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**Implicit-explicit language
attitudes in England: Attitude
change in apparent time data?**

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a standard language? Changing evaluations across
Europe*

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Introduction: explicit and implicit attitudes in social psychology/social cognition

- Body of empirical research indicating that individual's attitudes can operate at both *explicit* and *implicit* levels
 - i.e., differentiation between:
 - (explicit) evaluations - based on deliberate processes and fully reportable
 - (implicit) evaluations - not available to introspection and uncontrollable
 - (see Devos 2008; McKenzie & Gilmore 2017; McKenzie and Carrie, 2018)
- Psychologists developed innovative implicit attitude measures in last 20 years (in addition to traditional self-report instruments)
- For many researchers, newer implicit attitude measures perceived as more robust than explicit attitude measures
 - -absence of social desirability bias?

Implicit Association Test (IAT)

- Most widely used instrument to study implicit (Greenwald, McGhee & Schwartz 1998)
- IAT is a computer-based instrument which examines the *relative strength of associations* between
 - two dichotomous *attitude objects* (e.g., Caucasians-African Americans + associated traits)
 - and two opposing *evaluative dimensions* (e.g., positive-negative + associated traits)
 - through comparison of participants' *response latencies* for each
- Theory underlying IAT is that *more rapid categorisations* of - for example- Caucasians with positive traits and African Americans with negative traits (or vice-versa) *reflect strong evaluative associations in memory* and (arguably) *unconscious prejudices* (Rudman, Greenwald, Mellott & Schwartz 1999)
- = more positive implicit attitudes towards Caucasians than African Americans (or vice versa)

Example 1: IAT instructions

POSITIVE

To classify a word as OR press the LEFT 'z' key.

NORTHERN ENGLISH SPEECH

NEGATIVE

To classify a word as OR press the RIGHT '/' key.

SOUTHERN ENGLISH SPEECH

Again, please remember that each word will fall in ONLY ONE CATEGORY.

Four labels at the top will tell you which words go with each key.

Press Enter to begin.

Example 2: IAT experimental block (task underway)

POSITIVE
OR
NORTHERN ENGLISH SPEECH

NEGATIVE
OR
SOUTHERN ENGLISH SPEECH

not clear

Example 3: IAT response time feedback

Your average response time was 1028ms

Your accuracy was 100%

Press any key to continue.

IAT research in Social Psychology

- IAT employed in many domains
 - Including: towards different genders, nationalities, sexual orientations, religions and ethnic groups (Fiske & Taylor 2008)
 - instrument generally has *very good predictive validity* - especially regarding prejudicial attitudes towards specific social groups
 - correlate strongly with individual behaviour (see Greenwald et al. 2009)
- Evidence of strong correlations between IAT scores and *amygdala* activity in evaluations of racial groups (Phelps et al. 2000)

Relationship between implicit-explicit attitudes in Social Psychology/Social Cognition

- Research generally demonstrated *low correlations* between explicit and implicit measures, including the IAT
 - especially socially sensitive topics, e.g., minority group prejudice (see Hofmann et al. 2005)
 - points to implicit and explicit attitudes as *structurally distinct* (Greenwald and Nosek 2009)
 - implies individuals can hold *different* implicit-explicit attitudes about an attitude object (Wilson, Lindsey & Schooler 2000; Rydell & McConnell 2006)

Attitude change and explicit-implicit evaluations in Social Psychology/Social Cognition

- Consistent implicit-explicit attitudes *more stable* than inconsistent evaluations (Karpen et al 2012)
 - mounting evidence implicit and explicit evaluations do not change at the same rate
 - ... more rapidly learnt, less stable explicit attitudes changing at a faster pace
 - ... than slowly acquired implicit attitudes – resistant to change (Brinol et al. 2009; Gawronski et al., 2017; Gregg et al. 2006)
- **Implicit-explicit attitude discrepancy (IED)**, in *real time* or *apparent time data* may indicate attitude change in progress
 - with *explicit ratings indicating the direction of any change underway*, i.e., towards greater/lesser positivity towards the attitude object (Gawronski & Strack 2004; Petty et al 2006; Charlesworth and Banaji, 2019)

Language attitudes 1

- Large body of research - across different languages and in a plethora of contexts
 - majority of studies examined individuals' (arguably) *explicit language* attitudes, often employing 'indirect instruments' such as the matched-guise technique/verbal-guise technique
- Results demonstrated a high degree of consistency
 - speakers of language varieties perceived *standard* frequently rated positively on *status* traits when compared to speakers of forms deemed non-standard
 - speakers of *non-standard* speech varieties frequently rated positively on *solidarity/social attractiveness* traits (Coupland & Bishop 2007)
 - historically, *English* nationals' positive status ratings of (standard) varieties associated with English speakers from southern England, e.g., Received Pronunciation (RP) / Standard Southern British English (SSBE)
 - positive ratings of (speakers of) urban speech forms in northern England highly on social attractiveness, e.g., in Liverpool and Newcastle (Giles & Coupland 1991; McKenzie 2015)
 - But – recent evidence of greater tolerance of urban speech in England (see Coupland & Bishop 2007; Mugglestone 2003) – *attitude change in progress?*

So what? - Language attitudes 2

- Public attitudes towards linguistic diversity, within and outwith England, clearly index stereotypes regarding speakers and their *perceived* social group membership
- Thus of interest to sociolinguists -
 - results of prior explicit language attitude studies - repeatedly indicated the language variety employed by a given speaker can have wide-ranging social implications, including influencing:
 - job hiring and career progression, teachers' perceptions of their students' educational abilities and the perceived persuasiveness/credibility of the message (e.g., Powesland & Giles 1975; Rakic, Steffens & Mummendey, 2011; Seligman, Tucker & Lambert 1972)

Prior language attitude research using IAT

- Recent studies, examining both explicit and implicit attitudes, employing the IAT:
 - Thailand (Todd and Pojanapunya 2009); New Zealand (Babel 2010); USA (Pantos and Perkins 2012; Campbell-Kibler 2012)
 - provide evidence of implicit-explicit *language* attitude divergence
 - compatible with findings in other attitudinal domains
- But:
- Lack of implicit *language* attitude research undertaken in England using the IAT
 - surprising given volume of (explicit) language attitude studies investigating varieties of English spoken in northern/southern England
 - Northern English vs. Southern English: most dominant and socially meaningful (socio)linguistic distinction made between regional varieties of English in England (Trudgill 1999; Wales 2006)

IED, Language attitude change and (socio)linguistic change

- No (known) research investigating the extent to which implicit-explicit attitude divergence towards language use can determine the direction of *language* attitude change in progress
- But linguists' growing realisation: *language change in progress* must be considered in relation to ongoing social-psychological change within the community
- Recent evidence that changes in community language attitudes can indeed influence micro-level language change over time
 - albeit in complex ways which are not yet fully understood (see Grondelaers & Kristiansen 2013; Sandøy 2013)

Present Study: Research Questions

- i) What are English nationals' *implicit* attitudes towards a) Northern English speech and b) Southern English speech?
- ii) What are English nationals' *explicit* attitudes towards a) Northern English speech and b) Southern English speech?
- iii) To what extent, if at all, is there *implicit-explicit attitude discrepancy (IED)* between English nationals' implicit and explicit language attitudes?
- iv) To what extent, if at all, do age and gender differences amongst English nationals influence implicit and explicit language attitudes?

Participants

- 90 English nationals
- Male ($n=43$) Female ($n=47$)
- Composed of individuals from a wide range of occupations/levels of educational attainment
- Age range 18-67 (mean=39.4, SD=12.6)
- All participants resident in Newcastle upon Tyne at time of data collection
- All self-identified as Northern English ($N=90$)
 - (Not included: self-identified as Southern English ($n=14$) or Other English (e.g., Midland or Anglo-British) ($n=4$))

Implicit Attitude Instrument: IAT

(see also McKenzie and Carrie, 2018)

- Open Sesame software (Python programming language)
- *Three practice and two experimental blocks*
- Attitude object dimensions: *Northern English Speech - Southern English Speech*
 - five representative cities included for each dimension (collected in pilot study)
 - Northern English speech: *Newcastle – Liverpool – Manchester – Leeds – Sheffield*
 - Southern English speech: *Cambridge – Oxford – London – Southampton – Brighton*
- The evaluative dimensions: *Positive - Negative*
 - composed of five target words (and bipolar opposites) (collected in pilot study)
 - positive: *correct – good – educated – clear – high status*
 - negative: *not correct – bad - not educated - not clear - low status*
- As per IAT norms, throughout the blocks, the labels (Northern English speech- Southern English speech and positive-negative) were positioned on either the left or right of screen
 - Word stimuli presented individually in middle of screen in random sequence

IAT: Test blocks

Block	No. of Trials	Function	Label: left of screen (left key)	Stimuli	Label: right of screen (right key)
1	20	Practice	Positive	*Traits	Negative
2	20	Practice	Northern English speech	**Northern-Southern English cities	Southern English speech
3	40	Test	Positive + Northern English speech	Traits + Northern-Southern English cities	Negative + Southern English speech
4	20	Practice	Southern English speech	Northern-Southern English cities	Northern English speech
5	40	Test	Positive + Southern English speech	Traits + Northern-Southern English cities	Negative + Northern English speech

- *Positive evaluative traits (correct, good, educated, clear, high status)
- *Negative evaluative traits (not correct, bad, not educated, not clear, low status)
- **Representative Northern English speech cities (Newcastle, Liverpool, Manchester, Leeds, Sheffield)
- **Representative Southern English speech cities (Cambridge, Oxford, London, Southampton, Brighton)

IAT: Experimental block (5) instructions: Negative Northern English –Positive Southern English

Once again, you will be presented with a set of words to classify into groups.
Again, the four categories (POSITIVE, NEGATIVE, NORTHERN ENGLISH SPEECH, SOUTHERN ENGLISH SPEECH)
you saw separately, will be presented together.

NEGATIVE

To classify a word as OR press the LEFT 'z' key.

NORTHERN ENGLISH SPEECH

POSITIVE

To classify a word as OR press the RIGHT '/' key.

SOUTHERN ENGLISH SPEECH

Please remember that each word will fall in ONLY ONE CATEGORY.
Four labels at the top will tell you which words go with each key.

Press Enter to begin.

IAT: Experimental block (3): test underway

Positive Northern English – Negative Southern English

POSITIVE
OR
NORTHERN ENGLISH SPEECH

NEGATIVE
OR
SOUTHERN ENGLISH SPEECH

Brighton

Explicit Attitude Instrument: Self-report (magnitude estimation)

1 I like to hear varieties of English spoken in the *north* of England

Yes **No**

How would you describe the *speakers* of international varieties of English?

2 I like to hear varieties of English spoken in the *south* of England

Yes **No**

How would you describe the *speakers* of international varieties of English?

see Crites et al 1994 re 'like' as a general evaluative term (i.e., not measuring affective states or cognitive characteristics of the attitude object)

Results: Implicit language attitudes (IAT)

- Initial data analysis: inspection of response latencies less than 300ms/greater than 3,000ms - no cases
- *D* score calculated
 - mean Pro-Southern English response latency condition (block 5) ($M=1151.28\text{ms}$, $SD=504.62$) *minus* Pro-Northern English response latency condition (block 3) ($M=1295.19\text{ms}$, $SD=331.73$)
 - divided by pooled standard deviation across both conditions
 - *D* score - range between -2.0 and 2.0 - where 0.0 represents no difference in response latencies between conditions
 - ***D*=0.21, a small to moderate *D* score effect size**
- *Implicit bias in favour of Southern English speech* (Pro Southern English)
- One sample *t*-test demonstrated *significant* difference between *D* score across participants
- $t(89)=4.27, p=0.001$

Results: Explicit language attitudes

- Participant ratings (80-point scale) broadly positive for:
 - Northern English speech ($M=68.17$, $SD=10.86$)
 - Southern English speech ($M=50.82$, $SD=20.51$)
 - Mean explicit difference score (**in favour of Northern English**) ($M=17.35$, $SD=21.12$)
- But *explicit preference for varieties of English spoken in the north of England*
 - in contrast to the IAT results
- Follow-up one sample t -test again demonstrated the difference between the self-report ratings for Northern English and Southern English speech across participants was *significantly greater than zero*:
 - $t(89)=7.80$, $p<0.001$ ($p=0.000$)

Results: Implicit-explicit language attitude relations

- Correlation analysis demonstrated weak relationship between D-IAT scores
 - $r = -0.134, p=0.11$
- *Consistent with generally weak implicit-explicit relations* in previous research examining attitudes towards a range of (non-language related) socially sensitive topics and employing the IAT (Nosek et al. 2007; Greenwald et al. 2009)
- Hence, results of the present study suggest that IAT measures and self-report measures are also able to capture distinct levels of *linguistic* attitudes which are potentially conflicting (see also McKenzie 2015)

Results: Age effects (if time)

- Participants classified into three distinct age groups through visual binning
 - young (18-34 years) ($n=30$); middle-aged (35-49 years) ($n=33$); and older (50-68 years) ($n=27$)
- *Implicit attitudes*
- One way between groups ANOVA: **no significant main effect for age** on overall D Score:
- $F(2, 87)=1.312, p=0.28, \eta^2=0.03$
- *Explicit attitudes*
 - Further two-way ANOVA analysis (Bonferroni adjusted) of the explicit difference score across participants indicated:
 - younger age group most positive ($M=20.93, SD=17.30$) towards Northern English speech than middle-aged group ($M=15.59, SD=16.95$) or the older age group ($M=15.51, SD=28.59$)
 - though younger participants greater self-reported favourability - not significant:
 - $F(1, 84)=0.90, p>0.05 (p=0.411), \eta^2=0.021$

Results: Gender effects (if time)

- Two-way ANOVA analysis conducted on potential effect of gender, male ($n=43$) and female ($n=47$), upon implicit and explicit attitudes
- *Implicit attitudes*
 - no significant effect for gender on the overall D score:
 - $F(1, 84)=0.016, p>0.05$ ($p=0.90$), $\eta^2=0.00$
- *Explicit attitudes*
 - *Further two-way ANOVAs indicted no significant effect for gender on explicit difference ratings between Northern-Southern English*
 - $F(1, 84)=0.353, p>0.05$ ($p=0.554$), $\eta^2=0.004$

Results: Age (x 3)-Gender (x 2) interaction (if time)

- Two-way ANOVAs (Bonferroni adjusted) for the implicit D-IAT scores and the explicit ratings for Northern English and Southern English:
- A **significant interaction effect for the explicit difference ratings only**:
 - $F(2,84)=4.135, p<0.05$ ($p=0.022$), $\eta^2= 0.08$
 - *younger females (M=27.09, SD=19.03) rate Northern English significantly more positively on the self-report scale*
 - *(when compared to older males) (M=9.00, SD=21.49)*
 - but– *no main effects for gender or age found*

Wider discussion and conclusions 1

- Questioned directly, Newcastle-based English nationals *significantly more positive towards Northern English speech*
 - likely attributable to ‘conscious’ expression of solidarity with fellow speakers of English perceived as ‘northern English’
 - similar ingroup loyalty found amongst UK participants, including in Newcastle Upon Tyne, towards (speakers of) ‘local’ forms of English (McKenzie 2015; Coupland & Bishop 2007)
- Conversely, *significant implicit bias in favour of Southern English speech*
 - points to stable, deeply embedded, ‘unconscious’ negative associations with (speakers of) forms of English spoken in northern England
 - arguably - reflects historical political domination/economic power of the south of England within the UK more widely - and elevation of particular southern English speech varieties, on prestige, within and outwith the UK-context (McKenzie 2010; Cameron 2012)
 - despite - participants self-identifying as ‘Northern English’

Wider discussion and conclusions 2

- *Weak correlation* between explicit self-report and implicit IAT ratings for Northern English-Southern English speech
- Evidence English nationals' evaluations of linguistic variation are multifaceted
 - suggests language attitudes operate at different(unconscious-conscious?) levels of awareness
 - i.e., there exist dual implicit and explicit attitudes towards *language* diversity
- Weak correlations consistent with
 - (limited) previous IAT-based research investigating attitudes towards linguistic variation in other contexts (Todd & Pojanapunya 2009; Pantos & Perkins 2012)
 - results from the extensive body of implicit and explicit attitude research examining *non-language related* attitudinal objects (see Hofmann et al. 2005)

Wider discussion and conclusions 3

- Evidence for structurally distinct language attitudes - implications for the investigation of language attitude change. Specifically:
 - Pro-Southern English speech bias - in IAT study - likely reflects more deeply held, slowly changing implicit attitudes, formed through repeated exposure
 - Pro-Northern English self-report ratings reflect more recently formed explicit attitudes, change at a more rapid rate
- IED provides *evidence of language attitude change in progress, in apparent time data*
 - explicit attitudes changing more rapidly, in direction of greater tolerance of / favourability towards (speakers of) (varieties of) English spoken in the north of England
 - evidence of younger females leading attitude change?
- parallels evidence of IED as indicator of attitude change in progress in other attitudinal domains - most notably in studies examining white US nationals' explicit/implicit ratings of African-Americans (see Wilson et al. 2000)

Wider discussion and conclusions 4

- Evidence of language attitude change in progress in *apparent time* data
 - need in-depth longitudinal (i.e., real time) language attitude studies
 - findings obtained can help provide more precise picture of *rate* and *direction* of (unconscious-conscious?) language attitude change in progress
- Kristiansen (2015) notes:
 - implicit-explicit language attitude research, undertaken in conjunction with research examining patterns of language use, can help uncover the driving forces behind any sociolinguistic change in progress within particular speech communities

Wider discussion and conclusions 5: Limitations

- In IAT, presentation of the labels ‘Northern English speech’ and ‘Southern English speech’ - rather than actual speech samples
 - norm to use labels in IAT - but Pantos & Perkins (2012), Campbell-Kibler (2012), Rosseel et al. (2018) included auditory samples
 - but – is it possible to present speech of one speaker each from the north and south of England as representative of the English spoken within these large geographical areas –
 - if so, what specific features to present for evaluation (trap-bath? strut-foot?) (see McKenzie and McNeil, in progress)
- Also:
- worthwhile to investigate implicit language attitudes across diverse speech communities and/or incorporate other implicit attitude measures
 - e.g., the affect misattribution procedure (AMP) (Payne 2009), the bona-fide pipeline (Olsen & Fazio 2009) as well as modifications on the IAT such as the Single Category Implicit Association Test (SC-IAT) (Karpinski & Steinman 2006; Rosseel 2017)

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