Identifications of Speaker Ethnicity in South-East England: Multicultural London English as a Divisible Perceptual Variety

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Abstract

This study uses crowdsourcing through LanguageARC to collect data on levels of accuracy in the identification of speakers' ethnicities. Ten participants (5 US; 5 South-East England) classified lexically identical speech stimuli from a corpus of 227 speakers aged 18-33yrs from South-East England into the main "ethnic" groups in Britain: White British, Black British and Asian British. Firstly, the data reveals that there is no significant geographic proximity effect on performance between US and British participants. Secondly, results contribute to recent work suggesting that despite the varying heritages of young, ethnic minority speakers in London, they speak an innovative and emerging variety: Multicultural London English (MLE) (e.g. Cheshire et al., 2011). Countering this, participants found perceptual linguistic differences between speakers of all 3 ethnicities (80.7% accuracy). The highest rate of accuracy (96%) was when identifying the ethnicity of Black British speakers from London whose speech seems to form a distinct, perceptual category. Participants also perform substantially better than chance at identifying Black British and Asian British speakers who are not from London (80% and 60% respectively). This suggests that MLE is not a single, homogeneous variety but instead, there are perceptual linguistic differences by ethnicity which transcend the borders of London.

Keywords: linguistic perception; linguistic variety identification; speaker ethnicity; MLE; Cockney; citizen linguistics, crowdsourcing

1. Introduction

1.1. Objective and subjective linguistic variation

There is a gap in linguistic research between what we know about language production and what we know about how language production is perceived and categorised. As explained by Clopper and Pisoni:

Despite large amounts of evidence to support the notion that linguistic variation between talkers due to regional and ethnic differences is real and robust and an important property of spoken language…we know less about what naïve listeners know about these sources of variation. (2007: 315 as cited in McKenzie, 2015).

Work in both perceptual phonetics (Clopper and Pisoni, 2007; Kendall and Fridland, 2010) and perceptual dialectology (Giles, 1970; Preston, 1989; Leach, Watson and Gnevsheva, 2016; Montgomery, 2012; Carrie and McKenzie, 2018) has sought to understand this knowledge gap which has implications, for example, when asking naïve listeners to provide judgements concerning the regional or social identity of speakers during annotation.

It has been established that listeners form categories which they assign speakers to depending on the speakers' linguistic forms and extra-linguistic information (Woolard, 2008; Eckert and Labov, 2017). As such, linguistic features can take on meaning as listeners begin to associate them with certain characteristics or social groups. In sociolinguistics, the term "indexicality" refers to the ideological relationship between linguistic features and a social group, persona, characteristic or place that they signal (see Silverstein 2003; Eckert 2008a). Linguistic features can move from having pre-ideological, social distributions to being indexing of macro-social groups such as class, gender, ethnicity or micro, local identities (e.g. "jocks" vs "burnouts" in Detroit: Eckert, 1989; see Silverstein's orders of indexicality 2003).

The social categories used by naïve listeners to define and categorise linguistic variation are not evenly distributed. For example, a study in North-East England asked British participants to listen to speech stimuli and identify where the speakers were from using their own labels (McKenzie, 2015). This work demonstrated that British participants have clear conceptions of what they perceive to be firstly, an Indian accent, secondly, the local, Tyneside accent and thirdly, a Scottish accent. Participants were mostly accurate at identifying speakers from these places. However, they did not hold categories say of "Thai" speech and were not able to accurately classify a Thai speaker.

In this sense, there are distinctions between subjective and objective boundaries. That is, the ways in which non-linguists categorise speakers may be distinct from true linguistic production (Preston, 2010). The disparity between subjective and objective linguistic variation can in part, be explained by both geographic proximity and cultural prominence. Geographic proximity effects have been found in listeners' ability to identify a speaker's home location (Montgomery, 2012). For instance, it is likely that a person from Liverpool will be more accurate than someone from Manchester at pin-pointing the home location of another Liverpool speaker based on their speech (Leach, Watson and Gnevsheva, 2016).

Nonetheless, geographic provenance alone is not sufficient to account for the perceptual labels formed and held by a community. In the above example in which Britons could accurately identify the speech of India but not Thailand, this is likely related to the shared social history, and thus, familiarity, between Britain and India (McKenzie, 2015). Indeed, despite a geographic distance of over 10,000 miles, Britons hold perceptual categories for vowel productions in New Zealand and Australian varieties of English (Shaw et al., 2019).

The language varieties spoken in some places are more easily identifiable than others due to the areas' higher cultural prominence (Montgomery, 2012; Montgomery and

Beal, 2011; Leach, Watson and Gnevsheva, 2016). Montgomery defines cultural prominence as follows:

Cultural prominence functions by bringing "far-away" areas "closer" to respondents through increased exposure in various forms of media and public discourse. (Montgomery, 2012: 640)

The level of cultural prominence associated with different places and their language varieties differs across communities. For instance, in Britain, the speech of India, Australia and New Zealand (amongst many other places) holds cultural prominence as a result of the countries' shared social history. Nonetheless, cultural prominence is not always bilateral. For instance, larger urban areas tend to have higher cultural prominence than rural areas (Leach, Watson and Gnevsheva, 2016). Furthermore, the level of cultural prominence that certain groups or locations hold is often mediated at least in part, by power relations.

Through draw-a-map tasks (Preston, 1989), Montgomery (2012) assessed British participants' mental knowledge of geographic variation within Britain. There is a power disparity between England and Scotland, for instance, England is the most notable seat of British political power. The study revealed that English participants often considered the entirety of Scotland to be one single speech zone, "Scottish". In contrast, Scottish participants identified as many distinct speech zones in England as the English participants (e.g. Cockney, West Country, etc.). Therefore, the categories formed by British participants was mediated by the relative cultural prominence of England and Scotland which in part, is reflected in the power relations between the two countries.

This section has summarised research into how speakers are categorised by listeners and how this can differ to the objective boundaries established in linguistic production research. This is partly conditioned by geographic proximity and cultural prominence effects. In this paper, I outline a LanguageARC project (see Cieri et al., 2018; 2019), *From Cockney to the Queen*, which examines how language in South-East England is produced, categorised and evaluated. In this paper, I present early results of one, single task from this project: an ethnicity identification task. This contributes to the very limited work on auditory identification of ethnicity (e.g. Todd, 2011a; Todd, 2011b).

This study analyses to what extent the perceptions of linguistic variation by ethnicity align with previous research on linguistic production in South-East England. As demonstrated in the following section, linguistic production has been shown to vary between ethnic minority and white speakers in London (e.g. Cheshire et al., 2011). Recent work suggests that despite the varying ethnic backgrounds and heritages of ethnic minority speakers in London, on the whole they speak a new and emerging variety of English: Multicultural London English (MLE) (Cheshire et al., 2011; Kerswill, Torgersen and Fox, 2008; Fox, 2015).

In this present study, participants were asked to categorise speakers from South-East England based solely on audio stimuli into the 3 main "ethnic" groups in Britain: White British, Black British and Asian British. I'll use the term "ethnicity" for these social groupings and treat them as emic or meaningful because they appear as such in public discourse and in government documents, while recognizing that the categories are troublesome from a scientific perspective.

In total, 10 participants took part, 5 of whom were based in the US and 5 in South-East England. Following the recent work on linguistic variation in London, we would predict that participants may be able to distinguish young, White British speakers from Asian British and Black British speakers, but will not find distinctive, linguistic differences between the latter two ethnicities. We would also expect a geographic proximity effect, such that speakers in the US are less accurate than speakers in South-East England.

Nonetheless, both these hypotheses are disconfirmed. The results reveal that firstly, there is no significant proximity effect. Secondly, participants perform at 80.7% accuracy, and have significantly higher rates of accuracy for Black British speakers whose speech seems to form a distinct, perceptual category.

1.2. The linguistic context: variation and change in London and South-East England

In the last few decades, South-East England and particularly, London have experienced much social and demographic change. In general, change in the South-East has been led by change initiated in London. Firstly, in what has been termed the "Cockney Diaspora", throughout more than 100 years, white working-class East Londoners have relocated to the home counties[1], and secondly, in the latter half of the 20th century, London experienced high rates of immigration (Watt, Millington and Huq, 2014; Fox, 2015; Butler and Hamnett, 2011; Young and Willmott, 1957; Cohen, 2013).

The Cockney Diaspora occurred as a result of many inter-related factors such as government-led slum clearance programmes between the 1920s and 1960s; a move to "better oneself" as East London had high rates of poverty; and the de-industrialisation of London (Watt, Millington and Huq, 2014; Fox, 2015; Butler and Hamnett, 2011; Young and Willmott, 1957; Cole and Strycharczuk, 2019; Cole and Evans, In Revision; Cohen, 2013). This led to a large-scale reduction in the White British population in London which has been termed by some as "White Flight" (Butler and Hamnett, 2011).

The county of Essex (which borders East London) has been the main out-post of the Cockney Diaspora and "White Flight" from London (Watt, Millington and Huq, 2014). Since the 1980s, the county has experienced increased economic and social mobility (Biressi and Nunn, 2013). Whilst previously, the border between outer London and Essex was most strongly demarcated by social class, in

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[1] The home counties are the counties that immediately surround London.

modern times, it is increasingly a border of ethnicity (Butler and Hamnett, 2011: 8). Whilst the population of the white, working-class in London was still in decline in the latter half of the 20th century, the ethnic minority population began to rise rapidly in 1981. Between 1991 and 2011, London's ethnic minority population grew by 57% (Butler and Hamnett, 2011: 6). As a result, in modern times, East London is highly ethnically, culturally and linguistically diverse (Fox, 2015). For instance, in the 2011 census, the East London borough of Newham was the local authority in England and Wales where people from the White ethnic group made up the lowest percentage of the population (29%) (Office for National Statistics, 2011).

The large-scale social and demographic changes experienced in South-East England over previous decades have had linguistic consequences. Features of Cockney[2] are found to some extent, across South-East England (e.g. "Estuary English": Rosewarne, 1994), particularly, in out-posts of the Cockney Diaspora to Essex (e.g. in Debden: Cole and Strycharczuk, 2019; Cole and Evans, In Revision). In the 1980s, Estuary English was first documented amongst those in their 20s and was perceived as a spectrum ranging from the standard variety, Received Pronunciation (RP), to Cockney that was found across South-East England (Rosewarne, 1994; Wells, 1997).

Wells (1992, 1997) considers Estuary English to share some features of Cockney such as t-glotalling in word-final position, vocalisation of pre-consonantal /l/ and yod-coalescence in stressed syllables, but to not have other features of Cockney such as h-dropping in content words, monophthongisation of the MOUTH vowel, th-fronting or inter-vocalic t-glotalling.

Estuary English was so named as it was perceived as being found most strongly along the Thames Estuary (Rosewarne, 1994), a stretch of water that runs eastward from the edge of London to the North Sea, delineating the county borders of Essex and Kent. It is no coincidence that many of the 20th century council estates erected to house Cockneys were built along the Thames Estuary. This includes the Becontree Estate in Dagenham, built between 1921 and 1935, which at completion comprised 24,000 homes and is still considered to be the largest municipal housing estate in Europe (London borough of Barking and Dagenham, 2014). Further, after the closure of the East London Docks in the 1970s, many dock workers relocated to the only remaining open docks, in Tilbury, Essex, on the Thames Estuary (Fox, 2015; Cohen, 2013).

Although Cockney linguistic features are found to some extent across South-East England and in particular, along the Thames Estuary, they are no longer found amongst young people in East London (Cheshire et al., 2008, 2011; Kerswill, Torgersen and Fox, 2008; Fox, 2015). Instead, in East and North London, a new variety of English, Multicultural London English (MLE), has emerged amongst young people as a result of contact between many different languages and dialects. Although the variety is found most strongly in inner-London, it appears to be

diffusing outwards. For instance, it has been found to a lesser extent, in the outer East London borough of Havering (Cheshire et al., 2008, 2011).

This somewhat stigmatised variety of English (Fox and Kircher, 2019) is most strongly characterised by an innovative vowel system that does not share the diphthong shift which is a central feature of Cockney (Wells, 1982; Mott, 2012; Labov 1994). In relation to Cockney vowels, diphthongs are lowered and centralised in MLE (Kerswill, Torgersen and Fox, 2008).

Much work on MLE has categorised speakers in East London into "Anglo" and "non-Anglo"(Cheshire et al., 2011; Kerswill, Torgersen and Fox, 2008), defined respectively as "people of white British background and … the children of immigrants, almost all from developing countries" (Kerswill and Torgersen, 2017: 17). This work has found that MLE is spoken most strongly by young, non-Anglo speakers in London, regardless of their ethnic background or heritage. Following this, participants may struggle to differentiate Asian British and Black British speakers in London, and perhaps, South-East England as a whole, as they are theoretically, speakers of a single dialect.

The above research has demonstrated that in South-East England, language varies by ethnicity, yet, this may also operate as a proxy for if a speaker is from London or the home counties. That is, ethnic minority speakers are indeed, most likely to use MLE features, but ethnic minority speakers are also most likely to live in London, where MLE is spoken. In the corpus of southern-eastern speech stimuli used in this project, 45.8% of Asian British and 74% of Black British speakers were from London, compared to 16.2% of White British speakers.

It is hard at this time to unpick whether MLE could be considered an ethnolect that is found to some extent in the speech of ethnic minority young people across South-East England (and perhaps beyond), or is a geographic dialect rooted most firmly in East London. To my knowledge, there has not been research into the extent to which MLE linguistic features are also used by ethnic minority speakers outside of London. However, it is known, that to a much lesser extent than ethnic minority speakers, MLE features are used by White British young people in inner-London, particularly those with ethnically mixed friendship networks (Cheshire et al., 2008; Fox, 2015). This poses the question: will participants only find perceptual linguistic differences between White British and non-White British speakers in London, but not in the remainder of the South-East?

This paper investigates subjective linguistic variation as well as how this relates to known, objective variation. This follows on from previous perceptual dialectology work in South-East England (Cole, Under Review). In this project, participants were found to associate ethnic minority speakers of MLE with East London and white, working-class speakers of near-Cockney with Essex, as found in a range of production studies (MLE: Cheshire et al., 2008,

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[2] Cockney is the variety of English that has conventionally been associated with the white, working class in East London (Wells, 1982)

2011; Kerswill, Torgersen and Fox, 2008; Fox, 2015. Essex: Cole and Strycharczuk, 2019; Cole and Evans, In Revision). Nonetheless, participants' perceptual categories were not in complete alignment with the linguistic variation reported in production studies. Participants associated white, working-class speakers with not only Essex, but also East London in line with traditional associations, despite evidence that young speakers in East London no longer use Cockney features (Cheshire et al., 2008, 2011).

In this sense, it is not only of interest if participants can accurately identify a speaker's ethnicity, but also, the instances when they are incorrect. If listeners were to solely base their perceptual, linguistic categories on the linguistic variation which has been reported in production studies, we would firstly, expect them be able to distinguish most easily between white speakers who are not from London and non-white speakers who are from London. However, it seems unlikely that these categories will account for potential variation in the speech of White British speakers who live in London or ethnic minority speakers in the remainder of the South-East. Secondly, we would not expect participants to find distinctive differences between the speech of Asian British and Black British speakers. This paper reveals that participants do find perceptual differences between Asian British and Black British speakers, and the perceptual distinctions found between all 3 ethnicities transcend the borders of London.

2. Methods

This paper investigates to what extent participants can accurately identify young, south-eastern speakers as White British, Asian British or Black British in the context of ongoing linguistic change in South-East England. The research questions are the following:

1. Is there a geographic proximity effect in performance between US and British participants?
2. To what extent do participants' categorisations of speakers' ethnicities align with production research in South-East England?
   a. Will participants be able to distinguish White British speakers from Asian British and Black British speakers, but not find distinctive differences between the latter two ethnicities?
   b. Will participants only find perceptual linguistic differences between White British and non-White British speakers in London, but not in the remainder of the South-East?

This study is part of a wider project investigating how language in South-East England is used and perceived in relation to geographic location, class and ethnicity. This project, *From Cockney to the Queen*, has been set up on LanguageArc, an online resource which allows researchers to create language resources (Cieri et al., 2018, 2019). LanguageARC encourages members of the public, or Citizen Linguists, to spare as little or as much time as they would like to contribute to linguistic research.

The ethnicity identification task which will be discussed in this present paper is part of a series of 3 different task-types. In the first task-type, participants are asked to identify speakers' class, ethnicity or geographic location by selecting from fixed-term labels. In the second task-type, participants qualitatively describe their own class or ethnicity as well as what leads them to define it in this way. In the third task-type, participants qualitatively describe maps of either London or the South-East of England. They are asked to describe the distinct speech zones that they perceive in these areas as well as the demographics, characteristics and accents they would associate with each area. Participants perform the latter two tasks orally, by speaking aloud their answers which are recorded via their device's microphone and saved on storage managed by LanguageARC.

This study presents the results of the ethnicity identification task. In this task, 10 respondents from both the US and South-East England categorised speakers into the 3 most prevalent ethnicities in Britain according to the 2011 Census: White British, Asian British and Black British (Office for National Statistics, 2011). Whilst this project is at an early stage and further research will expand on this analysis, in general, little variation is found between the accuracies of each participant-group (US or South-East England), suggesting the findings may be robust despite low participants numbers.

2.1. Participants

A total of 10 respondents took part in the ethnicity identification task on LanguageARC. Of these respondents, 5 were based in Great Britain and 5 were based in the United States. The participants were not overtly recruited, but instead, participated in the task as part of their contribution more generally to LanguageARC. Given the geographic proximity effect, we would expect the participants in Great Britain to be more accurate at identifying the speakers' ethnicities than the participants in the US. Of the 5 respondents in Great Britain, LanguageARC recorded that they all completed the study in parts of South-East England (London, Oxford, Chelmsford and 2 respondents in Colchester). Of the respondents in the United States, 4 were in Philadelphia, Pennsylvania and 1 was in San Antonio, Texas. At this point, more information about the participants such as age, gender and ethnicity is not known.

2.2. Stimuli

Participants heard Speech stimuli taken from a corpus of 227 speakers from South-East England. The audio clips were lexically identical and were taken from a passage reading (Chicken Little: Shaw et al., 2018) which was recorded as part of a larger study on language production and perception in South-East England (Cole, Under Review). Although spontaneous speech would likely lead to greater use of vernacular features, a reading passage was chosen to control for contextual information or lexical choice. Each clip lasted approximately 10 seconds and was taken from a reading of the same sentence which was chosen to include a range of linguistic variables known to be variable between Cockney, MLE and RP:

"The sky is falling", cried Chicken Little. His head hurt and he could feel a big painful bump on it. "I'd better warn the others", and off he raced in a panicked cloud of fluff.

The speech stimuli were randomised for each individual participant. Each participant could complete as many or as few of the 277 judgements as they wished. The task did not have to be completed in one sitting, and participants could return to the task at any point and pick up where they left off. In fact, Citizen Linguists at LanguageARC are encouraged to dip into tasks even if they only wish to spare a few minutes.

All speakers were aged between 18 and 33 ($\bar{x}$ = 21.8; SD = 3.2). They had all lived in South-East England for at least half of the years between the ages of 3 and 18. The speakers came from a wide range of geographically disparate locations across South-East England, including within London. There was at least one speaker from each borough of London as well as the following counties: Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Berkshire, Buckinghamshire, East Sussex, West Sussex, Hampshire, Norfolk, Suffolk, Surrey. Of the speakers, 41 identified as lower-working class, 54 as upper-working, 81 as lower-middle, 47 as upper-middle and 4 as upper class.

The stimuli were formed of 24 Asian British speakers, 54 Black British, 136 White British and 13 speakers who were categorised as "Other", as they did not fit into any of these 3 categories. For instance, if participants self-identified as "Kurdish" or "Mixed British" they were classified as "Other" for the purpose of this task. Judgements made about speakers in the "Other" category were not analysed in this present study which was interested in the identification of White British, Black British and Asian British speakers.

Speakers were asked to define their ethnicity in their own words. Following this, the speakers were grouped according to the most prevalent groups on the 2011 UK Census: White British, Black British and Asian British. For instance, a speaker who considered themselves "British Indian" was grouped as Asian British for the purpose of this study. Of the 54 speakers who were classified as Black British, 45 had self-identified using this term. Others had used terms such as "Black European", "Black Caribbean", "Black African" or "Black South African", but for the purpose of this study, were classified as "Black British".

Of the 136 White British participants, 134 had used this exact term in their self-identification of ethnicity, whilst 2 had identified as "White". Of the 24 Asian British speakers, only 9 had self-identified using this term whilst 15 were grouped as "Asian British" but had self-identified with terms such as "British Indian", "British Bangladeshi", "Pakistani British". This suggests that "Black British" and "White British" are important terms in speakers' own self-definition. However, although the term "Asian British" is used in popular discourse and official documentation, it may not capture the varied self-identifications amongst those grouped under this label.

In this study, I recognise that of course, ethnic identities are varied and complex (Hall-Lew, 2014). Indeed, language is a complex, symbolic resource used to communicate and infer social meaning and identity that extends far beyond ethnicity (Eckert, 2008b). For instance, it has long been established that in the US, not all speakers who are African American speak African American English (see Becker,

2014). Therefore, I would not expect, nor consider it possible, for participants to identify the ethnicity of all speakers with 100% accuracy. Nonetheless, this paper investigates to what extent these broad labels are salient and meaningful categories in terms of linguistic perception, and how this relates to previously reported linguistic production in South-East England.

2.3. Analysis

In total, 266 ethnicity judgements were made about speakers. Judgements were made about 119 of the 227 speakers. Of the 266 judgements, 189 were made by the British participants and 77 by the US participants. Of the 266 judgements, 26 judgements were made of Asian British speakers, 67 of Black British speakers and the remainder of White British speakers. When identifying a speaker's ethnicity, participants had the option to either select "Other" if they did not think the speaker belonged to any of the 3 choices provided, or they could skip that speaker. Participants did so on 2 and 17 instances respectively. These cases were not included in the analysis.

A logistic mixed effect regression was run in R using the glmer function of the lme4 package (Bates et al., 2015). This tested to what extent the gender, ethnicity and social class of speakers or the country of the participant (US or Great Britain) could predict the accuracy of the ethnicity judgements. Gender was included as it has been widely reported that men often use more vernacular features than women (see Labov's first principle, 1990). Social class was also included as it is an important determiner in linguistic variation in Britain (e.g. Milroy, 2001).

The dependent variable in the model was the participants' accuracy for each judgement: a two-level categorical variable coded as either "yes" or "no". White British was the reference level for the ethnicity variable, and lower-working class was the reference level for the social class variable. In order to control for the individual inputs of each participant, participant ID was included as a random intercept in the model. For all comparisons, α was set at 0.05.

3. Results

On the whole, respondents had reasonably high rates of accuracy when identifying the ethnicity of speakers, with an average of 80.7%. There were no significant effects for the participants' country, suggesting that there was not a proximity effect (US vs Great Britain: 78% and 81.6% accuracy respectively). There were also no significant effects of either speakers' social class (79.3%, 80%, 77.7%, 88.9% accuracy for lower-working, upper-working, lower-middle and upper-middle respectively) or gender (80.8% for male and 80.0% for female speakers).

Nonetheless, when a given speech stimuli was categorised by a participant, the resultant accuracy was dependent on the ethnicity of the speaker. The only significant effect found in the model was that Black British speakers were significantly more likely to be accurately assigned than White British speakers (p = 0.005). Participants accurately identified the ethnicity of Asian British speakers on 69.2%

of instances compared to 78% for White British speakers and 91.4% for Black British speakers (Fig. 1). The difference in accuracy between identifying White British and Asian British speakers was not found to be significant.
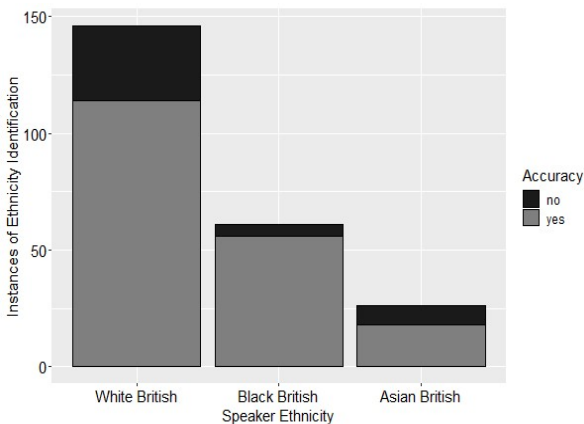

Figure 1: Accuracy of identifying a speaker's ethnicity based on speech stimuli. Black British speakers were significantly more likely to be accurately identified than Asian British or White British speakers.

On the instances in which participants inaccurately classed the stimuli (mis-identified a speaker's ethnicity), the relationship between the 3 ethnicities was not symmetrical (Fig. 2). Of the instances in which Asian British speakers were not accurately identified, they were considered to be White British on 87.5% of instances and Black British on 12.5% of occurrences. When White British participants were not correctly identified, they were judged to be Asian British on 59.4% of instances, and Black British on 40.6% of occurrences.
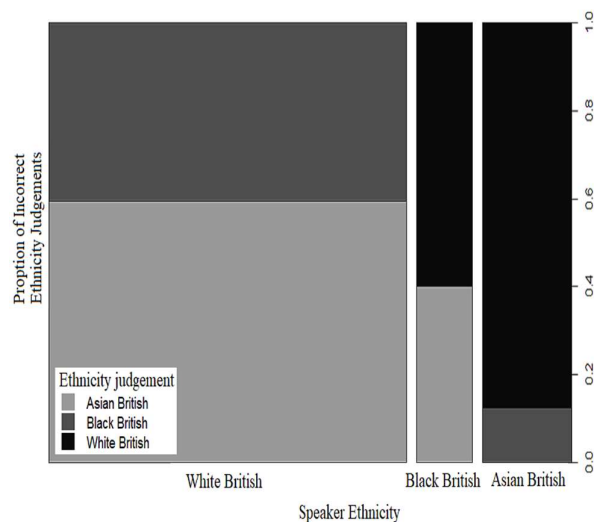

Figure 2: The incorrect ethnicity judgements made for each ethnicity group. When participants inaccurately label the ethnicity of Asian British or White British speakers, they frequently identify them as the other, but infrequently identify them as Black British. The column width reflects the uneven distribution of judgements made for speakers of each ethnicity in the data.

There is an overlap in how White British and Asian British speakers were identified such that they were most frequently mis-identified as the alternate group but were less frequently identified as Black British. The error made least frequently was identifying Asian British speakers as being Black British.

An analysis of the individual speakers whose ethnicity was most frequently identified either correctly or incorrectly sheds further light on the discrepancies between the 3 ethnicities. The findings suggest that for White British and Asian British speakers, their accent is associated with where they live as well as their ethnicity to a greater extent than for Black British speakers. The two speakers who were most frequently incorrectly identified were a White British speaker who lives in Ilford, East London and an Asian British participant who lives in Colchester, Essex. The former speaker was judged to be Asian British on 75% of instances, whilst the latter was judged to be White British on 75% of instances (n=4 for both).

Ilford is an area of London which is highly ethnically diverse and has a large Asian population. In the 2011 Census, in several wards in Ilford, British Indians formed around 25% of the population (Clementswood: 25.2%; Goodmayes: 24.5%; Valentines: 25.0%). In contrast, the Asian British speaker came from Colchester, a town in Northern Essex with low ethnic diversity (5.31% of the town's population were Asian British in the 2011 Census). The 15 Asian British participants who did not live in London were incorrectly categorised on 40% of instances, compared to 18% for the Asian British participants who lived in London. In contrast, the 28 White British participants who lived in London were inaccurately identified on 32.1% compared to 19.5% for those who did not live in London.

This is not to say that Black British speakers from across South-East England were identified with equal accuracy. The Black British participants who lived in London were inaccurately identified on only 4% of instances, compared to 20% amongst those who did not live in London. It seems that Black British speakers in London speak a variety of English that is perceptually, very distinct. Indeed, the 2 speakers whose ethnicities were most frequently accurately identified were a Black British speaker in East London and a White British speaker who lives in Rochester, on the Thames Estuary (100% accuracy, n=12 and n=5 respectively). The former location has a high prevalence of MLE (Cheshire et al., 2008, 2011), whilst the latter location is on the Thames Estuary, the area most strongly associated with Estuary English (Rosewarne, 1994). Therefore, it may be little surprise that these speakers had accents that led them to be accurately identified as their respective ethnicities on 100% of instances.

4. Discussion

This study aimed to contribute to the gap in linguistic research between what we know about language production and what we know about how language production is perceived and categorised (McKenzie, 2015; Clopper and Pisoni, 2007; Preston, 2010). This study used LanguageARC to collect data from Citizen Linguists to

analyse levels of accuracy in the identification of speakers' ethnicities.

The data revealed that firstly, a geographic proximity effect was not found. There were no significant differences in performance between participants in South-East England and the US. The lack of a proximity effect in this study may be attributable to several reasons. Previous studies on geographic proximity have investigated participants' ability to identify a speaker's geographic provenance. It has been found that participants perform better if they are from nearby the speaker (Leach, Watson and Gnevsheva, 2016; Montgomery, 2012). Nonetheless, this present study investigated participants' performance in identifying speakers' ethnicity, not geographic provenance, which may not be constrained by geographic proximity to the same extent. This is in line with previous research which found that a listener's performance at identifying speakers' ethnicity did not continually improve with repeated (task) exposure (Todd, 2011b).

It may be that there was not a significant proximity effect as a result of the nature of ethnolects. Previous work has suggested that ethnolects are marked by substrate influences from speakers' L1s (or heritage L1s) during the period of transition from bilingualism to monolingualism in the L2 (Clyne, 2000; Wolck, 2002). Therefore, regardless of whether the L2 is a variety of American English or British English, the ethnolects spoken in these respective countries may be marked by linguistic features found in the (heritage) L1s of ethnic minority speakers. Thus, a familiarity with British Englishes may not be the key determiner in performance at this task. It may also be the case that US speakers are more finely attuned to ethnic linguistic differences as ethnicity takes precedence in linguistic ideology in the US whilst social class is central to British linguistic ideology (Milroy, 2001).

As well as investigating geographic proximity effects, this paper examined to what extent the 3 ethnicities were perceptual categories held by the listeners. It has been established that individuals categorise people that they encounter based in part, on the speakers' linguistic output. The labels that listeners use in their categorisation of language varieties is dependent on both the distinct social sphere of a community (Woolard, 2008; Eckert and Labov, 2017) and the listener's familiarity with the language variety (e.g. cultural prominence: Montgomery, 2012; Montgomery and Beal, 2011; Leach, Watson and Gnevsheva, 2016). This study found that Black British is a meaningful linguistic category in linguistic perception. This is not to say that Asian British and White British are not also meaningful, linguistic categories. Indeed, on the whole, participants performed the task with relatively high accuracy (80.7%), but participants were significantly more accurate in classifying speakers who were Black British than Asian British or White British.

It may be the case that the labels "Asian British" and "White British" cannot fully capture the linguistic variation found within these groups. However, it is also possible that these varieties are as linguistically distinct and relatively homogeneous as Black British, but that participants do not hold such well-defined perceptual categories for these varieties. When self-defining their ethnicity with free

classification, "Black British" and in particular, "White British" were terms that were widely used by speakers. In contrast, "Asian British" was highly divisible in the speakers' self-identification (e.g. "British Indian", "British Bangladeshi", "Pakistani British"). This adds weight to the interpretation that although participants hold a perceptual category for "White British" speech, there is more variation in the speech of south-eastern White British speakers than is captured within this perceptual category. In contrast, whilst there is most likely, also relative variation in the speech of Asian British speakers, it seems that listeners do not hold such a clear perceptual category for "Asian British" speech.

When participants inaccurately classed the ethnicity of Asian British or White British speakers, they frequently identified them as the alternate group, but infrequently identified them as Black British. This was particularly the case for Asian British speakers who were relatively infrequently identified as Black British (3.8% of all judgements). There is not an equal distribution of misses across all classifications. White British participants could be mis-identified as Black British or Asian British (but more frequently the latter); Black British participants could be identified as either Asian British or more frequently, White British; Asian British participants were almost only ever mis-categorised as White British and not Black British.

In part, the rates of misidentification are related to the speakers' geographic provenance. Asian British and Black British speakers who lived outside of London were more frequently mis-identified than those who lived in London. In contrast, White British speakers who lived in London were more frequently mis-identified than those who did not live in London. The effect was not as large for Black British speakers as the other two ethnicities. It seems that many Black British speakers speak in a perceptually similar way across South-East England. This way of speaking is most strongly associated with London.

Black British speakers in London were almost never mis-identified as a different ethnicity (4% of instances), suggesting that the variety of English spoken by this group in London is perceptually, very distinct. Nonetheless, the rates of accurate identification were greater than chance for both Asian British and Black British speakers who were not from London (60% and 80% respectively). This suggests that to some extent, perceptual linguistic differences by ethnicity are found across South-East England. Although the varieties of English associated with Black British and Asian British speakers are most strongly rooted in London, they are not limited to the city.

This study has contributed to work on language variation and change in South-East England. Following work on MLE (Cheshire et al., 2008, 2011; Kerswill, Torgersen and Fox, 2008), I predicted that participants may be able to distinguish White British speakers from Asian British and Black British speakers, but would not find distinctive, linguistic differences between the latter two ethnicities. The results reveal that speakers had relatively high levels of accuracy at distinguishing between all 3 ethnicities, but in particular, the speech of Black British speakers seems to form a distinct, perceptual category.

Furthermore, White British speakers were most easily identified if they did not live in London, and the reverse was found for Asian British and Black British speakers. Nonetheless, listeners performed much better than chance at identifying the ethnicity of speakers from all locations in the South-East. This perceptual evidence suggests that MLE is most strongly but not exclusively found in London. Many Black British and Asian British speakers from across South-East England use linguistic features that perceptually mark out their ethnicity. This paper concludes that MLE is not a single, homogeneous variety but instead, there are perceptual linguistic differences by ethnicity which transcend the borders of London.

5. References

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