Crowdsourced Participants' Accuracy at Identifying the Social Class of Speakers from South East England

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Abstract

Five participants, each located in distinct locations (USA, Canada, South Africa, Scotland and (South East) England), identified the self-determined social class of a corpus of 227 speakers (born 1986–2001; from South East England) based on 10-second passage readings. This pilot study demonstrates the potential for using crowdsourcing to collect sociolinguistic data, specifically using LanguageARC, especially when geographic spread of participants is desirable but not easily possible using traditional fieldwork methods. Results show that, firstly, accuracy at identifying social class is relatively low when compared to other factors, including when the same speech stimuli were used (e.g., ethnicity: Cole 2020). Secondly, participants identified speakers' social class significantly better than chance for a three-class distinction (working, middle, upper) but not for a six-class distinction. Thirdly, despite some differences in performance, the participant located in South East England did not perform significantly better than other participants, suggesting that the participant's presumed greater familiarity with sociolinguistic variation in the region may not have been advantageous. Finally, there is a distinction to be made between participants' ability to pinpoint a speaker's exact social class membership and their ability to identify the speaker's relative class position. This paper discusses the role of social identification tasks in illuminating how speech is categorised and interpreted.

Keywords: social class; social identification tasks; language variation and change; sociolinguistics; citizen linguistics, crowdsourcing; South East England

1.   Introduction

The extent to which people can identify another person's class from their speech is an important consideration in sociolinguistics for two principal reasons. Firstly, social identification tasks - in which participants attempt to identify social information about a person such as class, ethnicity, gender, age or sexuality from speech stimuli - inform us of how different social categories are referenced in participants' minds from speech. Patterns of accuracy in social identification tasks reveal to what extent different social labels and groupings are meaningful categories for participants and to what extent participants have accurate linguistic representations of these social groupings (see Campbell-Kibler 2010 for an overview). Secondly, social identification tasks aid our understanding of how discrimination and stereotyping are linked to linguistic variation. If social information about a person can be identified from speech, then this contributes to our understanding of linguistic profiling and the ways evaluations or judgements are made about people based on their speech. This paper presents the results of a pilot study, exploring participants' accuracy at identify the social class of speakers from South East England.

1.1   Social Identification Tasks

Accuracy at social identification tasks is in part related to the link between a social group and linguistic features. 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 2008). Linguistic features can be indexing of so-called macro-social groups such as class, gender, ethnicity or micro-categories which reflect local identities (e.g. "jocks" vs "burnouts" in Detroit: Eckert, 1989).

There are different orders of indexicalities (see Silverstein 2003). There could simply be correlations between social factors and linguistic features which do not attract overt commentary. At the opposite extreme, features may be

socially salient such that people may perform, discuss, interpret and evaluate them. These linguistic features may become enregistered such that, following Johnstone's definition of enregisterment (2009: 159), linguistic features are linked with specific labels. In the same way that people may associate certain speech patterns with labels such as "Pittsburghese" (Johnstone, 2009), "Geordie" (Beal, 2018) or "chav" (Cole & Tieken, 2021), people may hold concepts of the way that different social class groupings such as "lower-working class" speak which may or may not be an accurate representation. In this way, social identification tasks shed some important insights into the links that participants make between speech and social groupings.

In addition, social identification tasks are important as they aid our understanding of how discrimination and stereotyping may be facilitated through linguistic perception and profiling. Purnell et al. (1999) demonstrated that in the US, a person's ethnicity could be determined from as little as the word *hello.* If social information about a person such as their ethnicity can be determined from their speech, then so too, speech can act as a vehicle for profiling and stereotyping. The authors also showed that when the same person inquired about a flat to let in a Standard American accent, they were more likely to receive a positive outcome such as an invitation to view the apartment than if they spoke in an African American or Chicano American accent (Purnell et al. 1999). If identifications about a person's social or demographic background can be made from speech alone, then the evaluations or judgements made about a person based on their speech can be a window into broader societal prejudice.

Previous work has shown that the lower a person's class in South East England, the more harshly they are judged, for instance on measures such as intelligence and friendliness (Cole 2021). In addition, it has been shown that when participants are instructed to assess potential candidates' interview performance and perceived hirability for a trainee

solicitor position at a corporate law firm, there is a particular bias against "candidates" who spoke working-class varieties from the South of England (Levon et al. 2021). Though studies have shown that working-class speakers are disadvantaged by their accent (which in itself is a marker that they are working class), there has not been substantive research into how accurately people's social class can be identified from their speech. This knowledge is an important component to understanding a fuller picture of how speech is perceived, categorised but also judged and evaluated in relation to social class.

1.2 Linguistic Variation and Class in Britain

Social class (or "class"), along with age, gender and ethnicity, is one of the most frequently studied social factors in sociolinguistics. The recurrent finding in a plethora of sociolinguistic production work in Britain, as well as many other locations, is that the lower a person's class, the more likely they are to use vernacular features. In contrast, the higher a person's class, the more likely they are to use standard features (see Cole, forthcoming for an overview).

Trudgill (2001) envisages linguistic variation in Britain as a triangle shape with social class on the y-axis and regional variation on the x-axis at the base of the triangle. In essence, the lower a person's social class, represented at the base of the triangle, the greater linguistic variation. This means that working-class people tend to speak in ways that are regionally marked and vary, often substantially, to the dialects of other working-class people from different places to them. In contrast, as social class increases, the less regional variation is found. At the extreme, at the tip of the triangle, the highest classes in Britain are presumed to speak almost identically to each other, converging on Received Pronunciation (RP) (often called "Queen's English"). RP is an accent exemplified by the higher classes that is spoken across the country and is often defined as not being regionally marked, i.e., is not linked to where a person is from (Trudgill, 2001). It is well established then that the lower a person's class the more regional productions in their speech. It seems, then, like a sound, though to my knowledge an untested, hypothesis that the reverse is also true: the more regional productions in a person's speech, the lower their class. Following this, if participants are attuned to the structure of sociolinguistic variation in Britain, they may be able to infer a person's class by the degree of regional pronunciations in their speech.

It is worth emphasising that sociolinguistic variation is a matter of probabilities. A working-class person is more likely to have a regional pronunciation at a higher rate than a middle-class person. It is very rarely the case that middle-class people will never produce a feature and it is produced without exception in the speech of working-class people from the same speech community. It is much more probable that the feature will be produced by both working-class and middle-class speakers but at different rates. Therefore, sociolinguistic variation is, at least in terms of social class, group-preferential and not group-exclusive. Following this, in a social class identification task, it is not simply the case that if a participant hears a regional linguistic feature they can be assured that the speaker is working-class. These features will also most likely be used by some middle-class speakers in the same community, but presumably to a lesser extent. Social class identification tasks test to what extent participants are attuned to sociolinguistic variation and can base probabilistic assumptions about a person's class from speech stimuli.

1.3 Accuracy at Social Class Identification Tasks

Previous research on social class identifications from speech has been very limited. There have been previous studies on how linguistic variation is perceived in relation to social class. For instance, in New Zealand, Hay et al. (2006) asked participants to listen to audio stimuli which could be variably interpreted as two different words due to a vowel merger in the speech community. If participants were led to believe that they are hearing a working-class speaker, they are more likely to believe they heard productions that are more common in working-class speakers. Buchstaller (2006) played matched-guise (produced by a single speaker) audio clips with variable rates of quotative *go* to see if this would effect to what extent British participants perceived the speaker as working class.

However, there have not been, to my knowledge, comprehensive studies testing to what extent speakers' social class can be identified from speech stimuli. Though social class has been neglected in social identification tasks, previous research has explored participants' accuracy at identifying various other social factors from speech stimuli: ethnicity/race (Purnell et al., 1999; Holliday & Jaggers, 2015; Cole 2020), age (O'Cain, 2000), sexuality and perceived masculinity/femininity (Munson 2007; Levon, 2014) and location (McKenzie, 2015). These studies have shown that firstly, not all speaker groups are identified with equal accuracy, which is often related to the saliency of the different categories and their associated linguistic features. Secondly, not all participant groups perform the task with equal accuracy which is often conditioned by participants' familiarity or exposure to relevant linguistic variation (see Clopper & Pisoni, 2004).

As a result, though no predictions are made about the direction of the effect in this present study, it may be that some social classes are identified more accurately than others and/or that it is easier to identify the social class of either men or women. In addition, the primary hypothesis of this paper is that the participant located in South East England will perform the task with highest accuracy. There are five participants in the study, each located in a different place: USA, Canada, South Africa, Scotland and (South East) England. In much the same way that a geographic proximity effect is found in participants' ability to identify speakers' geographic provenance (Montgomery, 2012), this paper predicts that the participant located in South East England will perform with highest accuracy. It is probable that they are most familiar with patterns of sociolinguistic variation and the class structure in South East England.

2. Methods

This study uses crowdsourcing through LanguageARC to collect data on levels of accuracy in the identification of speakers' social class from speech stimuli. This paper is based on data collected through 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 relation to place, class and ethnicity (see Cole 2020 for further findings from this project). LanguageArc is an online resource which allows researchers to create language resources which members of the public can participate in (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 *From Cockney to the Queen* project was open for a limited period of time and participants for this study were not overtly recruited, but instead, participated in the task as part of their contribution more generally to LanguageARC.

2.1 Research Questions

Can participants accurately identify the class of speakers significantly better than chance and is their accuracy affected by:

a) speakers' gender?
b) speakers' social class?
c) participants' location (South East England; Scotland; USA; South Africa; Canada)?

2.2 Participants

In this study, the results of five participants are presented, each located in a different English-speaking area: (South East) England, Scotland, USA, South Africa and Canada. LanguageARC indicates the location of the participant at the point they took part in the experiment. It is not known how long participants have spent in that location or their linguistic background or levels of exposure to south-eastern varieties of English. More information such as age, gender and social class is not known about the participants.

It is also acknowledged that there is a very small number of participants in this present study due in part to the limited period of time that the project was open for contributions. The results presented are a pilot study and are tentative. This paper presents a case study, demonstrating how sociolinguistic data can be collected for sociolinguistic studies through crowdsourcing, specifically using LanguageARC. An advantage of this approach is that participants were not recruited to the task and instead, they completed it for their own enjoyment or desire to contribute to research. It is therefore likely that, though there was a very limited number of participants, they have engaged closely with the task.

In addition, through LanguageArc, participants from all over the world can easily contribute to research as long as they have an internet connection and willingness. This overcomes some confounding factors that sociolinguists may face when recruiting participants, for instance, people from different locations or with different linguistic backgrounds who are recruited through their similar experience living or studying in a single location. Although crowdsourcing is often considered for large-scale collection, it can also benefit collections where geographic spread is desirable but not possible using traditional fieldwork methods. The comparison of the person located in South East England and other locations around the world would have been difficult without the crowdsourcing platform.

2.3 Stimuli and Procedure

Participants heard speech stimuli taken from a corpus of 227 speakers from South East England. The order of the speech stimuli was randomised for each individual participant. For each speaker, participants heard an approximately 10-second audio clip extracted from a passage reading. Participants then selected the class of the speaker from six options: "lower working", "upper working", "lower middle", "upper middle", "lower upper" and "upper upper" or they had the choice to skip that speaker. A two-tier system was used within each class (e.g., working class was split into lower- and upper-working). This decision was made in order to align findings with production studies where this same division of classes is made. For instance, it has previously been acknowledged that the lower-middle class and upper-working class are key in leading language change (have highest rates of incoming variants for a variable in a process of change) (e.g., Labov 2001; see Cole, forthcoming for discussion on class divisions in sociolinguistics).

"Lower upper" and "upper upper" were included as possible selections even though it may seem improbable that participants come into regular contact with upper class speakers in day-to-day life. However, this study did not want to make any prior assumptions about participants' backgrounds or their conceptions of the class structure or what constitutes each class. The "lower upper" and "upper upper" values were included to give participants the full range of options without making prior assumptions. In addition, "upper class" was also split into "lower" and "upper" so as to mirror the values added for both working- and middle-class. It is possible that including such a broad range may have affected the judgements of participants as they may have felt they needed to use the full range of responses. Nonetheless, if participants do indeed hold associations for the specific class labels then the full range of responses would not greatly skew participants' accuracy. In addition, participants' accuracy was tested not only as a binary outcome (correct classification vs. incorrect classification) but also as a correlation between speakers' class and participants' responses.

The audio clips were lexically identical and were taken from passage readings which were recorded as part of a larger study on language production and perception in South East England (see Cole, 2021). Although spontaneous speech would likely lead to a higher rate 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 or important in South East England such as (T)-glottalling, (ING), (H)-dropping, (L)-vocalisation and variation in the vowel system. This paper does not have the scope but future research could investigate which linguistic variables and variants lead speakers to be identified as a certain class. The sentence selected was:

"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.

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 locations across South East England which was defined generously. There was at least one speaker from each borough of London as well as the following counties: Cambridgeshire, Oxfordshire, Essex, Hertfordshire, Berkshire, Buckinghamshire, East Sussex, West Sussex, Hampshire, Suffolk, Surrey, Kent and Bedfordshire.

Of the speakers, 41 identified as lower-working class, 54 as upper working, 81 as lower middle, 47 as upper middle, three as lower upper and one as upper upper. Speakers identified their own social class. They selected their social class from the six pre-mentioned choices. Often, sociolinguists impose social class classifications on speakers, most often based on a metric of socio-economic indicators. Nonetheless, as it has not been evidenced to what extent this translates to self-defined groupings, in this study, speakers identified their own class. In this way, class was meaningful to the speakers and not outwardly defined, but it is also not clear what extent their social class identity translates to conventional measures of social class position.

2.4   Analysis

A consideration with LanguageARC is that 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. Though this approach encourages active engagement, it also means that there will almost always be an imbalance in the datapoints collected for each participant. Also, as participants do not have to complete the task in full, not all speakers are heard by all participants.

There was a total of 146 datapoints, excluding the 19 instances participants skipped a speaker rather than attempt to identify a speaker's class. In addition, upper-class speakers, of whom there was only four, were only heard a combined total of three times. As a result, identifications made of the four upper-class speakers were not included in the analysis.
In spite of this, participants could identify speakers' class from the 6-way distinction (i.e. including "lower-upper" and "upper-upper" class. This means that, in this analysis, on any instance that a participant considered a speaker to be either lower- or upper-upper class, they were not correct. However, it is still of interest to know which speakers, if any, were considered to be upper class as this provides insights into participants' perceptual representation of the class system.

Of the 227 speakers in the corpus of speech stimuli, at least one identification was made for 115 speakers. Of the 146 judgements, 28 were made of lower-working speakers, 38 of upper working, 55 of lower middle, and 25 of upper middle. This pattern roughly matched the distribution of speakers' social classes. For instance, as mentioned, more speakers identified as lower-middle class than any other class and correspondingly, more lower-middle class

speakers were heard by participants than any other class. In addition, there was an imbalance in the contribution of each participant. Of the 146 judgements, 67, 19, 20, 32 and 8 identifications were made by the participants located in South East England, South Africa, Scotland, Canada and the USA respectively.

The analysis was split into three parts. Firstly, it was tested whether participants' accuracy at identifying speakers' social class was better than chance. A one-sample Wilcoxon test was selected due to the non-parametric distribution of the datapoints. This test compared participants' average accuracy against the 1/6 probability of choosing the correct category out of chance.

Secondly, a logistic regression was run in R using the glm function to test whether the gender or social class of speakers or the location of participants predicted the accuracy of the class identifications. The dependent variable in the model was the participants' accuracy for each judgement: a two-level categorical variable coded as either "yes" or "no". Lower-working class was the reference level for the class variable as the extreme of the scale. South East England was the reference level for the participant location variable as the obvious baseline of comparison and due to the hypothesis that this participant would perform with highest rates of accuracy. For all comparisons, α was set at 0.05.

Thirdly, a Kendall's correlation was run to test the ordinal association between the two ranked variables for each participant: speakers' actual social class and the social class the participant classified them as. If a participant considers a lower-working class speaker as upper-working class, this seems is a more accurate judgement than considering the same speaker to be upper-middle class. The Kendall's correlation test established if there were positive correlations in participants' performance. That is, did they tend to consider lower-class speakers as of a lower class than they tended to consider higher-class speakers to be?

3.   Results

3.1   Did Participants Perform Better than Chance?

Participants made relatively balanced selections between the six choices: there were 18, 27, 29, 43, 17 and 12 selections for "lower working", "upper working", "lower middle", "upper middle", "lower upper" and "upper upper" respectively. Participants were more likely to consider speakers to be middle class, particularly upper-middle class, compared to any other class group.

Participants had relatively low rates of accuracy when identifying the class of speakers, with an average across all judgements and all participants of 21.9% (32/146). As a point of comparison, based on the same speech stimuli and LanguageARC project, previous research (Cole 2020) explored participants' accuracy at identifying the ethnicity of speakers into the main "ethnic" groups in Britain according to the UK Census: White British, Black British and Asian British. In this study, participants found perceptual linguistic differences between speakers of all 3 ethnicities, averaging 80.7% accuracy at the task. 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. It is not the case then that there is no or very limited linguistic variation present in the speech stimuli, instead, participants in this present study could not identify class with the same accuracy that ethnicity was previously identified from the same speech stimuli.

On the whole, a one-sample Wilcoxon test did not find participants' rates of accuracy to be significantly greater than chance. It seems that participants do not have a 6-way class distinction, or at least, not one that translates to accuracy at linguistic identifications. However, when responses were amassed into three classes (working, middle and upper), a one-sample Wilcoxon test found that accuracy rates were significantly greater than chance averaging 47.3% (69/146) (p=0.03) (see Figure 1).
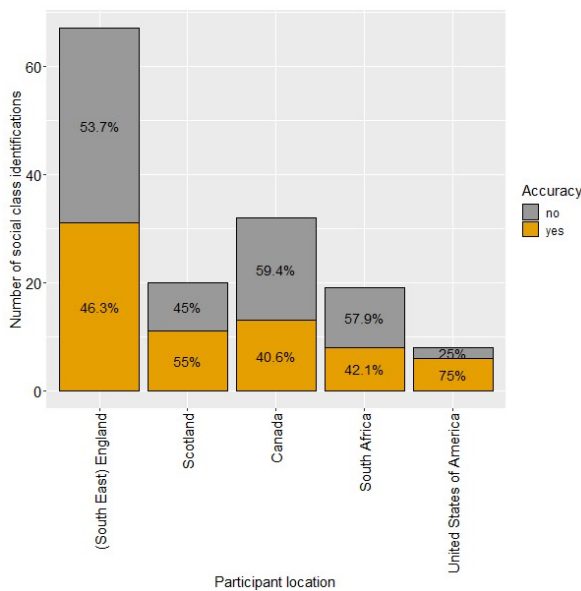

Figure 1: Participant location (one participant per location) and their accuracy at identifying speakers' social class from speech stimuli. Participants' average performance was significantly greater than chance when identifying class from a 3-way distinction (working, middle, upper). Compared to the baseline of South-East England, there were no significant differences in participants' rates of accuracy.

3.2 Which Factors Predict Participants' Accuracy?

There were no significant effects in the logistic regression model. There was a trend that women's class was identified more accurately than that of men (26.3% and 17.1% accuracy for female and male speakers respectively) but the effect was not significant (p=0.057) (Figure 2). In addition, accuracy was not greater when identifying any specific social class. The rates of accuracy for identifying speakers from each class were 21.4%, 21%, 20% and 28% for lower-working, upper-working, lower-middle and upper-middle class speakers respectively (Figure 3).

There were no significant differences in accuracy rates between participants. Participants performed with similar rates of accuracy when identifying the class of speakers (see Figure 1). This is with the exception of the participant in the USA who performed with higher rates of accuracy than other but this difference was not significant and this participant had many less datapoints than the other participants. Though it was hypothesised that the participant located in South East England would perform significantly better than other participants, this was not found to be the case. The lack of significant effects in the model for the gender and class of speakers as well as the location of participants was also found to be true when the test was re-run with a three-class distinction.
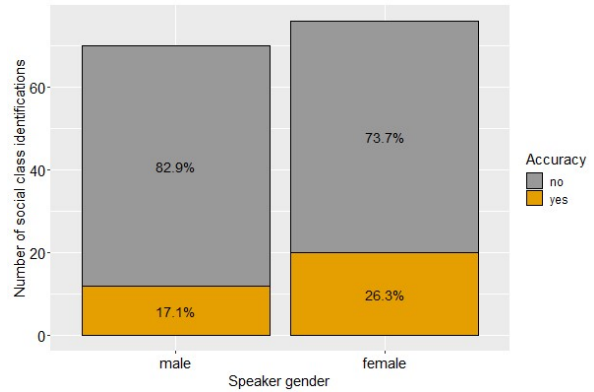

Figure 2: Speakers' gender and the accuracy with which their social class was identified from speech stimuli. Though women's social class was accurately identified more often than men's, the effect was not significant (p=0.057).
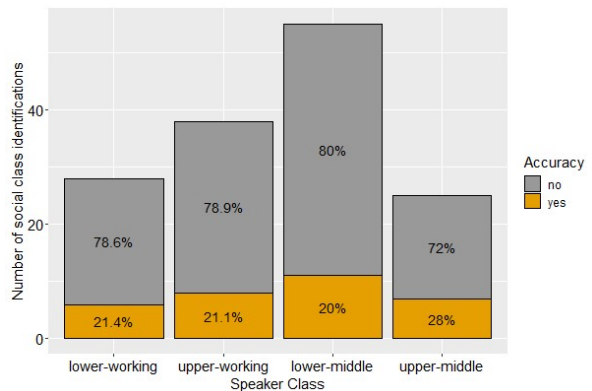

Figure 3: Speakers' social class and how accurately their class was identified from speech stimuli. There were no significant effects.

3.3 Is there Correlation between Speakers' Class and how they are Classified?

A Kendall's correlation test explored the relationship between speakers' social class and the classifications made by the participants. A significant correlation was only found for the South East participant and no others. For this participant there was a weak, yet significant correlation (p = 0.021; Tau = 0.23).

For instance, as shown in Figure 4, this participant accurately classified lower-middle class speakers as lower-middle class on six instances and inaccurately as upper-middle class on 10 instances. They very infrequently considered the participant to be working class (one and two instances for lower and upper respectively) or upper class (four and two instances for lower and upper respectively). In contrast, a lower-working class speaker was only correctly identified as lower-working class on two instances, but most frequently (on five instances) they were thought to be upper working class. These results further indicate that the participant's linguistic representation of the class system is more closely aligned with a three-way class system than a six-way system.
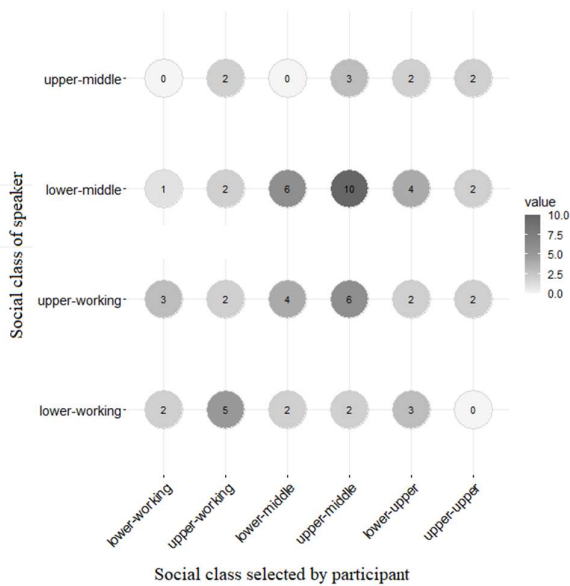

Figure 4: Results of a participant located in South East England when identifying the social class of speakers from this region. The social class selected by the participant and social class of speakers are weakly but significantly correlated (p-value = 0.021; Tau = 0.23).

This trend mostly held with the exception of upper-working class speakers. The class of these speakers was accurately identified on only two instances and they were considered lower-working class on three instances. They were most often considered to be middle class (four and six instances for lower-middle and upper-middle class respectively). It may be that upper-working class speakers do not speak in a way that allows them to be accurately identified as working class. Instead, they speak in a way more similar to participants' perceptual representation of middle-class speech. This is reminiscent of Labov's (see 1966, 1972) previous assertations that lower-middle and upper-working class speakers have the most social and linguistic 'insecurity' and consequentially, they use standard features to a greater extent than would be expected relative to their bordering classes, reflecting their aspirations of upward social mobility. Further research could look at exploring this in more detail with greater participant numbers.

4. Discussion

Participants' accuracy was significantly better than chance when identifying speakers' class in a three-way distinction (working, middle, upper) but not for a six-way distinction (lower working, upper working, lower middle, upper middle, lower upper, upper upper). When exploring the effect of social factors on patterns of linguistic variation and change, sociolinguists typically divide up social class with a two-way distinction within each class (e.g., working class is split into upper- and lower- working etc.). Though sociolinguists have often found variation within this fine-grained class system, it does not seem that participants were attuned to this variation as they did not make accurate class identifications in the six-way class division. Given that sociolinguists' class system apparently does not resonate with contributors, it may be that in future research, alternative comparisons could provide interesting insights into how class is perceived and categorised from linguistic stimuli. For example, participants could judge the relative class position of speakers e.g., whether they are the same class or if one speaker is of a higher or lower class than the other(s).

Rates of accuracy at the task were not significantly affected by either speakers' gender or social class. In addition, there were no significant differences in rates of accuracy between the five participants. In contrast to the paper's prediction, the participant located in South East England did not perform significantly better than the other participants. Though it was predicted that this participant would have greater familiarity with sociolinguistic variation and social class structures in South East England, they did not perform significantly better than other participants. This finding is reminiscent of the results of the pre-mentioned study in which, based on the same speech stimuli as this present study, participants were asked to identify the ethnicity of speakers from South East England (Cole, 2020). The five participants located in Britain did not perform significantly better than the five participants in the US.

Both ethnicity and class are macro social categories, and perhaps a geographic proximity effect would be found for more locally-meaningful, micro categories. As discussed, the structure of sociolinguistic variation in Britain is strongly related to social class i.e., the higher the social class, the lesser the regional variation. Following this, in order to complete this task, participants only needed to be attuned to the general principle of sociolinguistic variation in Britain: the closer a speaker is to RP, the higher their class. Previous work has shown that people in the US are familiar with RP and the accent is associated with notions of prestige and correctness (Stewart et al., 1985). It was perhaps not necessary to be familiar with south-eastern varieties but instead, to be able to discern the degree of difference from RP for each speaker, which may explain the lack of significant differences in participants' performance.

Nonetheless, there was an important difference in the performance of the participant located in South East England compared to other participants. For this participant, and none other, there was a significant correlation between the speakers' class and the class that they were classified as by the participant. Therefore, to

some extent, this participant did perform more accurately than others but this difference was not found when accuracy was considered as a binary outcome. The South East England participant was somewhat attuned to the general trend of the relative class position of the person whose speech they heard, but this did not clearly translate to a clear ability to pinpoint which specific class a speaker pertained to.

As discussed, the results of a social class identification task are of interest to sociolinguists for two main reasons. Firstly, if a person's social or demographic factors can be identified from speech, then this provides insights into the ways that profiling and discriminatory practices can take place based on a person's speech (see Purnell et al., 1999). Accuracy at the class identification task was relatively low and was only significantly greater than chance for a three-way class distinction. Nonetheless, this does not mean that, based on speech stimuli, people of different classes face equal evaluations. As discussed, there is much previous evidence that in southern England, based on their speech, speakers of working-class accents are disadvantaged (Cole, 2021; Levon et al., 2022).

Nonetheless, linguistic variation is perhaps not overtly linked to social class in the minds of listeners. When participants heard speech that was strongly regionally-marked, this may not have overtly and explicitly indexed the label "working class" and even less so "lower-working class". In fact, this is perhaps why prejudice and negative attitudes towards working-class speech patterns are so pervasive in British society; there is not a salient awareness that these ideas contribute towards and bolster societal inequalities related to a person's social class. Instead, speech that is heavily regionally-marked may be considered in other framings such as incorrect, not proper or lazy rather than a marker of a person's social class despite the objective linguistic reality of linguistic variation by class.

This links with the other previously mentioned reason why social identification tasks are of importance to sociolinguists. These tasks can go some way to revealing if social labels are meaningful categories for participants and to what extent participants have accurate linguistic representations of these social groupings. Participants did not seem generally attuned with the linguistic make-up of the class groupings used in this study. Participants performed with higher accuracy for the three-way class distinction than the six-way distinction, but accuracy was relatively low across the task. Generally, the labels were not accurately referenced in participants' minds by the combinations of linguistic features they heard produced by the speakers.

However, these findings do not rule out the possibility that participants do explicitly associate specific ways of speaking with these class labels. Firstly, this paper tested participants ability to identify a person's class identity and not their class per se. It may be that there is not a clear alignment between social class as determined by objective criteria and social class identity. It is possible that rates of accuracy at the class identification task would have been different if class was determined and defined differently. Secondly, it may be that the linguistic features which index social class labels were not present in the stimuli presented

to participants. However, as mentioned there was sufficient linguistic variation in the speech stimuli that in a previous study based on the same speech stimuli (Cole 2020), participants could identify speakers' ethnicity with much greater accuracy (averaging 80.7%). Thirdly, it may be that participants do indeed associate the linguistic features present in the speech stimuli with specific class labels but that this did not translate to accuracy at the task. Buchstaller (2006) has previously shown that British participants overtly associate quotatative *go* with the working class. However, when played matched-guise audio clips with variable rates of *go*, the participants did not believe that participants with higher rates of *go* were more likely to be working class. It is not necessarily the case that what participants' overtly associate with a label is entirely equitable with how they actually perceive and categorise speech stimuli.

In sum, this paper has presented the results of a pilot study testing the extent to which participants can identify another person's social class from their speech and which factors condition accuracy. This study has shown the potential for collecting sociolinguistic data with crowdsourcing, specifically using LanguageARC. This is a pilot study with a small number of participants so results are necessarily tentative. However, some interesting results have emerged. Firstly, accuracy at identifying social class is relatively low, for instance when compared to other factors in comparable studies (e.g.,ethnicity: Cole 2020). Secondly, participants could not identify speakers' social class significantly better than chance from a six-class distinction but they could for a three-class distinction. Thirdly, though there were some different patterns of responses, the participant located in South East England did not perform with significantly greater accuracy than other participants, suggesting familiarity with sociolinguistic variation in the region may not have been very advantageous. Finally, there is a distinction to be made between participants ability to pinpoint a speaker's exact social class membership and their ability to identify their relative class position. This paper has discussed these results in the context of how social identification tasks can illuminate patterns in how speech is categorised and interpreted.

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