no potential for accent effect. Although they were collected *after* the audio responses, the written answers acted as a proxy for the participants' *prior* beliefs to each statement. These could then be compared to their audio responses, because the large number of trials and time between these two tasks (approximately 30 minutes) reduced the likelihood of memorising their initial responses. While it is unusual to measure prior beliefs after current beliefs, evidence suggests that priming effects are stronger when the stimulus is presented visually rather than auditorily (e.g. Roediger and Blaxton 1987). This supports the use of audio stimuli in a task where low memory retention is important. In this way, measuring responses to the same stimuli in written and audio form can empirically test whether accent changed their responses, and examine their implicit attitudes to different accents. Initially, the written task was planned to directly follow the audio task because it was expected that the participants would not be able to recall their initial answers given the large amount of trivia statements. The same pilot study mentioned in section 5.3.2 also sought to test the feasibility of the implicit measurement procedure – in particular whether or not participants recalled their initial answers. Results revealed that participants did in fact remember the majority of their initial

answers. Therefore, in order to increase the likelihood of memory decay, the written task was moved to the end of the experiment. In doing so, this ensured that the persuasive effects were bigger because of the larger gap between the audio and written task. A further related amendment resulting from the pilot study was to emphasize in the instructions that we were interested in the time it took for participants to answer each question, and that they should therefore answer as quickly as possible.

Taken together, it remains to be seen how exactly this task revealed persuasive effects of British accents. Participants heard a series of trivia statements in six different British accents, and they had to respond ‘true’ or ‘false’ as quickly as possible to each statement. These functioned as their current beliefs. At the end of the experiment, they answered the exact same questions again in written form, which function as their prior beliefs. If a participant already believed a statement was true as indicated by their answer on the written form, but they responded ‘false’ in the audio task when they heard the same statement in Irish English, for example, then this would suggest that Irish English has a dissuasive effect. This is because they previously believed the statement was true, but when they heard the statement in Irish English, they decided it was false. On the other hand, if they already believed a statement was false, as indicated by their answer on the written form, but they responded ‘true’ in the audio task when they heard the same statement in MLE, for example, then this would suggest that MLE has a persuasive effect. This is because they previously believed the statement was false, but when they heard the statement in MLE, they decided it was true. Table 6.2 shows the possible combinations of participants’ prior and current beliefs, and the persuasion outcomes. At first glance, measuring how accent changes the perceived truth-value of a trivia statement is more closely linked to beliefs than attitudes. Albarracín et al. (2005) argue that these two concepts are both categorizations that can be conceptualised as a probability assignment, but beliefs are more objective in that they can be verified by external criteria, whereas attitudes are harder to confirm because they are more evaluative. The distinction is reduced in this task because trivia statements have ambiguous truth-value, and so participants’ were forced to rely on their subjective validation in the form of accent credibility. In other words, as the perceived truth-value is not obvious, the task measures the extent to which they evaluate an accent as credible.

*Table 6.2 Persuasive effects combining prior belief and current belief*

Prior belief (written)	Current belief (aural)	Persuasive effect
True	False	Dissuaded
False	True	Persuaded

The time it takes to choose an answer may also be an indicator of accent persuasiveness. According to Fabrigar et al. (2005), fast reaction times may signal high accessibility, because of the stronger association between the accent (attitude object) and the true/false response (evaluation). Conversely, slow reaction times could signal low accessibility, due to the weaker association between the attitude object and evaluation (Fabrigar et al. 2005). In other words, accents can be persuasive or dissuasive to varying degrees. Table 6.3 outlines all possible persuasive effects between current and prior beliefs after incorporating reaction time. For example, the most persuasive accent would be one which caused the participant to quickly select ‘true’ when they already believed a statement to be false. On the other hand, those who slowly select ‘true’ when they already believed something to be false have *just* been persuaded. The most dissuasive accent would be one which caused the participant to quickly select ‘false’, when they already believed a statement to be true. However, if they slowly respond ‘false’ to a statement, when they previously believed it was true, then this signals that the accent has *just* dissuaded them. It must be noted that reaction time was treated with caution because it is not automatically an indicator of persuasiveness. Other potential explanations for varying reaction times in this experiment include stimulus complexity (Bates et al. 1999) and arousal (Welford 1980), i.e. whether a participant is tense or relaxed.

*Table 6.3 Persuasive effects resulting from different combinations between prior belief, current belief and reaction time*

Prior belief (written)	Current belief (aural)	Reaction time	Persuasive effect
False	True	Quick	Persuaded
False	True	Slow	Just persuaded
True	False	Quick	Dissuaded
True	False	Slow	Just dissuaded

The sentences were adapted from online trivia websites and encyclopaedias across a range of topics (e.g. Unkelbach 2007). The statements were not limited to an oral health context because the BBaRTS intervention material contains health messages which are embedded within stories that cover various themes, such as going to the beach or putting on a dance show. However, phrases were excluded which had associations with any of the accents under investigation. For example, *Windsor Castle is the oldest castle in the world*, may strike up associations with RP because this accent is also known as ‘Queen’s English’ and the royal family is linked to Windsor. To increase the persuasive power of accent, the content was made more ambiguous by presenting half true sentences and half false sentences. The pilot study aimed to confirm that the sentences were indeed ambiguous in terms of truth-value, and as forgettable as possible.

Statements which elicited a strong emotional reaction, such as laughter or surprise, were removed and replaced with an alternative. This was gauged by observing the participants' reaction to each statement, and also asking them directly at the end if any statements stood out in particular. This provided very useful feedback and led to refinements in this aspect of the research instrument, for example excluding the following statement: *In France, it is illegal to marry a deceased person*. Lastly, all statements were matched for syllable length such that the average length was 11 for both true and false statements.

### *6.2.2 Research instrument: Individual differences questionnaires*

Participants were asked to complete questionnaires to measure their mood (task 1), dogmatism, self-esteem, self-monitor and need for cognition (tasks 3-6). Mood was important as research suggests that a positive mood increases the likelihood of stereotyping (Bodenhausen et al. 1994). The Brief Mood Introspection Scale (BMIS) (Mayer and Gaschke 1988) has subscales for an array of adjectives such as tired, nervous and calm as well as an 'Overall, my mood is' pleasant/unpleasant scale. In keeping with this literature, the binary pleasant/unpleasant was also used. Concerning granularity, the subscales in existing current mood questionnaires range from 4-6 points (Barrett and Russell 1998; Steyer et al. 1997; Terry et al. 1999), while the BMIS 'Overall my mood is' scale is 20-points. Therefore, in order to retain the participants' attention and achieve a meaningful level of granularity, a 10-point scale was used.

The questionnaires measuring the remaining individual differences were compiled from the literature on each characteristic. Beginning with dogmatism, the initial 40-item dogmatism, or D-, scale was developed by Rokeach in 1960 but has been plagued with problems, such as construct validity and internal reliability (Crowson et al. 2008). Altemeyer (1996) developed a revised scale called the DOG Scale, a 24-item scale which aimed to offer more consistency. Studies examining the DOG scale have proven promising, making it a sound assessment tool for this research. For example, Crowson (2009) found that the measure exhibits unidimensionality, is empirically distinguishable from measures such as need to evaluate and need for structure, and strongly correlates with theoretically related variables. These studies suggest that the DOG scale is internally consistent and reliable, and it was selected for this research.

Moving onto self-esteem, according to Blascovich and Tomaka (1991), the Rosenberg Self-Esteem Scale (RSES) is the most widely used scale to assess self-esteem. Conceptualised by Rosenberg in 1965, the RSES is a single factor 10-item scale seeking to determine the extent to which one holds a favourable or unfavourable attitude toward the self. One potentially problematic finding is that the five positively and five



negatively worded items tapped into two different dimensions of self-esteem comprising positive images of the self, for example self-worth, and negative images of the self, such as self-derogation (Greenberger et al. 2003). Marsh et al. (2010) used longitudinal data to examine eight competing factor structures and found that, in fact, the scale contains only one dimension. Following these conclusions, they warned that “researchers assume that factors based on positively and negatively worded items measure substantively distinct factors without systematically evaluating this supposition in relation to alternative models” (Marsh et al. 2010: 379-380). Taken together, these studies demonstrate that the RSES is an appropriate measure for participants’ self-esteem.

Regarding measurement of one’s self monitor, Snyder developed a 25-item scale in 1974 to measure the extent to which people consciously adjust their behaviour in social situations. Snyder and Gangestad (1986) later offered a revised 18-item scale based on the claim that it reflects two classes of high and low self-monitoring individuals. However, this version faced criticism, for example, Briggs and Cheek (1988) argued that this assumption confuses multiple factors, meaning that the scale actually weakened connections to self-monitoring’s fundamental principles. In light of these challenges, Gangestad and Snyder (2000) used a structural framework to systematically organise the literature on how the scale related to external variables. They argued that if variables related to self-monitoring clustered together on the self-monitoring axis of the framework, then the variables combine to represent the self-monitoring construct. Results revealed that their scale “does measure a single, mathematically defined dimension within the factor space, a dimension represented by the axis that runs directly through the Self-Monitoring Scale’s placement within the factor space” (Gangestad and Snyder 2000: 543). This suggests that Snyder and Gangestad’s (1986) 18-item scale is a suitable tool for measuring participants’ self-monitor.

Finally, we address need for cognition, a concept which was first distinguished by Cohen et al. (1955: 291) who described it as a “need to structure relevant situations in meaningful, integrated ways. It is a need to understand and make reasonable the experiential world”. Cacioppo and Petty (1982) produced a 34-item scale, which was later revised by Cacioppo et al. (1984), resulting in an 18-item instrument. In a comparison of the two scales, correlations between subjects’ new and revised scores were high and significant. Second, a principle component analysis demonstrated that one factor remained dominant in the revised version. Other researchers support its use, finding high internal consistency (Sadowski 1993) with a single dominant factor (Fosterlee and Ho 1999). Given the relatively unanimous evidence in favour of the 18-

item NFC scale designed by Cacioppo et al. (1984), this was the chosen instrument to measure NFC in my project.

### 6.2.3 Procedure

Participants were seated in a quiet room and asked to complete a 1-item mood questionnaire (task 1). For the first task of the implicit measurement procedure (task 2), the extracted audio files were presented to participants using Psychopy at a comfortable listening level over closed headphones. This was an independent measures design, so participants in each area were split into six different groups. This means that each statement was heard in each accent by a different group, for example *Texas is the largest state in America*, was heard in Yorkshire English by group one, in Irish English by group two, and so on. Using Psychopy, each participant was manually assigned a group at the beginning of the experiment. Before the experiment started, instructions were presented to the participants on the screen. They were asked to decide whether a series of trivia statements were ‘true’ or ‘false’ as quickly as possible by responding ‘z’ for true and ‘/’ for false on a keyboard. The task started with a single audio bleep to orient the participants’ attention and inform them about the beginning of the experiment (Wentura and Degner 2010), and after each statement, they heard the same bleep to inform them that they were about to hear the next statement. The task began with six practice trials, one in each accent, which allowed the participant to become accustomed to the task before the experimental trials (Wentura and Degner 2010). 120 trials were then presented to the participants, with 20 statements for each of the six accents, of which 10 were true statements and 10 false. Table 6.4 shows the details of the experiment for one participant, which was randomized at the participant level, block level, and statement level.

Table 6.4 Experimental layout

Per participant	Per block	Per 30 statements	Per 5 statements
120 statements	30 statements	5 Yorkshire statements	2 true
		5 RP statements	2 false
		5 Irish statements	1 true or false
		5 Estuary statements	(alternating)
		5 MLE statements	
		5 Dundee statements	

Having answered the 1-item mood question, participants completed task 2 which lasted approximately 10 minutes. They then filled out the four individual differences

questionnaires (tasks 3-6), which took a further 15 minutes. After 10 minutes, having completed tasks 7-8, participants were given a sheet of paper with the same statements as the implicit measurement procedure, and asked to circle 'true' or 'false' (task 9). This took approximately 15 minutes.

#### *6.2.4 Measuring implicitness*

I have argued that the task measures accent persuasiveness, but in what way is the task implicit according to Bargh's (1994) four criteria of automaticity: unintentional; unconscious; efficient; and uncontrollable? Primarily, task 2 lends itself well to implicit measurement procedures where automatic responses are required due to the binary response ('true'/'false'). However, researchers are urging for a more precise description of the phrase 'automatic' given its complex, yet often vague use in social cognition studies (De Houwer 2006; Gawronski and Creighton 2013). It should first be noted that responding to a proposition does take more time than responding to an association, and may increase the likelihood of reflecting upon, and controlling responses. The mean reaction time was 1.19s, which may be long compared to reaction times in other implicit measurement procedures, but this reaction time is, in fact, lower than other measures, such as De Houwer et al.'s (2015) RRT, which also uses propositions.

Perhaps the main advantage of this design is that it is a fun task which requires participants to play a trivia game as quickly as possible. Based on informal observations at the beginning of the experiment, many participants said that they were eager to answer the questions correctly. Even during the task, some participants displayed focused expressions and tense behaviour, perhaps because they had put pressure on themselves to 'do well', which was exacerbated by the time constraints. This pressure is not surprising as there is a factually correct answer, which is not the case with other measures such as the IAT. The nature of using trivia statements in a response-latency task therefore arguably distracted them from learning that the real goal of the experiment was to measure their perceived credibility of each accent. This is reinforced by the fact that, once debriefed at the end of the entire experiment, some explained that they did not know this response-latency task was related to accent. As such, while it is not empirical evidence, certainly for some participants, they were unaware that their response was guided by accent, which satisfies the unconscious aspect of the procedure. Even if they were aware, participants' behaviour also suggested that they regretted their response to certain statements, for example some participants expressed their frustration immediately after pressing a key, or said things such as "I didn't mean that!" and "can I go back?" Indeed, this may have been because they simply pressed the wrong button, but it also indicates that the process of judging the accents was potentially

uncontrollable. Unfortunately, the degree of intentionality of participants' evaluations is harder to discern, but efficiency is somewhat easier. Judging the truth-value of a trivia statement in restricted time conditions is undoubtedly a cognitively demanding task, and so the process of judging the accents probably took place under highly efficient conditions, particularly as many parents also had their children with them. It is unlikely that every attitudinal judgement by every participant was implicit in the sense of Bargh's (1994) four criteria. It is perhaps more realistic that at some moments some judgements were more implicit than others, but the procedure most likely elicited responses which were efficient and uncontrollable, and to a lesser degree unintentional and unconscious. Nonetheless, the procedure arguably obtained more automatic judgements than those obtained in the explicit measure (chapter 7).

### *6.3 Implicit attitude results*

#### *6.3.1 Data Processing*

Data was deleted for two participants who asked if they could return their written answers later that day but failed to do so. In total, there were 240 responses per participant, which resulted in a total of 27,600 responses.

#### *6.3.2 Data analysis*

The aim of this analysis was to test the hypothesis that there would be a persuasive effect of accent, which varies by BBaRTS trial area. Descriptive statistics captured the proportion of 'true'/'false' responses for prior belief and current belief by accent, as well as the  $d'$  score. The  $d'$  score is the result of a signal detection theory analysis and will be explored in more detail in the next section. The inferential analysis examined the interaction between accent and prior belief on current belief in each trial area. Using the *lme4* package in R (Bates et al. 2015), a logistic regression was built with accent and prior belief as fixed-effect predictors and current belief as the outcome. A pairwise comparison explored the significant differences between all six accents. This produced six separate models with the same two predictors and outcome, but varying the accent reference level. Random effects of statement and participant were initially put into the model to ensure that speakers were not responding to a particular statement in the same way, and that a specific individual did not bias the results. However, each model only managed to converge with one of these random effects, and so these were left out of the model. To account for multiple comparisons between the accents, post-hoc analyses

were computed using the Bonferroni correction, which set the level of significance at 0.01. Each area will be addressed individually.

### 6.3.3 Signal detection theory

Signal detection theory was used to interpret the data, because it examines decision-making in the presence of uncertainty (Heeger 2007). In this case, the uncertainty is deciding whether the statement is true or false. More specifically, according to Heeger (2007), it studies our ability to distinguish between the signal, factual information, and the noise, our bias, during the judgement process. He argues that our judgement is shaped by external noise, such as bleeps, and, crucially, internal noise, which is neural responses that influence our decisions through bias or criteria. In this case, the noise is the accent and the signal is the statement. The analysis sought to understand how different British accents affected participants' ability to decide if a statement was true or false. Put another way, by comparing their prior belief and their current belief, we can determine how difficult it was for them to tease apart the irrelevant information (accent) from the relevant information (the truth/falsity of the statement). Signal detection theory does this by generating four response options, which are outlined in Table 6.5 in the context of this study.

*Table 6.5 Response options for signal detection analysis*

	Current belief: True	Current belief: False
Prior belief: True	Hit	Miss
Prior belief: False	False alarm	Correct rejection

This study is interested in two aspects, the  $d'$  score and the proportion of 'false alarms'/'misses' for each accent. The  $d'$  score, or  $d'$ , is calculated by dividing the 'hit' rate by the 'false alarm' rate. This measure represents the distance between the signal and noise distribution, and tells us the strength of the signal relative to the noise (Abdi 2007). In this case, it highlights the accents to which participants were most sensitive, and therefore found harder to distinguish from the signal. Second, we want to know the persuasive and dissuasive effects of each accent. This is when the prior belief and current belief are different ('false alarms' and 'misses'), because it shows that the accent made the participants change their belief about the truth/falsity of a statement. For example, as outlined above, if they already believed a statement was true, but their current response was 'false', then that would be a 'miss' or accent dissuasion. On the other hand, if they already believed a statement was false, but then they responded 'true' in the moment, then that would be a 'false alarm' or accent persuasion. This is because

the accent has interfered with the signal such that the person now answers differently. As ‘false alarms’ and ‘misses’ are a different way of displaying the persuasive/dissuasive effects, the analysis here focuses just on the ‘misses.’

### 6.3.4 Tayside

Focusing first on accent sensitivity, Table 6.6 shows the  $d'$  scores for each accent among Tayside participants. We can see that Estuary English had the highest  $d'$  score ( $d' = 2.06$ ), which means that participants found it easiest to ignore the accent, and focus on the signal, the truth/falsity of the statement. This was closely followed by Yorkshire English and RP, which had a  $d'$  of 1.91, and 1.90 respectively. Towards the lower end, Dundee English had a score of 1.75, and MLE was the lowest ( $d' = 1.64$ ). This means that participants found it very difficult to ignore the accent, and focus on the task at hand when the statement was presented in MLE.

Table 6.6  $d'$  values for signal detection analysis among Tayside participants ( $n = 46$ )

	Dundee	Estuary	Irish	MLE	RP	Yorkshire
$d'$	1.75	2.06	1.82	1.64	1.90	1.91

Moving our attention to the persuasive/dissuasive effects of each accent, Figure 6.1 shows the proportion of ‘true’/‘false’ responses for prior and current beliefs by accent as well as significant differences, which will be discussed further below. The general trend is indicative of a similarity between prior and current beliefs. In other words, despite the large number of trials, and space between the audio and written task, it seems that either the participants largely recalled their initial answers to the questions, or their beliefs had not changed. This can be seen by the large number of ‘hits’ and ‘correct rejections’, which is when one’s prior and current belief is the same. Specifically, when participants already believed a statement was true, they responded ‘true’ the most when they heard the statement in Estuary English (86.8%) and RP (86.0%), followed by Yorkshire English (84.7%), Irish English (84.3%), Dundee English (81.9%), and lastly when they heard the statement in MLE (78.9%).

However, although their written and audio responses were largely similar, the graph also suggests that accent did change people’s minds. To explore this persuasive effect, one can look at the proportions of ‘misses’ which is when they already believed a statement was true, but responded ‘false’ in the moment (accent dissuasion). For example, we can see that the highest proportion of ‘misses’ was for MLE (21%), whereas Estuary English had the lowest number of ‘misses’ (13%). This suggests that MLE was the most dissuasive accent and Estuary English was the most persuasive

accent. This graph also shows that Dundee English had a rather dissuasive effect, because it received the second highest number of ‘misses’ (18%). This is followed closely by Irish English (16%) and Yorkshire English (15%). Similar to Estuary English, RP produced a relatively low number of ‘misses’ (14%).

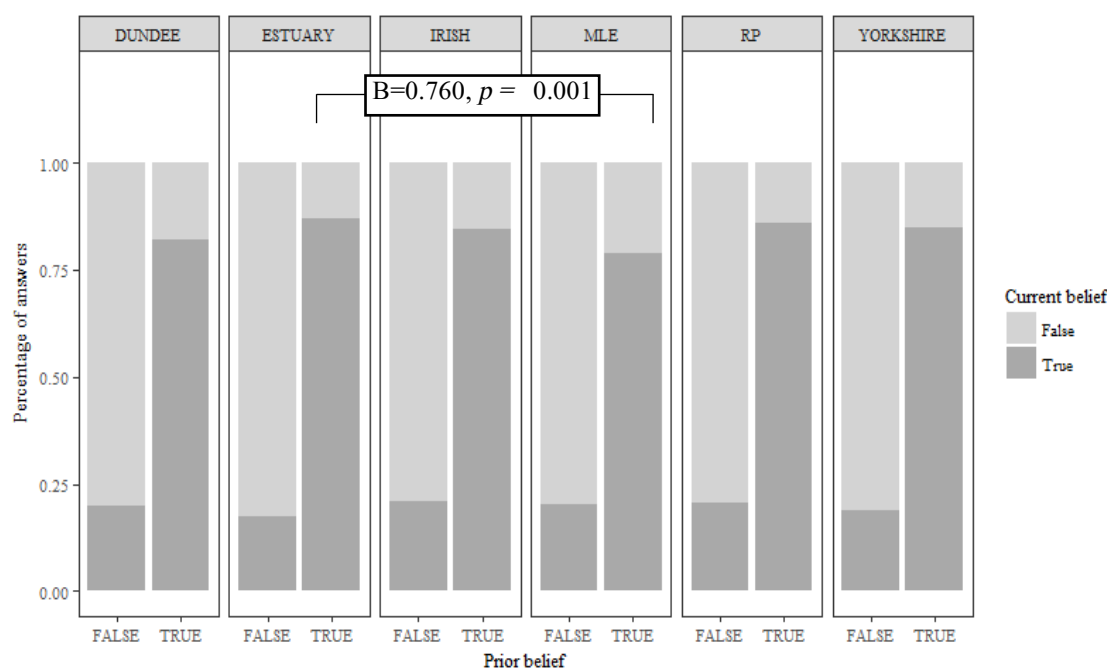


Figure 6.1 Proportion of prior belief responses and current belief responses by accent among Tayside participants ( $n = 46$ )

The logistic regression results in Table 6.7 show that there was a significant main effect of prior belief on current belief ( $p = 0.000$ ). There is also a significant interaction between accent and prior belief on current response ( $p = 0.045$ ). We can see that from the regression results in Table 6.8, we can see that there is a difference between Estuary English and MLE ( $p = 0.002$ ). Specifically, there is a negative accent effect of MLE compared with the reference level accent, Estuary English. In other words, if participants already believed a statement to be true, they were significantly *more* likely to respond ‘false’ in the moment if they heard the statement in MLE compared with Estuary English. This finding is corroborated by Figure 6.1, where MLE has a higher number of ‘misses’ than Estuary English.

Table 6.7 Logistic regression summary of accent and prior belief on current belief among Tayside participants ( $n = 46$ )

Fixed effects	$df$	Deviance	Resid $df$	Resid Dev	$p$ -value
Null			5519	7652.3	
Prior belief	1	2455.24	5513	5192.6	0.000
Accent	5	4.48	5513	7647.9	0.483
Prior belief : Accent	5	11.36	5508	5181.3	0.045

Table 6.8 Pairwise comparisons for logistic regression of accent and prior belief on current belief among Tayside participants ( $n = 46$ ). Negative ‘-’ indicates a positive accent effect compared to reference level accent, i.e. participants are **less** likely to respond ‘false’, despite prior true belief to a statement. Positive indicates a negative accent effect in comparison to the reference level accent, i.e. **more** likely to respond ‘false’ despite prior true belief to a statement.

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value
Dundee										
Estuary	-0.554	0.027								
Irish	-0.117	0.623	0.437	0.084						
MLE	0.206	0.379	0.760	0.002	0.323	0.173				
RP	-0.272	0.269	0.283	0.272	-0.155	0.533	-0.478	0.048		
Yorkshire	-0.273	0.263	0.281	0.273	-0.156	0.526	-0.478	0.046	0.002	0.995

In terms of the APE model, this is an interesting example of how implicit attitudes, or gut reactions, are formed on the spot. Gawronski and Bodenhausen (2006, 2011) argue that implicit attitudes are influenced by the existing structure of associations in memory, and the input stimuli. One could argue that MLE was dissuasive, because it activated stronger, more negative associations compared with Estuary English. It is useful to first examine the source of the valence and strength of the associations for each accent. The prominence of MLE in the media is an appropriate starting point. Kerswill (2014) noted that journalists portray MLE as a hindrance to educational achievement and social mobility. They also regularly draw links between ‘Jafaican’ and bad behaviour as well as labelling this new ‘language’ as problematic. For example, an article in the Scottish newspaper *Daily Record* discusses the world’s most wanted man, Jihadi John: “The executioner spoke “Multicultural London English,” according to University of York linguistics expert Professor Paul Kerswill” (Beattie, *Daily Record* 2014). In *The Scotsman*, an article about the evolution of British accents claims: “These days, most East Londoners speak what one 2010 socio-linguistics survey dubbed “Multicultural London English” – which might explain why so many modern Cockneys sound like they’re just back from Jamaica” (McCade, *The Scotsman* 2013). It is crucial to remind ourselves here that such associations are independent of truth-value, and are activated regardless of whether they are accurate or inaccurate (Gawronski and Bodenhausen 2006, 2011). Nonetheless, this evidence from the media and Kerswill (2014) shows how MLE may have developed such negative associations. The media also seemingly played a role in the persuasiveness of more standard accents, such as Estuary English. In their study on implicit and explicit



attitudes, McKenzie and Carrie (2018) found that participants from Northern England displayed positive implicit associations towards Southern English speech. They argued that this is due to the historical and political dominance of the south of England, as well as British media, which has rendered southern accents, such as RP, and more recently Standard Southern British English, as synonymous with Standard English, and therefore more prestigious.

Now we know how such associations possibly became linked to MLE and Estuary English, the labels provided by the participants in chapter 5 go further to suggest that these media representations exist as associations specifically in the participants' memory. Many alluded to the ethnic element of the accent, such as *African* and *Afro-Caribbean*. Further still, several participants provided responses which hint at the geographical element, such as *inner London* and *East London*, which indicates a knowledge of its link to populations of lower socioeconomic status. Perhaps most telling of the strength of stereotypes associated with MLE in Tayside is the response *London innit*, which, as previously mentioned, refers to the discourse-pragmatic innovation (Pichler 2016). Responses to MLE, therefore suggest an awareness of its stigmatization. From this, one can speculate that associations in memory may include 'uneducated' or 'lower-class', thus leading to a negative reaction. On the other hand, approximately a third of participants' responses to the speaker's origin for Estuary English was either *English* or *England*, which indicates a more positive, less aversive association.

So how did these associations form and become activated given the large distance between Tayside and London? Using Montgomery's (2012) work on cultural prominence, it is likely that the media coverage of MLE has rendered it a highly negative and salient British accent to the extent that it reduced the perceived geographical distance between the accent and these participants. As Bodenhausen et al. (2009) observe, automatic bias is the result of spontaneous activation of mental associations which are found in contemporary society. The strong negative associations with MLE also find support in the stereotype literature. Hamilton and Gifford (1976) found that the relationship between negative characteristics and minority group membership is often overestimated. They argue that this is because distinctive information is very accessible, thus making minority groups, like MLE speakers, much more noticeable. Combining this with Fiske's (1980) observation that negative behaviour is more distinctive than positive behaviour, it becomes clear how negative associations were formed, and activated in the minds of Tayside participants.

Taken together, as MLE and Estuary English are both London accents, the negative media coverage seems to have placed MLE in stark contrast to Estuary English. I argue that this is why MLE triggered comparatively stronger affective gut

reactions, which not only affected participants' ability to distinguish between the noise and the signal, as indicated by the low  $d'$  value (1.64), but it negatively influenced the statement's perceived truth-value. Associations with Estuary English, however, were weaker, as indicated by the high  $d'$  value (2.06), and led to a less adverse gut reaction.

Results also suggest that Dundee English had a more dissuasive accent effect compared with Estuary English ( $p = 0.027$ ), and MLE had a more dissuasive effect than RP ( $p = 0.048$ ) and Yorkshire English ( $p = 0.046$ ). This is indicated by the higher number of 'misses' for MLE and Dundee English compared with these three accents. While the Bonferroni correction procedure reduces the risk of type I errors, it has also been regarded as highly conservative, and even increasing the risk of type II errors (Cabin and Mitchel 2000). I will not assign the same importance to these results, but it is worth mentioning that these reinforce the above argument about the activation of associations. The dissuasive effect of MLE over RP and Yorkshire can be further evidence of the presence of strong, negative associations in memory. This is also supported by the high  $d'$  values for Yorkshire English and RP (1.90 1.91), which suggest that it was comparatively easier to ignore the internal noise generated by these accents, and focus on the signal – the statement. The persuasiveness of Estuary English over Dundee English is an intriguing finding, because it may indicate negative associations with Tayside participants' own accent. However, as indicated by the response labels above, it is perhaps more likely that the associations with Estuary English were comparatively weaker, and more positive in that this accent is possibly seen as standard. Dundee English is less standard, and may therefore be seen as offering comparatively less social mobility. As this lack of standardness is not only perceived as negative, but also associated with Tayside participants' own accent, one could assert that Dundee English interfered more strongly with their ability to focus on the statement. This is supported by the lower  $d'$  score compared to Estuary English (1.75 vs. 2.06).

### *6.3.5 Newham*

In terms of the  $d'$  analysis, Table 6.9 shows the scores for each accent among Newham participants. In this trial area, MLE had the highest  $d'$  score (1.70), which means that participants found it easiest to ignore the accent, and focus on the signal, the truth/falsity of the statement. This was closely followed by Estuary English and Irish English, which had a  $d'$  value of 1.50 and 1.42 respectively. The accent with the lowest  $d'$  value was Dundee English ( $d' = 1.15$ ), followed by Yorkshire English and RP ( $d' = 1.32$ ), which suggests that participants struggled to ignore these accents and concentrate on the task. Overall, these  $d'$  scores were lower than those of Tayside participants, which shows that Newham participants were not good at the task and/or found it

difficult. This is because a low score shows that they were more sensitive to accent differences.

Table 6.9  $d'$  values for signal detection analysis among Newham participants ( $n = 34$ )

	Dundee	Estuary	Irish	MLE	RP	Yorkshire
$d'$	1.15	1.50	1.42	1.70	1.32	1.32

Figure 6.2 displays the proportion of prior and current belief responses by accent, as well as the significant differences between the accents, which will be discussed in detail below. Similar to Tayside, there is a trend for prior and current beliefs to be the same, which means that participants either remembered their responses, or their beliefs had not altered. This is evident by the large number of ‘hits’, where both prior and current responses were ‘true’, and ‘correct rejections’, where both prior and current responses were ‘false’. This was mostly the case for MLE, such that if participants already believed a statement to be true, they were most likely to respond ‘true’ when it was in MLE (81%), and if they already believed a statement to be false, they were most likely to respond ‘false’ for this accent too (80%). There were fewest ‘hits’ and ‘correct rejections’ for Dundee English, which received 71% and 72% respectively.

As previously mentioned, it is more crucial to compare the ‘misses’ and lack thereof, because these indicate the persuasive effects of each accent. Estuary English and MLE had the lowest proportion of ‘misses’ (19%) compared with all five other accents. This hints that they had a persuasive effect because if participants believed that a statement was true, they were *less* likely to respond ‘false’ when they heard the statement in these accents. However, Yorkshire English and Dundee English both revealed a higher proportion of ‘misses’ (27%, 29%), which suggests that these accents had a dissuasive effect. In other words, if participants believed that a statement was true, they were *more* likely to respond ‘false’ when they heard the statement in these accents. RP and Irish English were in the middle of these four accents, in that their proportion of ‘misses’ was 24%.

Similar to Tayside, Table 6.10 reveals a main effect of prior belief on current belief ( $p = 0.000$ ), and a significant interaction between prior belief and accent on current belief ( $p = 0.008$ ). Table 6.11 (p. 132) displays the pairwise comparisons between all six accents. It shows that if participants already believed a statement to be true, they were significantly less likely to respond ‘false’ in the moment if they heard the statement in MLE compared with Dundee English ( $p = 0.001$ ), RP ( $p = 0.011$ ) and Yorkshire English ( $p = 0.011$ ). This is perhaps best visualised in Figure 6.2, whereby

MLE has a fewer number of ‘misses’ compared with these three accents, which is an indicator of a persuasive accent effect.

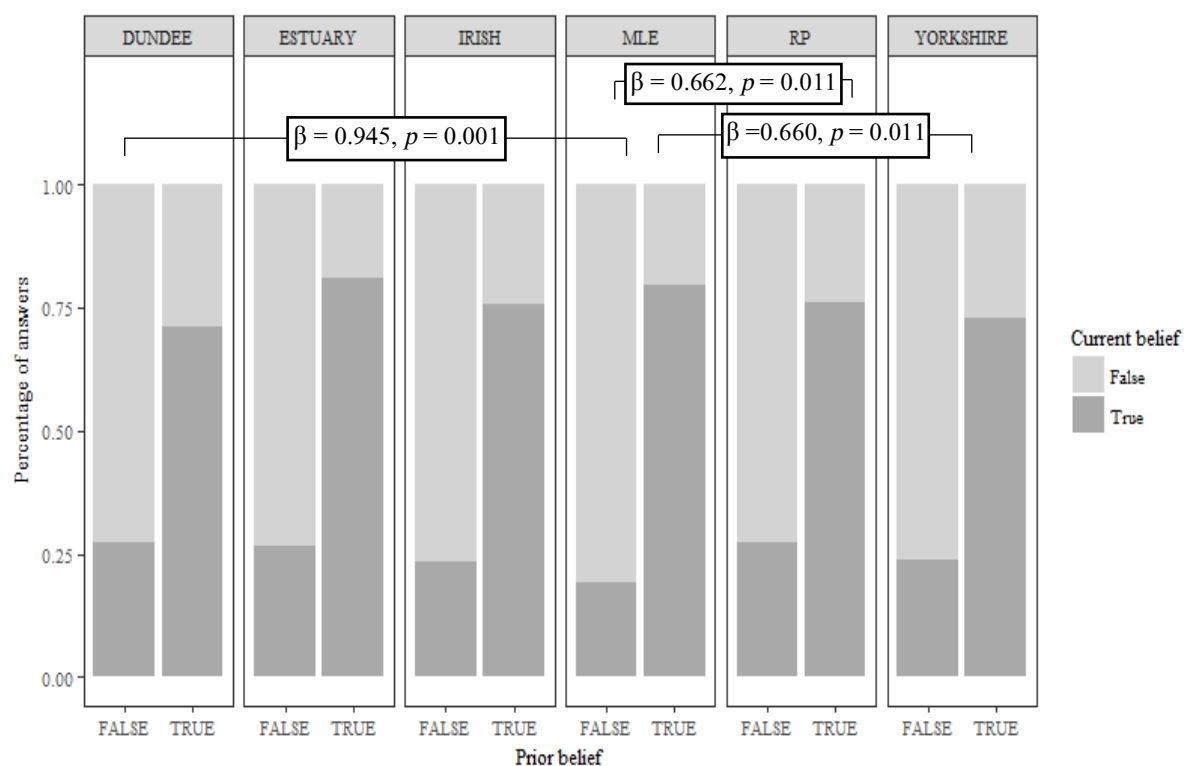


Figure 6.2 Proportion of prior belief responses and current belief responses by accent among Newham participants ( $n = 34$ )

Once again, the potential stereotypes activated for these accents can help to explain the persuasive and dissuasive effects. One could argue that Newham participants had a sound understanding of the associations linked to MLE, because the responses provided in the accent identification task alluded to London, ethnicity, or youth language. In turn, this hints that they may be aware of the accent’s stigmatization. Taking this into consideration, it remains to be seen why this accent was significantly *more* persuasive than RP, Yorkshire English and Dundee English. It seems that despite a likely understanding of MLE’s strong negative stereotypes, associations were nonetheless weaker and more positive compared with these three accents. This interpretation is supported by the  $d'$  values. The  $d'$  value for MLE was the highest (1.70), which indicates that participants found it easiest to ignore the accent and focus

Table 6.10 Logistic regression summary of accent and prior belief on current belief among Newham participants ( $n = 34$ )

Fixed effects	$df$	Deviance	Resid $df$	Resid Dev	$p$ -value
Null			4049	5656.0	
Prior belief	1	1135.06	4073	4513.9	0.000
Accent	5	7.04	4074	5649.0	0.217
Prior belief : Accent	5	15.78	4068	4498.2	0.008

Table 6.11 Pairwise comparisons for logistic regression of accent and prior belief on current belief among Newham participants ( $n = 34$ ). Negative ‘-’ indicates a positive accent effect compared to reference level accent, i.e. participants are **less** likely to respond ‘false’, despite prior true belief to a statement. Positive indicates a negative accent effect in comparison to the reference level accent, i.e. **more** likely to respond ‘false’ despite prior true belief to a statement.

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value	$\beta$	$p$ -value
Dundee										
Estuary	-0.590	0.019								
Irish	-0.459	0.064	0.131	0.612						
MLE	-0.945	0.001	-0.356	0.183	-0.487	0.065				
RP	-0.283	0.248	0.307	0.230	0.176	0.486	0.662	0.011		
Yorkshire	-0.285	0.244	0.304	0.233	0.173	0.492	0.660	0.011	-0.002	0.992

on the statement. Applying the APE model, we can infer that the existing structure of associations quite possibly contains negative stereotypes due to their response labels and media representations of MLE. Yet, the input stimuli must have activated a structure of associations which led to a positive gut reaction to their own accent. One such possible structure is associations of trustworthiness, such as *my accent*. Evidence suggests that perceived similarity fosters feelings of trustworthiness (e.g. Nass and Brave 2005). This raises the question as to why those in Tayside were not persuaded by their own accent, but this is where the importance of addressing each community individually is crucial. If we approach the interpretation of their attitudes from a minority group perspective, it becomes easier to explain why Newham participants’ associations of similarity counteracted any negative associations. Social Identity Theory (Tajfel and Turner 1979) posits that membership to a group helps to increase self-esteem by favouring the in-group at the expense of the out-group. Along similar lines, Greenberg et al. (2009: 323) state that: “Groups provide the individual with the broad consensual support necessary to sustain faith in a meaningful and enduring conception of reality”. In other words, group membership offers stability when an individual is struggling to find their place in the world. More specifically, in the context of minority groups, Mehra et al. (1998) found that one is more likely to use a group as a basis for shared understanding if that group is rare in the social context. Participants in Newham may have a heightened reliance on their own group for subjective validation, because they face marginalisation due to their low socioeconomic status, and possible immigrant background. As mentioned in section 3.5, belonging to a minority group can lead members to feel rejected and distrust members of the majority group (Schmitt et al.

2002). Upon hearing their accent, associations of similarity were activated which increased trust and produced a persuasive accent effect.

We have seen how MLE activated a positive gut reaction through similarity-based associations, but this provides only half the argument. To understand this accent's persuasiveness, we must also explore the relative dissuasiveness of RP, Yorkshire English and Dundee English. Taking the  $d'$  scores as a starting point, the lowest scores were for these three accents, which hints that Newham participants have strong associations in memory that interfered with their ability to separate the noise (accent) from the signal (statement). This is probably most simple for RP. While some responses were positive, such as *nice*, *clean*, *proper*, others were negative, including *posh*, *snobbish*. Therefore much like MLE, despite an existing structure of positive and negative associations in memory, the input stimuli seemingly elicited associations which led to a negative gut reaction to RP. This is harder to explain for Dundee English and Yorkshire English, as the possible existing structure of associations is not as obvious. For both accents, participants provided geographical labels, albeit at the broader level such as *North* or *Scotland*. One indicator of negative associations is that their ability to identify these accents was weaker compared with RP and MLE. Even among those participants who did recognise the accent, or who incorrectly identified it with responses such as *Newcastle* or *Irish*, it leads to the possibility that they associated the accent with *different*, or *far away*. This places speakers of these accents firmly in the out-group on the basis of unfamiliarity. It seems that the strength of such associations were strong and negative enough to interfere with their ability to discern the signal from the noise, and led to negative gut reactions. In summary, the dissuasiveness of Dundee English and Yorkshire English for reasons of out-group dissimilarity is further supported by the persuasiveness of their own accent for reasons of in-group similarity.

### 6.3.6 Kent

The  $d'$  analysis in Table 6.12 shows the scores for each accent among Kent participants. Similar to Newham, MLE had the highest  $d'$  score (2.18), which means that participants found it easiest to ignore the accent, and focus on the signal, the truth/falsity of the statement. This was followed by Dundee English and RP which both had a score of 2.05, and Irish English at 2.02. The lowest  $d'$  scores were for Estuary English (1.98) and Yorkshire English (1.96), which suggests that these accents created the most 'noise' and consequently interfered with their ability to respond to the trivia statements. It is also important to note that these  $d'$  scores are generally much higher than for Tayside and Newham, with small differences between the accents.

Table 6.12  $d'$  values for signal detection analysis among Kent participants ( $n = 34$ )

	Dundee	Estuary	Irish	MLE	RP	Yorkshire
$d'$	2.05	1.98	2.02	2.18	2.05	1.96

Figure 6.3 shows the proportion of prior and current belief responses by accent. Contrasting to Newham and Tayside, there is slightly more stability in participants' responses across the accents, but similar to both these areas in that their current beliefs are largely in line with their prior beliefs. If participants already believed a statement was true, they were most likely to respond 'true' in the moment when they heard the statement in MLE (87.7%), followed by Dundee English (87.4%) and RP (86.6%).

From a persuasion perspective, there are not as many differences between the 'misses' compared with Tayside and Kent. The highest number of 'misses,' which indicates a dissuasive effect, was for Irish English (16%) but Estuary English and Yorkshire English followed closely behind at 15%. The accents with the lowest number of 'misses' were MLE (12%), RP (13%) and Dundee English (13%). The key observation from this data is that, similar to the  $d'$  scores, the differences between the accent effects are smaller across accents in Kent than in Newham and Tayside.

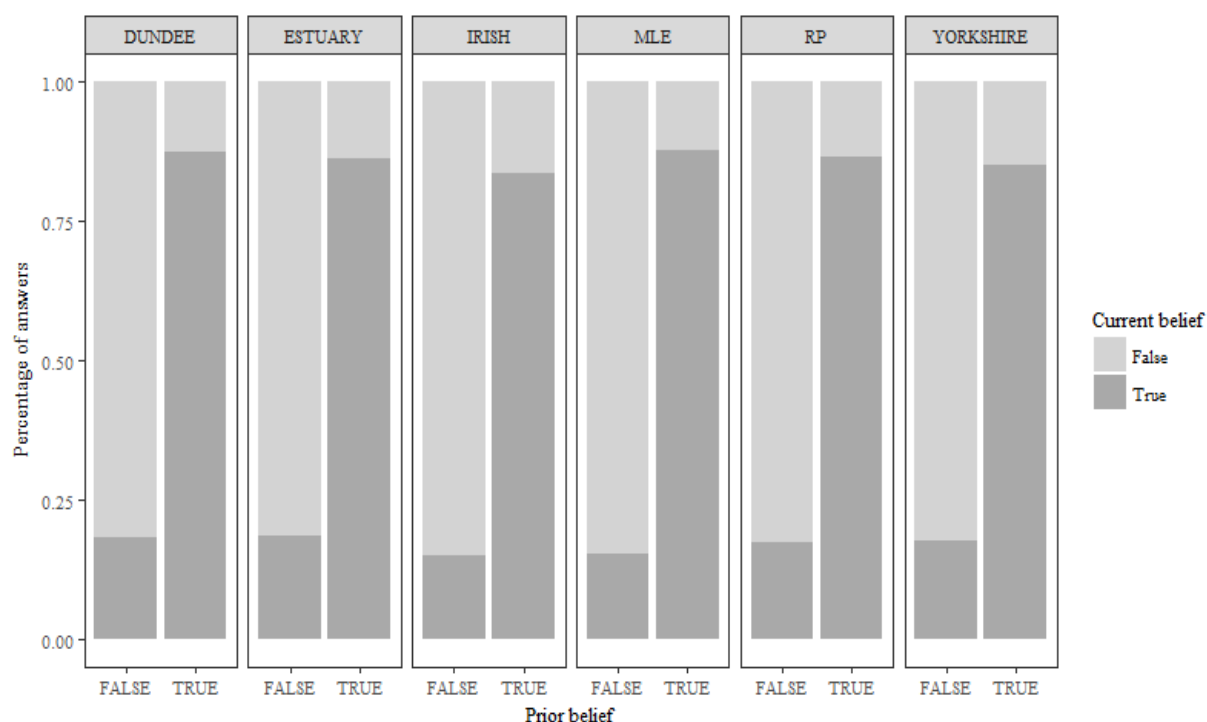


Figure 6.3 Proportion of prior belief responses and current belief responses by accent among Kent participants ( $n = 34$ )

In Table 6.13, we see that while there is a significant effect of prior belief on current belief ( $p = 0.000$ ), there is not a significant interaction between prior belief and accent on current belief like Tayside and Newham. In other words, if an individual

already believed a statement was true, the accent in which the statement was presented did not influence their current belief. This is supported by the  $d'$  scores in that the range is much smaller (0.21), whereas the difference between the highest and lowest  $d'$  score was 0.43 for Tayside, and 0.55 for Newham. Moreover, the average  $d'$  score across all accents in Kent was higher (2.03), compared with Tayside (1.84) and Newham (1.40), which suggests that participants found it generally easier to separate the noise from the signal, and were less sensitive to accent differences.

*Table 6.13 Logistic regression summary of accent and prior belief on current belief among Kent participants (n = 34)*

Fixed effects	<i>df</i>	Deviance	Resid <i>df</i>	Resid Dev	<i>p</i> -value
Null			4079	5628.7	
Prior belief	1	2133.04	4073	3492.5	0.000
Accent	5	3.21	4074	5625.5	0.667
Prior belief : Accent	5	2.08	4068	3490.4	0.838

At first, this is a surprising result given that their knowledge of the different accents was much better than participants from the other two areas. Their sound ability to identify the accents implies that they may have stronger associations in memory with each accent which, in turn, leads to greater positive or negative gut reactions. In fact, as will be discussed in chapter 7, their explicit attitudes were very much in line with social norms, which suggests that they *do* possess a level of positive and negative prejudice against difference accents. A lack of significance between the accents on an implicit level therefore hints that their automatic associations were possibly being activated, but not influencing their judgements. Research initially argued that when we encounter a certain group member, it is inevitable that our stereotypical mental associations will be activated (Allport 1954; Bargh 1999; Devine 1989). However, Bodenhausen et al. (2009) discuss the impact of diverse environments on one's ability to suppress biased thoughts. They argue that biased responding can be undermined by increased interpersonal interaction across groups, because it allows the individual to experience counter-stereotypical examples. Along similar lines, according Gaertner et al.'s (1993) Common Ingroup Identity Model, increased intergroup interaction is one cause of recategorisation, which involves shifting the categorical basis upon which one makes judgements to a more self-inclusive category. The process changes an individual's cognitive representation of membership from two groups to one to create more harmonious interpersonal relations. Crucially, the authors found that this effect generalised beyond participants in the immediate contact situation. In other words, attitudes became more favourable to out-group members who were not directly involved. I propose that Kent participants, who possessed higher knowledge of the



accents, as evidenced by their responses in the identification task, have encountered more counter-stereotypical examples of out-group members compared with Newham and Tayside participants. Associations were therefore activated but these did not influence their judgement possibly because their lived experience of the accents meant that differences between the groups were not salient enough. This led their focus to the content of the stimulus rather than to the form, which is why we see a lack of difference in  $d'$  values and no persuasive effect of accent. It should be noted that recategorisation can be a voluntary process, and, in such cases, is therefore conscious, controlled, intentional, and inefficient. However, I argue that the judgements elicited were still the result of an automatic process. Recategorisation was a natural result of intergroup interaction rather than participants' attempt to suppress their bias, which then reduced the impact of accent differences on judgement in time-restricted conditions.

### 6.3.7 Summary

Having seen the wide range of influences on accent persuasiveness in the accent identification task, the implicit task shows us which of these associations may have been activated. In Tayside, I claim that the persuasive effects are driven by social norms. MLE is less persuasive than Estuary English perhaps owing to the negative media-driven associations of the former, and the positive standard-based associations of the latter. In Newham, however, life experiences arguably played a larger role in the persuasion process. Participants were generally more sensitive to accent differences, possibly because they were less familiar with the accents overall. I suggest that their experiences of belonging to a minority group led to a greater reliance on associations of similarity, which resulted in feelings of trust, and a positive affective gut reaction for their own accent, MLE, despite a likely understanding of its stigmatization. The persuasiveness of this accent is also arguably rooted in the comparably more negative associations of RP, such as *posh*, and Yorkshire English and Dundee English, for example, *different*. Participants from Kent were least sensitive to accent differences, arguably due to their strong knowledge of each accent, as indicated by the responses in the accent identification task. This led to recategorisation, whereby they transformed their perceptions of accent-based group boundaries from 'us' and 'them' to 'we'. In turn, their associations did not affect their judgement, and no single accent was more persuasive than another. Therefore, we can only partially accept the hypothesis that there is a persuasive effect of accent, which varies in each trial area. The most important message from the task, however, is that accent persuasiveness is influenced by a complex interaction between life experiences, and media, social, and historical factors.

## 6.4 Reaction time results

### 6.4.1. Data processing

While Psychopy captured participants' reaction time, this measurement also included the length of the trivia statement. In order to generate a normalised reaction time, the length of the trivia statement was subtracted from the total reaction time.

### 6.4.2 Data analysis

The aim of this analysis was to test the hypothesis that reaction time would vary as a function of accent persuasiveness. The descriptive analysis calculated the mean reaction time and standard error to first understand the broad differences between participants' response time to each accent. In the inferential analysis, a linear mixed effects regression was conducted using the *lme4* package in R (Bates et al. 2015). In the model, prior belief, current belief and accent were the predictors, which were all tested for an interaction effect on the outcome, reaction time. Random effects of participant and statement were also put into the model. If accent had a significant effect on reaction time, pairwise comparisons between all six accents were carried out to explore this effect further. Again, this produced six separate models per area with the same predictors and outcome, but varying the accent reference level. To account for multiple comparisons between the accents, post-hoc analyses were computed using the Bonferroni correction, which set the level of significant at 0.01.

### 6.4.3 Tayside

As Figure 6.4 shows, the average response time for participants in Tayside ranged from 1.04s-1.15s, which places their response time range between that of participants from Kent and Newham (Figures 6.5-6.6). They responded quickest to RP (1.03s), followed by Yorkshire English (1.06s) and then Dundee English, Estuary English and Irish English all had a mean reaction time of 1.07s. Responses were slowest for MLE at 1.15s.

The results in Table 6.14 show that there was a significant main effect of prior belief ( $p = 0.000$ ), and a significant interaction between prior and current belief ( $p = 0.000$ ). More importantly, there was a main effect of accent ( $p = 0.011$ ), and a significant interaction between prior belief and accent ( $p = 0.009$ ). Pairwise comparisons between the accents were examined to understand these two findings further. However, such comparisons did not yield significant differences between the

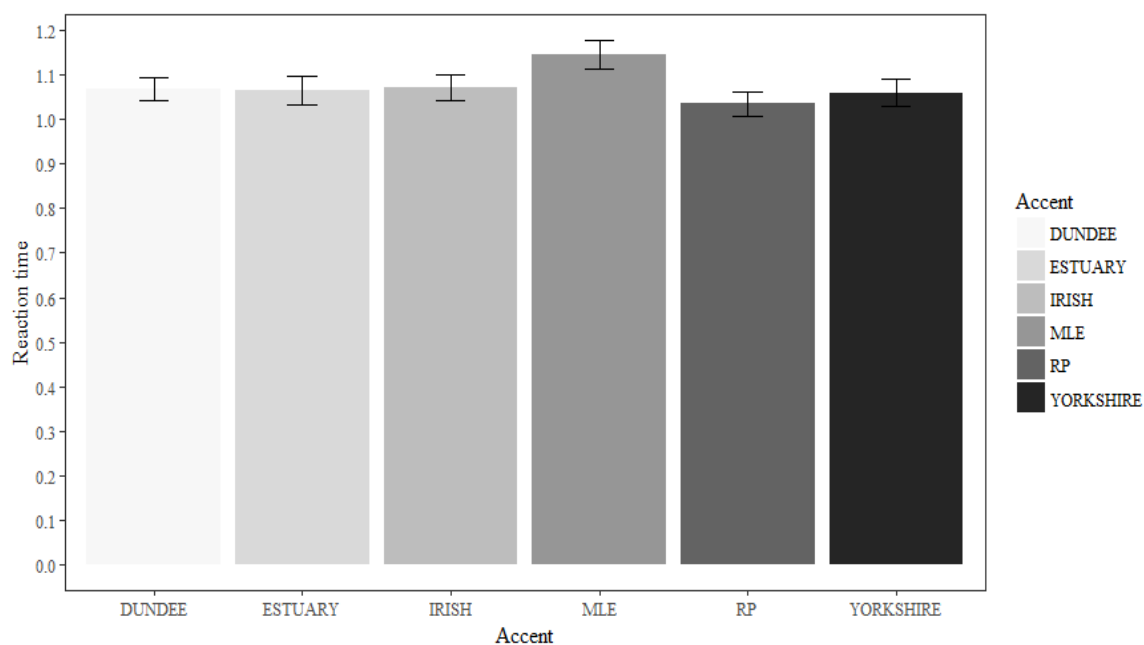


Figure 6.4 Mean reaction time and standard error for each accent among Tayside participants ( $n = 46$ )

Table 6.14 Linear regression summary of accent, current belief and prior belief on reaction time among Tayside participants ( $n = 46$ )

Fixed effects	Sum sq	Mean sq	NumDf	DenDF	F value	<i>p</i> -value
Prior belief	18.49	18.50	1	5455.6	36.49	0.000
Accent	7.57	1.52	5	5351.1	2.98	0.011
Current belief	1.01	1.01	1	5430.0	1.99	0.158
Prior belief : Accent	7.76	1.55	5	5368.6	3.06	0.009
Prior belief : Current belief	42.11	42.11	1	5397.6	83.07	0.000
Accent : Current belief	4.89	0.98	5	5366.3	1.92	0.086
Prior belief : Accent : Current belief	3.23	0.64	5	5372.5	1.27	0.273

accents. More crucially, the interaction between prior belief, accent and current belief was not significant.

While there was no interaction effect between prior belief, accent and current belief, looking at Figure 6.4, it is nonetheless important to note that MLE had the slowest reaction time, while RP had the fastest reaction time. These results become more interpretable, if we recall that MLE was significantly more dissuasive than Estuary English, and nearly more dissuasive than Yorkshire English and RP. I argued that MLE activated stronger associations, and this was due to the large amount of internal noise, as indicated by the low  $d'$  value. It therefore follows that this level of noise would reduce participants' ability to focus on the signal, and slow down their reaction time. On the other hand, RP, Yorkshire English and Estuary English had the highest  $d'$  values, which suggests that there was less internal noise, and participants found it easier to focus on the statement. Indeed, this is corroborated by the fact that participants responded fastest to statements in RP, followed by Yorkshire English.

#### 6.4.4 Newham

Newham participants had the longest average reaction times out of all three trial areas, ranging from 1.45s-1.59s (Figure 6.5). This is expected because most participants did not speak English as a first language, and their ability to identify the accents was weakest. This suggests that the stimuli were less familiar, which meant their mean processing time was longer. They responded slowest to Irish English with a mean time of 1.59s, followed by MLE (1.56s), and RP (1.52s), but they responded faster to statements presented in Estuary English (1.45s) and Yorkshire English (1.46s).

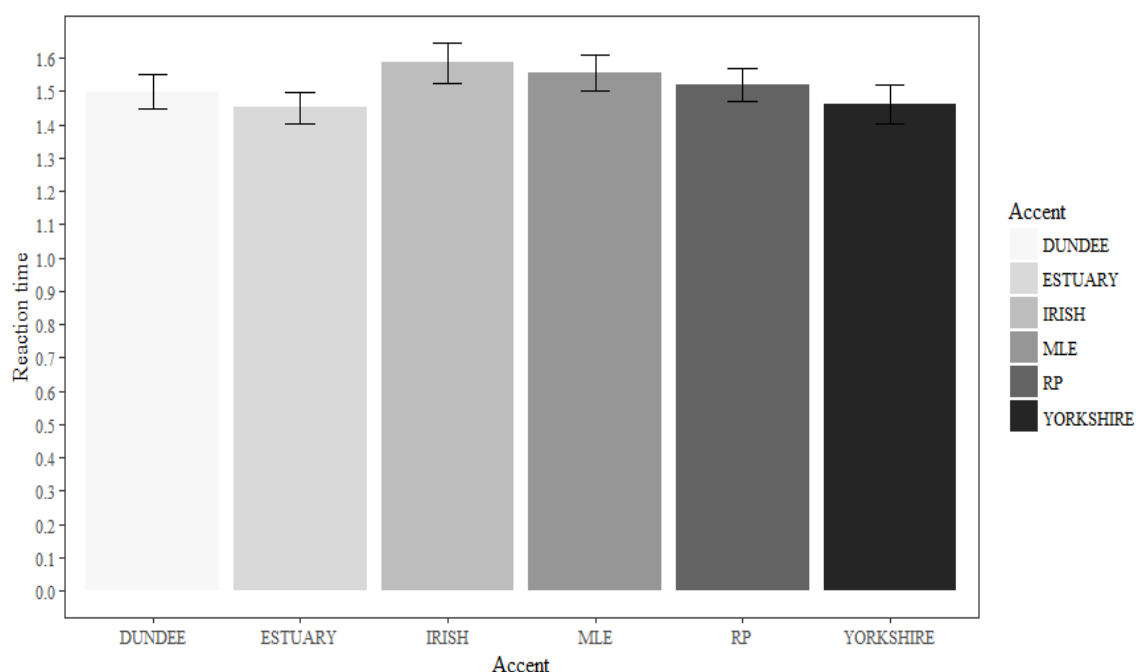


Figure 6.5 Mean reaction time and standard error for each accent among Newham participants ( $n = 34$ )

Table 6.15 shows that there was a main effect of current belief on reaction time ( $p = 0.009$ ). Much like Tayside, there was also a significant interaction between current belief and prior belief on reaction time ( $p = 0.000$ ). However, there was neither a main effect of accent, nor an interaction between prior belief, current belief and accent on reaction time.

Examining Figure 6.5, it is still interesting to note that the effect of accent on reaction time differs from its effect on response. We saw that MLE had a persuasive effect compared with RP, Dundee English and Yorkshire English. I claimed that this is because MLE activated weaker associations, as indicated by the high  $d'$  score. Yet, in line with the argument that I proposed for Tayside in section 6.4.3, this would then imply that there was less internal noise for MLE and the response time would therefore

Table 6.15 Linear regression summary of accent, current belief and prior belief on reaction time among Newham participants ( $n = 34$ )

	Sum sq	Mean sq	NumDf	DenDF	F value	$p$ -value
Prior belief	0.68	0.68	1	4029.2	0.525	0.468
Accent	9.01	1.80	5	3933.3	1.402	0.220
Current belief	8.79	8.79	1	4021.3	6.840	0.009
Prior belief : Accent	9.28	1.86	5	3975.3	1.445	0.205
Prior belief : Current belief	26.03	26.03	1	3993.4	20.252	0.000
Accent : Current belief	13.24	2.65	5	3969.2	2.060	0.067
Prior belief : Accent : Current belief	7.28	4.46	5	3966.7	1.133	0.341

be expected to be faster. Instead, Figure 6.5 shows that Estuary English produced the fastest reaction time. Conversely, one would expect RP, Dundee English and Yorkshire English to elicit slower reaction times because associations in memory were arguably stronger, as evidenced by the dissuasive effect and low  $d'$  scores, and so there would be more internal noise. In fact, Irish English elicited the slowest reaction time. Neither Estuary English nor Irish English produced a persuasive/dissuasive effect. This points to an intriguing disconnect between how accent affects reaction time and response, which may be linked to the proficiency of the participants. These results are not significant, however, so the relationship between these two outcomes is speculative.

#### 6.4.5 Kent

In Figure 6.6, we can see that Kent participants had the quickest average reaction times ranging from 0.95s-1.10s. This aligns with the finding that the  $d'$  values were the highest in this area. In other words, they found it easiest to ignore the irrelevant information, accent, and focus on the relevant information, statement, which then allowed them to respond faster. Participants responded slowest to statements presented in MLE with a mean reaction time of 1.10s, followed closely by Dundee English at 1.09s. They responded fastest to statements presented in Yorkshire English (0.95s), while Irish English (1.01s), Estuary English (1.00s) and RP (1.01s) all had similar reaction times.

Table 6.16 shows that there was a main effect of prior belief ( $p = 0.045$ ), and the effect of current belief on reaction time was near significant ( $p = 0.052$ ). Similar to Tayside and Newham, the interaction between prior and current belief was also highly significant ( $p = 0.000$ ). However, there was no effect of accent on reaction time, and once again, the interaction between prior belief, current belief and accent was not significant.

Looking closely at Figure 6.6, I should mention that participants responded the slowest to MLE. Perhaps given the media portrayal of MLE, there are negative

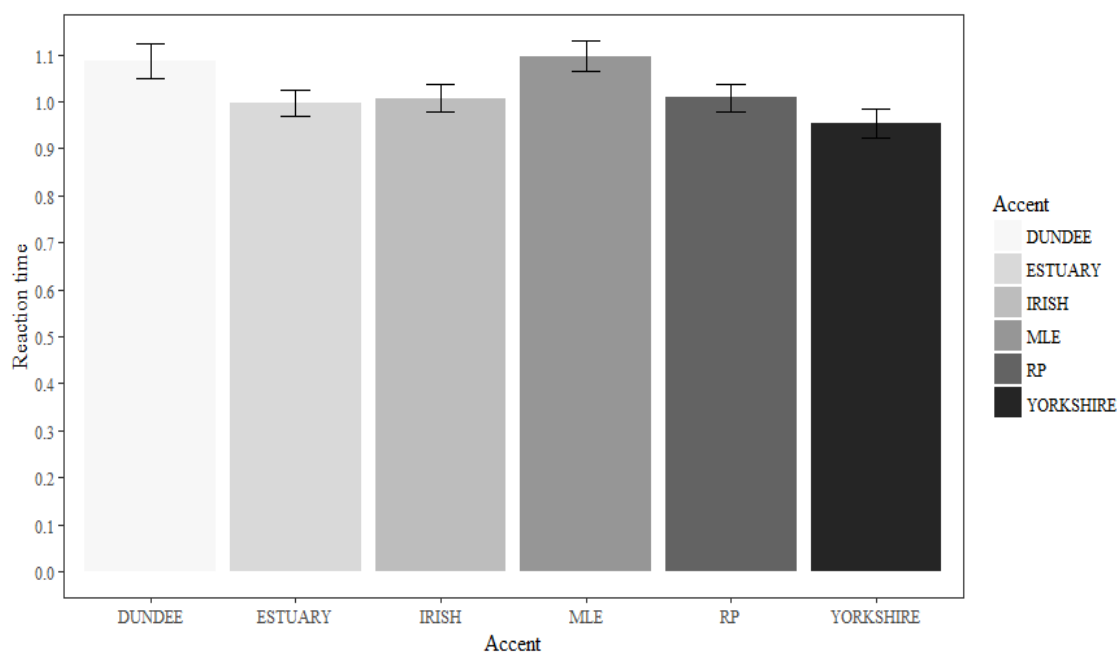


Figure 6.6 Mean reaction time and standard error for each accent among Kent participants ( $n = 34$ )

Table 6.16 Linear regression summary of accent, current belief and prior belief on reaction time among Kent participants ( $n = 34$ )

	Sum sq	Mean sq	NumDf	DenDF	F value	$p$ -value
Prior belief	1.74	1.74	1	4021.0	4.027	0.045
Accent	3.83	0.77	5	3926.7	1.775	0.114
Current belief	1.63	1.63	1	4002.0	3.765	0.052
Prior belief : Accent	1.24	0.25	5	3943.8	0.576	0.719
Prior belief : Current belief	23.33	23.33	1	3973.7	54.043	0.000
Accent : Current belief	0.66	0.13	5	3945.2	0.304	0.911
Prior belief : Accent : Current belief	2.16	0.43	5	3947.3	0.999	0.416

associations in memory for this accent among Kent participants. In turn, these affected the decision-making process, but not the outcome itself. In other words, while there was no implicit accent effect in Kent, participants responded slower to the accent that is associated with negative evaluations. I contend that such associations were activated, but they did not affect participants' responses to the statements. This is supported by the fact that the highest  $d'$  value was for MLE, which means that they actually found it easiest to ignore this accent, and focus on the statement. This may be further evidence of recategorisation and extension of the in-group boundaries. While negative associations may exist in memory for this accent, indicated by the slow reaction time, they did not affect their decision making outcome, suggested by the high  $d'$  scores.

#### 6.4.6 Summary

Reaction time displays a similar pattern across all three areas. First, there is a strong interaction between prior and current belief on reaction time. Second, and more surprisingly, it is interesting that accent persuasiveness did not affect reaction time. In other words, there was no significant interaction between accent, prior belief and current belief on reaction time, and so the hypothesis must be rejected. One interpretation is that the speed with which all participants processed the accents was inconsistent. In other words, they still had associations in memory, which led to positive and negative gut reactions, but the associations were not activated at consistent rates within each accent. This may have been due to the complexity of the stimuli, which has been known to affect reaction time (Bates et al. 1999). Specifically, using a variety of trivia statements may have hindered participants' ability to categorise the accents consistently, so there was no significant effect of accent.

However, the descriptive analyses do shed light on how accent may affect one's reaction time. In Tayside, accent impacted reaction time and response in a similar way. MLE and RP produced the slowest and fastest reaction times respectively. I argued that this was linked to the strong, dissuasive associations of the former and weaker, more persuasive associations of the latter. In Newham, however, accent impacted reaction time and response in different ways. The slowest and fastest reaction times were for the only two accents which did *not* elicit a persuasive accent effect: Estuary English and Irish English. Finally, in Kent, accent seemed to impact participants' reaction time but not enough to produce statistically significant differences. The slowest reaction time was for an accent associated with negative evaluations, MLE, as indicated by the media and accent identification task. Yet this accent did not produce a dissuasive effect, possibly because they engaged in recategorisation of in-group boundaries. Once again, the variation by area serves to emphasize the multifaceted nature of accent persuasiveness.

## 6.5 *Individual differences results*

### 6.5.1 *Data analysis*

The aim of this analysis was to test the hypothesis that individual differences affect accent persuasiveness. A correlation matrix was first performed using the *Hmisc* package in R (Harrell Jr 2012) to check for multicollinearity between the five existing variables (mood, NFC, dogmatism, self-esteem, self-monitor). A principal components analysis was then conducted in each area to eliminate redundancy in the data. Using the *psych* package in R (Revelle 2018), this analysis reduced the variables to a new set of more interpretable, uncorrelated variables. Based on this, a full model was built with

current belief as the outcome, and prior belief, accent and the principal components as the predictors. Using the *MuMin* package (Bartón 2013), a manual step down logistic regression was used to calculate the best model with AIC comparisons. Bonferroni-corrected pairwise comparisons among the accents were then examined.

### 6.5.2 Tayside

The correlation matrix results are presented in Table 6.17, and suggest that the individual differences are not correlated. A principal components analysis was conducted using the Varimax method. Factor analysis indicates the presence of three components, which are outlined in Table 6.18. We can see that both mood and self-esteem load strongly onto component 1 (0.84, 0.86), dogmatism and NFC load onto component 2, with a negative correlation (-0.77, 0.93), and self-monitor loads very highly on component 3 (0.98). The step down regression revealed that the best model did not include any principal components, suggesting that these do not strengthen the effect of accent on persuasion. As we will see, these findings contrast with Newham and Kent.

Table 6.17 Correlation matrix between individual differences among Tayside participants ( $n = 46$ )

Trait	Mood	Self-monitor	Self-esteem	NFC	Dogmatism
Mood	1.00	0.17	0.49	0.29	- 0.13
Self-monitor	0.17	1.00	0.05	0.16	- 0.38
Self-esteem	0.49	0.05	1.00	0.24	- 0.09
NFC	0.29	0.16	0.24	1.00	- 0.47
Dogmatism	- 0.13	- 0.38	- 0.09	- 0.47	1.00

Table 6.18 Factor loading (Method: Principal components with Varimax rotation) among Tayside participants ( $n = 46$ )

Trait	Component 1	Component 2	Component 3	Communalities
Mood	0.84	0.01	0.15	0.78
Self-esteem	0.86	0.03	- 0.07	0.75
Dogmatism	0.14	- 0.77	- 0.28	0.78
NFC	0.13	0.93	- 0.21	0.84
Self-monitor	0.06	- 0.05	0.98	0.94
Eigenvalue	1.50	1.45	1.11	
% Variance	0.30	0.29	0.22	
Cumulative %	0.30	0.59	0.81	

### 6.5.3 Newham

The correlation matrix results are presented in Table 6.19, and indicate that the five variables are not significantly correlated. Components were therefore rotated using a Varimax method, and Table 6.20 contains the loadings of each of the five variables onto



the four components. Mood loaded strongly onto component 2 (0.90), and self-esteem loaded very well onto component 4 (0.99). Dogmatism loaded strongly onto component 1 (0.94) and self-monitor onto component 3 (0.97). NFC was not included in the analysis as it did not load strongly onto any of the components.

Table 6.19 Correlation matrix between individual differences among Newham participants ( $n = 34$ )

Trait	Mood	Self-monitor	Self-esteem	NFC	Dogmatism
Mood	1.00	- 0.24	0.21	0.26	0.12
Self monitor	- 0.24	1.00	0.16	0.18	- 0.18
Self-esteem	0.21	0.16	1.00	0.32	- 0.06
NFC	0.26	0.18	0.32	1.00	- 0.35
Dogmatism	0.12	- 0.18	- 0.06	- 0.35	1.00

Table 6.20 Factor loading (Method: Principal components with Varimax rotation) among Newham participants ( $n = 34$ )

Trait	Component 1	Component 2	Component 3	Component 4	Communalities
Mood	0.12	0.90	- 0.20	0.09	0.88
Self-esteem	- 0.05	0.13	0.08	0.99	1.00
Dogmatism	0.94	0.11	- 0.03	- 0.01	0.91
NFC	- 0.58	0.58	0.27	0.22	0.79
Self-monitor	- 0.08	- 0.11	0.97	0.08	0.97
Eignevalue	1.25	1.19	1.06	1.04	
% Variance	0.25	0.24	0.21	0.21	
Cumulative %	0.25	0.49	0.70	0.91	

A summary of the regression for the best model is displayed in Table 6.21, which included both component 1 (dogmatism) and component 2 (mood). It shows that there was a significant main effect of prior belief on current belief ( $p = 0.000$ ), as well as a significant interaction between prior belief and accent ( $p = 0.008$ ). Importantly, for this discussion, there was a significant interaction between prior belief, accent and component 1 ( $p = 0.000$ ), and prior belief, accent and component 2 ( $p = 0.002$ ). Although the regression shows that component 2 had an effect, the p-values in the pairwise comparisons were above the adjusted value ( $p = 0.01$ ). The pairwise comparisons in Table 6.22, however, show that among highly dogmatic participants, if they already believed a statement was true, they were more likely to respond ‘false’ when the statement was presented in Dundee English ( $p = 0.001$ ), MLE ( $p = 0.001$ ), and Yorkshire English ( $p = 0.001$ ) compared with Irish English. They were also more likely to respond ‘false’ when the statement was in Dundee English ( $p = 0.001$ ) and MLE ( $p = 0.001$ ) compared with Yorkshire English. Finally, if they already believed a statement was true, they were more likely to respond ‘false’ if the statement was in MLE compared with Dundee English ( $p = 0.001$ ). In other words, dogmatism is associated with the persuasiveness of Irish English, and to a lesser degree Yorkshire English, and

Table 6.21 Logistic regression summary of accent, prior belief, and individual differences on current belief among Newham participants ( $n = 34$ )

Fixed effects	<i>df</i>	Deviance	Resid <i>df</i> .	Resid Dev.	<i>p</i> -value
Null			4079	5656.0	
Prior belief	1	1134.77	4078	4521.3	0.000
Accent	5	7.34	4073	4513.9	0.197
Prior belief : accent	5	15.78	4068	4498.2	0.008
Prior belief : accent : component 1	12	107.30	4056	4390.9	0.000
Prior belief : accent : component 2	12	3.82	4044	4360.0	0.002

Table 6.22 Pairwise comparison for logistic regression of accent, prior belief, and individual differences on current belief among Newham participants ( $n = 34$ )

	$\beta$	<i>p</i> -value
Intercept	0.993	0.001
Prior belief true (vs. false) : Dundee (vs. Irish) : component 1	0.418	0.001
Prior belief true (vs. false) : Yorkshire (vs. Irish) : component 1	0.403	0.001
Prior belief true (vs. false) : MLE (vs. Irish) : component 1	0.452	0.001
Prior belief true (vs. false) : Dundee (vs. Yorkshire) : component 1	0.418	0.001
Prior belief true (vs. false) : MLE (vs. Yorkshire) : component 1	0.452	0.001
Prior belief true (vs. false) : MLE (vs. Dundee) : component 1	0.452	0.001

the dissuasiveness of MLE, and to a lesser degree Dundee English: Irish English > Yorkshire English > Dundee English > MLE.

In section 6.3.5, we saw that MLE was *more* persuasive than Dundee English and Yorkshire English, but among dogmatic participants, it seems that negative associations in memory for MLE were stronger than negative associations for Dundee English and Yorkshire English. As dogmatic participants are less flexible in their thinking, it follows that MLE, which has been subject to extensive negative commentary (Kerswill 2014), will elicit negative attitudes. In other words, it seems that MLE's associations with stigmatization outweighed its associations with in-group similarity.

#### 6.5.4 Kent

Finally, in Kent, there were no significant correlations between the individual differences as outlined in the correlation matrix (Table 6.23). Again, the data is orthogonal, and so a Varimax rotation was used. Table 6.24 contains the loadings of each of the five variables on the three components. Both mood and self-monitor load strongly onto component 1 with a negative correlation (-0.78, 0.83), self-esteem and NFC load onto component 2 (0.74, 0.80), and dogmatism loads onto component 3 (0.97).

Table 6.23 Correlation matrix between individual differences among Kent participants ( $n = 34$ )

Trait	Mood	Self-monitor	Self-esteem	Dogmatism	NFC
Mood	1.00	- 0.32	- 0.13	- 0.32	- 0.32
Self-monitor	- 0.32	1.00	0.03	0.01	0.18
Self-esteem	- 0.13	0.03	1.00	0.23	- 0.11
Dogmatism	- 0.32	0.01	0.23	1.00	0.01
NFC	0.11	0.18	- 0.11	0.01	1.00

Table 6.24 Factor loading (Method: Principal components with Varimax rotation) among Kent participants ( $n = 34$ )

Trait	Component 1	Component 2	Component 3	Communalities
Mood	- 0.78	- 0.30	0.26	0.77
Self-esteem	- 0.05	0.74	- 0.09	0.56
Dogmatism	0.03	- 0.01	0.97	0.94
NFC	0.16	0.80	0.06	0.67
Self-monitor	0.83	- 0.12	0.27	0.77
Eigenvalue	1.32	1.30	1.09	
% Variance	0.26	0.26	0.22	
Cumulative %	0.26	0.52	0.74	

A summary of the best model is displayed in Table 6.25, which included only component 1 (self-monitor/ mood). It shows a significant main effect of prior belief on current belief ( $p = 0.000$ ), and a significant interaction between prior belief, accent and component 1 (self-monitor/mood) on current belief ( $p = 0.000$ ). The pairwise comparisons are outlined in Table 6.26, but it is first helpful to understand the correlation between self-monitor and mood. If a participant was in a bad mood, then they were more inclined to have a high self-monitor, or put otherwise, they were more concerned with how they came across in social situations. Among these participants, if they already believed a statement to be true, they were more likely to respond ‘false’, in the moment if the accent was in Irish English ( $p = 0.004$ ) and Yorkshire English ( $p = 0.009$ ) compared with Dundee English. They were also more likely to respond ‘false’, when the statement was presented in Yorkshire English compared with Irish English ( $p = 0.009$ ). In other words, we see a persuasive hierarchy of Dundee English > Irish English > Yorkshire English.

Table 6.25 Logistic regression summary of accent, prior belief, and individual differences on current belief among Kent participants ( $n = 34$ )

Fixed effects	<i>df</i>	Deviance	Resid <i>df</i>	Resid Dev	<i>p</i> -value
Null			4079	5628.7	
Prior belief	1	2132.08	4078	3496.6	0.000
Accent	5	4.17	4073	3492.5	0.526
Prior belief : accent	5	2.08	4068	3490.4	0.838
Prior belief : accent : component 1	12	36.61	4056	3453.8	0.000

*Table 6.26 Pairwise comparisons for logistic regression of accent, prior belief, and individual differences on current belief among Kent participants (n = 34)*

Fixed effects	$\beta$	p-value
Intercept	1.512	0.001
Prior belief true (vs. false) Irish (vs. Dundee) : component 2	0.411	0.004
Prior belief true (vs. false) Yorkshire (vs. Dundee) : component 2	0.363	0.009
Prior belief true (vs. false) Yorkshire (vs. Irish) : component 2	0.363	0.009

These results are initially unexpected because there was no implicit accent effect among Kent participants, as we saw in section 6.3.6. A high self-monitor increases people's willingness to modify their behaviour, which may make them less tolerant of non-standard accents. While all accents were well identified, Yorkshire English was the least accurately recognised, which possibly means that it was perceived as more non-standard compared with Dundee English and Irish English. This accent was therefore dissuasive because those participants who were very concerned with impression management regarded Yorkshire English as 'too' regional and non-prestigious. The interaction with mood is interesting, given that a bad mood increases message elaboration, so cues, such as accent, become less important (Bless et al. 1990). This is harder to explain, but it may be that the effect of self-monitor had a greater impact on accent persuasiveness than the effect of mood.

### *6.5.5 Summary*

In summary, individual differences do not affect accent persuasiveness to a large extent, but dogmatism, self-monitor and mood had a marginal influence. Accent bias is so prevalent in Britain that it cultivates associations in memory regarding what is a 'right' and 'wrong' accent. It therefore makes sense that a rigid thought style (dogmatism) and a tendency to employ impression management strategies (self-monitor) would affect accent persuasiveness. What is perhaps harder to explain is why there was no effect of individual differences on accent persuasiveness in Tayside, but this is a preliminary investigation, so it would certainly be interesting to verify this with further research. It may be that other individual differences affect accent persuasiveness here. In Newham, dogmatic participants were more persuaded by the three least-well identified accents compared with MLE, which suggests that associations of stigmatization were more important in accent persuasiveness than associations of in-group solidarity. Finally in Kent, we see that a bad mood and a high self-monitor influenced the dissuasiveness of Yorkshire English. This may be due to its poor identification and, therefore, more intense perception as a non-standard, regional British accent. Overall, while individual

differences have been shown to affect stereotype activation and persuasion, there is only partial evidence here to support these claims. The hypothesis can therefore not be accepted in its entirety.

I have demonstrated that there is a pool of associations for the accents in chapter 5. In this chapter, I have shown how specific associations may be activated during the persuasion process and implicit attitude formation. The question remains as to how these associations are validated? Are they accepted or rejected as a basis for explicit attitudes, and if so why? The next chapter seeks to provide answers to these questions, and understand explicit attitudes to British accents more broadly.

## 7 Study one: Explicit attitude task

### 7.1 Overview

In this chapter, I will focus on the second method used to investigate the hypothesis that there would be a persuasive effect of accent, varying by trial area: the explicit measurement procedure. This comprised two matched-guise tests (task 7 – Table 7.1), which explored participants' explicit attitudes to the same six British accents. While this task did not measure how accent changed people's minds, it did seek to elicit conceptually similar associations of accent credibility. From the perspective of the APE model, the task sheds light on why propositions arising from affective gut reactions may be rejected or accepted.

*Table 7.1 Order of tasks and number of questions for study one*

Task number	Task	Number of questions/trials
1	Brief mood questionnaire	1
2	Implicit attitude test	126
3	Self-monitor questionnaire	18
4	Self-esteem questionnaire	10
5	Need for cognition questionnaire	18
6	Dogmatism questionnaire	20
7	<b>Explicit attitude test</b>	<b>1</b>
8	Accent identification task	6
9	Written form questionnaire	120
10	Demographic questionnaire	6

### 7.2 Method

#### 7.2.1 Research instrument

To elicit explicit attitudes, participants completed two matched-guise tests, one examining attitudes to accents in a neutral context, and another in an oral health context. Measuring attitudes in two contexts tested whether attitudes to accents vary depending on context, and therefore the stability of explicit attitudes. In the first test, participants

heard six identical passages with a different accent about how to travel from Birmingham to Wales (Appendix B.1). The destinations were selected as participants were not from either of these areas, and so they were less likely to be knowledgeable about route options. In the second test, participants heard six identical passages with a different accent, which delivered advice on how to prevent tooth decay (Appendix B.2). The first speech sample was 34-37 seconds long and the second speech sample was 30-33 seconds long. Matched-guise test samples have previously ranged from 30 seconds for three passages (Eisenstein 1982), 35 seconds for thirteen passages (Giles 1970), 180 seconds for 8 passages (Ball 1983), and 240 seconds for one passage (Rubin 1992). As the matched-guise test followed a lengthy implicit measurement procedure and four individual differences questionnaires, 30-37 seconds was considered an appropriate length for a speech sample to retain participants' attention whilst giving them enough time to judge the accent in question. The speech rate was not adjusted because this intrinsically varies for different accents, for example urban accents are often faster than rural accents (Wells 1982). While this means that persuasiveness may be linked to the speed of accent rather than accent differences, varying the speed would not only affect the pitch, but also reduce the naturalness of the guises.

### *7.2.2 Procedure*

The same female actor as for the implicit measurement procedure produced the recordings of the speech samples, which were presented in random order using Psychopy. After each sample, participants had to answer the following question: 'How likely are you to follow the advice of this woman?' using a 6-point Likert scale whereby 1 was 'not very likely' and 6 was 'very likely'. In the second test, the experiment was repeated but instead, participants responded to the following question: 'How likely are you to follow the advice of this dentist?' Likelihood to follow advice was the basis for the explicit task, because it has previously been linked to persuasion and credibility (e.g. Briggs et al. 2002; McKnight and Kacmar 2007). This is important because there is a conceptual correspondence with the implicit measurement procedure. In other words, the implicit measurement procedure assessed persuasion by measuring accent credibility via prior and current beliefs, but the explicit measurement procedure elicited attitudes about accent credibility. The focus on credibility allows implicit and explicit attitudes to be compared.

As it is likely that the participants were aware that they were discriminating between speakers based on their accents, the statements were hedged by inserting 'likely' to reduce any distress. A 6-point Likert scale was used to provide enough meaningful response categories without giving participants the option of a mid-point.

Mid-points are problematic because they can increase social desirability bias. In Garland's (1991) study, he discovered that respondents used the mid-point to avoid providing a socially unacceptable answer. As accent discrimination is a prevalent and sensitive topic in Britain, forcing participants to make a decision by removing the mid-point would provide important linguistic insights. A 6-point scale was also used due to the task's sensitivity from a social perspective. The additional options of 'slightly agree' and 'slightly disagree' provided more nuanced responses compared with a scale of fewer points that only offer, for example, 'neither agree or disagree', 'agree' and 'strongly agree'. They also gave participants who would ordinarily respond with a mid-point the opportunity to respond with a weaker attitudinal response, and still elicit a positive or negative response.

### *7.2.3 Measuring explicitness*

Having detailed the research instrument and procedure, it is important to touch on how this aspect of the experiment measures explicitness. As discussed briefly in section 3.4.3, the matched-guise test has traditionally been used to elicit implicit attitudes because participants are unaware that the researcher is interested in language attitudes. Pantos and Perkins (2013) used the APE model as a theoretical framework for investigating implicit and explicit attitudes to foreign and native accents of American English. Their implicit measurement procedure was the IAT and their explicit measurement procedure was a verbal guise test on the ground that this would elicit participants' "thoughtful propositional reactions to audio stimuli" (Pantos and Perkins 2013: 9).

However, it is also worth explaining exactly how Bargh's (1994) criteria of automaticity apply to the explicit attitude measurement procedure used in my study. First, as there was no time pressure to answer the questions, the judgement process was most likely more efficient. Additionally, Gawronski and Bodenhausen (2006, 2011) note that reporting an evaluative judgement arising from a propositional process is usually controllable because a person can choose to report a different judgement. Regarding awareness, there were no filler items as the goal was not to disguise the nature of the task, and several participants asked whether it was related to accent once they had finished. In this sense, the attitudes were not elicited through an unconscious process. Intention, again, is harder to unpack, and easier to understand in hindsight. This is because when the translated proposition is consistent with the validating information, an intentional assessment of information is not required. However, when inconsistency occurs between these two pieces of information, people intentionally search for an alternative proposition or negate the translated proposition. In sum, one can argue that



the judgements elicited here were explicit in terms of efficiency, awareness and control, but intention is less clear. This suggests that the procedure elicits attitudes to accents which are more explicit than the implicit measurement procedure.

### 7.3 Results

#### 7.3.1 Data analysis

Descriptive analyses were first conducted to compare the mean score and standard error for each accent by context. The distribution of the residuals was checked using the *qqnorm* function (Becker et al. 1988) in R, and results suggest that they are normally distributed. Two separate linear regressions were performed in each area to test whether accent influenced one's likelihood to follow advice using the *lm* call in the *lme4* package (Bates et al. 2015). In the first model, likelihood to follow neutral advice was the outcome and accent was the predictor, and in the second model, likelihood to follow oral health advice was the outcome and accent was the predictor. Random effects were not included as each participant only heard one passage per accent for each context. Pairwise comparisons were carried out to explore the significant differences between all six accents, which produced six separate models for the neutral and oral health context. Results were confirmed through a post-hoc TukeyHSD comparison. I will present the descriptive results for both contexts together, but address the inferential analysis for each context separately because there is a larger amount of data. The discussion which follows will focus on explicit attitudes, and bring in the accent identification and implicit attitude results in the context of the Associative Propositional-Evaluative model (Gawronski and Bodenhausen 2006, 2011).

#### 7.3.2 Tayside: Descriptive analysis

Figures 7.1-7.2 display the mean and standard error for each accent by context. In a health context, Dundee English was the accent that elicited the highest likelihood to follow advice ( $M = 4.89$ ), followed by RP and Irish English ( $M = 4.72$ ), then Estuary English ( $M = 4.54$ ). Yorkshire English has the second lowest mean score ( $M = 4.28$ ), while MLE produced the lowest mean likelihood to follow advice in a health context ( $M = 3.76$ ). In a neutral context, results are fairly similar but there is a slight shift, such that RP received the highest mean score ( $M = 4.61$ ), followed closely by Dundee English ( $M = 4.54$ ), and Estuary English ( $M = 4.48$ ). Towards the lower end of the scale are Irish English ( $M = 4.24$ ), Yorkshire English ( $M = 4.22$ ) and finally MLE with a much lower score ( $M = 3.61$ ). We also see that participants were more likely overall to

follow health advice than neutral advice. This may be because participants felt more pressure to comply with medical advice, as there is greater shame in stating that they would not adhere to advice which is clearly beneficial to their well-being.

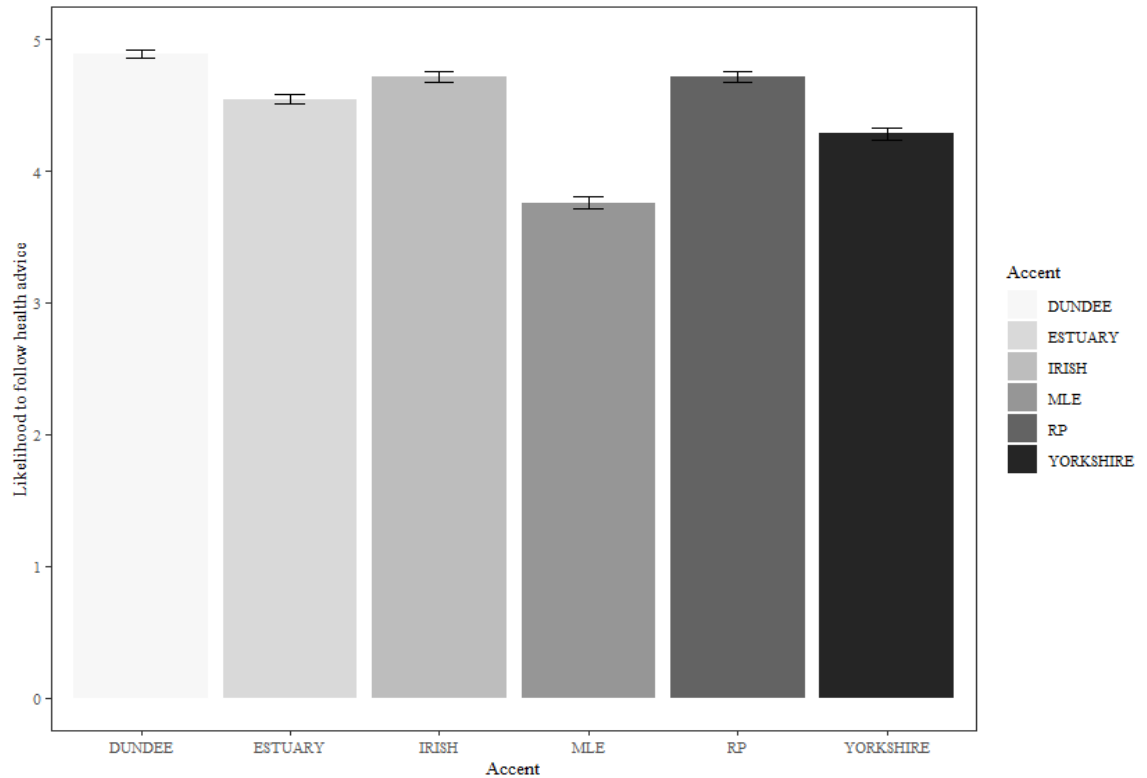


Figure 7.1 Mean and standard error of likelihood to follow advice in health context among Tayside participants ( $n = 46$ )

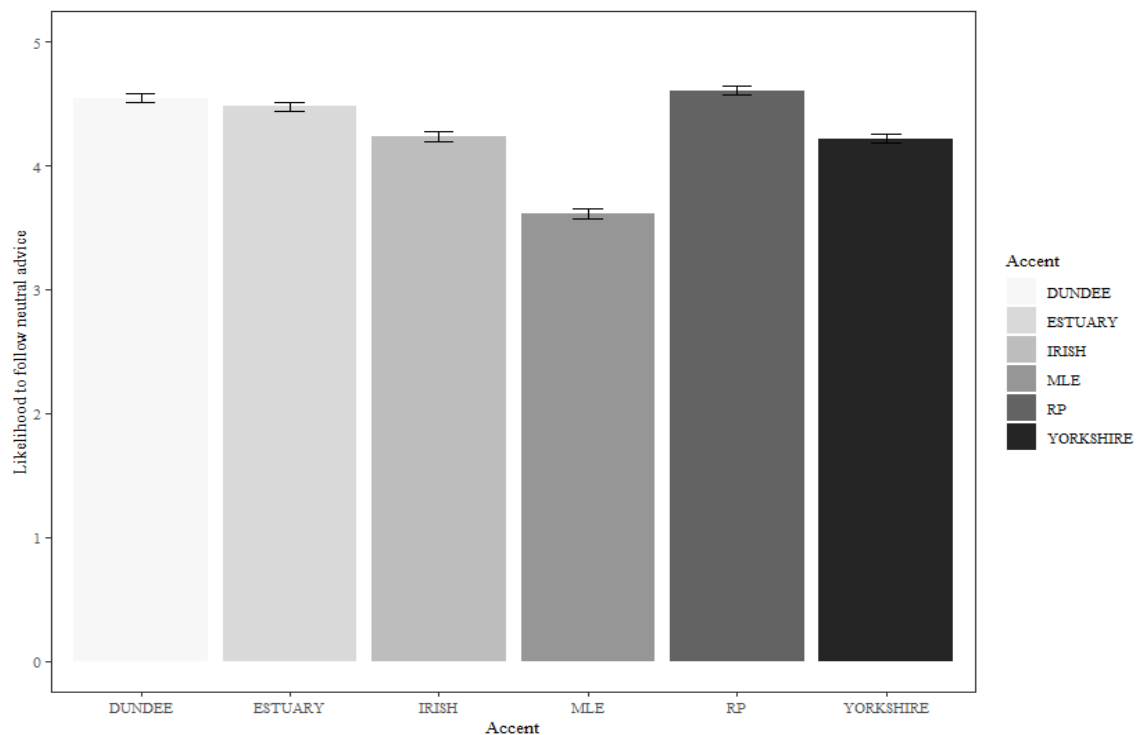


Figure 7.2 Mean and standard error of likelihood to follow advice in neutral context among Tayside participants ( $n = 46$ )

### 7.3.3 Tayside: Inferential analysis

Table 7.2 displays results of the regression, which shows that accent significantly influenced one's likelihood to follow health advice ( $p = 0.000$ ). The results of the pairwise comparison are shown in Table 7.3 along with a TukeyHSD plot in Figure 7.3. Each line indicates the mean difference between two accents with the confidence interval. When the line crosses zero, the difference between two accents is not significant, for example the difference between RP and Irish English is not significant. This data indicate that participants were significantly more likely to follow health advice when it was presented in Dundee English compared with all five accents: Irish English and RP ( $p = 0.021$ ), Estuary English, Yorkshire English, and MLE ( $p = 0.000$ ). They were more likely to follow health advice in Irish English and RP compared with Estuary English ( $p = 0.021$ ), MLE and Yorkshire English ( $p = 0.000$ ), but there was no significant difference between the effect of Irish English and RP. We can also see that participants were more likely to follow advice when presented in Estuary English versus Yorkshire English and MLE ( $p = 0.000$ ), and more likely to follow advice in Yorkshire English versus MLE ( $p = 0.000$ ). In this way, a hierarchy of accents emerges in terms of likelihood to follow advice which confirms the earlier descriptive results: Dundee English > Irish English, RP > Estuary English > Yorkshire English > MLE.

Table 7.2 Linear regression summary of accent on likelihood to follow health advice among Tayside participants ( $n = 46$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	774.5	154.90	109.44	0.000
Residuals	5514	7804.3	1.42	-	-

Table 7.3 Pairwise comparisons for linear regression accent on likelihood to follow health advice with adjusted *p*-values among Tayside participants ( $n = 46$ )

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee										
Estuary	-0.347	0.000								
Irish	-0.174	0.021	0.174	0.021						
MLE	-1.130	0.000	-0.782	0.000	-0.956	0.000				
RP	-0.174	0.021	0.174	0.021	0.000	1.000	0.956	0.000		
Yorkshire	-0.608	0.000	-0.261	0.000	-0.435	0.000	0.522	0.000	-0.435	0.000

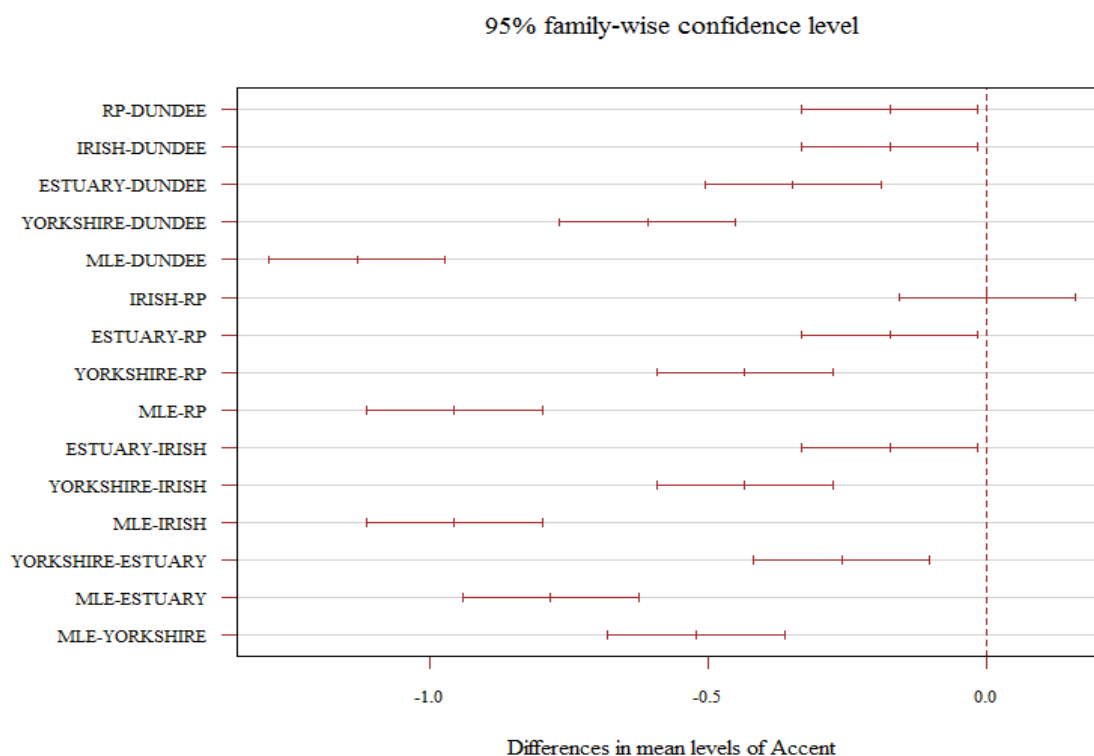


Figure 7.3 TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Tayside participants ( $n = 46$ )

The results in Table 7.4 tell us that accent also significantly affected participants' likelihood to follow neutral advice ( $p = 0.000$ ). The regression results are displayed in Table 7.5, with post-hoc comparisons shown in Figure 7.4. Overall, there are some similarities with the health context results. The accents with the highest likelihood to follow advice were RP, Dundee English and Estuary English compared with Irish English, MLE and Yorkshire English ( $p = 0.000$ ). However, there was no significant difference between the effect of RP, Estuary English and Dundee English. Next, participants were significantly more likely to follow advice in Irish English and Yorkshire English compared with MLE, ( $p = 0.000$ ) but there was no significant difference between these two accents. Again, a hierarchy emerged in terms of likelihood to follow health advice: RP, Dundee English, Estuary English > Irish English, Yorkshire English > MLE.

Table 7.4 Linear regression summary of accent on likelihood to follow neutral advice among Tayside participants ( $n = 46$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	618.7	123.75	89.53	0.000
Residuals	5514	7621.7	1.38	-	-

Table 7.5 Pairwise comparisons for linear regression accent on likelihood to follow neutral advice among Tayside participants ( $n = 46$ )

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee										
Estuary	-0.065	0.841								
Irish	-0.304	0.000	-0.239	0.001						
MLE	-0.934	0.000	-0.869	0.001	-0.630	0.000				
RP	0.065	0.841	0.130	0.164	0.369	0.000	-1.000	0.000		
Yorkshire	-0.322	0.000	-0.257	0.001	-0.018	0.999	0.612	0.000	-0.388	0.000

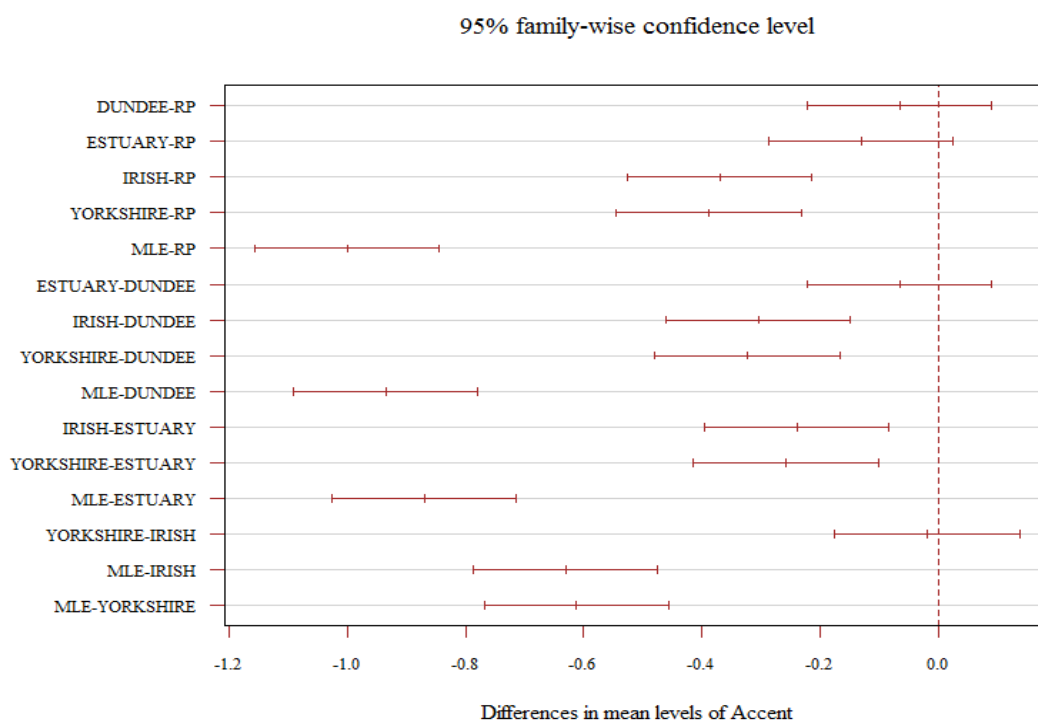


Figure 7.4 TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Tayside participants ( $n = 46$ )

### 7.3.3 Tayside: Discussion

I will begin by addressing the high likelihood to follow advice in Dundee English. In section 6.3.4, the implicit measure revealed that among Tayside participants, there was a near significant dissuasive effect of Dundee English compared with Estuary English. As this was only near significant, it is difficult to ascertain what associations may be activated upon hearing Dundee English. Given that explicit attitudes are propositional

processes based on these activated associations, it is hard to fully explain why the positive explicit attitude emerged.

However, during the propositional process, associations are also assessed for their consistency with other information that is deemed relevant at the time. Gawronski et al. (2008) provide an example of how this information is used in racial discrimination by drawing on Jones and Gerard (1967). They note that the proposition is assessed for its consistency with non-evaluative beliefs about the world and evaluative judgements of other attitude objects. The authors argue that an instance of the translated proposition and relevant information may be:

- (1) I dislike black people.
- (2) Black people represent a disadvantaged group.
- (3) Negative evaluations of disadvantaged groups are wrong.

In the context of my study, one cannot determine statement (1), because this is the proposition arising from the affective gut reaction. We do not know this affective gut reaction, because the implicit attitude task did not reveal any persuasive or dissuasive effect between Dundee English and other accents. However, one can put forward a plausible example of the relevant information that Tayside participants may have used when evaluating Dundee English:

- (1) *Unknown.*
- (2) Dundee English represents my own group.
- (3) Negative evaluations of my own group are wrong.

Of course, what precise information an individual deems important for the validation of a proposition cannot be known, and undoubtedly varies from individual to individual. Yet, the non-evaluative belief about the world, (2), can possibly be traced back to section 5.4.5 where I note that Tayside participants largely perceived the accent as intended (e.g. *Scotland East Dundee, Dundee*) and even if there were inaccuracies at the city level, most identified it as a Scottish accent. Therefore when they heard Dundee English, they used this information in their evaluation.

Statement (3) is an evaluative judgement of another attitude object, which in this case is discriminatory behaviour against 'my own group'. In section 5.4.1, there was evidence suggesting that Tayside participants were hostile to English accents, such as perceptions of RP as *posh* and the insertion of *England* to signal ideological distance from Scotland, as well as informal conversations which indicated negativity. This negativity is arguably driven by the deeply entrenched Scotland-England divide (Martin 1988), which fosters a strong subjective vitality among Scottish participants. Such solidarity to their in-group is supported by Tajfel and Turner (1979), who argue that in order to increase our self-esteem, we may be prejudice against out-group members.

After recognising that the attitude object, Dundee English, represents their group, these participants may have concluded that they should not express negativity. Instead, they wanted to appear loyal, particularly in the presence of an English researcher. Abrams and Hogg (1988) also found evidence of accent loyalty in their language attitude study in Scotland. Results show that Dundee English participants favoured their own accent in contrast to Glaswegian, but upgraded Glaswegian when they had to evaluate it alongside RP. The authors argue that participants redefined the out-group when RP was introduced, and shifted the boundary of the in-group to include Glaswegian. They did this to display their identification with Scotland and high subjective vitality. This supports statement (3), that participants believe discriminatory behaviour against their own group is wrong. Combining both pieces of relevant information, participants claimed that they were very likely to follow advice in Dundee English. One possible reason that scores were higher in the health context is that the study was conducted in a dental hospital. As such, participants were already in an environment whereby they either trusted dental health advice presented in a Dundee English accent, or they felt pressure to state that they would comply most with advice in this accent.

For RP to be rated favourably as well means that their likelihood to follow advice is determined by accents associated with solidarity (Dundee English) *and* prestige (RP). First, we can argue that RP was recognised as a high status, educated accent by labels such as *private school* and *Downton Abbey*. Secondly, as outlined in section 3.2, RP is often still considered a model accent, associated with social and economic advancement since its emergence in the 18<sup>th</sup> century. Therefore, while there were negative associations with RP, its high position compared with the other accents shows that there is potentially a conflict among participants between a desire to express in-group solidarity to their own accent, and align their response to well-established standards.

The low likelihood to follow advice in Yorkshire English, is best explained in the context of the North-South divide. If we take participants' likelihood to follow advice in a prestigious RP accent as a starting point, one can argue that the working-class stereotypes of the North led to low scores for Yorkshire English. Wales (2000) discusses the binaries between the North and South such as 'up' and 'down', but also 'rich' and 'poor'. She argues that the origin of this 'poor' reputation lies in the Industrial Revolution, which served to make working-class synonymous with the North. Perhaps most importantly, Wales suggests that the media "regularly and aggressively promote such loaded oppositions," which makes the divide more noticeable. This cultural prominence is reinforced with the extremely popular soaps *Emmerdale* and *Coronation Street*, which are set in the Yorkshire Dales and Greater Manchester

respectively. Further still, she draws on the specific mention of articles in the national media, which use northern features in their headlines, such as ‘Ba a gum, there’s an ee in t’Oxford Dictionary’ (The Daily Telegraph 1999 as cited in Wales 2000). It seems that an ability to recognise the accent combined with a potential awareness of its inferior status contributed to the relevant information used in the propositional process. This then led to a low likelihood to follow advice presented in this accent in both contexts.

The finding that participants were most likely to follow neutral advice presented in Estuary English, along with RP and Dundee English, can perhaps be explained by the fact that Estuary English is seen as a standard accent without the negative class-based associations. Otherwise put, given that it is a lower-middle class accent (Kerswill 2006), Estuary English is perhaps regarded as more of an everyday accent and scores higher in normal situations, such as hearing directions, as opposed to health advice. If we recall, in section 6.3.4, participants were more persuaded by Estuary English compared with MLE. I argued that this was because it activated positive, although weaker, associations in memory compared with MLE, which then produced a persuasive effect. This suggests that implicit and explicit attitudes to Estuary English were positive compared with MLE. What can the APE model tell us about how such a correlation arose? During the propositional process, the positive gut reaction is transformed into a proposition, such as (1) ‘I like this accent’. Again, what is crucial here is the relevant information required to validate this proposition, which I have suggested below using Gawronski et al.’s (2008) framework:

- (1) I like this accent.
- (2) This accent is spoken by lots of English people.
- (3) Positive evaluations of mainstream accents are acceptable.

We can discern that response labels, such as *English*, may feed into proposition (2). This is because equating the accent with the language implies an awareness that the accent is widespread. In terms of proposition (3), it does not seem entirely accurate to say that it stems from media representations, unlike MLE. Media coverage of Estuary English has been positive and negative, as suggested by these news article titles: ‘Leave it aht, Samantha...Mrs Cameron’s Estuary English typifies a society that mistrusts aspirate and mocks excellence’ (Hitchens, The Daily Mail 2010) and ‘Estuary English is smashin’ and it is also correct’ (Kamm The Times 2017). Given the distance between Tayside and South East England, it may be, however, that the use of Estuary English in the media itself, as opposed to media coverage, served to normalise this accent. Myles (2010: 15) says: “The influence of the media, particularly TV celebrities, in the popularization of ‘Estuary English’ as well as its appeal to the new middle classes in Britain shows change can occur in the social status of once subordinated accents or



dialects even if, as in this case, it may be stimulated by populist impulses”. In this way, an accent which did not enjoy the same status as RP, now has high levels of social acceptability. As a result, positive associations of the accent are not deemed problematic, and participants’ motivation to disguise their transformed propositions was possibly reduced. Bodenhausen et al.’s (2009: 115) chapter on controlling prejudice serves very well to support this idea: “...the strength of motivation may wax and wane, depending on one’s situational vulnerability to sanction for expressing prejudice.” Taken together, a consistency emerges between implicit and explicit attitudes.

Moving onto MLE, participants significantly preferred all five other accents in both contexts. There was also a significant dissuasive effect of MLE compared with Estuary English. We can therefore argue for a correlation between their implicit and explicit attitudes. In the propositional process, i.e. the explicit task, participants transformed their negative associations into propositions, such as ‘I dislike this accent’. Again, below is an example of the information used to assess the consistency of their associations with relevant information:

- (1) I dislike this accent.
- (2) It is mainly spoken by uneducated people.
- (3) Negative evaluations of uneducated people are not unacceptable.

Once again, it is not possible to know the exact nature of such statements, but we can argue that response labels, such as *London African*, *London mixed*, and *Asian London* led to the belief that MLE is spoken by non-native speakers of English and produced something akin to proposition (2). Regarding proposition (3), Bassili and Brown (2005) actually note that implicit and explicit attitudes are correlated when the attitude object is not socially sensitive. This is because the individual does not feel the need to alter their explicit attitude for self-presentation concerns. If an accent is publicly criticised, for example, media reports claiming that MLE is tarnishing the English language, one may believe that a negative attitude is not only widespread but also expected, thus reducing its perceived controversy. Participants’ motivation to control their prejudice was perhaps further weakened by the large geographical distance between themselves and MLE speakers, which also decreased the social penalties of expressing bias. This is in line with McKenzie’s (2015a) study on attitudes to English speech varieties. Results reveal that there was a correlation between implicit and explicit attitudes towards non-native English speech, which he argued was potentially due to a lack of social desirability bias. He draws on Labov’s (1966) study which concluded that when an attitude is intensely negative, self-presentation concerns do not impact explicit attitudes. Indeed, this finding echoes Fazio et al.’s (1995: 1025) second level of prejudice. Negativity is automatically activated and participants have “no qualms about their

experiencing such negativity or about expressing it.” This is why we see a consistency between participant’s attitudes to MLE.

### 7.3.4 Newham: Descriptive analysis

Figures 7.5-7.6 display the mean and standard error for each accent by context. The accent with the highest average in a health context was RP ( $M = 5.18$ ), followed by Estuary English ( $M = 4.74$ ). In a neutral context, these positions were reversed, such that Estuary English received the highest mean score ( $M = 4.59$ ), followed by RP ( $M = 4.32$ ). There is a similar pattern between MLE and Dundee English at the bottom of the scale. MLE received the lowest mean rating in a neutral context ( $M = 3.53$ ), followed by Dundee English ( $M = 3.76$ ), but Dundee English elicited the lowest likelihood to follow advice in a health context ( $M = 4.09$ ), followed by MLE ( $M = 4.15$ ). Finally, the positions of Yorkshire English and Irish English were stable across both contexts with their mean scores occupying third and fourth place respectively (health:  $M = 4.59$ ,  $M = 4.56$ , neutral:  $M = 4.26$ ,  $M = 3.88$ ). We can see also that, similar to Tayside, participants’ likelihood to follow advice was higher in the health context than in the neutral context, but their attitudes to accents were relatively stable.

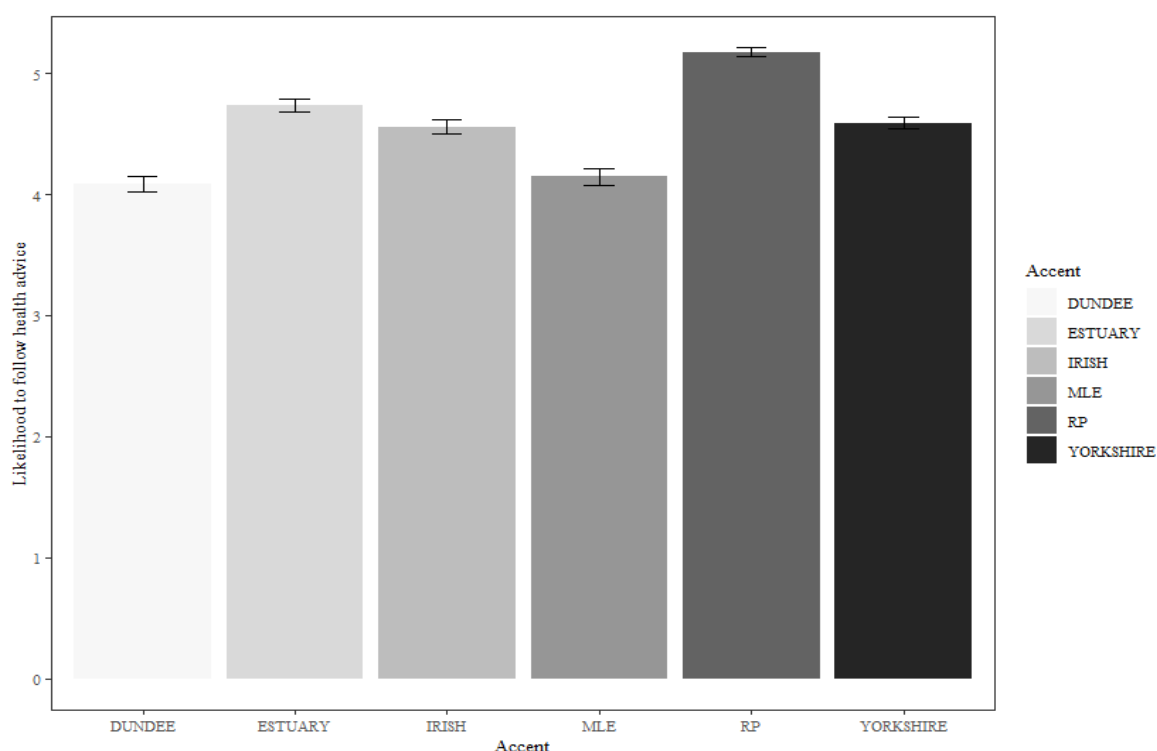


Figure 7.5 Mean and standard error of likelihood to follow advice in health context among Newham participants ( $n = 34$ )

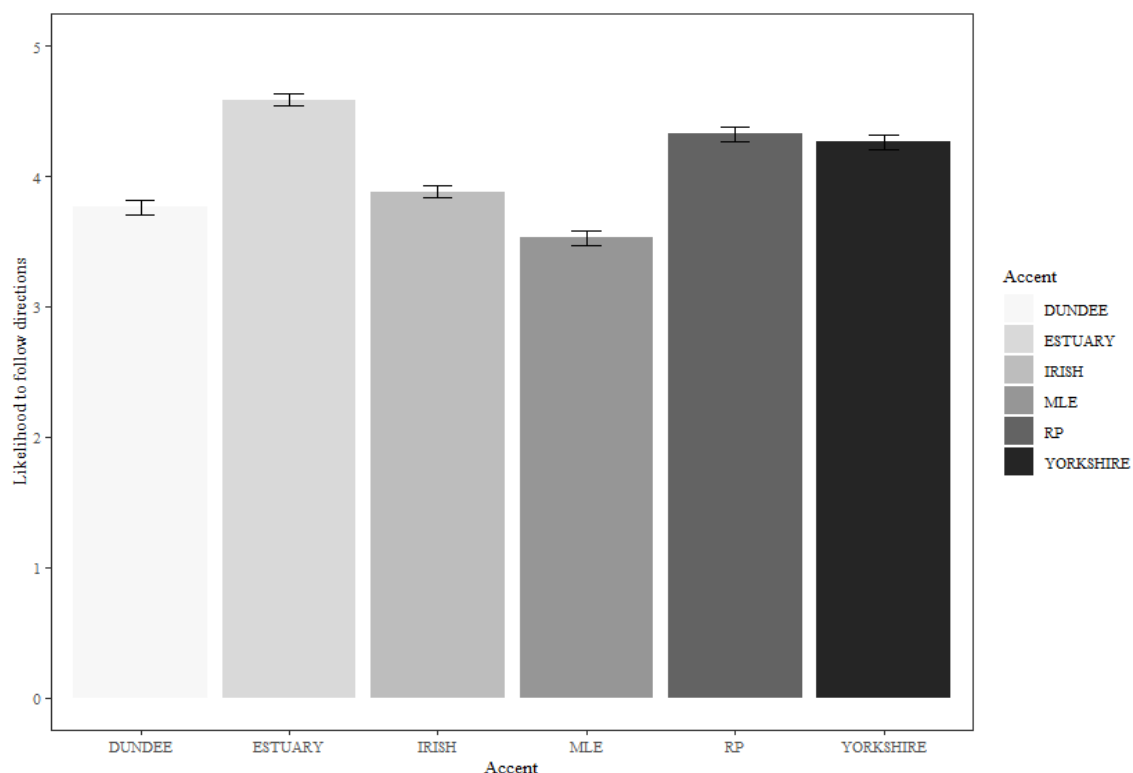


Figure 7.6 Mean and standard error of likelihood to follow advice in neutral context among Newham participants ( $n = 34$ )

### 7.3.5 Newham: Inferential analysis

In Table 7.6, we can see that one's likelihood to follow health advice was significantly affected by accent ( $p = 0.000$ ). Exploring this further in the regression results (Table 7.7) and TukeyHSD plot (Figure 7.7), the differences between each accent emerge. RP was rated significantly higher in a health context compared with all five accents ( $p = 0.001$ ). Next participants were most likely to follow advice in Estuary English compared with Dundee English and MLE ( $p = 0.000$ ), and Irish English ( $p = 0.025$ ). While there was no significant difference between the effect of Yorkshire English, Estuary English and Irish English, participants were likely to follow advice in these two accents compared with Dundee English and MLE ( $p = 0.000$ ). In sum, ranking the accents in order of likelihood to follow health advice: RP > Estuary English, Irish English, Yorkshire English > Dundee English, MLE.

Table 7.6 Linear regression summary of accent on likelihood to follow health advice among Newham participants ( $n = 34$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	547.9	109.58	51.77	.000
Residuals	4074	8624.2	2.12	-	-

Table 7.7 Pairwise comparisons for linear regression accent on likelihood to follow health advice among Newham participants ( $n = 34$ )

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee										
Estuary	0.647	0.000								
Irish	0.471	0.000	-0.176	0.025						
MLE	0.059	0.976	-0.588	0.000	-0.412	0.000				
RP	1.089	0.000	0.443	0.000	0.619	0.000	1.031	0.000		
Yorkshire	0.500	0.000	-0.147	0.062	0.029	0.709	0.441	0.000	-0.589	0.000

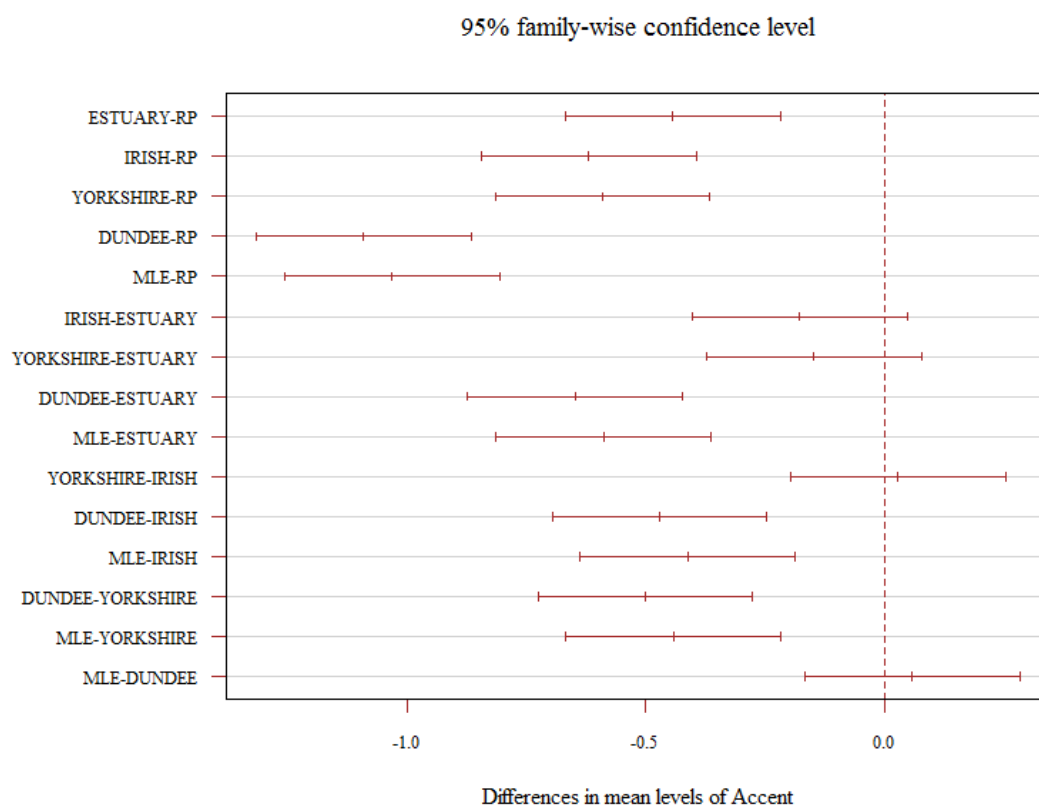


Figure 7.7 TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Newham ( $n = 34$ )

Again, there was a significant effect of accent on one's likelihood to follow neutral advice (Table 7.8). The pairwise comparisons can be seen in Table 7.9, and from a visual perspective in Figure 7.8. In a neutral context, participants were significantly more likely to follow advice when it was presented in Estuary English compared with

all five accents: ( $p = 0.000$ ). They were more likely to follow advice in RP and Yorkshire English compared with Dundee English, Irish English and MLE ( $p = 0.000$ ), but there was no significant difference between the effect of RP and Yorkshire English. At the lower end of the scale, participants were significantly more likely to follow advice in Dundee English and Irish English versus MLE ( $p = 0.000$ ), but there was no difference between the effect of Dundee English and Irish English. Finally, they were more likely to follow advice in Dundee English compared with MLE ( $p = 0.000$ ). Taking a step back, these results produce the following hierarchy of accents in order of following neutral advice: Estuary English > RP, Yorkshire English > Dundee English, Irish English > MLE.

*Table 7.8 Linear regression summary of accent on likelihood to follow neutral advice among Newham participants ( $n = 34$ )*

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	537.6	107.53	57.58	0.000
Residuals	4074	7608.2	1.868	-	-

*Table 7.9 Pairwise comparisons for linear regression accent on likelihood to follow neutral advice among Newham participants ( $n = 34$ )*

	Reference Level									
	Dundee		Estuary		Irish		MLE		RP	
	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee										
Estuary	0.823	0.000								
Irish	0.117	0.607	-0.705	0.000						
MLE	-0.235	0.000	-1.059	0.000	-0.353	0.000				
RP	0.559	0.000	-0.264	0.000	0.441	0.000	0.794	0.000		
Yorkshire	0.500	0.000	-0.323	0.000	0.382	0.000	0.735	0.000	-0.059	0.969

### *7.3.6 Newham: Discussion*

The prestige of RP, and association of RP speakers, can most easily explain its high ranking in both contexts for these participants. RP is not only the perceived standard accent by many native speakers but also by non-native speakers (e.g. Jenkins 2002; Kachru 1990). Deciding whether to comply with health advice or not carries more risks than neutral advice, so it is possible that a prestigious accent like RP had a greater impact when judging speakers on this topic. In addition, given that RP is often associated with

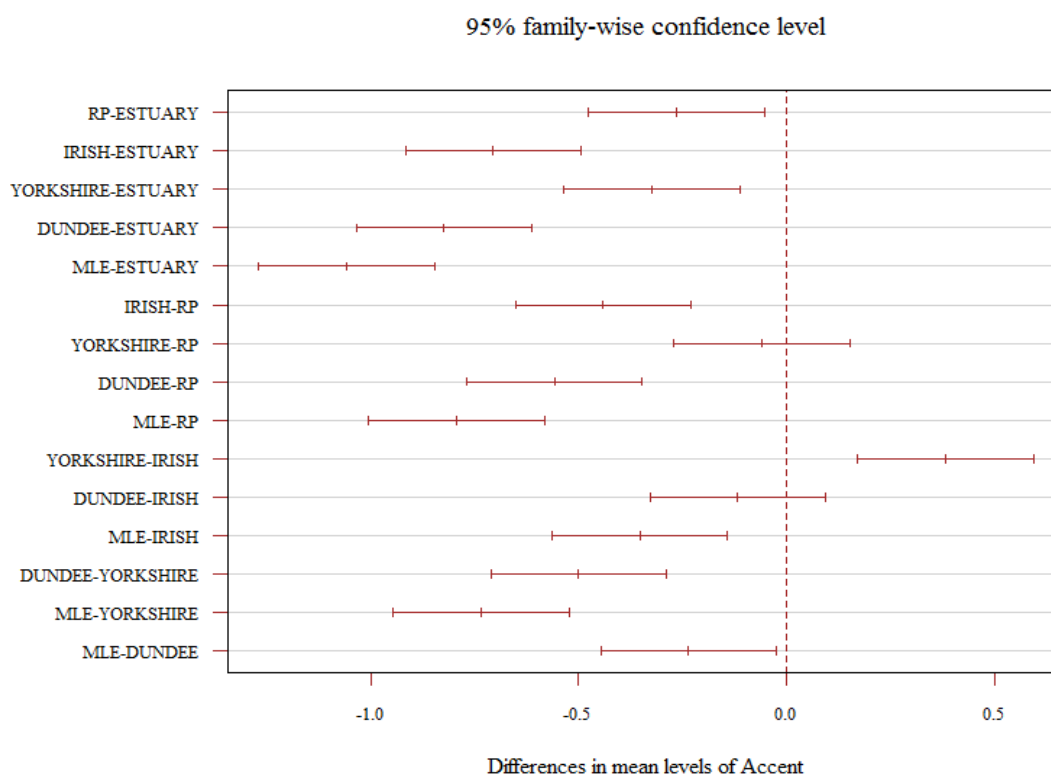


Figure 7.8 TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Newham participants ( $n = 34$ )

professionals in a position of authority, it is not unsurprising that it was perceived as more credible in a health context compared to other accents.

Interestingly, we can also see that explicit and implicit attitudes to RP are inconsistent, such that Newham participants were more persuaded by MLE compared to RP, but they claimed that they were more likely to follow advice in RP compared to MLE in both contexts. How can the APE model explain this lack of correlation? In section 6.3.5, we saw that a negative implicit attitude to RP was potentially the result of the activation of class-related associations, supported by responses to the accent such as *posh*, *snobbish*, *Queen's English*. Such associations were arguably established in memory by the media perpetuating specific ideologies. One could argue that this resulted in the below translated proposition (1), and salient information deemed relevant for judgement (2)-(3):

- (1) I dislike this accent.
- (2) This accent is spoken by educated people.
- (3) Negative evaluations of educated people are unacceptable.

In other words, the negative translated proposition (1) was rejected and replaced with a positive explicit attitude, which led to a lack of consistency between participants' implicit and explicit attitudes. While Gawronski and Bodenhausen (2006, 2011) claim that discrepancies between implicit and explicit attitudes are not necessarily due to

social desirability bias, I argue that this is most likely the case here. Accent bias is increasingly frowned upon, particularly in recent years, but conversations which maintain prejudice have not halted. We are almost surrounded by a contradictory discourse whereby we should not admit to accent bias, even though it is clearly still rife in news articles, comedy sketches, educational debates and so on. It seems that, following Bassili and Brown's (2005) line of thinking, participants' implicit and explicit attitudes are uncorrelated because the attitude object, RP, is controversial. This means that, due to society norms, the risk of *not* expressing positive bias to RP is higher than expressing negative bias. This perhaps led to a rejection of the translated proposition, which resulted in inconsistent explicit and implicit attitudes. This mirrors Fazio et al.'s (1995: 1025) third level of prejudice: those who experience prejudice but are motivated to "counter the effects of that negativity".

Much like in Tayside, the perceived standardness of Estuary English can explain participants' high likelihood to follow neutral advice and, to a slightly lesser extent, health advice when presented in this accent. In section 5.4.2, we saw that Estuary English labels included *Standard British* and *normal*, which imply that it is perceived as a standard English accent without associations of snobbery. Therefore, the relevant information which participants may have used in the propositional process is (1) 'it is spoken by many people in England' (non-evaluative belief about the world), and (2) 'positive evaluations of this accent are acceptable' (evaluative judgement of another attitude object). Unfortunately, it is not possible to know whether this led them to accept or reject their affective gut reaction. This is because the implicit measure did not produce any significant findings with this accent, which would have elucidated their implicit attitudes.

The fact that Estuary English received a higher score in a neutral context, but a lower score in a health context may be because directions are more likely to be heard in everyday life by someone who is similar to the listener, as mentioned earlier. Along with perceptions of standardness, Estuary English was often perceived as geographically bound to areas, such as London, Kent and Essex, and while certain speakers had an Asian English or MLE accent, there were participants whose accent was Estuary English. This suggests that in the neutral context, connotations of similarity may have emerged when hearing the accent. They therefore regarded positive evaluations as more acceptable, and potentially obligatory from a loyalty perspective, much like Dundee English in Tayside. Health advice, however, is administered less frequently, and by someone in a position of power, so accents of greater prestige, like RP, may do better in persuading them to adhere to advice.

Participants were significantly least likely to follow advice when presented in MLE (and Dundee English), but they were also persuaded by MLE over RP, Yorkshire

English and Dundee English. Once again, the APE model can elucidate on the lack of correlation between their implicit and explicit attitudes to MLE. In section 6.3.5, I argued that many participants were from non-native English backgrounds, and possibly experienced stronger associations of trustworthiness when hearing their own accent compared with others. This association was rooted in their increased reliance on the in-group, borne out of social marginalisation. A positive gut reaction emerged, which was then translated into a proposition during the explicit task, such as: ‘I like my accent’ or, if they did not recognise it as MLE per se, ‘I like this accent because I hear a lot’. However, when combined with the salient information that is relevant for the validation of this proposition, we can see that the correlation is lost:

- (1) I like my accent.
- (2) It is spoken by people in my area.
- (3) Positive evaluations of people in my area are unacceptable.

Proposition (2), which is a non-evaluative belief about the world, can be traced back to their responses such as *East London, probably not British born, London, Newham, and East End*, and indicate that they link MLE with their surroundings. Proposition (3), however, is most likely a result from negative media coverage, and possible mistreatment that they have experienced or witnessed against MLE speakers. In other words, the associative process gave rise to a positive affective reaction, but when this was translated into a proposition, it was rejected as a basis for explicit attitudes because it was inconsistent with other information deemed relevant. In much the same way as expressing a negative attitude to a prestigious accent (RP) was perceived as unacceptable, expressing a positive attitude to a stigmatized accent (MLE) was also regarded as unacceptable. This counters Bodenhausen et al.’s (2009) claim that there are social penalties with expressing prejudice in an era of increasing egalitarian norms throughout many contemporary societies. In other words, it seems that for MLE, *not* displaying prejudice to an accent which is subject to extensive negative bias carries higher social penalties than appearing to be non-prejudice. One could argue that the social risk is higher for MLE, because it is closely associated with participants’ sense of identity, rendering it a more controversial attitude object. As a result, we see a lack of correlation between their negative explicit attitude and positive implicit attitude.

However, participants’ attitudes to Dundee English were correlated, in that they were less persuaded by Dundee English compared with MLE, and they were significantly less likely to follow advice in Dundee English compared with all accents in a neutral context and RP, Estuary English, Irish English and Yorkshire English in a health context. In section 6.3.5, I claimed that Dundee English was dissuasive compared with MLE, because there was a comparatively stronger, negative gut reaction arising



from associations such as *different from me* or *farther away*. As a result, a possible translated proposition, alongside relevant information could be:

- (1) I don't like this accent.
- (2) It is spoken by people far away.
- (3) Negative evaluations about people far away are acceptable.

From a qualitative perspective, Newham participants were able to identify Dundee English reasonably well, albeit only at the broad country level, as opposed to identifying it as Dundee English. Nonetheless, even among those who struggled to identify this accent with labels such as *Ireland*, *Newcastle*, *Yorkshire English*, it is plausible that they still perceived the speaker as far away. This explains how proposition (2) may have emerged. One could argue that proposition (3) potentially mirrors proposition (3) used by Tayside participants for MLE: 'Negative evaluations of uneducated people are acceptable'. Put simply, the motivation of Newham participants to control their prejudice against people who are perceived as far away is weak, because there is less risk involved. This is just like Tayside participants who did not perceive that there were high social penalties of expressing prejudice against MLE. Dundee English is deemed as a less controversial attitude object among Newham participants compared with MLE, potentially because it has no connection with their identity. This is why negative evaluations were seen as more accepted, and there is a correlation between their implicit and explicit attitudes.

Finally, the Yorkshire English accent was more favoured among Newham participants compared with Dundee English and MLE in a health context, and Dundee English, Irish English and MLE in a neutral context. As we saw in section 5.4.4, it was also not very well identified compared with other accents except Irish English. The large geographical barrier possibly led to this low identification, because increasing distance decreases knowledge about a location (Montgomery 2012). Alongside this, their inability to identify Yorkshire English may be due to its lower cultural prominence among participants in this trial area. High levels of cultural prominence can make distant areas seem closer through media exposure (Montgomery 2012), which, in the case of Yorkshire English, were not as strong as for other accents such as RP and MLE. However, there was a small influence of media, such that when asked to label the accent, several participants mentioned that they knew it from television programmes. This contrasts with Tayside participants who were less likely to follow advice in this accent, because, I argued, they had a greater understanding of the ideological North-South divide than immigrant populations. As a result of the geographical barrier and lack of cultural prominence, societal norms regarding attitudes to the Yorkshire English accent are weaker compared with those for RP and MLE. This positions Yorkshire

English in between other accents which lie at the extreme ends of the scale. In terms of the relationship between implicit and explicit attitudes, there was a positive implicit accent effect of MLE compared with Yorkshire English, but a positive explicit accent effect of Yorkshire English compared with MLE in both contexts. As this accent was the least well recognised, one could argue that this inconsistency was less due to inconsistent attitudes to Yorkshire English, as opposed to comparatively stronger inconsistent attitudes to MLE and RP, and consistent attitudes to Dundee English.

### 7.3.7 Kent: Descriptive analysis

Figures 7.9-7.10 show the mean and standard error for each accent by context. The mean scores for each accent are more stable across both contexts compared with Tayside and Newham, but similar to these areas in that the health context shows a higher overall mean score across the accents than the neutral context ( $M = 4.51$ ,  $M = 4.23$ ). RP received the highest mean rating across a health context and neutral context ( $M = 5.35$ ,  $M = 4.91$ ), indicating a consistent likelihood to follow advice in this accent. This is followed by Estuary English, Yorkshire English and Irish English in a health context ( $M = 4.65$ ), but just Estuary English and Yorkshire English in a neutral context ( $M = 4.35$ ), with Irish English falling slightly behind ( $M = 4.29$ ). Dundee English had the penultimate lowest mean likelihood in both contexts ( $M = 4.38$ ,  $M = 3.85$ ). Similar to the other two trial areas, MLE had the lowest mean rating across a health context and neutral context ( $M = 3.71$ ,  $M = 3.65$ ).

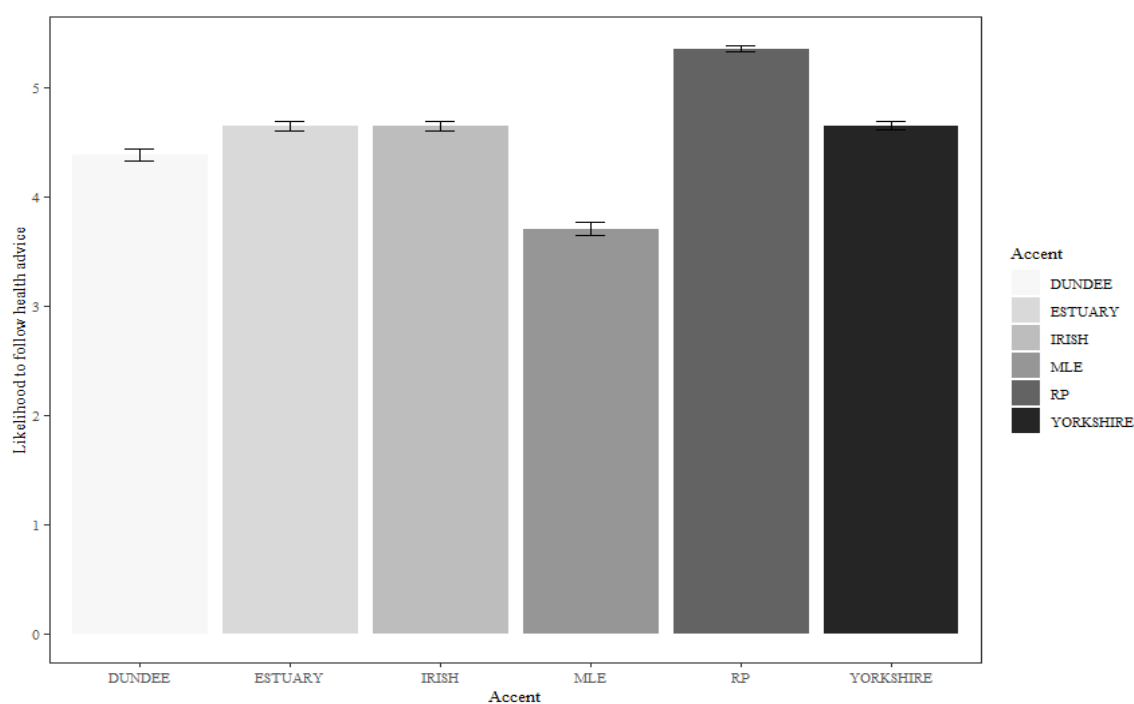


Figure 7.9 Mean and standard error of likelihood to follow advice in health context among Kent participants ( $n = 34$ )

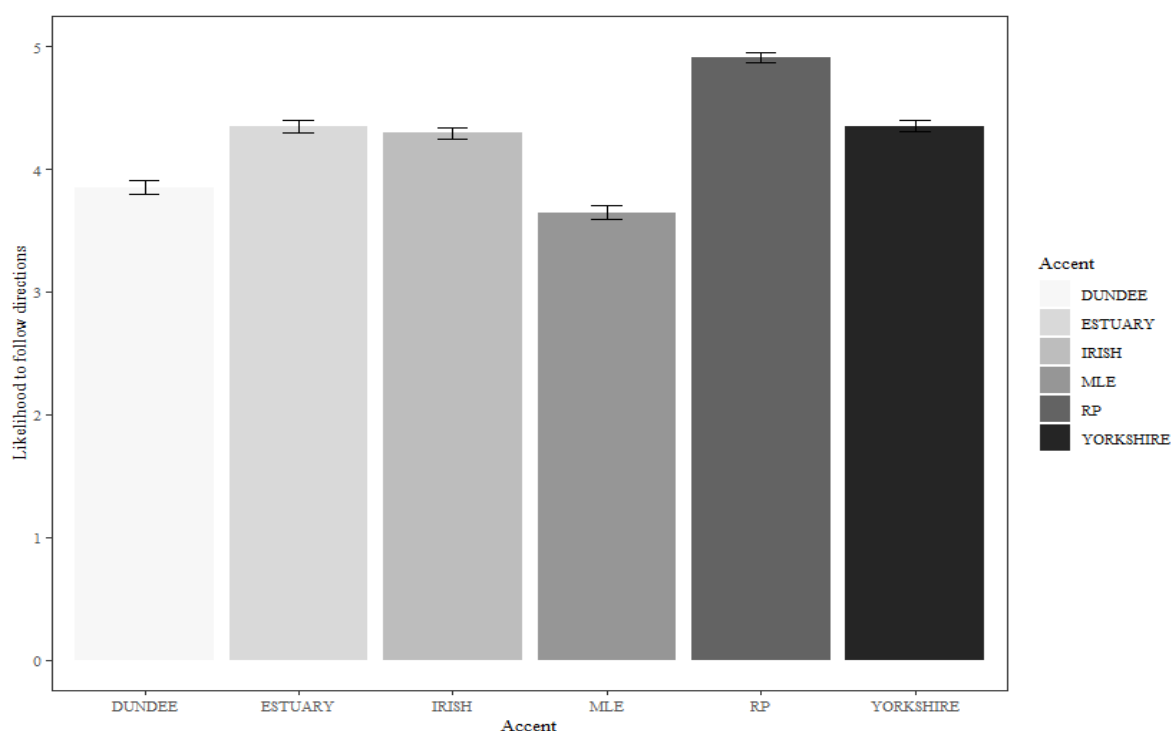


Figure 7.10 Mean and standard error of likelihood to follow advice in neutral context among Kent participants ( $n = 34$ )

### 7.3.8 Kent: Inferential analysis

From the regression results in Tables 7.10-7.11, we can see that accent had a significant effect on participants' likelihood to follow neutral and health advice. The pairwise comparisons in Tables 7.12-7.13, and TukeyHSD plots in Figures 7.11-7.12 suggest that participants were significantly more likely to follow advice in both contexts when it was presented in RP compared with all five accents ( $p = 0.000$ ). There was no interaction between Estuary English, Irish English and Yorkshire English but all three of these accents were significantly more favoured compared with Dundee English and MLE ( $p = 0.000$ ) in both contexts. Finally, MLE was significantly less likely to make participants follow health and neutral advice than Dundee English ( $p = 0.000$ ,  $p = 0.039$ ). The position of each accent in relation to one another is the same across contexts, and produces the following hierarchy: RP > Estuary English, Irish English, Yorkshire English > Dundee English > MLE. This suggests a higher stability of explicit attitudes compared with the other two trial areas.

Table 7.10. Linear regression summary of accent on likelihood to follow health advice among Kent participants ( $n = 34$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	96.5	192.100	136.75	0.000
Residuals	4074	5722.9	1.405	-	-

Table 7.11 Linear regression summary of accent on likelihood to follow neutral advice among Kent participants ( $n = 34$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	5	667.1	133.41	8.08	0.000
Residuals	4074	6787.1	1.66	-	-

Table 7.12 Pairwise comparisons for linear regression accent on likelihood to follow health advice among Kent participants ( $n = 34$ )

		Reference Level									
		Dundee		Estuary		Irish		MLE		RP	
		B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee											
Estuary		0.265	0.000								
Irish		0.265	0.000	0.000	1.000						
MLE		-0.676	0.000	-0.941	0.000	-0.941	0.000				
RP		0.971	0.000	0.706	0.000	0.706	0.000	1.647	0.000		
Yorkshire		0.265	0.000	0.000	1.000	0.000	1.000	0.941	0.000	-0.706	0.000

Table 7.13 Pairwise comparisons for linear regression accent on likelihood to follow neutral advice among Kent participants ( $n = 34$ )

		Reference Level									
		Dundee		Estuary		Irish		MLE		RP	
		B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value	B	<i>p</i> -value
Dundee											
Estuary		0.500	.000								
Irish		0.441	.000	-0.059	.960						
MLE		-0.206	.039	-0.706	.000	-0.647	.000				
RP		1.059	.000	0.559	.000	0.618	.000	1.265	.000		
Yorkshire		0.500	.000	0.000	1.000	0.059	.960	0.706	.000	-0.559	.000

### 7.3.9 Kent: Discussion

Section 6.3.6 demonstrated that accent did not have a persuasive effect on Kent participants. I argued that this is because they had encountered counter-stereotypical examples of the out-group, as evidenced by their high knowledge of the accents, which led them to overlook accent differences and judge the content of the statement as opposed to the form. This may partly explain why their explicit attitudes *did* reveal

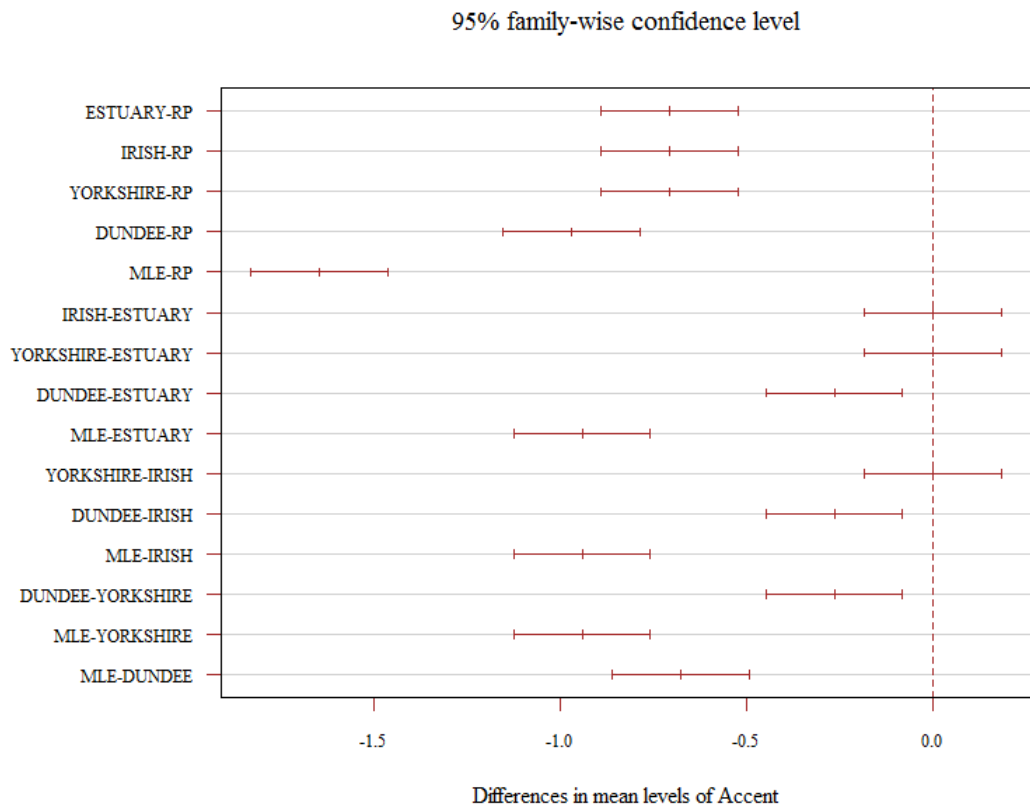


Figure 7.11. TukeyHSD plot showing the impact of accent on likelihood to follow health advice among Kent participants ( $n = 34$ )

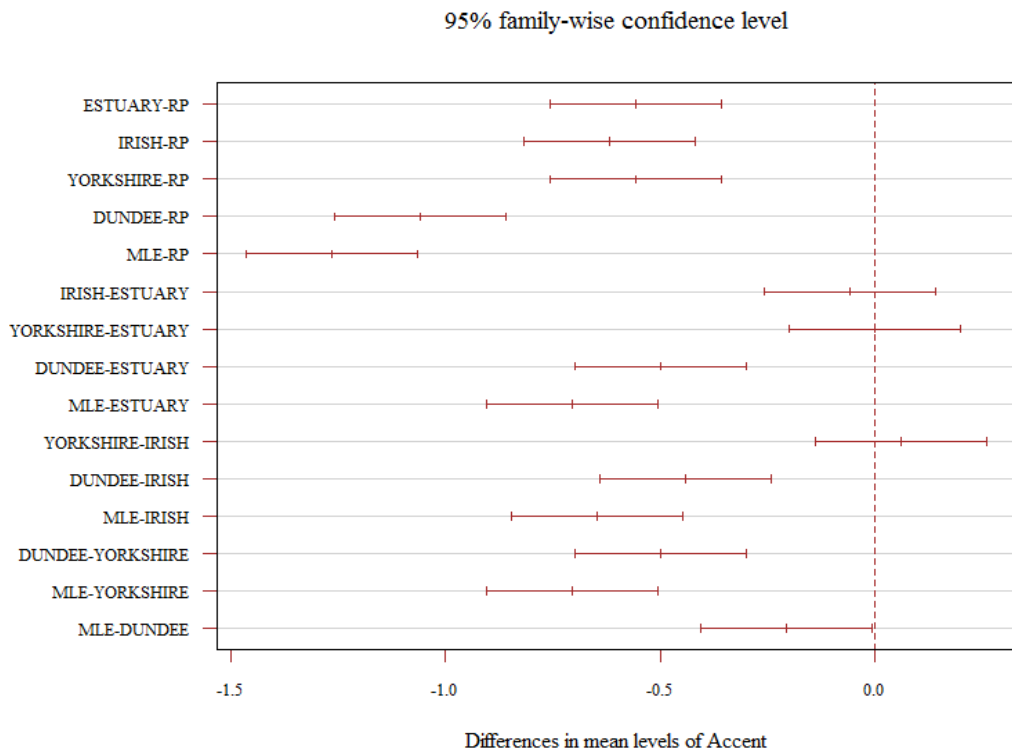


Figure 7.12 TukeyHSD plot showing the impact of accent on likelihood to follow neutral advice among Kent participants ( $n = 34$ )

significant biases between accents. The matched-guise test stimuli were all the same which directed participants' attention to the accent differences and led to evaluations based on these judgements. Also, while implicit attitudes are activated regardless of whether one considers them to be accurate, explicit attitudes are dependent on one's subjective truth-values, i.e. whether they believe the activated associations are true or false. In this way, responses may reflect any self-presentation concerns about expressing accent bias. Therefore, while the implicit measure suggests that participants fit into Fazio et al.'s (1995: 1025) first level of prejudice, in that they are "truly non-prejudiced" because they do not experience automatic activation of negative evaluations, the explicit measure implies that they are prejudiced to some degree.

However, the lack of a significant difference between the effect of Estuary English, Yorkshire English and Irish English on one's likelihood to follow advice is somewhat unexpected. Even if participants had engaged in recategorisation, and widened the in-group boundaries, Estuary English was included in the accent stimuli due to its close association with Kent. It was therefore expected that strong positive or negative associations would be more established in the minds of these participants. This led to two possible predictions about participants' explicit attitudes to the accent. The first prediction was a strong likelihood to follow advice rooted in its perception as an accent associated with solidarity (trust) and status (standardness). This is because many of the participants spoke in an Estuary English accent, and so hearing this accent may lead to feelings of trust. Also, several participants used the same terms to define RP and Estuary English, for example, *South East* and *London*, which signals that they would regard positive evaluations as acceptable due the status of Estuary English as standard. The alternative prediction was that it might be perceived rather negatively. Kerswill (2007: 14) defines Estuary English as a "south-eastern lower middle-class accent" and certain participants did make the distinction between Estuary English and RP, for example, *Essex* vs. *business*, *South England* vs. *best Surrey*. The media may have also reinforced this idea with comments such as: "...the lazy vowels of Estuary English" (Wace, Daily Mail 2016), or "...adopting the Estuary English more often heard among those somewhat further down the social ladder" (Betts, The Telegraph 2015). Regardless of the valence of perception, this evidence makes it unexpected that their attitudes were not more extreme to create a statistical significance between these three accents.

On the other hand, it is clear to see why participants were most likely to follow advice when it was presented in RP. While Estuary English is spoken in Kent, RP is also associated with South East England, indicated by both academics (e.g. Altendorf 2003; Mugglestone 2007; Cruttenden 2001) and participants. Participants in Tayside and Newham included negative associations of RP, such as *snobbish*, *posh*, and *private*

*school*, but these did not feature in any responses provided by Kent participants. Instead, their class-based responses were positive, for example, *well-spoken*, *nicely speaking English*, and *proper English*. In terms of the APE model, we cannot speculate whether they accepted or rejected the translated proposition, because there is no information about their affective gut reaction. Regardless, we can consider the validating information that influenced the propositional process. A plausible example of a non-evaluative belief about RP may be: ‘It is spoken by middle-class speakers’, but ‘middle-class’ may reasonably be interchanged with ‘standard’ or ‘south-eastern’. An instance of a propositional evaluation of another relevant attitude object may be: ‘Positive evaluations of middle-class speakers are acceptable’. Much like Tayside and Newham speakers, this information is most likely informed by their experiences and exposure from the media, which maintain such associations.

The low position of MLE in both contexts is quite easily explained. First, MLE is a London accent within close proximity to Kent, which suggests that participants have encountered MLE speakers, or commentary of the accent either directly, or indirectly through the media. This means that MLE was both geographically *and* culturally prominent to Kent participants. To support this assumption, two thirds of participants provided an answer which referred to its London origin, eight alluded to the ethnic or youth aspect, such as *Indian teenager South East London*, or *urban*, and only 3/34 participants did not provide an answer. Again, we cannot ascertain their affective gut reactions, but the validating information is slightly more open to conjecture. One possible example of a non-evaluative belief about MLE based on their responses to the accent may be: ‘It is spoken by teenagers’, but other possibilities include ‘uneducated people’. Due to the on-going media coverage surrounding this accent and its speakers, which we saw earlier, an instance of a propositional evaluation of another relevant attitude object may be: ‘Negative evaluations about teenagers are acceptable’. In other words, teenagers do not have as much experience of the world as adults, and so it is acceptable not to take their advice. As a result of this information, their explicit attitude was negative, and they were significantly less likely to follow advice in MLE compared to the other accents.

Results also indicate that participants were not very likely to follow advice in Dundee English. Montgomery (2012) explored English respondents’ perceptions of Scottish dialect areas. He notes that the Scotland-England divide is intensifying as a result of the devolution in the past decade, which renders the border significant both ideologically but also politically and economically. More importantly, he draws on Ihalainen (1994 as cited in Montgomery 2012), arguing that there is a strong linguistic barrier, which further solidifies the border. As a result, the border has simultaneously strengthened English respondents’ loyalty to the in-group and reduced their awareness

of the out-group. This is reflected in his results, showing that English respondents had a much more general perception of Scottish variation. While Montgomery (2012) states that he is *not* proposing that English respondents feel negatively to Scottish people, the explicit attitudes of Kent participants' here seem to suggest otherwise. The APE model would posit that this arose out of the validating information which, similar to that of Newham participants, touches on the out-group aspect of Dundee English speakers, and the perceived acceptability of holding a negative attitude. This is due to the large physical and ideological distance from Dundee English speakers, and a consequently lower perceived social risk of expressing prejudice.

#### *7.4 Summary*

Thus far, I have speculated as to what may influence the activation of associations in memory, and lead to a positive or negative gut reaction. Here, I have argued that such associations are translated into propositions which are sometimes accepted as a basis for explicit attitudes, such as when the accent is less controversial and social penalties are lower. This usually applies to accents which are known at the social norm level, such as Tayside and MLE. In these cases, the validating information means that one's motivation to reject the translated proposition is weak, and we see a consistency between explicit and implicit attitudes. On other occasions, the translated proposition is rejected as a basis for explicit attitudes, for example, when the accent is highly controversial and there is a greater social risk. In such instances, validating information means that participants' motivation to reject the translated proposition is strong, and we see an inconsistency between explicit and implicit attitudes. This occurs when the accent is perhaps more closely tied to one's lived experiences of the accent, such as Newham and MLE. These findings serve to highlight the crucial role of both non-evaluative beliefs about the world, and evaluative judgements of other attitude objects in the propositional process.

In terms of attitudinal stability, whereby context did not have a hugely influential impact on explicit attitudes and, despite some differences in the effect of accent on likelihood to follow advice, results in all three trial areas remained consistent. The associations activated may actually be different across contexts, but this cannot be verified because they seem to constantly reject certain gut reactions and accept others based on the same validating information. The lack of context effect on explicit attitudes suggests that they are temporally consistent, not necessarily due to temporally consistent associations, but because participants are using the same validating information in the propositional process. For example, the accents which elicit the most similar explicit attitudes across context are those which are also the most prominent in



the media: RP and MLE. This is additional support that media portrayals of British accents *and* meta-commentary around the notion of accent bias have led to a rigidity in validating information. Further evidence for the stability of validating information is that although it was qualitatively assessed, Kent participants had the strongest ability to identify the accents, and context had the weakest effect on their explicit attitudes. It therefore follows that they have stable validating information which guides their explicit attitudes. Their non-evaluative beliefs about the world, for example, 'MLE is spoken by uneducated groups', and evaluative judgements of other relevant attitude objects, such as 'negative evaluations of uneducated groups are acceptable', are more temporally consistent than those who had a weaker knowledge of the accent, where information about the speakers and its social connotations are less understood. This leads us onto the hypothesis outlined at the beginning of the chapter. We can accept it in that there was a significant effect of accent on one's likelihood to follow advice, and there was variation by area. However, there were also similarities in this effect by area, predominantly for MLE and RP, and so the hypothesis must be accepted with caution.

## 8 Study two: The self-validation hypothesis

### *8.1 Overview*

As this thesis will inform the production of the BBaRTS animated cartoons, study two sought to test the findings from study one using the BBaRTS children's storybooks. The procedure is rooted in a third wave of persuasion research on metacognition, specifically the self-validation hypothesis (Petty et al. 2002). The theory posits that an individual will only be persuaded by a message if they are confident in the thoughts that they have generated about the message. To examine how accent affects thought confidence, the 'most persuasive' and 'least persuasive' accents from study one were used as voiceovers for digitised versions of two BBaRTS children's storybooks. This provides an insight into how the accents altered parents' attitudes to dental health messages.

The study was conducted in East London, as opposed to Tayside or Kent. This was not only for logistical reasons, but also because immigrant populations often reside in more socially deprived areas like East London, where access to dental health services is more restricted. Their susceptibility to dental caries highlights the importance of conducting research in this area. This demographic has also largely been overlooked in language attitude studies, due to the trend in research to limit sample populations to proficient English speakers. Britain (2016) points out that sociolinguistics has a tendency to include only 'authentic speakers' who satisfy certain criteria that suit the analysis. In research, non-native speakers are frequently subject to analysis, for example in bilingualism studies, but they are rarely used as participants outside of this domain because they pose too many problems, which I address in more detail in section 8.5.1. For that reason, East London provided fertile ground for an unexplored area of research both methodologically and demographically speaking. This study was therefore designed to investigate how an important target population for the prevention of dental caries could be persuaded to care for their children's oral health.

I will first discuss a summary of previous work on self-validation to contextualise the study. In particular, this review will focus on how the perceived credibility, power and similarity of the source can affect thought confidence, and

thereby persuasion. I will then demonstrate how this research can be applied to accent, before proceeding with my experiment. This tests five hypotheses which are all pivotal to the self-validation hypothesis. Several unforeseen methodological and analytical problems arose owing to participants' proficiency in English. As a result, while some hypotheses were confirmed, others were rejected. However, these results can inform how future experiments on this topic, and research more broadly, could proceed with non-native English speakers. While this study was originally conducted to test the findings of study one, results are presented in isolation. This is because comparing the results from study one and study two relied on the assumption that both sample populations shared a similar awareness of the accents in question. As this research had to work with participants who were less proficient in English than study one, the attitudes of the two populations are not comparable, because they are not responding to the stimuli in the same manner. Despite these issues, this study is the first to examine the effect of accent on self-validation, and therefore presents a unique contribution to linguistics and persuasion research.

## *8.2 Self-validation*

In section 3.3.1, we saw that persuasion researchers initially focused on how single variables affected attitude change. Developments then led to dual process theories, whereby message arguments *and* peripheral cues, such as trustworthiness, operated simultaneously. In other words, one could explain the persuasive effects of a trustworthy source and a weak argument message or an untrustworthy source and a strong argument message. One of the most famous persuasion models emerging from this shift was the ELM (Petty and Cacioppo 1986). Elaboration is the extent of thinking about a message and is conditioned by one's motivation and ability to process the message. Depending on whether one engages in high or low elaboration, variables can affect persuasion in different ways: (1) by serving as arguments; (2) by serving as a peripheral cue; (3) by affecting the motivation and ability to think about the message; and (4) by biasing the nature of thoughts generated. For example, under low elaboration conditions – when an individual is not motivated or able to process the arguments – a highly trustworthy person may be persuasive regardless of argument quality, and in this case trustworthiness acts a peripheral cue. I have previously argued that low elaboration is more likely for the target population of this research because parents of young children will be less motivated and able to focus on the message. A variable such as accent will therefore act as a peripheral cue, and potentially affect persuasion regardless of argument quality. Peripheral cues do this by triggering positive or negative affective states, which become linked with the attitude object; for example, if an accent is

stigmatized or hard to process, then attitudes to the message are negative and the parent is dissuaded. What we can see from this wave of persuasion research is that it focuses on primary thoughts, which are initial associations between an object and a feeling or attribute, for example 'I like this flower'.

The next phase is less focused on primary thoughts and elaboration of the message, and instead examines second level thoughts. According to Petty et al. (2007b: 2), these are thoughts about thoughts, and belong to a higher level of thinking known as metacognition, where the target is not "what the thought is actually about, but what the person perceives it to be about"; for example, 'I am sure that I like this flower'. The authors claim that this concept has flourished in various areas of research such as consumer psychology and cognitive psychology, particularly in the domain of human memory. Petty et al. (2002) use Yzerby et al.'s (1998) example of the tip-of-the-tongue phenomenon whereby the urge to search for a word intensifies as one gets closer to finding the answer. This demonstrates that people have a tendency to evaluate their own thought processes (Petty et al. 2002). Another good example of how metacognition operates is from social cognition. Schwarz et al. (1991) found that if people felt able to identify examples of their own assertive behaviour, then this increased their own perceived assertiveness. They claim that this is because we judge the likelihood of an occurrence on the ease with which it comes to mind (Tversky and Kahneman 1973 as cited in Schwarz et al. 1991).

Petty et al. (2007b) detail various types of metacognition: thoughts about the origin of a thought, such as whether it belongs to oneself or others; thoughts about the valence of a thought; and thoughts about the amount of thoughts one generates. They also outline two further aspects of metacognition, which are metacognitive evaluation and metacognitive confidence. The former entails one's assessment of the evaluative nature of their thoughts towards an attitude object; for example, whether an attitude is good or bad, desirable or undesirable. The latter, metacognitive confidence, features most notably in Kruglanski's (1989) Lay Epistemic Theory, which posits that beliefs are first generated and then validated. Following on from Kruglanski's work, Petty et al. (2007b: 2) claim that: "A subjective experience that constitutes one of life's greatest meta-cognitive challenges is the sense of epistemic certainty or uncertainty". Put simply, the extent to which we are sure of our thoughts has an important place in our lives. Petty et al. (2007b) therefore hypothesised that the degree of certainty an individual has in their thoughts is important, because it may determine whether their thoughts are translated into evaluations, which then guide their behaviour. The idea that generating a thought is not enough to affect one's attitudes, unless the thought is also held with confidence, is known as the *self-validation hypothesis*. They found that increasing confidence in favourable thoughts should increase persuasion, because it

validates the positive thoughts generated, but increasing doubt will decrease persuasion, because it invalidates the positive thoughts generated. Similarly, increasing confidence in unfavourable thoughts should decrease persuasion, because it validates the negative thoughts generated, but increasing doubt should increase persuasion, because it invalidates the negative thoughts generated. The authors also highlight that the observed effects of thought confidence are dependent on high elaboration conditions, because people can only engage in higher forms of thinking, like metacognition, with sufficient motivation and ability. Additionally, validating our thoughts is only possible if we have been able to generate thoughts in the first place.

The appeal of the self-validation hypothesis lies not only in the prevalence of metacognition in other fields. It also directly feeds back into the issue of self-efficacy, which forms the core of this research as seen in section 2.6:

The possibility of varying the confidence people have in the validity of their thoughts might have important implications for other fields outside the persuasion domain. For example, research on self-efficacy has suggested that to meet objectives, it is necessary not only to have thoughts directed toward these objectives but also to have confidence in the validity of these thoughts. (Petty et al. 2002: 737).

Perhaps most importantly, the self-validation hypothesis has been examined in the context of the big three tenets of persuasion – credibility, similarity and power. In this way, it allows the results from chapters 6-7 to be empirically studied in the context of the BBaRTS material. These results revealed that among participants from Newham, MLE was more persuasive than Dundee English, Yorkshire English and RP. It also creates an opportunity to contribute to this growing area of research, and persuasion more broadly, because the study will use audio stimuli as opposed to just visual stimuli which have been used in previous studies on the self-validation hypothesis.

I will now summarise some of the relevant literature conducted so far, because it highlights the potential of metacognition, and contextualises the methodological challenges of using audio stimuli.

### *8.2.1 Credibility*

In this first section, I will discuss how the credibility of the source can affect thought confidence. Specifically, I will discuss three key studies, which each shows how source credibility can influence the perceived validity of one's thoughts about a persuasive message.

Briñol et al. (2004) examined how thought confidence mediated the impact of credibility on advertisement effectiveness. They hypothesised that if source credibility

is high, participants will have greater confidence in their thoughts about a product. This is rooted in the idea that if an individual generates thoughts about an advertisement, and then learns that the message has come from a high credibility source, they might think that the information must be valid and their thoughts can be trusted. On the other hand, the authors hypothesised that if source credibility is low, participants will have less confidence in their thoughts about a product, because they perceive the information as invalid and less trustworthy. The researchers made a further prediction regarding the direction and extent of thinking about the advertisements. They anticipated that the credibility of the source would only affect attitudes via thought confidence if the participants were presented with strong arguments, as opposed to mixed (i.e. strong and weak) arguments. This is because presenting mixed arguments means that neither strong nor weak arguments dominate. People are then confident in both sides of the argument, which leaves no clear direction for attitude change (Briñol et al. 2004). To recap, a highly credible source was expected to lead to greater confidence in one's thoughts generated about an advertisement. Source credibility was also predicted to mediate the effect of thought confidence on attitudes when participants were presented with strong arguments.

To test this prediction, 75 participants were presented with an advertisement for a new phosphate-based laundry detergent. It was a 2 x 2 factorial design with source credibility and argument strength as the independent variables. Participants were therefore first randomly assigned an advertisement that contained either strong or mixed arguments, and later learnt that it was from either a high or low credible source. By way of example, in the strong argument condition, participants were told that the detergent was safer, less expensive and helps clothes last longer, whereas in the mixed argument condition, participants were told that the detergent packaging was colourful and attractive. Participants watched the advertisement, and then listed their thoughts about the arguments in the advertisement, before discovering that it came from a high or low credibility source. In the high-credibility condition, they learnt that the source was a government consumer agency, and in the low-credibility condition, they were told that it was a major detergent manufacturer. Next, participants rated the confidence they had in the thoughts that they had listed, and reported their attitudes towards the product. Results were consistent with Briñol et al.'s predictions. First and foremost, as expected, participants' thoughts and attitudes were more favourable in the strong argument condition compared with the mixed argument condition, and those in the high-credibility condition were more confident in their thoughts. Crucially, participants who received a strong argument had more favourable attitudes when credibility was high as opposed to low. The authors argue that is because the source credibility information made participants more confident in their thoughts. The significance of this study lies in

its initial demonstration that metacognitive confidence can affect persuasion, but this research was limited because it only focused on strong and mixed arguments.

Tormala et al. (2006) delved deeper into the effect of metacognition by exploring what happens when one is exposed to weak arguments. They predicted a reverse effect, such that when participants were presented with weak arguments, a low credibility source would result in *more* persuasion, and a high credibility source would result in *less* persuasion. The reasoning behind this counterintuitive ‘backfire effect’, is that people rely more on their thoughts as their confidence increases. If there is a highly credible source who increases one’s confidence in a weak argument, then “the source may undermine the persuasive potential of the message” (Briñol and Petty 2009: 27). 106 students were presented with a strong or weak version of a message entitled ‘The Benefits of Phosphate-Based Laundry Detergents’. Similar to Briñol et al. (2004), in the strong argument condition, participants were told, for example, that the detergent is “vastly superior” and “significantly less harmful” than other detergents. In the weak argument condition, for example, they were told that “7 out of 10 shoppers said they would take a free sample home” (Tormala et al. 2006: 609). They were asked to list their thoughts in boxes on the screen, and then told that the information was from either a major soap and detergent manufacturer (low credibility), or a pamphlet from a consumer advocacy group (high credibility). Following this, participants rated their overall confidence in the thoughts listed during the message, and completed attitude measures about the product. Unexpectedly, thoughts were more favourable in the strong rather than weak argument condition, and thought confidence was higher in the high rather than low credibility condition. Their experiment also yielded some fascinating findings, which not only confirmed Briñol et al.’s (2004) study, but also confirmed the backfire effect of credibility. As predicted, when the persuasive message was strong, thoughts were more favourable, and a high credibility source increased persuasion, and when the persuasive message was weak, thoughts were less favourable and a low credibility source decreased persuasion. Crucially, they also found that when the persuasive message was weak, thoughts were less favourable and the high credibility source resulted in *less* persuasion than the low credibility source. This is because people generated negative thoughts in response to a weak message, and then developed greater confidence in them when they realised they were from a high credibility source. Confidence in these negative thoughts then led to dissuasion. Finally, Tormala et al.’s (2006) study revealed that when the persuasive message was weak, a low credibility source was *more* persuasive than the high credibility source, because resistance is undermined.

Their study is significant in teasing apart the mechanics of the self-validation hypothesis, but it was still not entirely clear about when the validating information, such

as the credibility of the source, should be presented. In other words, how would persuasion be affected if information about the source was presented before or after the persuasive message? Tormala et al. (2007) set out to answer this question and varied whether the source credibility manipulation came before or after the message and thought generation task. They found that source credibility affected the *valence* of the attitudes (positive vs. negative) when it was revealed before the message. However, source credibility affected *thought confidence* when it was revealed after the message, which then led participants to rely on their thoughts for attitude formation. When studying metacognition, it is therefore crucial to present information about the source, known as the validating information, after the message has been presented. (It should be noted that the term ‘validating information’ in the context of self-validation is different from its definition in the APE model).

Taken together, as Briñol and Petty (2009) succinctly summarise, the studies show that source credibility can influence how confident we are in our thoughts about a message, which in turn affects persuasion. This research has implications for how the credibility of an accent may influence thought confidence, and the persuasiveness of the BBaRTS material.

### 8.2.2 Similarity

While the majority of studies on the self-validation hypothesis have largely focused on credibility, researchers have also examined the effect of thought similarity. In section 3.3.4, we saw that similarity forms part of social attractiveness (Perloff 2010), which is one of the three key factors in persuasion (Kelman 1958). Given its large role in persuasion, understanding how similarity affects the perceived validity of one’s thoughts about a persuasive message is therefore important for this research.

In the earliest study on the self-validation hypothesis, Petty et al. (2002) explored the way thought confidence mediated the effect of similarity on attitudes. Otherwise put, they tested how learning that one’s thoughts about a persuasive message were similar or dissimilar to others influenced the confidence that a person had in their thoughts, and thereby influenced their attitudes. In this way, the similarity of the source was not directly manipulated, but rather the perceived similarity of one’s thoughts to others, which is based on Festinger’s (1950) notion of conceptual validation. This posits that people become more confident in their thoughts once they learn that their thoughts are similar to others. In experiment four of Petty et al.’s (2002) study, 76 students were told that senior exams may be implemented in their university, and the board was interested in their reactions. They received either two strong or two weak arguments. In the strong argument condition, they were told, for example, that the exams would



increase the graduate starting salary and in the weak argument condition, they heard that exams encourage students to study by increasing anxiety. They then completed a thought-listing task, which involved writing down their thoughts about the consequences of these exams. Participants were then told that their thought lists would be compared with those of 1,800 other students at the university. Half of the participants were told that their thoughts had been rejected for future research because only 8% of their thoughts were similar to those of other students. The other half was informed that their thoughts had been accepted for future research because they were 87% similar to those of other students. As per other studies, thoughts were more favourable in the strong argument condition, and those in the high consensus condition were more confident in their thoughts. Unsurprisingly, they also found that attitudes were more positive in the strong argument condition. What is interesting is that social consensus impacted people's confidence in their own thoughts, which then influenced the persuasiveness of the message. In other words, "when thoughts were favourable towards the proposal, sharing thoughts with other increased persuasion, but when thoughts were not favourable, sharing thoughts with others decreased persuasion" (Briñol and Petty 2009: 79)

This study makes a further contribution to persuasion research by challenging the assumption that the persuasion process relies solely on the amount and direction of thinking. Instead it provides further evidence that thought confidence is an additional dimension which must be considered when crafting a persuasive message. Specifically, it demonstrates the power of similarity in increasing the perceived validity of people's thoughts to a message, which influences their attitudes. Briñol and Petty (2009) argue that Petty et al.'s (2002) research also indicates that manipulating source similarity directly, as opposed to thought similarity, may induce more thought confidence than dissimilar sources. In other words, if a communicator uses an accent which is similar to that of the receiver, then this may increase the receiver's confidence in their thoughts about the message and, in turn, persuasion.

### *8.2.3 Power*

As we also saw in section 3.3.4, authority is another key element of persuasion (Kelman 1958). French and Raven (1959: 153) outline five types of social power, one of which is legitimate power, and "is very similar to the notion of legitimacy of authority". This makes Briñol et al.'s (2007) work on power and persuasion very relevant here. They conducted a series of experiments to examine the self-validation hypothesis in the context of power. In particular, they looked at how an individual's perception of their own position of power affected their attitudes to a persuasive message. The authors

argue that it is important to study the influence of power on action, because feeling powerful increases our inclination to act in line with our desires (Galinsky et al. 2007). Briñol et al. (2007) propose that the underlying mechanism for this relationship between power and action is confidence. Specifically, people's prior experiences may lead them to associate powerful individuals with confidence, which means that their *own* experiences of being in high power situations may make them feel more confident. From a persuasion perspective, power would increase one's confidence in their thoughts about the message and lead to persuasion. On the other hand, feeling less powerful would reduce their confidence, and result in dissuasion.

For the purpose of contextualising this study, I will focus on experiment two and five from Briñol et al.'s (2007) research. In experiment two, 78 students were first told that they would be taking part in a study about social roles and each participant was assigned a high-power (boss) or low-power (employee) role. They were asked to engage in a role-play scenario that might occur at work – a technique which has been used previously to induce high- and low-power states (Kipnis 1972 as cited in Briñol et al. 2007). Those in the low power roles were instructed to act as if they had no control over how the work was done, while those in the high power roles were seated in a taller, more authoritative looking chair. Then, participants received either a strong or weak persuasive message for a mobile phone. In the strong argument condition, they were told, for example, that the phone was unbreakable, whereas in the weak argument condition, they were told that the PIN code was only two digits long. Similar to previous studies, they then completed attitudinal questionnaires about the message. Results revealed that those in the high-power condition showed fewer attitudinal differences between strong and weak arguments than those in the low-power condition. They argued that this is because feeling powerful validated their position *prior* to message processing, so they were more confident and less motivated to process the mobile phone message.

Building on experiment two, in experiment five, Briñol et al. focused on when to present the validating information. The authors used a similar methodology as experiment two, except they only used strong arguments so that they could examine the effect of power before and after a persuasive message. The authors hypothesised that if participants are made to feel powerful, and therefore confident, *before* processing a message, they would interpret their own confidence as a sign that their thoughts are reliable. Briñol et al. predicted that this confidence would mean that participants are less focused on the subsequent information (the persuasive message), and so the strong argument would be less persuasive for high-power participants than low-power participants. If, however, participants were made to feel powerful *after* processing a message, the thoughts they had generated about the persuasive message would be

validated. This means that the strong argument would be more persuasive for high-power compared with low-power participants. Results were consistent with their hypotheses: the strong argument was more persuasive when participants were made to feel powerful after processing the message, but the strong argument was less persuasive when participants were made to feel powerful before processing the message.

Existing studies on the effect of authority in persuasion suggest that a powerful source is more persuasive, but this wave of research adds another layer of complexity. It shifts the focus from the source to the recipient, and argues that the recipient's perceived power is something which should also be accounted for. This is because it alters their confidence, and the extent to which they rely on their thoughts about a persuasive message. Crucially, whether or not their thoughts are validated determines whether or not the message will be persuasive. What remains to be seen is whether the power or authority of the communicator's accent affects thought confidence and, if so, how this influences persuasion.

#### *8.2.4 Summary of the existing research*

Petty and his colleagues have designed several innovative studies to test how credibility, similarity, and power influence the effect of thought confidence on persuasion. Their work advances traditional perspectives on the communication process, by arguing for another factor which has thus far been overlooked: metacognition. This is an exciting development which is in its infancy and warrants further exploration. Here, I will depart from previous research which has used visual information to manipulate credibility, similarity, and authority, i.e. words on a computer screen, or role-play scenarios. Instead, I attempt to understand how two different accents, and their associations with credibility, similarity and authority affect one's confidence in their thoughts about an oral health message.

#### *8.3 Methodology*

Before describing the methodology in detail, it is useful to highlight a crucial distinction between previous experiments on self-validation and my current study. In prior work, Petty and colleagues presented each participant with a strong or weak persuasive message, before asking participants to list their thoughts about the arguments in the message. They then revealed the validating information, such as the credibility, power or similarity of the source. After this, participants were asked to reflect on the thoughts that they had listed and rate their confidence in them, before completing attitudinal measures to the arguments presented. In my study, the validating information is not

simply additional information, for example, discovering that the message is from a pamphlet from a consumer group, or a manufacturer. Instead, the validating information is the accent in which the message is presented. As a message cannot be separated from the accent, it was decided to present two messages to each participant: one message *without* the validating information, and another similar message *with* the validating information of accent. Therefore, each participant first read one strong (test version) or weak (control version) BBarTS storybook. They were asked to list thoughts that they had about the oral health arguments in the book. They then read a second, very similar, strong (test version) or weak (control version) BBarTS storybook *with* the validating information of accent. Measurements of thought confidence, and attitudes to the oral health messages were then collected. This unique procedure shows how accent affected participants' confidence in their thoughts about the messages in the book. In turn, it reveals whether accent can influence persuasion via thought confidence. Here I will outline the recruitment process, the research instrument and the procedure. There are five hypotheses in total, which will be developed and explained in detail.

### *8.3.1 Research site and participants*

Recruitment was slightly different compared to study one, which was due to poor participation. Initially, a local council worker sent an email to all school receptionists in Newham inviting their schools to take part in the study. Despite three follow ups, no schools decided to take part, but a local council worker in the neighbouring borough of Tower Hamlets, who regularly liaises with many primary schools, recruited two primary schools in the area, as well as three baby clinic centres. She contacted the health advisor in each primary school and baby clinic, who then contacted parents individually to arrange a time slot. In total, 37 parents of children under 8 participated.

While the first study was carried out in Newham, one can make the case that Tower Hamlets is appropriate for the current study due to similarities between the boroughs. Tower Hamlets is a borough directly to the west of Newham which stretches from Spitafields to Poplar. Although it is also next to the financially thriving business district, City, Tower Hamlets has the highest rate of income poverty in London at 39% (Trust for London 2018a). Newham follows closely behind at 37% (Trust for London 2018b), which shows that both boroughs have a low socioeconomic status. This suggests that access to dental services in these areas is limited, and makes Tower Hamlets a suitable alternative research site. Not only this, but the demographics are also comparable, predominantly in terms of the number of proficient English speakers. In Tower Hamlets, 8% of residents have poor (or no) fluency in spoken English, which is the second highest proportion nationally after Newham at 9% (Tower Hamlets

Corporate Research Unit April 2013). There are however differences in terms of ethnic diversity, for example, Tower Hamlets has a higher proportion of white people (45%) compared with Newham (27%), but a lower proportion of black people (7%) than its neighbouring borough (18%) (Newham London 2015; Tower Hamlets Corporate Research Unit February 2013). Asian/Asian British people account for a large proportion of the population in both Tower Hamlets and Newham at 41% and 47% respectively (Newham Info 2015; Tower Hamlets February 2013). Despite slight differences in the composition of these boroughs, both are socially disadvantaged with a high number of non-native English speakers. For this reason, Tower Hamlets was regarded as an acceptable fieldwork site in place of Newham.

### *8.3.2 Non-native speakers of English: social salience or cognitive salience?*

As the majority of the participants had low proficiency in English, this raises the question as to what they were responding to when they heard the accents. Drawing on speech perception research, here I will argue that accent can still serve as a peripheral cue in the absence of native-like proficiency. This is because participants may not be able to access the social differences between accents, but they can determine which variables are more familiar, perhaps below the level of awareness, on the basis of their experience with the accent. In other words, previous encounters with different accents may give the listener the impression that a certain accent is more or less familiar, and guide their attitudes accordingly.

Speech perception can be described as “the process during which listeners meaningfully interpret a complex acoustic signal”. (Lowie 2013: 608). Cues within this signal activate both linguistic and social representations, and these interact to create a complex picture of referential and social indices (McGowan 2016). Speech perception can also be viewed in terms of salience, which has been explored in various contexts (e.g. Levon and Fox 2014; Llamas et al. 2016; Preston 2010), but is perhaps most associated with Labov’s (1972) model of awareness. He argues that *indicators* are linguistic variables which distinguish social and geographical categories, but exist below the level of awareness. The next level is *markers*, which contain important social information, but they are not subject to meta-commentary. Finally, *stereotypes* are subject to overt commentary, and they are usually stigmatized.

Building on this, Labov et al. (2011: 435) developed the notion of the sociolinguistic monitor, which is a mechanism that “tracks, stores and processes information on linguistic variation”. One characteristic of the sociolinguistic monitor is asymmetry, which asserts that listeners are more sensitive to variables that are unexpected in a social situation. Rác (2013: 37) also focuses on surprisal in his work

on cognitive salience, which he defines as any segment that has a “large surprisal value when compared to an array of language input”. In other words, cognitive salience will be higher if a variable has a high degree of unexpectedness, and this is a function of prior knowledge. He distinguishes cognitive salience from social salience, which is a form that has social indexation, and resembles Labov’s *marker*. It must be noted that socially salient variables are cognitively salient, but not necessarily vice versa. As certain participants were not highly proficient in English, we can argue that they may not have encountered different British accents enough to detect their social salience. When interpreting the acoustic signal, it is more likely that their judgements were guided by the cognitive salience of certain accent features. For example, it is possible that accents which are encountered more frequently have more segments of speech with a lower surprisal value. In turn, this creates a higher processing fluency, which according to Dragojevic and Giles (2016), can lead to positive attitudes. In sum, this research suggests that social salience is not a prerequisite for accent persuasiveness, and cognitive salience may be more important in this specific communication setting where English proficiency is low.

### 8.3.3 Research instrument: BBaRTS storybooks

The BBaRTS intervention material is a series of 8 children’s storybooks. Each story has a test version, which contains oral health messages to encourage good oral health routines, and a control version, which comprises the exact same story but excludes the oral health messages. In this way, the test version provides strong oral health messages and the control version provides weak oral health messages. Based on similar assumptions by Petty and colleagues, it was first predicted that the strong argument condition would elicit more positive thoughts than the weak argument condition:

H1: Thoughts generated in the strong argument condition will be more favourable than thoughts generated in the weak argument condition.

As briefly noted earlier, the validating information is accent, which cannot be separated from the message. It was therefore necessary to present *two* strong or weak messages to each participant. The first message was storybook 1, used just for reading. It is at this point when participants engaged in a thought listing task. They were then presented with a second message, storybook 2, which was used for reading *alongside* the validating information, accent, outlined in the next section.

Regarding the thought listing task, all four groups initially received the same instructions on a screen, which were to write down as many thoughts as possible about

the oral health messages in the book, for example, “I like that they have a healthy breakfast”. However, in a second pilot study with 10 university students, results revealed that some participants in the weak argument condition struggled slightly more to generate thoughts in response to this question, which impacted the ability to measure thought confidence. It was predicted that participants would notice the weak oral health messages, such as ‘they go to bed without brushing their teeth’, but some failed to do so. It was decided that generating thoughts about the story in general would facilitate thought generation. Instructions in the weak argument condition were therefore altered to explain that they would read a children’s storybook about two frogs, called Zip and Pop, who were going to the supermarket with their family. They were told to read the story, and write down on a piece of paper any thoughts that they had about the story, for example, “I agree that they should spend mealtime together”. In the strong argument condition, participants were asked to write down any thoughts they had about the oral health messages in the book. The reason that participants in the strong argument condition were not asked to write down general thoughts about the story was to increase the likelihood that the thoughts they wrote down from storybook 1 were also applicable to storybook 2. As previously mentioned, the oral health messages are extremely prominent in both books, so participants’ attention was guided to this topic. Although the instructions in both conditions asked participants to generate different thoughts, it was expected that those in the strong argument condition would still produce more favourable thoughts due to the salience of the positive oral health messages and the neutral nature of the content in the weak argument condition. Along similar lines, a second prediction in the self-validation literature concerns attitudes to the messages in the book. As the focus here is on oral health guidance, a hypothesis was formulated regarding attitudes to oral health messages and the argument condition:

H2: Attitudes to the oral health messages in the strong argument condition will be more favourable than attitudes to the oral health messages in the weak argument condition.

In order to gather this data, three 9-point semantic differential scales were used to measure attitudes to the oral health messages in the books. The first two scales were negative-positive and good-bad (Briñol et al. 2004; Tormala and Petty 2004; Petty et al. 2002), and the third scale measured the extent to which parents believed the oral-health related behaviours in the book to be challenging (difficult-easy).

Having touched on the use of two storybooks per participant, it is important to explain precisely which books were chosen and why. The two storybooks were selected by a dental public health professional. The first storybook, ‘Hop and Shop with Zip and Pop’ (Figure 8.1), is about a family trip to the supermarket, and the second book,

‘Splish and Splash with Zip and Pop’ (Figure 8.2), is about a family trip to the beach. Similarity between these two storybooks was crucial, because the thoughts generated about storybook 1 should still be applicable to storybook 2. If the two storybooks were very different, then the accent manipulation would not have any bearing on participants’ confidence in their thoughts, because the thoughts would be different. The messages in the strong argument condition are similar because the oral health messages are very salient, and almost identical in each storybook. The messages in the weak argument condition are similar in the sense that they lack crucial oral health messages, such as tooth brushing before bedtime. However, these two storybooks also centre on well-known family events, such as meal time, which created overall similarity. The vocabulary is also less complex than other storybooks in this series, which revolve around events such as music and dancing, and included words like *cymbals*, *rocked*, *rolled*, *drumsticks*, *whirled*, *waltzed*, *twisted*, and *span*. Finally, simpler stories were also seen as more appropriate for a population who are not highly proficient in English.

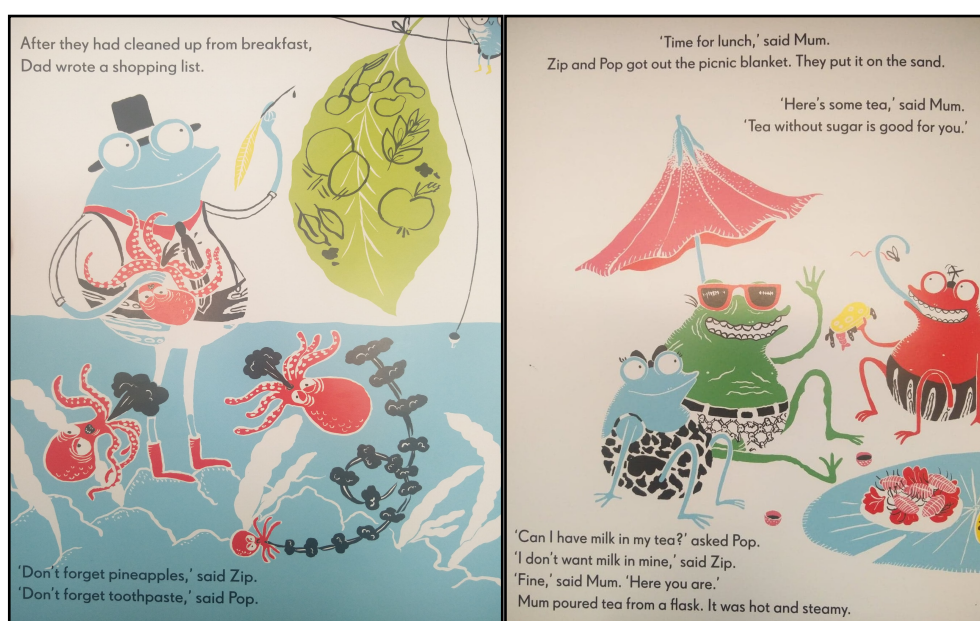


Figure 8.1. Screenshot of the test version of ‘Hop and Shop with Zip and Pop’

Figure 8.2. Screenshot of the test version of ‘Splish and Splash with Zip and Pop’

Initially, ‘Splish and Splash with Zip and Pop’ was selected for the reading, and ‘Hop and Shop with Zip and Pop’ was selected for reading with the validating information of accent. This is because the beach storybook, ‘Splish and Splash with Zip and Pop’, is more eventful and fun, and was regarded as more likely to generate thoughts. However, as discussed earlier, the pilot study showed that participants could not generate many thoughts in response to the control version (weak argument condition). While this may have been partly due to the phrasing of the task, i.e. list



thoughts about the oral health messages, upon reflection, the supermarket story, ‘Hop and Shop with Zip and Pop’, is not only slightly longer, but also easier for parents in East London to relate to as they are likely to encounter supermarkets more often than beaches. Therefore, to encourage thought generation, the two stories were swapped around, so the supermarket story ‘Hop and Shop with Zip and Pop,’ was storybook 1 used for reading, and ‘Splish and Splash with Zip and Pop’ was storybook 2 used for reading alongside accent as the validating information.

#### *8.3.4 Research instrument: Accent selection*

Participants read storybook 2, ‘Splish and Splash with Zip and Pop’, alongside a ‘persuasive’ and ‘dissuasive’ voice-over. study one found that MLE was the persuasive accent among Newham participants, because it was more persuasive compared with Dundee English, RP and Yorkshire English. The study also found that Dundee English was the dissuasive accent, and elicited negative explicit attitudes compared to four accents in a neutral context and three accents in an oral health context. From a self-validation perspective, MLE therefore acts as the persuasive validating information, while Dundee English is the dissuasive validating information. Thus it is predicted that MLE will lead to higher thought confidence and Dundee English will lead to lower thought confidence:

H3: MLE will increase participants’ confidence in their thoughts, while Dundee English will decrease participants’ confidence in their thoughts.

Therefore, echoing previous self-validation research (Briñol et al. 2004), after reading storybook 2 with a voice over, participants completed a thought confidence measure. This entailed looking at the thoughts that they had listed earlier, and rating on a scale of 1-7 how confident they were in those thoughts overall now, with 1 as ‘not at all confident’ and 7 as ‘very confident’.

As MLE produced a positive implicit accent effect in study one, one can predict that it is associated with at least one of the key tenets of persuasion: authority; credibility; and social attractiveness. If MLE does lead to persuasion, it would be interesting to understand why this is the case. In other words, is MLE persuasive because it is more credible, more socially attractive or more authoritative? This was an additional point of interest in my study. Credibility is a very dynamic concept, but for the purposes of this research, it was operationalised as trustworthiness. Social attractiveness incorporates similarity, physical attractiveness and likeability (Perloff 2010), and so in keeping with Petty et al.’s (2002) research, social attractiveness was

operationalised as similarity. I therefore incorporated measures to elicit attitudes about the narrator's perceived authority, trustworthiness and similarity to the participant. Specifically, the final task asked participants to think back to the narrator of the story, and rate on three 9-point Likert scales how trustworthy and authoritative she sounded, as well as how similar she sounded to the participant's own voice.

In order to maintain the validity of the research, the same female actor from study one was used to produce the experimental stimuli. Therefore, once the accents had been selected, using a Zoom H4n, the female actor was recorded reading the test and control version of storybook 2, 'Splish and Splash with Zip and Pop', in both an MLE accent and a Dundee English accent. This resulted in four files, which were then transferred, and placed into Psychopy.

### *8.3.5 Research instrument: Self validation*

While it is not a measurement in itself, the self-validation hypothesis centres on the above three hypotheses. Specifically, H1-H2 predicts that both thoughts and attitudes will be favourable in the strong argument condition, and unfavourable in the weak argument condition. H3 predicts that MLE will increase participants' confidence in their thoughts, and Dundee English will decrease participants' confidence in their thoughts (H3). We can therefore make a final, crucial, prediction which suggests that accent will affect attitudes:

H4: If H1, H2, and H3 are confirmed, in the strong argument condition, MLE will lead to favourable attitudes to the oral health messages, but Dundee English will lead to unfavourable attitudes to the oral health messages.

H5: If H1, H2, and H3 are confirmed, in the weak argument condition, MLE will lead to unfavourable attitudes to the oral health messages, but Dundee English will lead to favourable attitudes to the oral health messages.

### *8.3.6 Procedure*

The study took place in a quiet room in either the baby clinic or the primary school. Participants were assigned an argument condition (strong vs. weak) and an accent condition (persuasive vs. dissuasive). Participants read storybook 1 on the computer at their own pace, pressing the space bar to go onto the next page. Once they had finished storybook 1, they completed the thought listing task. Answers were encouraged by reiterating that there is no right or wrong answer. They were then instructed to put on

the headphones and read storybook 2, which had either an MLE or Dundee English voiceover. This was the critical validation of information stage. Following this, participants were asked to complete the thought confidence measure, and then attitudes to the oral health messages in the books were then collected. Finally, participants were asked to think back to the narrator of the story, and complete the trustworthy, authoritative and similarity measurements. Once the study had finished, the participants were debriefed and received £5 for their time. A visual representation of the experiment and the four groups is outlined in Table 8.1.

*Table 8.1 Order and description of tasks for each group (N=37)*

Group	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
1 ( <i>n</i> = 9)	Strong argument (Hop and Shop)	Thought list	Strong argument (Splish and Splash) + Dundee	Thought confidence	Attitude measure	Trustworthy, authoritative, similarity measure
2 ( <i>n</i> = 9)	Strong argument (Hop and Shop)	Thought list	Strong argument (Splish and Splash) + MLE	Thought confidence	Attitude measure	Trustworthy, authoritative, similarity measure
3 ( <i>n</i> = 10)	Weak argument (Hop and Shop)	Thought list	Weak argument (Splish and Splash) + Dundee	Thought confidence	Attitude measure	Trustworthy, authoritative, similarity measure
4 ( <i>n</i> = 9)	Weak argument (Hop and Shop)	Thought list	Weak argument (Splish and Splash) + MLE	Thought confidence	Attitude measure	Trustworthy, authoritative, similarity measure

## *8.4 Results*

### *8.4.1 Data processing*

I outlined at the beginning that the low proficiency of English led to misunderstandings. This meant that participants often wrote facts about the book as opposed to evaluative thoughts about the book, for example, ‘Zip and Pop went to the supermarket’. These statements were excluded from the thought favourability analysis, to ensure that only unfavourable and favourable thoughts were analysed. Seven participants were removed from the analysis of this variable because they only stated facts. Coincidentally, these were all participants assigned to strong argument condition (test storybook), and of these seven, three were assigned MLE and four were assigned Dundee English. This left 11 participants in the strong argument condition and 19 participants in the weak argument condition. The lack of thoughts, however, was not necessarily due to them not having favourable or unfavourable thoughts, but more related to their understanding of

the task. All 37 participants were therefore included in the remaining analyses. This resulted in 18 participants in the strong condition, of which nine were assigned MLE and nine were assigned Dundee English, and 19 participants in the weak condition, of which nine were assigned MLE, and 10 were assigned Dundee English.

To conduct a statistical analysis, a series of linear regressions were carried out in R using the *lm* command from the *lme4* package (Bates et al. 2015). No random effects were included in any of the models as there was only one measurement per variable. I will address the descriptive and inferential analyses, and model building for each hypothesis in order. What emerges from the data goes beyond the notion of self-validation, and highlights some key methodological issues in using accent as validating information, and conducting quantitative research in communities of non-native speakers.

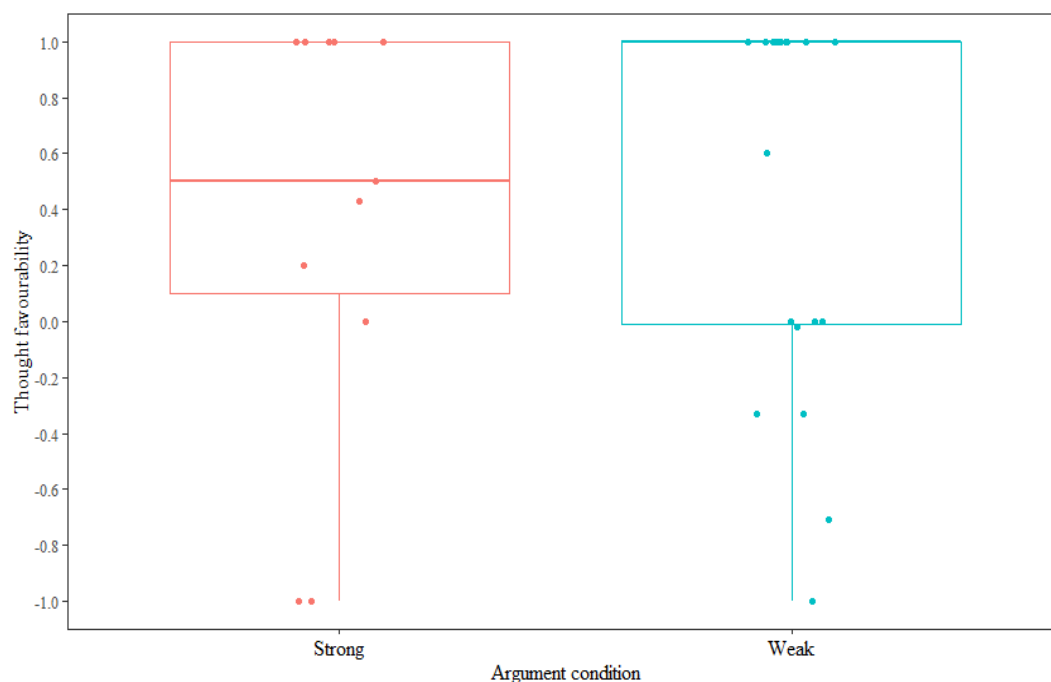
#### *8.4.2 H1: Thought favourability by argument condition*

In keeping with Petty and colleagues' work, the first analysis sought to confirm that thoughts were more favourable in the strong argument condition (test storybook) than the weak argument condition (control storybook). This was necessary because it is a pre-requisite for the self-validation hypothesis. As per Tormala et al. (2006), thought valence was operationalized through a thought favourability index. This index was calculated by first assigning a valence to each thought (favourable or unfavourable). In previous studies with a thought listing task, researchers asked participants to rate whether each thought was favourable, unfavourable or neutral. According to Bohner et al. (1988), this can be problematic and so they opted for a content analysis of the thought listing task in their research. Given the additional issue of participant proficiency in my study, participants' interpretation of their thoughts may be even less reliable. I therefore classified statements which expressed positive feelings, such as pleasure, happiness and approval as favourable, for example, "Found it funny when baked beans were right in front of him". Statements which expressed negative feelings, such as anger, negative surprise and disapproval, were classified as unfavourable, such as "Pictures on the story look dirty and messy".

The number of unfavourable thoughts was then subtracted from the number of favourable thoughts, before dividing the difference by the total number of thoughts. This produced a thought index ranging from -1 – +1 per participant. For example, if a participant had seven unfavourable thoughts and three favourable thoughts, their thought index would be -0.4. Table 8.2 displays the median, mean and standard deviation of thought favourability by argument condition, which is visually represented by the boxplot in Figure 8.3.

Table 8.2 Median, mean and standard deviation for thought favourability by argument condition ( $n = 30$ )

	Median	Mean	SD
Strong argument condition	0.50	0.38	0.77
Weak argument condition	1.00	0.43	0.69

Figure 8.3 Boxplot of thought favourability by argument condition ( $n = 30$ )

We can see that in the strong argument condition, the mean thought favourability index was in fact lower ( $M = 0.38$ ) than in the weak argument condition ( $M = 0.43$ ). In other words, participants' thoughts were *not* more favourable when they read the test storybook. This finding should be interpreted cautiously due to the difference in participant numbers as mentioned above. Nonetheless, in the weak argument condition, more participants had thoughts which had a valence of 0-1. This suggests a possible rejection of H1.

In order to confirm whether thoughts were indeed not more favourable in the strong argument condition, a linear regression was fitted to the data with thought favourability as the dependent variable and argument condition as the independent variable. No other factors were put into the model. The linear regression in Table 8.3 confirms that argument condition did not have a significant effect on participants' thought favourability ( $p = 0.837$ ). In other words, participants' thoughts were not more favourable when they read the test storybook, which means that we must reject H1. This finding is counter to previous self-validation studies whereby the strong argument condition *did* elicit more favourable thoughts. This finding has implications for the self-

validation hypothesis, because accent can only affect thought confidence, and thereby persuasion, if thoughts are more favourable in the first place. As we saw in Briñol et al. (2004), mixed arguments mean that neither strong nor weak arguments dominate. People are therefore confident in both sides of the argument, which leaves no clear direction for attitude change. The lack of a significant difference can be explained in the context of the participants' English proficiency, which will be discussed further on.

Table 8.3 Linear regression summary of thought favourability by argument condition ( $n = 30$ )

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Argument condition	1	0.02	0.02	0.04	0.837
Residuals	28	14.45	0.52	-	-

#### 8.4.3 H2: Attitudes by argument condition

Another important prerequisite for the self-validation hypothesis is not only that thoughts are more favourable in the strong argument condition, but that attitudes are more favourable as well. Tables 8.4-8.5 show the median, mean and standard deviation for attitudes to the oral health messages in both the strong and weak argument condition of storybook 2, while Figure 8.4 displays a boxplot of these attitudes in both conditions.

Table 8.4 Median, mean and standard deviation for attitude measurements in the strong argument condition ( $n = 18$ )

	Median	Mean	SD
Negative-positive	9.00	8.28	1.02
Difficult-easy	6.50	6.78	1.70
Bad-good	8.50	7.94	1.26

Table 8.5 Median, mean and standard deviation for attitude measurements in the weak argument condition ( $n = 19$ )

	Median	Mean	SD
Negative-positive	4.00	4.79	2.25
Difficult-easy	4.00	4.79	2.07
Bad-good	5.00	5.05	2.07

In general, attitudes in the strong argument condition were more stable, signified by the lower standard deviation across all three dimensions compared with the weak argument condition. In terms of *bad-good*, participants rated the oral health messages in the strong argument condition more favourably than those in the weak argument condition ( $M = 7.94$ ,  $M = 5.05$ ), and these attitudes show more variation for the weak

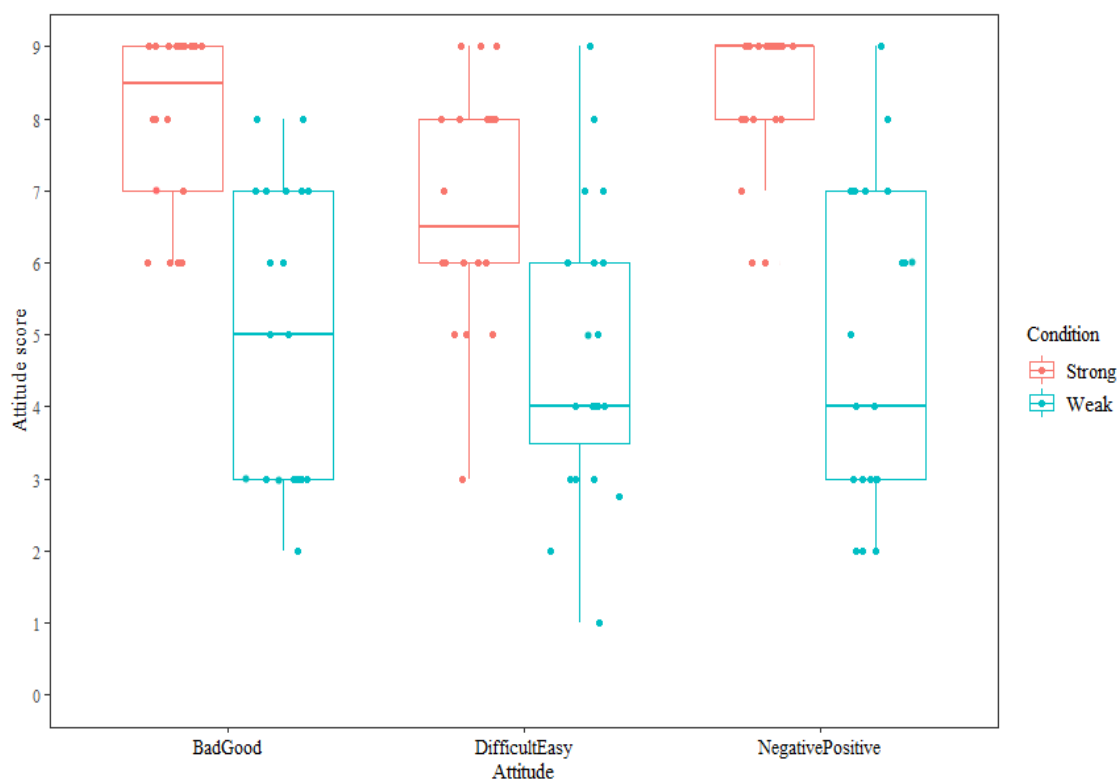


Figure 8.4 Boxplot of attitudes to storybook 2 by argument condition ( $N = 37$ )

argument condition than the strong argument condition ( $SD = 2.07$ ,  $SD = 1.26$ ). The extent to which participants found the oral health behaviours (e.g. brushing teeth, healthy eating) *difficult* or *easy* was more varied for both argument conditions ( $SD = 1.70$ ,  $SD = 2.07$ ), which may be due to the complexity of the question, and will be discussed further in the discussion. However, results indicate that participants believed the oral health behaviours in the strong argument condition were easier to implement than those in the weak argument condition ( $M = 6.78$ ,  $M = 4.79$ ). Finally, the extent to which participants felt the oral health messages in the strong argument condition were considered *positive* or *negative*, showed the least variation out of all three attitudinal dimensions ( $SD = 1.02$ ), whereas in the weak argument condition there were more discrepancies ( $SD = 2.25$ ). Their attitudes were more positive to the oral health messages in the strong argument condition than in the weak argument condition with a large difference between the means ( $M = 8.28$ ,  $M = 4.79$ ).

Overall, this indicates that we can accept H2, but inferential analyses were conducted to corroborate this. Three separate linear regressions were carried out for each of the semantic differential scales (*negative-positive*, *difficult-easy*, *good-bad*) to examine whether argument condition significantly affected attitudes to oral health messages in the storybook 2. For all three models, argument condition was the independent variable and participants' attitude score was the dependent variable. If we look at Table 8.6-8.8, we can understand the precise nature of the relationship between

argument condition and attitudes. These show that we can accept H2 because attitudes were significantly more favourable in the strong argument condition than the weak argument condition. In other words, participants felt that the oral health messages were more *positive* ( $p = 0.000$ ), more *good* ( $p = 0.000$ ), and that the behaviours were more *easy* to carry out ( $p = 0.003$ ) in the strong argument (test storybook) than the weak argument condition (control storybook).

Table 8.6 Linear regression of negative-positive attitudes by argument condition ( $N = 37$ )

	Estimate	Std. error	t-value	p-value
Intercept	1.30	0.91	1.43	0.161
Strong (vs. weak)	3.49	0.58	6.02	0.000

Table 8.7 Linear regression of bad-good attitudes by argument condition ( $N = 37$ )

	Estimate	Std. error	t-value	p-value
Intercept	2.16	0.89	2.43	0.020
Strong (vs. weak)	2.89	0.57	5.10	0.000

Table 8.8 Linear regression of difficult-easy attitudes by argument condition ( $N = 37$ )

	Estimate	Std. error	t-value	p-value
Intercept	2.80	0.98	2.86	0.007
Strong (vs. weak)	1.99	0.63	3.18	0.003

#### 8.4.4 H3: Thought confidence

Thus far, we have seen that thoughts were not more favourable, but attitudes were more favourable in the strong argument condition. The final prerequisite for the self-validation hypothesis is that MLE increases participants' confidence in their thoughts, and Dundee English decreases participants' confidence in their thoughts.

Table 8.9 displays the median, mean and standard deviation of thought confidence by accent, while Figure 8.5 is a boxplot of the relationship between these two variables. The mean shows that thought confidence was lower for Dundee English compared with MLE ( $M = 7.05$ ,  $M = 8.00$ ), and that these scores were also more varied for Dundee English in comparison to MLE ( $SD = 1.65$ ,  $SD = 1.08$ ).

Table 8.9 Median, mean and standard deviation of thought confidence by accent ( $N = 37$ )

	Median	Mean	SD
Dundee	7.00	7.05	1.65
MLE	8.00	8.00	1.08



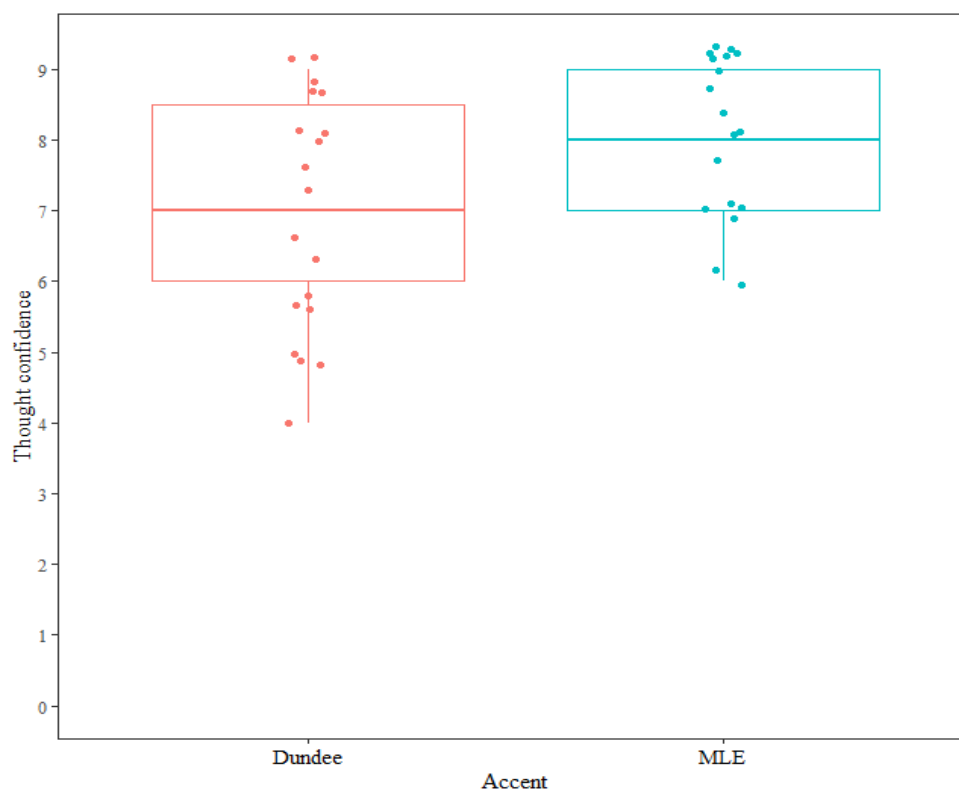


Figure 8.5 Boxplot of thought confidence by accent ( $N = 37$ )

To check whether we can accept H3 – that MLE will induce higher thought confidence – a linear regression was conducted with accent as the independent variable and thought confidence as the dependent variable. The regression reveals that participants had greater confidence in their thoughts in the ‘persuasive’ condition (MLE) than in the ‘dissuasive’ Dundee English condition ( $p = 0.001$ ) (Table 8.10). This means that we can accept H3, which matches previous self-validation work whereby the persuasive condition led to higher thought confidence.

The interaction in Table 8.10 should also be mentioned. While this did not form part of the hypothesis testing, MLE’s association with higher thought confidence was, in fact, dependent on the argument condition. As we can see in Figure 8.6, thought confidence was not higher for MLE in the strong argument condition compared with Dundee English. In fact, thought confidence was slightly *lower* for MLE in the strong argument condition than in the weak argument condition. On the other hand, the ‘dissuasive accent’, Dundee English, led to *higher* thought confidence in the strong argument condition than in the weak argument condition. This conflicts with Tormala et al. (2006) who found that high source credibility led to higher thought confidence in the strong argument condition. To confirm this finding, I explored the interaction between accent *and* argument condition on thought confidence (Table 8.10), which verified this highly insightful result. The effect of MLE on thought confidence in the strong and

Table 8.10 Linear regression of interaction between accent and argument condition on thought confidence ( $N = 37$ )

	Estimate	Std. error	t-value	p-value
Intercept	4.71	0.93	5.02	0.000
MLE (vs. Dundee)	3.62	1.35	2.67	0.001
Strong (vs. weak)	1.59	0.60	2.64	0.013
<b>2 way interaction</b>				
MLE (vs. Dundee) : strong (vs. weak)	-1.81	0.86	-2.10	0.044

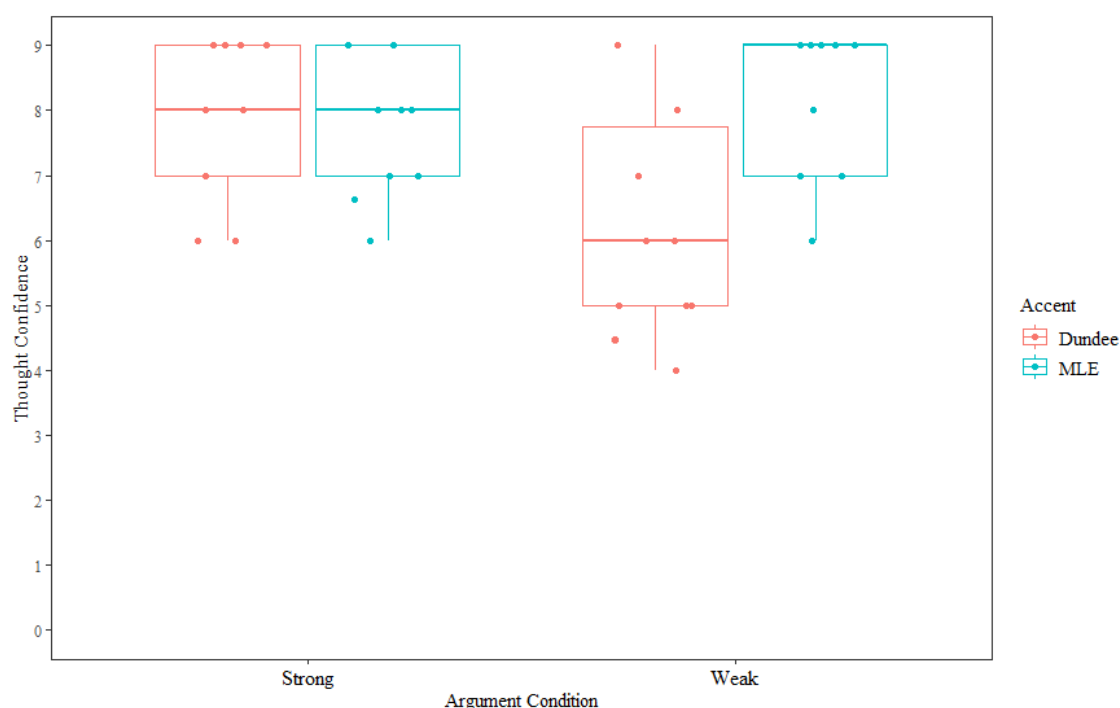


Figure 8.6 Boxplot of thought confidence by accent by argument condition ( $N = 37$ )

weak argument condition is significantly different compared with the effect of Dundee English on thought confidence in the strong and weak argument condition ( $p = 0.044$ ). More specifically, in the strong argument condition, hearing storybook 2 in MLE compared with Dundee English did not make participants more confident in the thoughts that they had generated about storybook 1. In fact, hearing storybook 2 in MLE made participants *less* confident in their thoughts, but hearing storybook 2 in Dundee English made participants *more* confident in their thoughts. This tells us that while both MLE and the strong argument condition significantly increased thought confidence individually, the presence of these variables together meant that the accent effect on thought confidence was cancelled out by the argument condition. Such a finding has repercussions for the mechanics of the self-validation hypothesis. If the

predicted ‘persuasive’ accent does not increase thought confidence, then attitudes will not be more favourable either, and persuasion does not occur.

#### 8.4.5 H4 and H5: Self-validation

Having examined the three conditions for the self-validation hypothesis, the final piece of this complex puzzle involves examining the interaction between accent, attitudes to the oral health messages, and argument condition. This tells us whether attitudes were more favourable in the strong argument condition *and* with MLE, and whether attitudes were less favourable in the weak argument condition *and* with Dundee English. Additionally, it signals whether attitudes were more favourable in the weak argument condition *and* with Dundee English, and less favourable in the weak argument condition *and* MLE.

Starting with the strong argument condition, Table 8.11 shows the mean, median and standard deviation of attitudes scores by accent, with an accompanying boxplot in Figure 8.7. The dimension *negative-positive* yielded the least variation for both MLE and Dundee English compared with other attitudinal dimensions ( $SD = 1.31$ ,  $SD = 0.71$ ). Both accents also had a higher mean on this dimension ( $M = 8.22$ ,  $M = 8.33$ ), which suggests positive attitudes to the oral health messages, particularly for Dundee English. The *difficult-easy* dimension displayed more variation and lower means for both MLE and Dundee English ( $SD = 1.88$ ,  $M = 6.56$ ;  $SD = 1.58$ ,  $M = 7.00$ ). In other words, participants perceived the oral health behaviours to be quite difficult, but this was more so the case for MLE. Finally, the *bad-good* dimension shows similar variability for both MLE and Dundee English ( $SD = 1.32$ ,  $SD = 1.27$ ), but a slightly higher mean for MLE, which indicates that participants felt the oral health messages were more *good* when heard in MLE than Dundee English ( $M = 8.00$ ,  $M = 7.89$ ).

Table 8.11 Median, mean and standard deviation for attitude measurements by accent in the strong argument condition ( $n = 18$ )

	MLE			Dundee		
	Median	Mean	SD	Median	Mean	SD
<i>Negative-Positive</i>	9.0	8.22	1.31	8.0	8.33	0.71
<i>Difficult-Easy</i>	6.0	6.56	1.88	7.0	7.00	1.58
<i>Bad-Good</i>	9.0	8.00	1.32	8.0	7.89	1.27

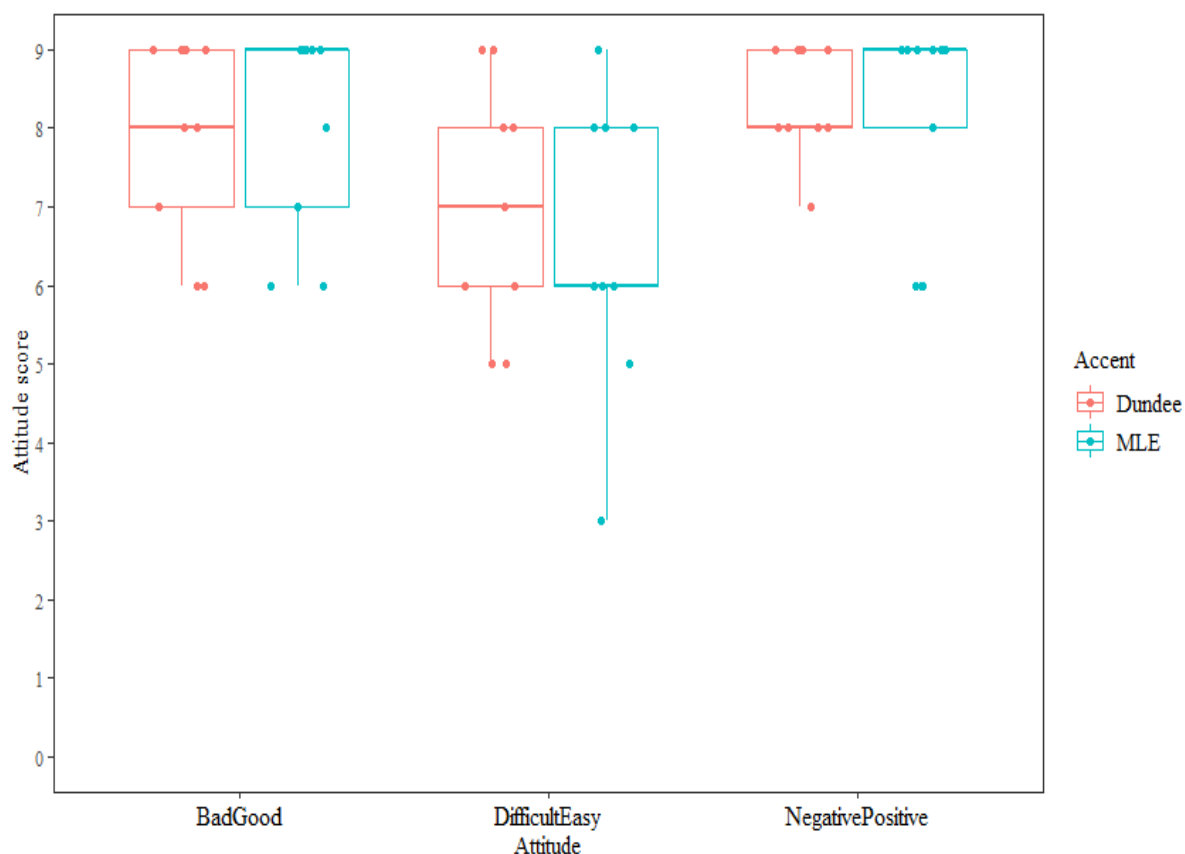


Figure 8.7 Boxplot of attitudes by accent in strong argument condition ( $n = 18$ )

Table 8.12 shows the mean, median and standard deviation of attitude scores by accent in the weak argument condition, with an accompanying boxplot in Figure 8.8. Overall, we can see that the scores for the weak argument condition are lower compared to those in the strong argument condition. Attitudes were more *positive* when the weak argument was heard in MLE compared with Dundee English ( $M = 5.11$ ,  $M = 4.50$ ), with a lower standard deviation ( $SD = 1.69$ ,  $SD = 2.71$ ). However, participants perceived the oral health behaviours to be slightly more *difficult* when heard in MLE as opposed to Dundee English ( $M = 4.44$ ,  $M = 5.10$ ). Moreover, as in the strong argument condition, attitudes were more *good* when presented in MLE compared with Dundee English ( $M = 5.56$ ,  $M = 4.60$ ), with many more discrepancies in these evaluations for Dundee English compared to MLE ( $SD = 2.37$ ,  $SD = 1.67$ ). Overall, in the weak argument condition, attitudes were more *positive* and more *good* when the book was heard in MLE. Yet, in the strong argument condition, attitudes were more *positive* and oral health behaviours were seen as more *easy* when the book was heard in Dundee English. We can already see that this is not in line with H4 and H5.

Table 8.12 Median, mean and standard deviation for attitude measurements by accent in the weak argument condition ( $n = 19$ )

	MLE			Dundee English		
	Median	Mean	SD	Median	Mean	SD
Negative-Positive	5.0	5.11	1.69	3.0	4.50	2.71
Difficult-Easy	4.0	4.44	2.24	5.0	5.10	1.97
Bad-Good	6.0	5.56	1.67	3.0	4.60	2.37

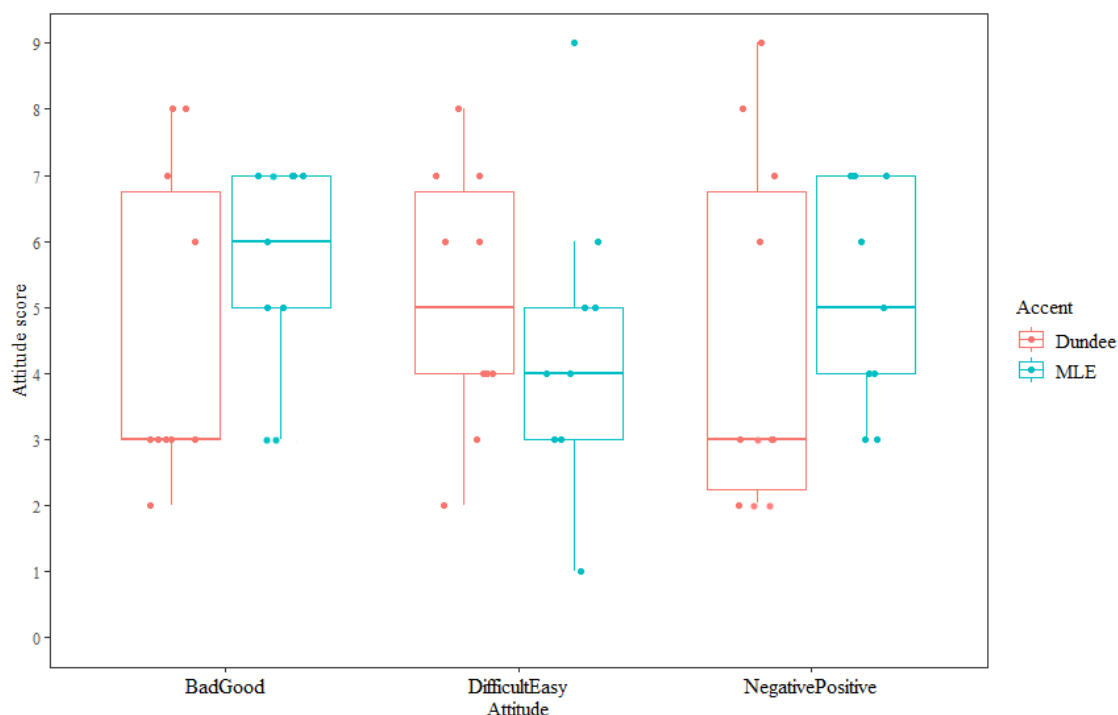


Figure 8.8 Boxplot of attitudes by accent in weak argument condition ( $n = 19$ )

To explore both sets of results more closely, three separate linear regressions were carried out for both the strong and weak argument condition, which created six models in total. In each model, attitude dimension score, e.g. *bad-good*, was the dependent variable, and the argument condition and accent were the independent variables. If the model was a significant predictor of attitudes, then further analyses were conducted via the *summary* function. There was no main effect of accent on attitudes to the messages in the story. Put otherwise, attitudes were not significantly more *positive*, more *good* or more *easy* when the storybook was heard in an MLE accent compared with a Dundee English accent. Moreover, unlike Tormala et al.'s (2006) study, there was also no significant interaction between the validating information (accent) and argument condition on attitudes, which means that H4 and H5 are not supported. Otherwise put, MLE did not increase participants' confidence in their thoughts in the strong argument condition such that their attitudes were more

favourable, and Dundee English did not increase participants' doubt in their thoughts in the strong argument condition such that their attitudes were unfavourable. Equally, MLE did not increase participants' confidence in their thoughts in the weak argument condition, resulting in more unfavourable attitudes, and Dundee English did not increase participants' doubts in their thoughts in the weak argument condition, leading to favourable attitudes. We therefore do not see evidence of the self-validation hypothesis.

*Table 8.13 Linear regression of negative-positive attitudes to oral health messages by accent and argument condition (N = 37)*

	Estimate	Std. error	t value	p-value
Intercept	0.67	1.29	0.52	0.608
MLE (vs. Dundee)	1.33	1.86	0.72	0.478
Strong (vs. weak)	3.83	0.83	4.63	0.000
<b>2 way interaction</b>				
MLE (vs. Dundee) : strong (vs. weak)	- 0.72	1.19	- 0.61	0.546

*Table 8.14 Linear regression of bad-good attitudes to oral health messages by accent and argument condition (N = 37)*

	Estimate	Std. error	t value	p-value
Intercept	1.31	1.25	1.06	0.299
MLE (vs. Dundee)	1.80	1.79	1.00	0.323
Strong (vs. weak)	3.29	0.79	4.12	0.002
<b>2 way interaction</b>				
MLE (vs. Dundee) : strong (vs. weak)	- 0.84	1.14	- 0.74	0.465

*Table 8.15 Linear regression of difficult-easy attitudes to oral health messages by accent and argument condition (N = 37)*

	Estimate	Std. error	t value	p-value
Intercept	3.20	1.38	2.32	0.027
MLE (vs. Dundee)	- 0.87	1.99	- 0.43	0.667
Strong (vs. weak)	1.90	0.89	2.14	0.040
<b>2 way interaction</b>				
MLE (vs. Dundee) : strong (vs. weak)	0.21	1.27	0.17	0.869

#### *8.4.6 Attitudes to accent*

It was also of interest to gauge attitudes to each accent. Tables 8.16 and 8.17 show the median, mean and standard deviation for attitudes to both Dundee English and MLE, and Figure 8.9 is a visual representation of participants' attitudes to these accents. The narrator's perceived authority showed large variation for both MLE ( $SD = 2.94$ ) and

Dundee English ( $SD = 2.41$ ), but the mean was much lower for MLE ( $M = 4.94$ ) than Dundee English ( $M = 6.05$ ). On average, participants perceived the Dundee English accent to be slightly more similar to their own voice than MLE ( $M = 4.74$ ,  $M = 4.61$ ), but there was far less agreement for MLE ( $SD = 3.13$ ) compared with Dundee English ( $SD = 2.10$ ). In terms of trustworthiness, the consensus was that both MLE and Dundee English sounded very trustworthy with a higher mean ( $M = 7.78$ ,  $M = 7.74$ ), and a lower standard deviation than the other two dimensions ( $SD = 1.26$ ,  $SD = 1.24$ ).

Table 8.16 Median, mean and standard deviation for attitudes to Dundee English ( $n = 19$ )

	Median	Mean	SD
Trustworthy	8.00	7.74	1.24
Authoritative	7.00	6.05	2.41
Similar	5.00	4.74	2.10

Table 8.17 Median, mean and standard deviation for attitudes to MLE ( $n = 18$ )

	Median	Mean	SD
Trustworthy	8.00	7.78	1.26
Authoritative	5.50	4.94	2.94
Similar	4.50	4.61	3.13

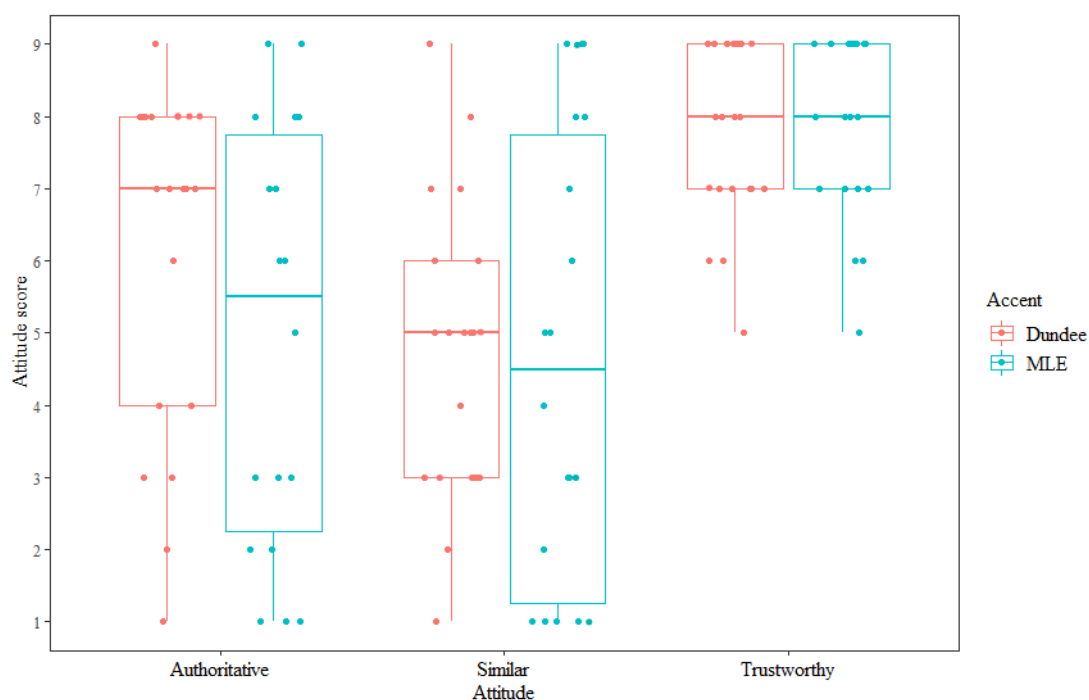


Figure 8.9 Boxplot of attitudes to narrator by accent ( $N = 37$ )

Based on these descriptive analyses, there do not seem to be great differences in attitudes towards the narrator, perhaps with the exception of their perceived authority. Once again, three separate linear regressions were carried out for each of the Likert

scales (trustworthy, authoritative, similar) to confirm this prediction. For all three models, accent was the independent variable and participants' attitude score was the dependent variable. The regression summaries reveal that there was no main effect of accent on attitudes to the narrator, and so no further tests were conducted (Tables 8.18-8.20). In other words, participants did not perceive MLE as more trustworthy ( $p = 0.921$ ), authoritative ( $p = 0.218$ ), or similar to their own voice ( $p = 0.886$ ) than Dundee English.

*Table 8.18 Linear regression summary of trustworthy attitudes to narrator by accent (N = 37)*

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	1	0.02	0.02	0.01	0.921
Residuals	35	54.80	1.57	-	-

*Table 8.19 Linear regression summary of authoritative attitudes to narrator by accent (N = 37)*

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	1	11.35	11.35	1.58	0.218
Residuals	35	251.89	7.20	-	-

*Table 8.20 Linear regression of similarity attitudes to narrator by accent (N = 37)*

	<i>df</i>	Sum Sq	Mean Sq	F value	<i>p</i> -value
Accent	1	0.15	0.15	0.021	0.886
Residuals	35	245.96	7.03	-	-

## *8.5 Discussion*

### *8.5.1 Proficiency of participants*

This study was conducted to test the results of study one using the BBaRTS intervention material, and therefore relied on the assumption that the sample populations were similar. The most crucial finding was that the participants' English proficiency was lower than those from study one, and results must therefore be explained separately from study one. Their limited vocabulary was one indicator of their low proficiency of English. For example, one participant's thought list read: "I agree with them", "I disagree chocolate", "I agree apple crumble", and "I agree bread, eggs, milk, cheese, beans, tuna". This was most likely in response to my instructions whereby I told her to focus on what she agreed with and did not agree with when clarifying the thought listing task. The content of her answers is 'correct', in that chocolate is bad, and apples, eggs, and milk are good, but we can see that she is not using advanced vocabulary to



formulate her answers. Syntax was another way of gauging poor proficiency, such as “We are very important to have dental services” and “I think my opinion is the chocolate cereal and biscuits not better for our children and anything sugary”. Both the syntax and lack of advanced vocabulary signals a low competency of English among the participants.

Perhaps a more indirect measure of their proficiency is their understanding of the thought listing task after reading storybook 1. The instructions in the strong argument condition asked participants to list their thoughts about the oral health messages, for example, “It’s good that they eat a healthy dinner”. In the weak argument condition, they were asked to list their thoughts about the book in general, for example, “It’s good that they spend time together as a family” or “It’s bad that they don’t brush their teeth”. The use of the word ‘thoughts’ may have been confusing for non-native English participants, and so their lack of understanding cannot be automatically assigned to English proficiency. However, upon realising that certain participants struggled to grasp the instructions, I made further clarifications, such as emphasizing that I was interested in their opinions about the book, so what they liked and what they did not like, and what they agreed with and did not agree with. Unfortunately, despite these further explanations, many participants still listed facts, rather than opinions, for example, “Chocolate is not good for teeth”, “Buying healthy snacks like fruit”, and “Washed face and hands, brushed teeth and dad checked”. This suggests that their comprehension of the task was a sign of their low English competence.

Additionally, the high standard deviations may also indicate a lack of understanding, particularly for the question: ‘How challenging are the dental behaviours in the storybook?’ This had the highest standard deviation of the attitude questions in comparison to the other two questions, for both accents and both argument conditions, which suggests that it may have been a difficult question to interpret.

At first sight, the consequence of these proficiency issues may seem small. Due to participants’ low competency in English, some simply listed facts as opposed to opinions about the storybook. However, this is probably the reason for a lack of significance between thought valence and argument condition; thoughts were not more favourable when participants were exposed to the strong argument condition compared with the weak argument condition. This result then had repercussions for the mechanics of the self-validation hypothesis, because unless there is a clear distinction in valence between the two argument conditions, then the validating information (accent) cannot influence the confidence that participants had in their thoughts. The next section seeks to offer solutions to the problem of using non-native English participants in studies on this topic.

### *8.5.2 Future modifications*

To remedy the issue of incorporating non-native speakers, the convenient solution would be to limit the study to native speakers of English, but this would severely reduce the ecological validity of the study. More importantly, it would exclude vulnerable populations whose attitudes researchers urgently need to understand. This is because their proficiency is partly why they are most susceptible to public health issues. One could argue that an interpreter who could translate the BBarTS storybooks would help to alleviate the problem. In fact, on some occasions, participants asked the experimenter to write down their thoughts for them as they were not confident enough in their writing and spelling abilities. An interpreter may therefore be advantageous when participants list their thoughts to capture more depth and accuracy to their answers. However, an interpreter is not possible when the study is investigating the effects of British accents. Interpreters can also be problematic in research beyond linguistics, for example, Kapbor and Bertero (2002) found that an interpreter might threaten the validity of qualitative interviews. They found that interpreters often used simplified questions as they were easy to answer due to the language barrier. Another problem was that they jumped to conclusions or misinterpreted answers because they knew a lot about the topic area. The authors recommend finding an interpreter who has strong linguistic abilities, knows a lot about the subject matter, and has strong awareness of both cultures. Instead of an interpreter, a translator may have been helpful for the questionnaires, but this does not resolve the issue of how best to use accent as the validating information in thought confidence experiments.

Perhaps, an important starting point would be to test whether accent can validate thoughts using simpler material, where the differences between the two messages are minimised. From a linguistic perspective, if the messages are easier to understand, there is a higher probability that participants will be able to generate thoughts. Changing the content of the messages would also be beneficial because even in the weak argument condition, among highly proficient speakers, the thoughts did not relate to the story itself. Instead, they often linked more to the layout and imagery. For example, one parent wrote: "I think the image of the frogs eating each other is a bit unsuitable for young children", while another wrote: "The designs seem a bit too advanced for 5-7 year old children". If participants were presented with just the message without imagery, much like previous studies (e.g. Petty et al. 2002), then this would increase the likelihood that their thoughts would relate to the message. Moreover, the instructions asked participants to list thoughts that they had about the book in general, and so with a simple message format, these instructions would be less likely to result in thoughts

unrelated to the oral health messages. The argument manipulations would then be more salient, and accent may have a stronger effect.

Another potentially important adjustment is making the argument distinctions clearer. In fact, as previously noted, Briñol et al.'s (2004) work showed that thought confidence does not affect attitudes when participants are exposed to mixed arguments. Distinguishing between strong and weak arguments would increase the effectiveness of the argument manipulations. In turn, the difference in thought valence for each argument condition would be stronger, and the impact of accent would be greater. In the current study, there was a strong argument condition, containing strong oral health messages, and a weak argument condition which did not contain oral health messages. The arguments are therefore not strong and weak per se, but strong and non-existent because the control storybooks did not have any dental arguments. In previous studies, both argument conditions mentioned the attitude object, so the argument manipulation was more effective. For example, the strong argument condition for Tormala et al.'s (2006: 690) study on attitudes to phosphate reads: "Among the various brands of laundry detergents currently on the market, those containing phosphate detergents are far and away the best". In the weak condition, it reads: "One woman, Cynthia Thompson, remarked: "That's a pretty good deal. I'll give it a try." Mrs Thompson's husband, a middle school math teacher, shared her enthusiasm, "If it ends up working," he said, "I'll recommend it to parents." The use of "far and away the best" in the strong argument condition makes it hard to argue against, whereas the phrases "pretty good", and "If it ends up working" in the weak argument condition are easier to challenge. For some participants, the distinction was clear through the absence of messages in the weak argument condition, because they stated that there were no oral health messages, and consequently had poorer attitudes to these oral health messages. However, for a select few, the lack of oral health messages was confusing with regard to the attitude questions. In future studies, messages whereby the differences in argument condition are clearer would help to establish whether accent can have an impact on thought confidence.

Next, it must be pointed out that elaboration may have affected the results. Thought confidence can only have an effect under high elaboration, because metacognition involves attending to and interpreting one's own cognitive experiences (Petty et al. 2002). When elaboration is low, the individual does not have the motivation or capacity to engage in higher forms of thinking. While most participants came alone, others came with their other children, who were very young. They did not disrupt the experiment, but participants were aware that their child was present, which may have prevented them from exerting the cognitive effort required to engage in metacognitive thought. Recruiting parents of young children is a difficult task, and so requesting that

they come alone would introduce further obstacles. This raises another issue of conducting research with this population, because not only are they non-native speakers of English, but they are also parents of very young children. It is not certain that the study induced low elaboration conditions, but elaboration must be remembered and taken into consideration in the design of future studies on metacognition.

Finally, the issue of social desirability must also be raised. We saw this in the thoughts listed at the beginning, with participants very eager to provide the 'correct' answer. For example, many reiterated that chocolate is bad for the teeth, and that we should brush our teeth, perhaps because they felt they were being tested. One participant even wrote: "We make children brush their teeth twice daily and they need to sleep minimum 8 hours daily", but there is no mention of sleep requirements in the story. Others wrote similar answers in different ways to fill up all 10 spaces on the thought listing sheet, despite reassurance that it was not necessary to do so. For example, one participant wrote: "Very interesting story for children", "Fun reading it", "Enjoyable book to read", "The pictures are very interesting" and "Characters in the book are interesting". Most importantly, she wrote: "There are some interesting songs to interest children", but there are no songs in the book, which shows that she may have felt pressure to write something down. In terms of the attitudinal results, it is harder to determine whether there was social desirability, but a few participants did select the highest answers, '8' and '9', for all questions, which would have indicated a favourable response. While these may have been representative of their behaviours or attitudes in real life, it is also possible that they selected the highest answer because this was the most agreeable way to respond. In that case, according to the APE model (Gawronski and Bodenhausen 2006, 2011), this creates a difference between attitudes that may be in line with social norms (explicit attitudes) and attitudes that may be oppositional to such norms (implicit attitudes). This difference may lead to cognitive dissonance, which is psychological discomfort, caused by two cognitive "nonfitting relations" (Festinger 1957: 3). However, research suggests that cultures cope with cognitive dissonance differently. Specifically, studies have found that cognitive consistency is a cultural phenomenon, because the effects of dissonance-related attitude change observed in Western culture do not apply to Eastern culture (e.g. Heine and Lehman 1997; Hoshino-Browne et al. 2005). Heine et al. (1999) argue that this is because East Asia is typically collectivist, and more focused on maintaining harmonious interpersonal relationships. Collectivism also extends to South Asian communities (Triandis 1994), which was the heritage of many participants in this study. Therefore, consistent differences in attitudinal results within this culture may not necessarily signal differences in the construct being measured, but response bias instead (Harumi 2011). This is because they are more used to tolerating cognitive dissonance due to their collectivist culture. So

while cognitive consistency has not been explored directly, it is an important point to remember for future research in similar communities on attitudes.

In sum, I have suggested modifications which, I hope, are useful for further studies on self-validation with accent using non-native speakers. But more importantly, I have highlighted the extent of the problems stemming from proficiency issues, and brought to the fore a much larger issue in academic research which must be addressed across disciplines.

### *8.5.3 Measurements: thought valence, thought confidence and attitudes*

Having explored the sampling issues relating to the study, I will now discuss the results in the context of attitude research. First, thought valence was not higher in the strong argument condition, which we have seen was probably due to an amalgam of: (1) reduced understanding which led to stating facts rather than opinions; (2) a weak distinction between the strong and weak argument conditions; and (3) a complicated message format whereby participants focused on imagery or design.

Secondly, MLE was not perceived as significantly more trustworthy, authoritative or similar (to the participant's voice) compared with Dundee English. Taking into account the overall low English proficiency of the participants, one could argue that this led participants to judge the narrator according to criteria other than accent. Given that they were unable to attend to the more nuanced pronunciation differences between the two accents, they may have judged other qualities of the narrator, such as the gender and age. For example, they may have felt that the narrator was trustworthy, similar, and authoritative, because she sounded like a mother, which is very relatable for other parents. As the same female actor produced both accents, MLE and Dundee English were seen as equally trustworthy, authoritative and similar, and no significant effect of MLE emerged. This finds support in Exemplar Theory, an approach to social categorization which originated in psychology, and was extended to sociolinguistics (c.f. Johnson 1997; Pierrehumbert 2001). Exemplar models assert that individuals store every distinct occurrence of a stimulus and its category label (Kruschke 2008). Each instance, known as an exemplar, contains information, such as stereotypes about the category, values associated with the category, and past interactions with people belonging to the category (Drager and Kirtley 2016). When we encounter a stimulus, it is compared to the exemplars in memory and categorized accordingly. An exemplar approach can also be consolidated with the APE model, and the notion that attitudes are not static. Researchers have applied exemplar theory to connectionist networks, such as Kruschke's (1992: 22) attention learning covering map (ALCOVE), which is "a connectionist model of category learning that incorporates an

exemplar-based representation". As discussed earlier, it is likely that many participants have not encountered enough instances of MLE or Dundee English to create separate category labels. It is more probable that they would have only created an overarching category of English-speaking, middle aged, woman. When they heard the female actor talking, the similarity between the stimulus and exemplars in this category led them to evaluate both Dundee English and MLE in a similar manner.

Thirdly, thought confidence was significantly higher in the MLE condition, but how can this be explained when it was not deemed more trustworthy, authoritative or similar than Dundee English? There are two explanations: one relating to processing fluency, and the other focusing on content validity. First, these findings can be explained by examining the difference in phrasing of the narrator questions and the thought confidence question. While both were examining the effect of accent, the former guided the participants' attention to the woman telling the story, which resulted in participants' categorizing the narrator in a similar manner across both accents. The question on thought confidence, however, did not explicitly allude to the narrator, so the issue of categories was not present. Instead, the question drew their attention to how much they now validated their prior thoughts. Their confidence was unlikely to be influenced by the social connotations of the validating information, such as credibility, but by their ability to process the message better in MLE than Dundee English. Research on processing unfamiliar stimuli has been documented in various disciplines. For example, evidence from bilingualism studies suggests that reading and writing is slower and less accurate in a second language compared with a first language (e.g. Cook 1997). Martin et al. (2013) argue that this may be because L2 speakers have a weaker capacity to predict upcoming words compared with L1 speakers, which links with the notion of cognitive salience and surprisal mentioned earlier. Closely related, but from a consumer psychology perspective, familiar information is processed more easily than unfamiliar information and this processing fluency leads to more positive judgements (Schwarz 2004). Lippi-Green (2012) unpacks this observation, arguing that the responsibility of effective communication lies with the speaker. However this is only the case for dominant language groups. They demand a person with an accent to be clearer, and a failure to do so implies an unwillingness to communicate properly. Taking this research further, Dragojevic and Giles (2016) examine processing fluency and accent perception. They found that a Punjabi English accent elicited more negative reactions due to the reduced processing fluency. One can therefore argue that in the case of a minority group hearing a dominant group language, participants may have felt the burden of the communicative act, and a pressure to understand. While both accents belong to the dominant language, the processing required for MLE was lower due to higher exposure compared with Dundee English. As the story continued, participants'

perceived ability to understand increased, due to a reduced cognitive salience. This led to higher motivation and capacity to process the message, so their confidence was greater.

One must also raise the notion of content validity, whereby trustworthiness, authority and similarity did not map onto thought confidence. In other words, thought confidence was high, but no effect was found for trustworthiness, authority and similarity because they are conceptually different constructs. For non-native speakers of a language, effective validating information may not entail trustworthiness, authority or similarity, but processing fluency of the accent. This signals that the measure used lacked content validity, which is “the degree to which a sample of items, taken together, constitute an adequate operational definition of the construct” (Polit and Beck 2006: 490). Thought confidence has previously been used to test persuasion, because it has been associated with constructs linked to persuasion (credibility, power and similarity). However, the fluidity of the term persuasion also means that it can be operationally defined in numerous ways. For example, studies on the self-validation hypothesis were conducted on native speakers, but it may be that thought confidence does not rely on indexical information for non-native speakers. In other words, these three traits were too conceptually distant from thought confidence for there to be a significant effect. That is not to say trustworthiness, authority and similarity do not have an effect, but persuasiveness may be a result of processing, rather than an immediate relationship between the source and one of these three elements. According to Polit and Beck (2006: 490), determining content validity requires a priori “careful conceptualization and domain analysis prior to item generation”, and then a posteriori “evaluation of the relevance of the scale’s content through expert assessment”. This highlights the complexity of ensuring high content validity, and was beyond the scope of this research. Taken together, trustworthiness, authority and similarity were assumed to relate directly to the construct of thought confidence, based on studies using native speakers. The current study suggests that processing may play a more direct role in the case of non-native speakers, and this measure is more important for the sample population.

H2 was confirmed, such that attitudes in the strong argument condition were more favourable than attitudes to the weak argument condition. H3 was also confirmed because MLE led to higher thought confidence than Dundee English. Thought confidence was also higher in the strong argument condition compared with the weak argument condition. The unexpected finding is that neither H4 nor H5 were confirmed. In other words, MLE did not result in more favourable attitudes than Dundee English in the strong argument condition, and MLE did not produce less favourable attitudes than Dundee English in the weak argument condition. As Levon and Fox (2014: 209) note, one must be “mindful of the need to treat null empirical results with caution”, but these

findings contrast with previous studies on the self-validation hypothesis. According to Briñol and Petty (2009), clear thought favourability or unfavourability is crucial for the self-validation hypothesis, because mixed thought valence would be confusing. Thoughts based on mixed arguments are less likely to be held with confidence, translated into attitudes, and to guide behaviour. In this study, however, even among those participants who listed facts, as opposed to opinions, attitudes in the strong argument condition were more favourable than attitudes in the weak argument condition. This supports the interpretation that the lack of significance between thought favourability and argument condition was due to a misunderstanding of the question, rather than an absence of favourable or unfavourable thoughts. Therefore, claiming that the self-validation hypothesis did not emerge because favourable thoughts were not associated with the strong argument condition seems unfounded. Instead, it appears that the choice of validating information, MLE, was not persuasive for the topic message. In other words, one could argue that MLE's lack of persuasive effect in the strong argument condition for both attitudes and thought confidence is due to context. While I argue that MLE was not socially salient for these participants, they may have felt that a voice which is easier to understand is more familiar. This has been demonstrated in the social cognition literature, in that stimuli which are easy to process are perceived as more familiar as discussed earlier (e.g. Schwarz 2004). Participants may have recognised MLE as a variety of English spoken in their area of London. But it is spoken as a vernacular by people from the lower end of the social scale, so the participants would have encountered MLE from their interactions with, for example shop keepers or bus drivers. Based on this exposure to MLE, participants potentially recognised that these people are different from those in positions of authority who dispense medical advice. The lack of significance may therefore be precisely because MLE has higher perceptual fluency compared with Dundee English. While ease of processing yielded a positive effect for MLE in terms of overall confidence, it was no more persuasive than Dundee English in a health context because this ease of processing also indicated that the message might not be from an expert source.

#### *8.5.4 Study one and study two*

While the proficiency differences between participants did not allow for a direct comparison of attitudes, we can see that explicit attitudes in study two were driven more by processing fluency, while those in study one resulted more from an awareness of MLE's negative social connotations. In the context of the APE model, study one participants rejected the propositional evaluation arising from their positive gut reaction to MLE. They then used relevant information, such as the knowledge that MLE is



stigmatized, and an awareness that a researcher was asking for their opinions on MLE, and developed a new propositional evaluation which satisfied their self-presentation goals. Participants in study two, however, used the ease of processing for attitude formation to conclude that the narrator sounded familiar, and therefore could not logically be a persuasive source of health advice. One could speculate that their implicit attitudes would be in line with their explicit attitudes because, unlike the participants in study one, they had less motivation to reject the positive propositional evaluation resulting from their affective reaction. They were not as aware of MLE's negative connotations in Britain, so self-presentation purposes were not a priority in this regard.

If the sample populations *had* been similar in terms of proficiency, it is important to bear in mind that attitudes may still have shown variation for two key reasons. First, similar to the issue of content validity raised above, the positive implicit effect of MLE in study one does not mean it will score highly on the measurements of study two. Credibility is one element of persuasion that is very multifaceted, and typically relates to the believability of a person (O'Keefe 2002). It incorporates many subcategories, such as expertise and trustworthiness, so believability (true/false) was deemed the most appropriate construct for a response latency experiment on persuasion. The measurements elicited in study two, however, did not measure persuasion in terms of believability. Both study one and study two targeted the concept of persuasion, but the constructs measured were different, and so there was a lack of conceptual correspondence. In other words, MLE may be more persuasive from a believability perspective, but that does not mean MLE will score highly on other dimensions. Secondly, the procedures in study one and study two tapped into different types of attitudes. We can ascertain that implicit measures were used in study one, because they arguably satisfy the criteria outlined in Bargh's (1994) work on automaticity: efficiency; lack of awareness; uncontrollability; and unintentionality. Newham participants displayed positive implicit attitudes to MLE compared with Dundee English, RP and Yorkshire English. These results were then tested in study two which used explicit measures, because this procedure was in line with previous work on the self-validation hypothesis. Participants were allowed to take their time, and reflect on their answers, which certainly does not meet the criteria of automaticity. In this way, study two was based on results from study one, but the two studies used different measurement procedures, so even with similar sample populations, comparisons would need to be made with caution.

### *8.5.5 Summary*

This study is the first attempt at examining whether accent can influence thought confidence, making a unique contribution to the work on both persuasion and language attitudes. Aside from the methodological obstacles, this study has important implications for persuasion. It highlights the possibility that the self-validation hypothesis, and persuasion more broadly, may not be driven by traits such as credibility, and power, but by more complex processes involving the perceptual fluency of the stimuli. This is more likely the case perhaps for non-native communities, and further studies should account for this possibility. It also mirrors the key finding of Dragojevic and Giles' (2016) study, except the focus here is on how non-native communities perceive native accents, as opposed to how native communities perceive non-native accents. The importance of processing emerged from study one as well, but there was a higher native proficiency, so participants' attitudes were driven more by social connotations than ease of processing.

The research also highlights the crucial issue of including non-native participants in attitudinal studies. It can be described as a double edge sword in that using participants who are non-native speakers will undoubtedly raise problems, but it is also wrong to exclude them purely for convenience when they are a part of the community. This is more so the case for applied research, which aims to address an issue affecting an entire population. Indeed, this study is rooted in a very real problem of tooth decay, which is highly prevalent in Britain, and particularly in East London. Ecological validity is therefore of high importance in understanding how *all* people in these areas can internalise health messages for long-lasting behaviour change. If sample populations are to be representative, one cannot exclude participants based on their proficiency in English, because their child may suffer dental caries as much as the child of their proficient counterpart. In fact, these are the very people whose attitudes we must understand most, because they are so often excluded. It is a trend in sociolinguistics to use samples which include only native speakers. For example, Kerswill (1993: 35) points out that Labov's (1966) New York study excluded 50 percent of his original sample because they did not meet "nativeness related criteria".

More relevant to this study, the problem has also been documented in applied linguistics, for example, De Angelis (2016: 97) examines how research can include multilingual individuals. She claimed that background languages are "highly inconvenient", because they introduce potential confounding variables, but this does not call for exclusion as this would create subject selection bias. Further still, evidence suggests that the issue of non-native speakers plagues disciplines beyond linguistics. For example, Frayne et al. (1996), looked at how often non-English speaking (NES) people were excluded from medical research in major U.S journals between 1989 and 1991. Of 172 corresponding authors, 40% excluded non-English speakers, mainly

because they had not thought of the issue, but also because they had translation problems. Crucially, they found that “NES persons are commonly excluded from provider-patient communication studies appearing in influential journals, potentially limiting the generalizability of study findings” (Frayne et al. 1996: 39). It may be tempting to overlook non-native speakers in a bid to create a ‘pure’ experiment, but this becomes highly problematic when the study aims to improve the well-being of the population.

Studies on the self-validation hypothesis are highly promising, and this experiment has employed a novel methodology to explore the persuasiveness of British accents in Tower Hamlets. To fully harness the potential of this research using accent in areas with non-native speakers, we must confront crucial methodological issues, and start viewing ‘valid’ participants as those who are authentic members of the community rather than authentic speakers of a language. It is important not to shy away from such obstacles, and to begin tackling them if we are to improve the effectiveness of health communication in the wider world.

## 9 Conclusion

### *9.1 Summary*

This research sought to address the global issue of childhood dental caries by drawing on sociolinguistics, social cognition and public health. Specifically, it aimed to inform the production of the BBaRTS animated cartoons – designed to increase parental self-efficacy to manage children’s oral health behaviours – by examining the persuasiveness of British accents in two studies.

Language attitude research suggests that the media simultaneously functions as a space where we learn what accent bias is ‘right’ and ‘wrong’, and store stereotypical associations to different accents. This warranted a measure of accent persuasiveness which did not allow for thoughtful responses, but instead led to judgements which were the result of automatic processes. Accent persuasiveness varied greatly by area, and is highly complex. It depends, first, as study two highlighted, on an individual’s familiarity of the accent, such that listeners who have not been exposed to various accents will rely more on the perceived fluency of the speaker (c.f. Dragojevic and Giles 2016; Dragojevic et al. 2017). This is because they have not created exemplars of different accents in memory (c.f. Hay et al. 2006). Those with greater familiarity of different accents will draw more on social norms, as shown, for example, by the persuasive effect of Estuary English over MLE among Tayside participants in study one. Lastly, at a deeper level, persuasion is rooted in personal experiences of each accent, shown by the persuasive effect of MLE among Newham participants over Dundee English, RP and Yorkshire English. Extensive experience, however, can also lead to a minimisation of perceived accent-boundaries altogether, as we saw in Kent.

Whatever an individual’s knowledge of an accent, this will impact the activation of associations in memory, regardless of whether they hold them to be accurate or not. When someone is asked for their more thoughtful attitudes to accents, the factors outlined above also determine whether they validate such associations. The associations are more likely to be accepted when the validating information suggests that social

penalties of expressing accent bias are low; in other words, when they feel comfortable revealing a biased attitude. Perceived low social risk seems to apply to accents known only at the social norm level, such as MLE's association with a lack of education, because this creates the distance required to disclose the attitude. As a result, we see a consistency between one's explicit and implicit attitudes.

On the other hand, these associations are likely to be rejected when the validating information indicates that expressing accent bias is controversial. Such controversy seems closely tied to accents experienced on a more personal level, and potentially linked to one's identity. This reduces the correlation between an individual's implicit and explicit attitudes. While the relationship between implicit and explicit attitudes is not always mediated by social desirability bias, and can be due to non-motivational factors, I hope to have demonstrated that the contentious nature of accent in Britain does often mediate the correlation. Results also highlight the issue of linguistic proficiency, primarily in study two, which signals a need to consider how to include non-native speakers in academic research.

## *9.2 Limitations*

My research is inevitably not without its limitations. First, the authenticity of the guises can never truly be certain. While steps were taken to ensure that accent strength was comparable and accents were accurate according to linguists, local speakers and participants, it is not possible to completely eliminate the risk of inauthenticity. As discussed in section 4.4, when opting for this approach, one must consider the advantage of maximising experimental control and the disadvantage of minimising authenticity. This is a preliminary exploration of the effect of pronunciation differences on persuasion, and so it was decided to prioritise the former, and conduct an experiment in highly controlled conditions.

Second, with regards to the accent identification task which underpinned the analysis of the persuasive effects, I must again acknowledge the subjectivity of my categorisations. These categories were not preconceived prior to data collection, as evidenced by the task's initial intention of validating the guises. However, my position as a researcher leads to an unavoidable possibility that I categorised responses in a way that participants did not intend. Every effort was made to carry out the categorisation process from each participant's perspective by examining their answers in relation to one another, and accounting for factors such as the sociocultural and historical context, as we saw with the participant who responded *TV* for Yorkshire English and *commercials on TV* for RP. Yet, it is important to recognise the limitation of inferring categories from responses, simply because one can never be certain of the underlying

perception of an accent. Future research might address this issue by setting aside time to discuss with participants the reasons for their responses.

Next, any study which examines the persuasive effect of a variable should explore attitudes to a message with the variable and attitudes to the same message without the variable. This will allow the researcher to understand whether the variable has caused attitude change. Extending the time between the presentation of the messages (trivia statements) was not practical in study one due to time constraints, and the possibility of hindering participant recruitment. Future studies, however, may benefit from increasing the time gap between messages, because this would ensure that participants did not recall the first message. If all participants forget the content of the first message, then responses to the second message could be attributed to the variable. In turn, this would make the persuasive effects of the variable arguably clearer.

Third, comparisons between implicit and explicit attitudes must be hedged due to the potential conceptual mismatch between the tasks. Both tasks in study one focused on the concept of credibility, but neither task specifically included this word. Doing so may have increased conceptual similarity between them, and thus the validity of claims regarding the relationship between implicit and explicit attitudes. However, even if such caution is exercised, it is still difficult to ensure that an accent is being evaluated along the intended dimension.

In a similar vein, as De Houwer (2006) rightfully asked, how can we be sure that a measure is implicit? It is difficult to empirically test its functional properties, but this does not mean researchers should not try. I speculated that the implicit measurement procedure prompted judgemental processes which were efficient and uncontrollable, and to a lesser degree unintentional and outside of participants' awareness. However, if we are to make claims about an individual's implicit attitudes, we should take steps to confirm that the measure is satisfying the criteria of automaticity. This is particularly the case when we are dealing with audio stimuli, where less is known about implicit cognition.

I must comment on the generalisability of these findings from two perspectives, first with respect to the sample size and make up in both studies. In every area, the sample comprised individuals from a range of ages, educational and occupational backgrounds. However, despite efforts to recruit parents of young children, 114 participants is a smaller size than intended. This is largely because it is a very time-poor population, and many of the mothers could not take part because they needed to work or had to run errands. Consequently, the findings are probably not generalizable to the general population of the areas investigated. The reduced sample size also means that the effects of more specific social variables, such as social class or ethnicity, were not captured. This should therefore be viewed as an exploratory investigation, but I hope to

have shown the complexity of this topic area, and I urge for more research examining these nuances given their potential role in accent persuasiveness. This is perhaps even more so the case with East London due to its ethnic and linguistic heterogeneity.

A second point is to what extent one can generalise these findings with regard to the stability of implicit and explicit attitudes. The temporal consistency of explicit attitudes to British accents can arguably be discussed with greater confidence than that of implicit attitudes. Such evaluations rely on validating information which is influenced by an awareness of what attitudes are acceptable. However, the stability of implicit attitudes is far trickier to determine as Bargh (1994: 6) rightly notes:

One cannot conclude that chronic, preconscious automaticity effects exist on the basis of demonstrations of temporary accessibility in that domain. Any mental representation or mode of thinking that is available in memory for use by the subject can be made accessible in an experiment, but this does not mean that every available mental structure or process is chronically accessible.

While this calls into question the relevance of studying implicit attitudes, that is not to say that it is not an insightful and worthwhile endeavour. Sociolinguistic research on implicit attitudes is in its early stages, and until recently, nothing was known about how people respond to language in a more automatic fashion. Since Kristiansen's study in 2009, determined researchers have set out to understand this complex phenomenon which set the stage for future researchers to make not only methodological refinements to the field, but also theoretical contributions. Therefore, even if chronic automaticity effects are not evident from one study, temporally accessible representations are still informing our understanding of attitudes. We are far from establishing a complete picture, but the elusive and powerful nature of our affective gut reactions is precisely why research must be pursued.

In regards to study two, there are several limitations and suggestions for future studies on metacognition. First, a complex message format was employed which hindered participants' ability to generate thoughts about the arguments in the story. This is because they were focused on other elements of the book, such as the imagery, which suggests that a simpler message format would be beneficial in generating more argument-specific thoughts. Secondly, the control storybook did not contain any oral health messages, and, on this basis, it operated as the weak argument condition. The test book, on the other hand, operated as the strong argument condition because it did contain oral health messages. As this distinction was not very obvious, thoughts were not more favourable in the strong argument condition as had been predicted. I therefore suggest that future studies should use messages which contain very clear strong and weak arguments because this would ensure that there is a greater distinction between the

argument conditions. Finally, ensuring that no children are present during the experiment would increase the likelihood of inducing high elaboration, which is a necessary prerequisite for metacognitive processes. It is expected that these three steps would produce more favourable thoughts in the strong argument condition, and less favourable thoughts in the weak argument condition. The variable under investigation is then more likely to mediate the effect of thought confidence on attitudes because thoughts are considered favourable in the first place. Unfortunately, such modifications were not possible here as the aim was to specifically test the BBaRTS intervention material.

A wider, more urgent issue is the linguistic proficiency of participants, which was predominantly a concern in study two, but also emerged in study one. In research, findings are invalid if the participant has misunderstood the task because one cannot be sure that they are responding to the intended construct. Studying the nuances of pronunciation differences further complicates the issue, because this removes the possibility of using a translator or interpreter. Efforts should be made not only to include non-native speakers in future research, but also to explore solutions to the potential problems raised by their proficiency. This is particularly the case in public health research, where the most vulnerable populations are often those with immigrant backgrounds and limited ability in the dominant language of the host society, but who are excluded for convenience purposes.

### *9.3 Future research*

Aside from replicating the research with the above recommendations in place, another potential avenue for future research focuses on methods to elicit implicit attitudes. As sociolinguists have only recently begun applying implicit measures to the study of language, it is important to explore other techniques. Researchers at the QLVL unit at KU Leuven are at the forefront of uncovering the potential of such methods. In their latest study, the team used the Relational Responding Task (Rosseel et al. 2018) to discover attitudes to Standard Belgian Dutch and colloquial Belgian Dutch. One can only answer further theoretical questions once an appropriate methodology has been tested. QLVL's emphasis on how best to elicit implicit attitudes is therefore crucial if they are to make claims about people's implicit attitudes. Future studies on implicit attitudes to British accents should follow suit, and aim to refine the research instrument.

From a theoretical perspective, this work was conducted using stimuli from a wide range of topics, because the BBaRTS oral health messages are contextualised in an array of scenarios, for example, dancing, family trips, and shopping. Additionally, as this is the first study on the persuasive effects of British accents, it was seen as more



appropriate to understand such effects in a broader context for applicability purposes. Nonetheless, it would be interesting to tease apart the reported context effects on implicit attitudes (e.g. Wittenbrink et al. 2001), and examine accent persuasiveness in a variety of defined settings. In other words, there may be many associations in memory for an accent, but does the setting affect the activation of specific associations? In the sports arena, one could speculate that an RP-speaking pundit, such as John McCririck, would be far more convincing when commentating on an upper-class sport like horseracing compared with football, which is typically associated with lower-middle classes. In a court room, MLE's associations with teenagers may mean a speaker is less persuasive, but have more influence over teenage activities, such as gaming. Understanding these context effects of accent persuasiveness would allow the likes of government spokespeople, advertising companies and health professionals to tailor their campaigns according to the message context.

#### *9.4 Implications*

Despite its limitations, this research has implications for the fields of linguistics, public health and social cognition. First and foremost, I have built on existing perceptual dialectology studies in Britain, namely Montgomery's (2007, 2012) work, by including accents which have not yet been examined, such as MLE and Estuary English. Understanding how laypeople perceive language has theoretical implications for the study of language attitudes because it shows *how* associations to a speaker, which are often inaccurate, are formed in memory. Certainly without my results, interpretations of implicit and explicit attitude measures would be much less clear. It therefore highlights the close connection between the two fields, and reinforces the need to incorporate perceptual dialectology into future language attitude studies.

I also hope to have furthered our knowledge about an area which is in its infancy: implicit cognition in sociolinguistics. Exciting advancements have been made in this field but only one study, by McKenzie and Carrie (2018), has applied techniques from social cognition to explore implicit attitudes in a British context. Extending the accents under investigation, my results provide insight into *what* potentially harmful associations are activated when we hear different accents. This is crucial given that they have the power to guide our more automatic decisions on a daily basis when we come into contact with speakers from different backgrounds.

My research updates our understanding of explicit attitudes to British accents in a modern sociolinguistic landscape, incorporating newer accents MLE and Estuary English. While accents were not evaluated along competency- and warmth-based dimensions, the findings provide an alternative perspective regarding an accent's

perceived credibility. Results highlight the value of explicit measures because, according to the APE model, they identify how people validate associations. Specifically, they shed light on people's non-evaluative beliefs about the world and evaluative judgements about other attitude objects, which in this case, was discriminatory behaviour, such as 'negative evaluations of this accent are acceptable'. This information is exceptionally useful in understanding *why* accent bias is perpetuated through the media or education system, for example.

Very few investigations have been conducted on accent persuasiveness (Lalwani et al. 2005; Mai and Hoffman 2011; Reinares-Lara et al. 2016), but both studies reported in this thesis reveal the great potential of future work. Given that persuasion is used in a variety of different arenas, from politics to advertising, empirically testing the persuasive effects of accent has important real-world repercussions, particularly in a British context where society is extremely susceptible to pronunciation differences. This leads back to the primary aim of this research, which was to investigate how sociolinguistics can address a public health problem. Commenting on the value of interdisciplinary research, philosopher of science Karl Popper (1962: 67) observed: "We are not students of some subject matter, but students of problems. And problems may cut right across the borders of any subject matter or discipline". Childhood dental caries is a worldwide issue which has huge financial implications for governments, and negative consequences for the health of millions. Pine et al.'s (2016) BBaRTS clinical trial has provided an extremely exciting, yet overdue, opportunity to explore how accent can contribute to attitude change. In this way, I hope to have offered a refreshing perspective on a globally relevant health problem, highlighting the theoretical and practical importance of bridging the gap between two very distinct disciplines.

# Appendices

## *Appendix A. Written questionnaire*

Please circle whether the following statements are true (T) or false (F)

Melbourne in Australia used to be named Batmania	T	F
Venezuela is named after Venice	T	F
Exodus is the first book of the Old Testament	T	F
Hippos can run faster than horses	T	F
The word goodbye comes from God be with you	T	F
The first remote control took eight seconds to change channels	T	F
In New York it is illegal to imitate an animal	T	F
Baseball originated in England	T	F
Sloths take two weeks to digest their food	T	F
Walt Disney was afraid of rollercoasters	T	F
Jacuzzi is a brand name	T	F
Nutmeg is poisonous if injected	T	F
Five percent of the worlds salt is for pretzels	T	F
An adult skeleton has 106 bones	T	F
Rats cry when they are tickled	T	F
Babies like high pitched singing voices	T	F
Baboons come from Africa and Arabia	T	F
Mexico's most famous beer is Sol	T	F
The Sun is 1000 times larger than Earth	T	F
It takes one minute for brain cells to react to aspirin	T	F
Hot water is heavier than cold	T	F
Pluto was named by an 11 year old girl	T	F
French fries originated in Belgium	T	F
Pluto takes 2	T	F
The first text message read Happy New Year's Eve	T	F
There are more than 50 different kinds of kangaroos	T	F
Hippos' sweat turns red when they're upset	T	F
The most popular male dog names are Max and Bailey	T	F
Bono was born Paul David Hewson	T	F
Tokyo is the city most prone to earthquakes	T	F
Humans develop a tail in the womb that dissolves	T	F
The most liked brand on Facebook is Starbucks	T	F
The film Titanic got three Oscars	T	F
Youtube started as a dating website	T	F
Karaoke means empty orchestra in Chinese	T	F
Dolphins sleep with one eye open	T	F
The lightest metal in the world is copper	T	F
Outer space is completely silent	T	F
Eating white chocolate helps eczema	T	F
Einstein failed Maths at school	T	F
India has four different time zones	T	F
It rains diamonds on Saturn	T	F
30 people have been born in Antarctica	T	F

Tom and Jerry were originally called Jasper and Jinx	T	F
The Great Wall of China can be seen from Space	T	F
George Bush and Hugh Hefner share common ancestors	T	F
30% of emails sent are spam	T	F
The majority of the Amazon rainforest is in Colombia	T	F
Ketchup was sold as a medicine in the early 19th century	T	F
Peanuts can be used to make dynamite	T	F
The most popular pin code is 1 2, 3, 4	T	F
The sum of all the numbers on a roulette wheel is 666	T	F
Reno is farther west than Los Angeles	T	F
Vienna has the oldest zoo in the world	T	F
The first Olympics were held in Greece	T	F
Neptune is the equivalent of Greek God Aphrodite	T	F
Elvis Presley's middle name is Aaron	T	F
Babies tend to cry in blue rooms	T	F
Gin is made from potatoes	T	F
Madrid is the noisiest city in the world	T	F
Grapes explode when microwaved	T	F
Issac Newton invented the game chequers	T	F
The world's tallest building is in Dubai	T	F
Grapefruit dehydrates you	T	F
The largest recorded snowflake was 15 inches	T	F
A hurricane can be as high as 50,000 feet	T	F
Woman can read smaller print than men	T	F
Fortune cookies originated in Italy	T	F
The first sport to be filmed was baseball	T	F
Heart attacks occur most often on Mondays	T	F
The Titanic was built in Dublin	T	F
Cats have five eyelids	T	F
Sand is the main component in glass	T	F
25% of British people sleep nude	T	F
Texas is the largest state in America	T	F
M and Ms stands for Mars and Murries	T	F
A Cadburys Crème Egg contains 170 calories	T	F
Italy has 10% of the worlds active volcanoes	T	F
Florence Nightingale invented scissors	T	F
Jerry Springer was born at a tube station in North London	T	F
Milkshakes were originally alcoholic drinks	T	F
A bee is more likely to sting you in rainy weather	T	F
School comes from the Ancient Greek ' <i>skhole</i> '	T	F
China is the world's largest producer of peanuts	T	F
Whoopi Goldberg's first job was a baker in New York City	T	F
America is home to the first underground	T	F
25% of human bones are located in the spine	T	F
The American flag has 49 stars	T	F
Ciabatta bread was invented in 1500	T	F
Laughter can strengthen the immune system	T	F
You burn more calories sleeping than watching TV	T	F
Captain Morgan was a Welsh pirate	T	F
There are 100 different drink combinations at Starbucks	T	F

45% of the world is left handed.	T	F
Mercury is known as the red planet	T	F
The first mobile phone cost \$4000	T	F
Google was launched in 1990	T	F
The giant panda is the national animal of Canada	T	F
Intelligent people have more magnesium in their hair	T	F
Police in India get paid more if they grow moustaches	T	F
It's illegal to chew gum in Singapore	T	F
Popcorn is mostly eaten in Autumn	T	F
Mount Everest grows two inches every year	T	F
Yawning wakes you up	T	F
Antarctica was once as warm as California	T	F
Human blood has more calories than crisps	T	F
A group of crocodiles is called an embarrassment	T	F
Carrots were purple before the 12th century	T	F
In France, an ashtray is considered a deadly weapon	T	F
Humans need food more than they need sleep	T	F
The dot on the letter 'i' is called a tittle	T	F
Iceland's national animal is the whale	T	F
Tea is the national drink of France	T	F
The first computer mouse was made of metal	T	F
The space between your fingers is called the glabella	T	F
In Spain artists can pay their taxes with artwork	T	F
Babies have more bones than adults	T	F
The Mojito cocktail originated in Argentina	T	F
A shrimp's heart is in its head	T	F
Half your brain is used for vision	T	F

*Appendix B. Matched guise test passages*

1. Neutral passage

I think the best way to get from Birmingham University to Cardiff University is to head west toward New Fosse Way. This will lead you to Bristol Road, where you need to continue for about 3 miles. At the roundabout take the 2<sup>nd</sup> exit onto the M5 to London. After about 60 miles, exit onto the M4 towards South Wales. Continue onto Eastern Avenue and then take the A470 exit towards the City Centre. Merge onto North Road and turn left onto Corbett Road where Cardiff University is situated.

2. Oral health passage

There are several ways you can avoid tooth decay. First you should brush your teeth twice a day for two minutes. Brushing your tongue will also freshen your breath and remove bacteria. Second, flossing helps prevent decay because it gets rid of plaque and food particles which a toothbrush cannot reach. Finally, it is important to avoid sugary food and drinks, and this also benefits your wider health. If you do have sugar, try to limit it to mealtimes rather than as a snack.

*Appendix C.1: Mood questionnaire*

Instructions: Circle the response on the scale below that describes your **current** mood:

Very pleasant 10 – 9 – 8 – 7 – 6 – 5 – 4 – 3 – 2 – 1 Very  
unpleasant

*Appendix C.2: Self-monitor questionnaire*

Instructions: The statements below concern your personal reactions to a number of situations. If a statement is true or mostly true as applied to you, mark **T** as your answer. If a statement is false or not usually true as applied to you, mark **F** as your answer. Record your responses in the spaces provided on the right.

I find it hard to imitate the behaviour of other people.	
At parties and social gatherings, I do not attempt to do or say things that others will like.	
I can only argue for ideas which I already believe.	
I can make impromptu speeches even on topics about which I have almost no	
I guess I put on a show to impress or entertain others.	
I would probably make a good actor.	
In a group of people I am rarely the centre of attention.	
In different situations and with different people, I often act like very different	
I am not particularly good at making other people like me.	
I'm not always the person I appear to be.	
I would not change my opinions (or the way I do things) in order to please someone	
I have considered being an entertainer.	
I have never been good at games like charades or improvisational acting.	
I have trouble changing my behaviour to suit different people and different	
At a party I let others keep the jokes and stories going.	
I feel a bit awkward in public and do not show up quite as well as I should.	
I can look anyone in the eye and tell a lie with a straight face (if for a right end).	
I may deceive people by being friendly when I really dislike them.	



*Appendix C.3: Self-esteem questionnaire*

Instructions: The statements below concern your general feelings about yourself. If you strongly agree with a statement, circle **SA**. If you agree, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.

On the whole, I am satisfied with myself.	SA	A	D	SD
At times, I think I am no good at all.	SA	A	D	SD
I feel that I have a number of good qualities.	SA	A	D	SD
I am able to do things as well as most other people	SA	A	D	SD
I feel I do not have much to be proud of.	SA	A	D	SD
I certainly feel useless at times	SA	A	D	SD
I feel that I'm a person of worth, at least on an equal plane	SA	A	D	SD
I wish I could have more respect for myself.	SA	A	D	SD
All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
I take a positive attitude toward myself.	SA	A	D	SD

*Appendix C.4: Need for cognition questionnaire*

Instructions: For each of the statements below, please indicate to what extent the statement is characteristic of you. Please keep the following scale in mind: **1** = extremely uncharacteristic; **2** = somewhat uncharacteristic; **3** = uncertain; **4** = somewhat characteristic; **5** = extremely characteristic.

I would prefer complex to simple problems.	
I like to have the responsibility of handling a situation that requires a lot of thinking.	
Thinking is not my idea of fun.	
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.	
I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.	
I find satisfaction in deliberating hard and for long hours.	
I only think as hard as I have to.	
I prefer to think about small, daily projects to long-term ones.	
I like tasks that require little thought once I've learned them.	
The idea of relying on thought to make my way to the top appeals to me.	
I really enjoy a task that involves coming up with new solutions to problems.	
Learning new ways to think doesn't excite me very much.	
I prefer my life to be filled with puzzles that I must solve.	
The notion of thinking abstractly is appealing to me.	
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.	
It's enough for me that something gets the job done; I don't care how or why it works?	

*Appendix C.5: Dogmatism questionnaire*

Instructions: For each of the statements below, please indicate to what extent the statement is characteristic of you. Please keep the following scale in mind: **-4** = very strongly disagree, **-3** = strongly disagree, **-2** = disagree, **-1** = slightly disagree, **0** = neutral, **+1** = slightly agree, **+2** = agree, **+3** = strongly agree, **+4** = very strongly agree.

Anyone who is honestly and truly seeking the truth will end up believing what I believe.	
There are so many things we have not discovered yet, nobody should be absolutely certain his beliefs are right.	
The things I believe in are so completely true, I could never doubt them.	
I have never discovered a system of beliefs that explains everything to my satisfaction.	
It is best to be open to all possibilities and ready to re-evaluate all your beliefs.	
My opinions are right and will stand the test of time	
Flexibility is a real virtue in thinking, since you may well be wrong.	
My opinions and beliefs fit together perfectly to make a crystal-clear “picture” of things.	
There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life.	
I am a long way from reaching final conclusions about the central issues in life.	
The person who is absolutely certain she has the truth will probably never find it.	
I am absolutely certain that my ideas about the fundamental issues in life are correct.	
The people who disagree with me may well turn out to be right.	
I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise.	
If you are “open-minded” about the most important things in life, you will probably reach the wrong conclusions.	
Twenty years from now, some of my opinions about the important things in life will probably have changed.	
“Flexibility in thinking” is another name for being “wishy-washy”.	
No one knows all the essential truths about the central issues in life.	
Someday I will probably realize my present ideas about the BIG issues are wrong.	
People who disagree with me are just plain wrong and often evil as well.	

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