ACCENT EVALUATION AND THE PERCEPTION OF SPOKEN THREATS

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Abstract

Although we may consider the existence of a 'threatening tone of voice', there is little empirical evidence on what, if any, aspects of speech can make somebody *sound* threatening. This study presents an exploratory examination of whether or not a speaker's accent can affect how threatening they are perceived to be. Participants provided evaluative responses to a series of direct and indirect threats recorded in three British English accent guises: Received Pronunciation, London Cockney and Northern Irish. The results showed that the non-standard London Cockney accent was rated as sounding significantly more threatening than the RP and Northern Irish guises in the indirect threat condition. Trends in the data also support the assertions that stereotypes about certain accents and threat types can change over time in response to changing world dynamics, with a bomb threat in a Northern Irish accent evaluated as being more threatening by older listeners compared to younger listeners. The London Cockney accent was also rated as being less threatening in the indirect condition by listeners from the South of England compared to those from the North, suggesting that listener geographical background could further influence evaluations of threats. The results highlight a potential issue for the legal system if evaluative judgements about a speaker's accent can influence listener perceptions of potential language crimes.

1. Introduction

Apple et al (1979:1) highlight that speech is comprised of two channels; a verbal channel and a vocal channel. The verbal channel refers to the words that are spoken, whereas the vocal channel refers to *how* the words were spoken and comprises of information relating to different aspects of voice (Apple et al, 1979:1). This study analyses the interaction between the verbal and vocal channels in spoken threats by providing an initial investigation into whether a speaker's accent can influence how threatening they are perceived to be when producing two contrasting types of threat.

Watt, Kelly and Llamas (2013) argue that although a threatener's 'tone of voice' could provide listeners with a basis to interpret threat from the vocal channel, there is no existing research on 'the phonetics of threat' to validate which aspects of speech could convey such a tone (Watt, Kelly and Llamas, 2013:100). Gales (2016) argues that despite advances in psychological and criminological analysis of threats, there is a lack of "empirical understanding of what threatening language actually is" (Gales 2016:1). This study begins to address this issue of identifying what aspects of speech can make a speaker sound threatening. To date, systematic treatment of how sociolinguistic considerations could influence listeners' perceptions of spoken threats has been altogether overlooked. Previous linguistic research on threats (see Carter, 2010; Fraser, 1998; Gales, 2011; 12; 15; 16; Storey, 1995; Yamanaka, 1995) has instead primarily focused on grammatical, lexical and theoretical arguments about how threats are made and communicated.

In contrast to the limited empirical research on spoken threats, research into accent evaluation and language attitudes has been plentiful over the last 60 years. Findings from across this field shows that listeners' evaluative responses can change according to the accent they hear (Coupland and Bishop, 2007; Giles, 1970). The application of this to various 'real-world' environments has also been examined, including, for example, whether a speaker's accent affects listener attributions of guilt in the context of simulated police interviews (Dixon and Mahoney, 2004; Dixon, Mahoney and Cocks, 2002).

This study aims to combine these two areas of research to assess whether or not a speaker's accent can affect how threatening they are perceived to be by listeners.

2. Background

2.1 Threats

Fraser (1998) argues that for a threat to be made, there must be "the intention to perform an act" on the part of the speaker, "the belief that the state of the world resulting from that act is unfavourable to the addressee", and "the intention to intimidate the addressee" (Fraser, 1998:162). Shuy (1993:98) states that threats are made for the speaker's benefit and to the hearer's detriment, and have an outcome which is controlled by the speaker. This is in contrast to warnings, which are made for the hearer's benefit and have an outcome which can be controlled by the hearer (Shuy, 1993:98). Fraser (1998:164) further states that threats are unfavourable acts designed to impose fear, whereas when making a warning, the speaker acts in the addressee's best interests by informing them before a harmful effect ensues.

The speaker-oriented criteria for threats proposed by Fraser (1998) sit somewhat at odds with the work of Storey (1995) and Gales (2012), who argue that threats are bound by a relationship of shared understanding between speaker and hearer. Storey (1995:75) argues that threats, by definition, are a two-way process and must be either accepted or acknowledged by a hearer to carry meaning. Gales (2012) takes a similar position, arguing that "threats are socially constructed acts of power between two parties – the threatener and the threatened" (Gales, 2012:2). Searle (1979:30) argues that when a speaker produces an utterance, they intend to produce an illocutionary effect in the hearer which involves their recognition of the speaker's intention. It can therefore be argued that while a speaker can make a threat independently of the listener, communication of the message or intent contained within a threatening utterance will involve both speaker and the hearer.

Gales (2012:8) identifies two main types of threats; direct and indirect. Direct threats make clear permutations that may arise as a result of the threatened action. They could also include information about the time, place and people that will be involved. Indirect threats do not overtly make clear that a threat is being made, and could on wording alone be classified as warnings, insults, or promises. Searle (1979:31) states that when designing a speech act indirectly, speakers communicate more than they say to the hearer. Gales (2012:8) also states that both indirect and direct threats can be worded conditionally. This usually involves the incorporation of an *if* clause into the design of the threat to add conditionality. For example, "If you take one more step, I'll shoot you" exemplifies a direct conditional, and "If you take one more step, there'll be trouble" exemplifies an indirect conditional. Fraser (1998:168) notes that direct conditionals are the most common type of direct threat.

2.2. Accent evaluation

2.2.1. Matched guise technique

The matched guise technique was developed by Lambert (1967) as a method of eliciting listeners' responses about speakers' personality traits, and involves one speaker producing stimuli in multiple language or accent guises. Listeners are not made aware that multiple recordings are produced by the same person, and Lambert (1967:94) states that this is not typically something that they subsequently become aware. Giles and Powesland (1975:7) argue that the technique is useful for obtaining attitudes towards varieties as it reduces some of the more idiosyncratic aspects of speech, with Baker (2009:51) adding that it is one of the few ways of indirectly eliciting listener prejudices towards varieties. However, the technique does not exist without criticism. For example, Preston (2002:42) warns that listeners must be able to assign voices to group categories for ratings to be meaningful. If listeners do not identify the accent they hear as belonging to the target group, then the validity of interpretations based on the assumption of such identification could be questioned.

2.2.2. Accent evaluation studies

Giles (1970) used a mix of vocal and conceptual stimuli to obtain listener evaluations of 16 varieties of English. Received Pronunciation (RP) was rated the most positively for both pleasantness and prestige, with regional and ethnic varieties receiving the least positive ratings. A more recent accent evaluation study is presented in Bishop, Coupland and Garrett (2005) and Coupland and Bishop (2007), who collaborated with the BBC Voices project to collect evaluative responses for 34 varieties of English. They found that accents associated with standard speech were more positively evaluated for both prestige and social attractiveness than those associated with non-standard, urban varieties. A great deal of similarity existed between the results of this work and results found by Giles (1970), leading to a suggestion that accent evaluations are robust to changes over time (Bishop, Coupland and Garrett, 2005:131). Watson and Clark (2015) also highlight that certain accent stereotypes appear to remain stable across time and trigger consistent, widely held evaluative responses by listeners. Montgomery (2007:157) also argues that proximity may affect more general perceptions of dialects and people's dialect ideologies. Coupland and Bishop (2007) found that in their conceptual dialect evaluation results, the label for 'an accent identical to [the participant's] own' was rated highly for both social attractiveness and prestige. Only Standard English and Queen's English received higher overall ratings on both counts.

One aim of the current study is to examine how accent evaluation may affect legally consequential decisions. Kalin (1982:148) states that accents are the source of many inferences about speakers, and that this is important in legal settings where opportunities for reactions to varieties are vast and can have life-changing consequences. Dixon, Mahoney and Cocks (2002) examined the effect of accent on listener attributions of guilt, using accent guises for Birmingham English and RP, along with 'white collar' and 'blue collar' crime types. The results showed that the Birmingham guise was rated as being significantly guiltier than the RP guise, leading the researchers to conclude that speakers with non-standard accents are more commonly associated with negative or criminal stereotypes. In a follow-up study, Dixon and Mahoney (2004) examined the effect of introducing contrasting evidence types (strong/weak) into their guilt evaluation paradigm. This study found that listeners attributed higher ratings of guilt when the evidence against the speaker was strong compared to when it was weak. Under this condition, no effect was found for accent on greater or lesser

attributions of guilt. The Birmingham guise was, however, rated as being more typically criminal and more likely to be accused of committing a crime than the RP guise. Dixon and Mahoney (2004:71) argue that the provision of evidence could cause listeners to focus away from character evaluations of the subject when making guilt assessments, but that broader criminality stereotypes appear to be linked to non-standard accents.

3. Research questions and hypotheses

This study aims to address the following research questions:

1. Are listener evaluations of how *threatening* a speaker sounds affected by the speaker's accent?

2. How does the type of threat presented to listeners affect judgements about how *threatening* voices are perceived to be?

3. Do factors such as listener age, listener sex and listener geographical background influence evaluations of how *threatening* different accents sound?

Based on the results found by Dixon and Mahoney (2004) and Dixon, Mahoney and Cocks (2002), it is hypothesised that perceptions of threat will alter depending on the speaker's accent, and that this effect will be stronger in indirect threats, where the wording alone does not signal that the utterance is a threat. Previous accent evaluation studies (Coupland and Bishop, 2007; Giles, 1970) found that non-standard accents are perceived less favourably than standard varieties, and it is expected that this will be the case in this study.

4. Methodology

A series of direct and indirect threats were recorded in Received Pronunciation, London Cockney and Northern Irish English accent guises. Guises were recorded by a trained male phonetician, who was familiarised with the stimuli before the recording session. Recordings were produced within a one-hour time period in the Department of Language and Linguistic Science recording studio at the University of York. Each stimulus was recorded in each accent guise, providing 15 indirect threat and nine direct threat recordings.

Table 4.1 displays the indirect threat stimuli recorded for this study.

Code	Utterance
I1	Are you sure you want to do that?
I2	How's your mum doing at the moment? Is she okay?
I3	I know where you live.
I4	I wouldn't do that if I were you.
I5	You've got two lovely little kids haven't you? I know where they go to school.

Table 4.1 - Stimuli for indirect threats

Fraser (1998:168) argues that any type of sentence can be used as an indirect threat as the speaker is under no obligation to reveal specific information about a threatened action. All utterances in Table 4.1 are similar in that they cannot be classified as threats from wording

alone. For example, I1 and I4 could be warnings or threats depending on whether the utterance was interpreted as being designed in the recipient's best interests or to their detriment (Shuy, 1993). While it is acknowledged that some of the indirect utterances may be judged to be more *threatening* than others, all five were designed to achieve the semantic ambiguity that Shuy (1993) describes as a property of indirect threats.

Table 4.2 displays the direct threat stimuli recorded for this study. In each case, the intention to perform an unfavourable action is made clear by the speaker. The same conditional clause was added to each direct threat. Conditionality was added based on Fraser's (1998) assertion that these are the most common type of direct threat found in 'real-world' cases.

Code	**Utterance**	
D1	You owe me ten thousand pounds. If I don't get my money in seven days…	…I'll get on the phone to my lawyers and sue you for everything you're worth
D2		…I'll get my friends to plant explosives under your building and blow it into the sky.
D3		…I'll get my friends to come round to your office and break both your legs.

Table 4.2 - Stimuli for direct threats

The use of the threat of a lawsuit, the threat of physical harm and a bomb threat was designed to create one 'white collar threat', one 'blue collar threat' and a threat type with potentially strong associations to one of the accents. Given the historic links between Northern Ireland and bomb attacks carried out by terrorist organisations such as the IRA, the use of a Northern Irish accent guise and a bomb threat allowed for this study to test whether listeners attached greater levels of threat to an accent when it was combined with a stereotypically associated threat type. Additionally, following the results obtained by Dixon, Mahoney and Cocks (2002), the threat stimuli also allowed this study to test whether the non-regional standard RP accent may be more stereotypically associated with the 'white collar' threat, and the urban, non-standard London Cockney accent more stereotypically associated with a 'blue collar' threat. RP is described as "the accent of those at the upper reaches of the social scale, as measured by education, income and profession, or title" (Hughes, Trudgill and Watt, 2012:3), whereas London Cockney is characterised as "the traditional working-class London accent" (Hughes, Trudgill and Watt, 2012:75).

4.1. Supra-segmental analysis of recordings

The matched guise recordings were compared for supra-segmental similarity before being played to listeners in order to validate that they were maximally similar in aspects other than speaker accent. The mean fundamental frequency (F0) was calculated for each recording using a Praat pitch analysis script (Harrison, 2008). This analysis identified two F0 outliers; RP I1 and Northern Irish I2. With these outliers removed, the sample mean F0 was 122Hz; 30Hz (RP I1) and 29Hz (NI I2) lower than the mean F0 of the two outliers. To address this issue, a pitch alteration Praat script (Fecher, 2015) was used to lower the mean F0 of each outlier by 30Hz to make them comparable with the rest of the sample.

When recording the stimuli, the speaker was instructed to keep intonation and stress patterns maximally similar across recordings of the same utterance. This was checked and validated

prior to the recordings being played to listeners. One difference in intonation which was permitted in declarative stimuli was a difference between the London and RP guises and the Northern Irish guise. Hickey (2008:93) comments that Northern Irish English uses rising tones where falling tones would be expected in Southern English varieties. Where this contrast existed at the end of declarative utterances, it was maintained to ensure accuracy for the reported norms of the target varieties.

The guises were assessed for tempo by measuring the articulation rate (AR), calculated as the mean number of syllables per second. Following Künzel's (1997) guidelines, pauses were classified as non-speech segments longer than 100ms, and were removed prior to AR calculation. Table 4.3 presents the mean averages for each guise and threat type.

Guise	Threat type	Mean articulation rate (sylls)
Northern Irish	Indirect	6.06
	Direct	5.28
London	Indirect	5.72
	Direct	5.18
RP	Indirect	5.96
	Direct	5.52

Table 4.3 - Articulation rate calculations for each guise and threat type

Reference samples and reported norms were analysed in order to assess the typicality and similarity of the mean AR calculations. Goldman-Eisler (1968:24) reports ARs between 4.4 and 5.9 sylls for spontaneous speech, with Hughes, Brereton and Gold (2013) reporting mean ARs of around 6 sylls for 100 male Standard Southern British English speakers speaking on the telephone. Although small differences exist between the values in Table 4.3, and the ARs in the direct threats were always lower than in the indirect threats, these differences can be considered unremarkable when compared to reported norms.

An assessment of voice quality was undertaken on each accent guise using a modified version of the Vocal Profile Analysis (VPA) (Laver, 1980) scheme developed by J.P French Associates. This analysis revealed broad similarities in vocal tract features and phonation quality across the guises, with some differences. Sibilance and fronted tongue body was noted for all three guises, as was breathy phonation. Lip spreading was noted for the London Cockney and Northern Irish guises. Tense vocal tract was noted for the RP and Northern Irish guises, with nasality also noted in the Northern Irish guise. Laver (1980) states that while voice quality is primarily an output of the physical characteristics of a speaker's vocal tract, psychological and social information can also be indexed by a speaker's voice quality. Given that the guises were all produced by the same speaker, it may be possible that the small differences can be attributed to characteristics of the accents being produced. Furthermore, given Gold and French's (2011:302) finding that voice quality was reported as the most useful parameter for discriminating speakers by forensic speaker comparison analysts, it could be argued that small differences in voice quality could help to obscure the fact that all guises were produced by the same speaker. Balancing voice quality similarity while maintaining dialect-appropriate norms and ensuring that listeners do not guess that all voices are produced by the same speaker would appear to be an under-reported, potentially problematic area for matched guise designs.

4.3. Participants and procedure

4.3.1. Matched guise validation experiment

In accent evaluation research involving vocal stimuli, Preston (2002:42) warns that listeners must be able to correctly attribute the accents heard. In order to address this issue, a questionnaire was designed to test how accurately each guise was perceived to represent its target variety. A subset of 12 stimuli were selected and played to 16 listeners (8 male, 8 female), with equal weighting given to each guise and threat type. Participants were instructed to listen to each recording and indicate where they thought the speaker they heard was from. Participants were able to answer freely and there were no fixed choices or indications of where the speakers may have been from provided. At the end of the questionnaire, participants were also asked to state how many speakers they thought they had heard during the experiment. This was included to test whether the guises were perceived as being produced by different speakers. No foil voices were used in this experiment.

4.3.2. Accent and threat evaluation experiment

For the main accent and threat evaluation experiment, 45 participants (30 female) completed an online questionnaire designed to elicit attitudes towards the indirect and direct threats in each accent guise. These participants were independent of the group that completed the matched guise validation experiment, with no participant completing both tasks. Information about participants' age, sex and whether they had previously received any formal linguistics training was obtained in order to test whether any of these variables affected listener perceptions. Information was also collected about where the listeners were from. No listener in the sample was from Northern Ireland, and therefore listeners were grouped into two 'geographical background' categories – Northern and Southern – in accordance with which side of the British linguistic North/South divide they identified as being from. Given that the two 'English' accents in the experiments were Southern, this was considered an appropriate distinction to make. While there is much linguistic debate over the concept of a linguistic north/south divide (see Wales, 2000), for the purposes of this paper, Trudgill's (1990) proposal of a dividing line running from The Wash to Shropshire, where Birmingham is part of the linguistic north, is accepted. Despite RP's position as a social UK accent rather than a regional accent, Hughes, Trudgill and Watt (2012:3) argue that northerners view it as a southern accent. Details of the sample are presented in Table 4.4.

Variable	Variants	Number
Listener age	*18-30*	*27*
	30+	*18*
Listener linguistics background	*Yes*	*9*
	No	*36*
Listener geographical background	*Northern*	*29*
	Southern	*16*

Table 4.4 - Details of sample for accent and threat evaluation experiment

Before recordings were played to listeners, Praat (version 5.3.77) (Boersma and Weenink, 2014) was used to band-pass filter the 44.1khz .wav files between 300Hz and 3400Hz to

simulate the telephone channel. Participants were told they would hear a series of telephone answerphone messages, and to listen to the voices from a third-party viewpoint. This was done to more closely replicate the evaluative position held by triers of fact in courtrooms.

Participants were instructed to listen to each recording and provide ratings based on how *intelligent, aggressive, threatening, angry* and *friendly* they thought the voice they heard was using a seven-point Likert scale. The additional qualities were included so as not to focus participants' attention solely on ratings for how *threatening* they perceived each voice to be. The ordering of the questions remained the same for each participant, and was structured so that no accent or threat stimulus appeared alongside each other in difference guises. The set of indirect threats were played first, followed by the direct threats.

5. Results

5.1. Matched guise validation task

The results of the matched guise validation task showed that speakers could successfully identify the London Cockney guise, with 97% of respondents correctly attributing the accent. The results for the Northern Irish guise were less strong, with 79% of listeners correctly attributing the speaker's accent. Although more difficult to map directly owing to its position as a social accent rather than a regional accent, the RP guise was also well attributed by respondents, with 93% of answers providing valid descriptive labels. Additionally, no listener in this task guessed that all guises were produced by a single speaker.

5.2. Accent and threat evaluation experiment

Statistical analysis was conducted using random intercept linear mixed effects regression modelling under the lme4 package in R (R core team, 2015). Ratings for how *threatening* the speaker's voice was perceived to be was used as the dependent variable, and the threat type (direct/indirect), speaker accent guise (RP/Northern Irish/London Cockney), listener's sex (male/female), listener's age (18-24/25-35/36+), whether the listener had a linguistics background (yes/no) and the listener's geographic background (North/South) were used as fixed effect independent variables. Individual listeners and stimuli (I1, I2, I3 etc.) were included as random effects, and the interaction between speaker accent and threat type was also tested for in the models constructed.

In order to compare between the variants of variables with more than two variants such as speaker accent and age, multiple models were constructed using contrasting intercepts to capture all relevant significance values. P-values were obtained using Satterthwaite approximations using the lmerTest package in R. The raw Likert-scale scores were normalised prior to statistical analysis using the *scale()* function (Baayen, 2008:61).

5.2.1. Effect of independent variables on perceptions of 'threatening'

The mixed effect output revealed a strongly significant effect for threat type on ratings for how *threatening* the vocal stimuli were perceived to be ($t=-10.44$, $p<0.001$). Direct threats were perceived as being significantly more *threatening* than indirect threats.

There was no significant effect found for accent on ratings for how *threatening* the vocal stimuli were perceived to be. There were no significant differences between the London and RP guises (*t=-0.369, p=0.71*), the London and Northern Irish guises (*t=0.959, p=0.34*) or the RP and Northern Irish guises (*t=1.328, p=0.18).* However a significant interaction was found between threat type and speaker accent. In the indirect condition, the London Cockney guise was perceived as being significantly more threatening than the RP guise (*t=-3.571, p<0.001*) and the Northern Irish guise (*t=-2.942, p=0.02*). There was no significant difference between the RP and Northern Irish guises (*t=0.629, p=0.52*) in this condition. There was also a significant effect for accent in the direct condition. The Northern Irish guise was perceived to be significantly more threatening than the London Cockney guise (*t=-2.212, p=0.03*) and the RP guise (*t=-2.618, p=0.009*). There was no significant difference between the London Cockney and RP guises in the direct condition (*t=-0.407, p=0.68*). Figure 5.2 illustrates the reported effects for speaker accent and threat type.

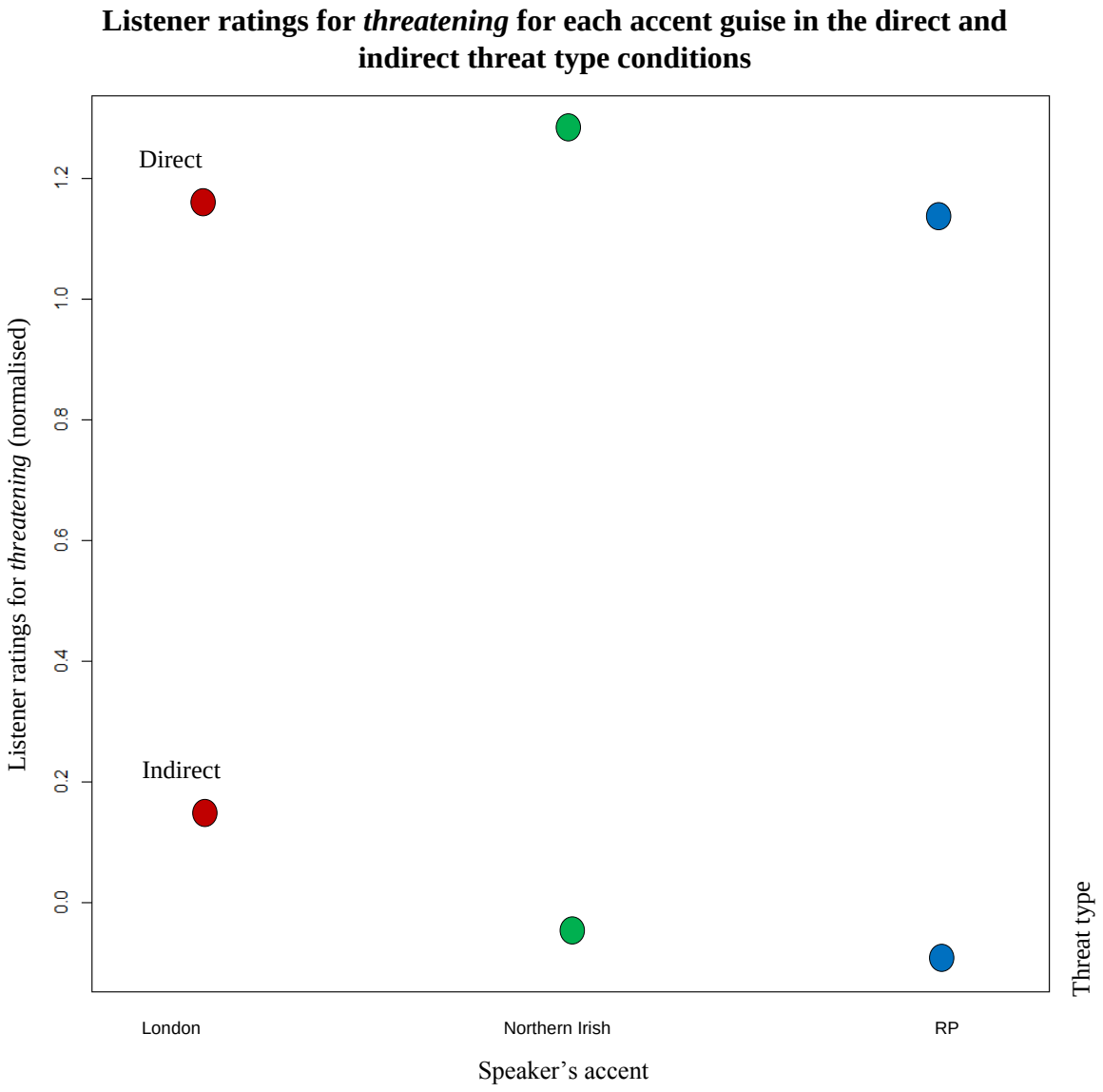

Figure 5.2 – Listener ratings for *threatening* in the direct and indirect threat conditions for each accent guise

The mixed effects output showed no significant differences between the older and younger age groups (*t=0.132. p=0.89*) on listener ratings for *threatening*. There was no also significant difference between males and female listener evaluations (*t=1.558, p=0.12*) or between listeners with a linguistics background and those without (*t=0.223, p=0.82*).

In order to test for effects of listener geographical background on evaluations of how *threatening* each accent guise sounded, separate linear mixed effects regression models were constructed for each accent guise. Given the previously reported interaction between accent and threat type, separate direct and indirect threat models were constructed for each accent guise. In each model, geographical background (North/South) was used as a fixed effect independent variable, with listener and stimuli used as random effects. Results are displayed in Table 5.1.

↓ **Accent guise**	**Threat type**	
	Direct	Indirect
London Cockney	t= -0.572 p=0.57	t= -1.932 p=0.06
RP	t= -0.149 p=0.88	t= -1.094 p=0.28
Northern Irish	t= -0.671 p=0.51	t= -0.933 p=0.36

Table 5.1 – Statistical output for effect of geographical background on evaluations of accent guises in the direct and indirect threat type conditions

The output in Table 5.1 shows no statistically significant effects for evaluations by Northern and Southern listeners of how *threatening* the accent guises sounded. However, the difference between Northern and Southern evaluations of the London Cockney accent guise in the indirect threat condition approached statistical significance (p=0.06). In this condition, Southern listener group rated the London Cockney accent guise as being less threatening than Northern listener group.

5.2.2. Relationship between accent and type of direct threat

In the 'blue-collar' threat of physical harm condition, the Northern Irish guise was perceived as being significantly more *threatening* than the London Cockney (*t=3.067, p=0.003*) and RP guises (*t=4.275, p<0.001*). There was no significant difference between the RP and London guises (*t=-1.208, p=0.23*) on ratings for *threatening* in this condition.

In the 'white-collar' threat of a lawsuit, there was no significant difference between the London and RP guises (*t=1.273, p=0.21*), the London and Northern Irish guises (*t=0.065, p=0.95*) or the RP and Northern Irish guises (*t=1.337, p=0.19*) on ratings for *threatening*. In listener ratings for *threatening* in the bomb threat condition, there was no significant difference between the Northern Irish and RP guises (*t=1.273, p=0.21*) or between the Northern Irish and London guises (*t=1.187, p=0.24*). However, a significant difference was found between the London Cockney and RP guises (t=2.175, p=0.03), with the RP guise rated more *threatening*.

Given the changing political environment in Northern Ireland post-1997, one further effect tested for in the bomb threat condition was an effect for age on ratings for how *threatening*

the bomb threat was perceived to be in the Northern Irish accent guise. This was conducted to see whether older listeners appeared to be more aware of the link between Northern Ireland and bomb attacks than younger listeners, and therefore would rate the Northern Irish accent in the bomb threat condition as sounding more threatening than ratings provided by younger listeners. As there was only one response per participant in this condition, a univariate ANOVA was conducted using the aov() function in R. In this model, ratings for *threatening* formed the dependent variable, with listener age used as a single independent variable.

The difference between the two age groups in this condition approached statistical significance (f=3.487, p=0.06), and the trend in the results was in line with prior expectations. Figure 5.3 illustrates the difference between the two age groups in the Northern Irish bomb threat condition, showing that the younger listener group rated the stimuli as being less *threatening* than the older listener group.

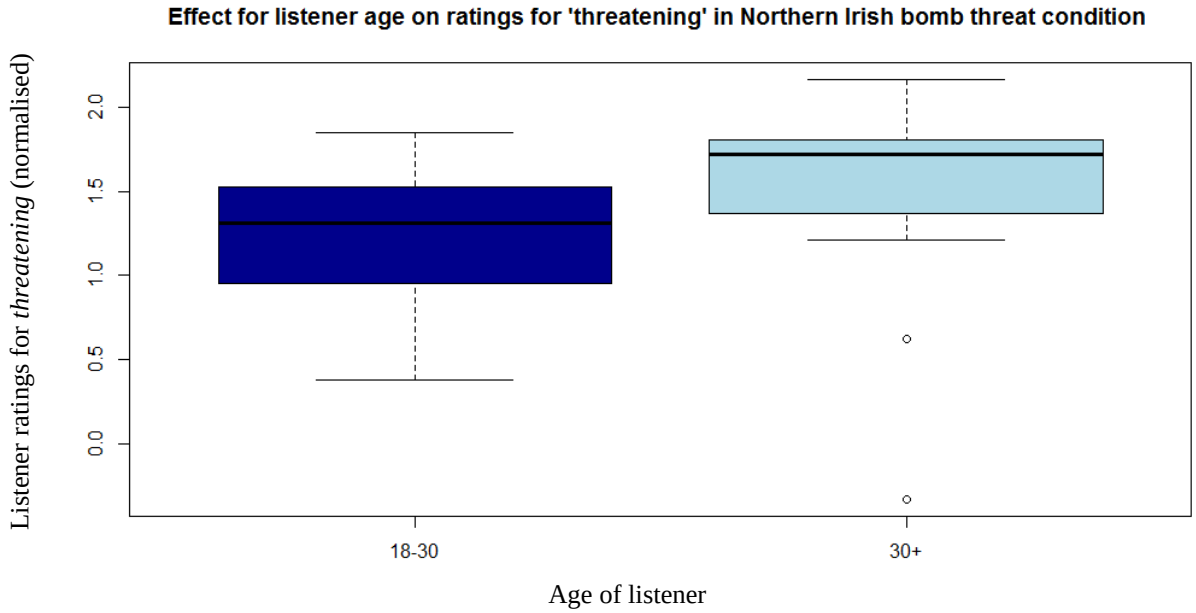

Figure 5.3 - Listener ratings for *threatening* by age group for Northern Irish bomb threats

5.2.3 – Listener perceptions of other personality traits

In addition to ratings for how *threatening* the speaker in each recording was perceived to be, mixed effects linear regression modelling was conducted on listener ratings for *anger*, *aggression*, *intelligence* and *friendliness*. The same fixed and random effect independent variables were used as for the lmer model for *threatening*. The results showed that the non-standard London Cockney guise was evaluated as significantly *angrier (t=4.113, p<0.001)*, more *aggressive (t=2.694, p=0.007)* and less *intelligent* (t=18.246, p<0.001) than the standard RP guise.

5.2.4 – Individual variation within the data

As a further measure of how robust the results found for the grouped data were at the level of the individual, the mean results for each individual participant were analysed. In the indirect

threat condition, the group ratings showed that the unambiguously non-standard London Cockney accent was rated as significantly more *threatening* than the standard RP accent. An examination of the mean individual ratings for *threatening* in the indirect threat condition showed that 27 out of the 45 participants had a higher mean *threatening* rating for London Cockney than for RP, with 13 participants having a higher mean *threatening* rating for RP than for London Cockney, and the remaining 5 participants having an equal mean *threatening* rating for the two accents. By comparison, 32 participants had a higher mean *angry* rating for the London Cockney accent when compared to RP, and 30 participants had a higher mean *aggressive* rating. Additionally, 43 out of 45 participants rated the RP guise as being more *intelligent* than the London Cockney guise.

6. Discussion

6.1. Direct and indirect threats

The results of this study showed that direct threats were perceived as being significantly more threatening than indirect threats. Given that direct threats overtly fulfil all necessary criteria for a spoken threat to be communicated (Fraser, 1988), the result showing that they are perceived as being significantly more threatening than utterances where doubt could exist about whether a threat has been made or not is unsurprising. Nevertheless, it indicates that a threat is more likely to be successfully communicated by a speaker and interpreted as being threatening by a listener if it is designed directly. It can also be argued that the strongly significant difference between the direct and indirect threat types validates the decision to treat the two separately in this analysis.

6.2. Effect of accent on the perception of indirect threats

Results showed that the unambiguously non-standard London Cockney guise was evaluated as being significantly more *threatening* than the RP and Northern Irish guises in the indirect condition. It can therefore be argued that the hypothesis that the standard accent in this study would be rated as the least *threatening* was validated by the results of this study when the lexical items in an utterance did not overtly signal a threat.

This assertion can be linked to Dixon and Mahoney (2004) and Dixon, Mahoney and Cocks' (2002) research into the effect of accent on listener attributions of guilt. This research found that when factors such as evidence type was absent from the evaluation paradigm, there was a significant effect for accent on guilt attributions, with the non-standard accent being perceived significantly guiltier than the standard accent. This lead the researchers to conclude that that stereotypes attached to non-standard accents can influence listener attributions of guilt and criminality. The results of this study suggest broadly the same pattern, indicating that when the lexical ambiguity created by indirect threats exists and information in the verbal channel is restricted, listeners can draw on broader accent stereotypes as an aspect of the vocal channel when rating how *threatening* a speaker sounds.

However, when the individual results are examined, it can be seen that 18 of the 45 participants did not conform to the overall group results. This result suggests that while hearing a non-standard accent in comparison to a standard accent could lead some listeners to perceive a greater level of threat in a given utterance, the effect is not universal. Comparing the individual ratings for *threatening* to those for *intelligence,* the effect of hearing a standard

accent and higher ratings for *intelligence* is comparatively much stronger, with 43/45 listeners rating the RP guise as being more *intelligent* than the London Cockney guise. Nevertheless, the significant group effect and the fact that a majority of listeners rated the unambiguously non-standard guise in this study as more *aggressive, angrier* and more *threatening* than the standard RP guise suggests that accent can influence listener judgements of spoken threat recordings in indirect threats.

The results from the listener geographical background output showed that the difference between ratings from Northern and Southern listeners for how *threatening* the London Cockney guise sounded in the indirect condition approached statistical significance ($p=0.06$). The London Cockney guise was rated as being less *threatening* by Southern listeners than Northern listeners. This trend links to Montgomery's (2007) argument that proximity can affect dialect perceptions. In this case, it can be suggested that the trend in the data supports the idea that listeners evaluate accents that are geographically 'closer' to their own more favourably. The lack of difference between Northerner and Southerner evaluations of RP could be attributed to RP's status as a social accent rather than a regional accent, and the lack of difference between ratings for the Northern Irish accent could be due to the fact that this variety is somewhat removed from both Northern and Southern British English listeners.

6.3. Effect of accent on the perception of direct threats

The group results also showed a significant effect for accent on listener ratings for *threatening* in the direct condition, with the Northern Irish guise considered significantly more threatening than the London Cockney and RP guises. Further examination of these results showed that this effect appeared to be being driven by higher ratings for the Northern Irish guise in the threat of physical harm condition. The results showed that this effect was not replicated in the lawsuit and bomb threat conditions, although a significant difference between London Cockney and RP was found in the bomb threat condition, with RP perceived as being more threatening than London Cockney.

These results indicate that while there appears to be an effect for accent in the direct condition, it is not as clear as the effect in the indirect condition. One explanation for this could be that the unambiguous lexical content in the direct threat recordings acts to overshadow some of the perceptions relating to the speaker's accent. A further complication with the interpretation of the significant effect for Northern Irish in the direct threat condition is the lower percentage of correct identifications for this guise in the matched guise validation task. Given this result, caution should perhaps be exercised in stating that specific stereotypes about Northern Irish speakers and threats of physical harm are causing this effect.

In the indirect condition, the unambiguously non-standard London Cockney accent was perceived as being the most *threatening*, but this was not the case in the direct condition. One explanation for this could be that when listeners evaluate direct threats, they use a different set of cues than when they evaluate indirect threats. One defining property of a direct threat is that it makes clear the unfavourable event that will happen (Gales, 2012). It could therefore be argued that when listeners evaluate how *threatening* a direct threat is, part of the evaluation involves an assessment of how likely they think the speaker is to bring about the unfavourable action threatened, or their capability to do so. This is commented on by Watt, Kelly and Llamas (2013:108), who hypothesise that the more threatening an utterance is

perceived to be, the more the hearer believes in the speaker's ability to carry out the unfavourable act.

Relating this to previous work on accent evaluation, Giles (1970) found that London Cockney was rated poorly by listeners for communicative content and status content, with Irish performing comparatively better and RP performing better still. It may therefore be the case that the negative stereotypes attached to London Cockney for status and communication actually serve to lessen ratings for *threatening* in direct condition if some listeners perceive the speaker to be less capable of carrying out, or less likely to carry out the unfavourable action threatened. However, such a theory would require further testing with more direct threat stimuli and different accents.

The difference between older and younger listeners' evaluations of the Northern Irish bomb threat recordings approaching significance ($p=0.06$). Older listeners evaluated the recordings as being more *threatening* than younger listeners. Given that the conflict in Northern Ireland began to come to an end with the Good Friday peace agreement in 1997, it can be argued that the younger listeners do not have as much of an awareness of the connection between Ireland and bomb attacks as older listeners do, and therefore assigned lower ratings for *threatening* to the Northern Irish bomb threat recordings. Although Bishop, Coupland and Garrett (2005) showed wide similarities between the results of their accent evaluation study and the results of Giles' (1970) study, the results of this study indicate that there may be certain stereotypes attached to certain accents that can change over time, particularly when specific types of speech acts are examined. This result highlights a potential link between a speaker's accent, the type of threat produced and how *threatening* that utterance is subsequently evaluated by listeners to be. This result points to a useful area for further study on threat perception.

Following the results obtained by Dixon, Mahoney and Cocks (2002), is was hypothesised that the RP accent would be rated as more threatening in the 'white collar' lawsuit condition, the London Cockney accent would be rated as more threatening in the 'blue collar' threat of physical harm condition and the Northern Irish guise would be rated as more threatening in the bomb threat condition. This did not occur in the results. One explanation for this could be that if listeners hear a direct threat, they will provide maximum, or near maximum, ratings for *threatening* regardless of the content of the threatening utterance.

7. Conclusion

This study can be seen as an initial examination into how a speaker's accent may contribute to perceptions of spoken threats. While it is acknowledged that only three accents were evaluated by a small listener group, the results suggest that accent evaluation can influence listener perceptions of spoken threats, with standard accents evaluated as being less *threatening* than non-standard accents when information in the verbal channel did not overtly signal a threat. This conclusion is further validated by other studies examining accent evaluation in legally relevant contexts (Dixon and Mahoney, 2004; Dixon, Mahoney and Cocks, 2002). While it acknowledged that the group patterns found were not universal, significant group results indicating that a speaker's accent could influence judgements about perceived levels of threat is a potentially problematic issue, as judgements about a person's social characteristics should not form part of legally consequential decisions made by, for example, triers of fact in courtrooms. At the very least, this study has begun to try and

highlight what could potentially be an important issue for pyscho-legal evaluations made in everyday situations.

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