GAME OF PHONES: A SOCIO-PHONETIC ANALYSIS OF STYLISED MEDIA PERFORMANCE OF YORKSHIRE ENGLISH

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ABSTRACT

Stylised linguistic performance in the media can provide an informed snapshot on how social meanings can be ascribed to phonetic variables [1]. This paper explores British English Yorkshire variety (YE) representation in the television series, Game of Thrones. Three actors' distinctive YE variable realisations were acoustically analysed. F1 and F2 measures were extracted from the two vowels' midpoints in the YE STRUT-FOOT merger [2]. The YE monophthongal GOAT and FACE were measured at the 25%, 50% and 75% trajectory points [3]. A lay-listener perception task [4] was conducted to assess YE performances and its socially indexical meaning.

Results found non-native YE actors to unsuccessfully produce the STRUT-FOOT merger and monophthongal variants. Listeners utilised YE variables to detect imitated performances and form social evaluations. Media reliance on phonetic cues to construct fictional social landscapes further entrenches the enregistered variety and its associated ideologies, highlighting a need for further research into media effects on language attitudes.

Keywords: vowels, sociophonetics, media, accents, performance

1. INTRODUCTION

Research into media influence on language attitudes is relatively undocumented [5, 6]. Sociophonetic variables have been found to function as valuable, stylistic resources amongst other semiotic cues (e.g., clothing and appearance) for both performative and interpretive means to navigate the social landscape and identity [7, 8]. This paper examines how broadcast media relies upon sociophonetic variation and its related ideologies as an indexical resource to construct fictional worlds and characters, and how such portrayals can further strengthen these indexical links. Its aim is to encourage further research into media effects on language attitudes and to contribute towards the growing discussion of accent bias in society, its implications [9], and media's role in perpetuating these linguistic ideologies through stereotypical accent representations.

1.1. Yorkshire English

Located in the North of England, the Yorkshire county is the largest county in the UK. There are multiple Yorkshire dialects that can be classified as possessing phonetic and morphosyntactic contrasts [10]. However, this paper utilises the term *Yorkshire English* (YE) to refer to the general representation of the regional variety in the media source. The term is also utilised in reference to the distinctive YE phonetic variables analysed in the paper, which do not appear collectively in any other geographic location than in Yorkshire (see section 2.1.1).

Yorkshire gained prowess in the industrial era of the 18th century onwards due to its textile, steel manufacturing and coal mining trade [11, 12, 13]. This resulted in densely populated industrial cities with a large working-class to meet the demands of the labour workforce. With a population greater than Scotland (over 5.3 million) [14], modern-day Yorkshire faces several social issues: with the Yorkshire city of Bradford ranking highest in Europe per crime index [15] and one third of all Yorkshire children facing poverty [16]. The social history of Yorkshire has arguably accounted for resulting social evaluations of Yorkshire speakers as being of lower status and prestige [17]. Contrastingly, the Yorkshire accent is often rated highly in terms of social attractiveness [18] as one of the most trustworthy British accents. Such ideologised values of the Yorkshire accent as 'honest' have caused YE to gain a market value, with many UK call-centres strategically placed in the region [19].

1.2. Game of Thrones

Adapted from the bestselling works of George R.R Martin, the HBO television series *Game of Thrones* (2011-2019) spanned 8 seasons and became a prominent figure of pop culture. A fictional fantasy world containing medieval warfare, magic and dragons, the screen adaptation drew on sociophonetic variation to aid the audience's sociocultural understanding of the Game of Thrones (GOT) world. The sociolinguistic context is evident in the depiction of the two main feuding families in GOT for overall power of the Westeros Kingdom. The Lannisters are

the most powerful and wealthy family, located in the Southern Kindgom and speak the standard received pronunciation (RP) accent. Although only less than 3% of the real-life population speak RP [20], ideologised values of its speakers as being of high status and intelligence [21] has proven a key tool to create characters of dominance in fictional media [22]. The Starks are the opposing family in the North who are depicted on-screen with the regional YE variety. The Starks' character depiction also parallels with the YE variety perception of being lower in status but, are an extremely loyal family vying for justice. The use of social-indexical variation with existing real-world ideological meanings lays the social groundwork for audiences to access immediate contextual knowledge of the fictional world. This is a growing stylistic tool employed across media platforms, present even in computer games [23].

2. METHODS

The present study employs a two-pronged approach when examining YE representation in the *Game of Thrones* (GOT) media series. The investigation comprises of an acoustic analysis of three actors' YE portrayals in GOT, and a lay listeners' social evaluation (LSE) task of the portrayals.

2.1. Materials

The speech of 3 male actors portraying YE in GOT were analysed: Sean Bean (native YE speaker), Kit Harrington (Standard Southern British English: SSBE speaker) and Richard Madden (Standard Scottish English: SSE speaker). Speech was extracted across 8 seasons of GOT (.mp4 file), video was excluded to minimise perceptual effects in the subsequent evaluation task. Resulting audio files were uploaded into Praat [24] for the data selection process.

2.1.1. Data Selection

In line with previous research into accent imitation in the media [25], this study employed the following selection criteria for speech samples: 1) Speech is in a monologue format (minimum 10 seconds in duration), with no interruptions from external actors/events. 2) No contextual references to the character or plotline. 3) Samples are in full sentences with grammatical structure. This is to ensure listener comprehension and minimise any perceptual effects in the LSE.

The distinctive YE variables functioned as controls for the speech samples, with at least 5 tokens of each YE variable present in each actor's speech compilation (table 1). The compiled recordings of each actor's YE portrayals are 1 minute in duration and utilised as stimuli in the LSE.

YE Variables	Examples	RP	YE
STRUT vowel	*'cut, blood'*	/ʌ/	/ʊ/
FOOT vowel	*'good'*	/ʊ/	/ʊ/
GOAT vowel	*'no, throne'*	/əʊ/	/oː/
FACE vowel	*'name, day'*	/eɪ/	/eː/
Intervocalic /t/	*'battle'*	/t/	/ʔ/

Table 1: YE variables used in speech samples and its minimal realisations in RP and YE.

2.2. Acoustic Analysis

Acoustic results for four YE vowels were reported: STRUT, FOOT, GOAT and FACE vowels [26]. Note that the present study employs the lexical sets [27] for analysing inter-speaker differentiation of YE variable production. An overall distribution of 78 YE tokens were analysed, with an equal distribution of tokens realised by each actor (overall tokens per variable: STRUT = 24, FOOT = 24, GOAT = 15, FACE = 15).

2.3.1. Procedure

All YE tokens were manually labelled in Praat using a TextGrid. To analyse the STRUT and FOOT vowels and their merged nature in YE, F1 and F2 formant measurements were measured by hand from bi-syllabic and monosyllabic lexical items [2]. To examine the monophthongal YE GOAT and FACE variants, the F1 and F2 formant measurements were measured from the 25%, 50% and 75% trajectory points throughout the vowel. Distances between the trajectory points were measured to assess the degree of movement across the vowels [3]. The acoustic data were visualised and statistically analysed using R [28]. Vowels were normalised via the Fabricius et al method [29] and were subsequently visualised utilising the Visible Vowels software [30].

2.3. Listener Social Evaluation (LSE) Task

A total of 18 participants were recruited for the LSE (50:50 native and non-native Yorkshire). The native YE group were aged 22-56 (mean = 30.4) and the non-native YE group were aged 21-26 (mean = 23.5). Conditions were not controlled for gender: native YE group (4F, 5M), non-native YE group (7F, 2M). Listeners were classified as native YE if they received both their primary and secondary education in Yorkshire [31] and had 10 years of uninterrupted residence in the region. All listeners were monolingual speakers of English.

2.3.1. Task Design

Participants were presented the speech compilations of the 3 actors' YE portrayals in GOT as auditory stimuli via Sony SX310 headphones. To eliminate order effects on listener responses, participants were split into three conditions in which 3 actors would be presented in alternating orders. After each stimulus was presented, participants would answer a questionnaire that aimed to elicit both qualitative and quantitative findings. Likert-scale ratings were employed to assess listener ratings on the YE portrayals and the accent's credibility. Participants were able to provide qualitative answers on lay-listener perceptual judgements of the performance, the phonetic variables utilised to form judgements, and the social evaluations/attitudes (status and social attractiveness) of the YE characters from auditory stimuli only. The overall duration of the social evaluation task was no longer than 15 minutes (table 2).

Task	Duration
Stimulus 1	1 minute
Sub-questionnaire	8 questions
Stimulus 2	1 minute
Sub-questionnaire	8 questions
Stimulus 3	1 minute
Sub-questionnaire	10 questions

Table 2: LSE Task Design

3. RESULTS

3.1. Acoustic Analysis

Extensive inter-speaker variability amongst the actors is observed in their STRUT-FOOT realisations (figure 1). Native Yorkshire actor, Sean Bean (SB) produces both STRUT and FOOT in a centralised position with consistent merger, as expected in YE accents. Scotsman Richard Madden (RM) and SSBE speaker Kit Harrington (KH) are unable to produce STRUT-FOOT productions with the positional accuracy needed and are unable to consistently merge the vowels. KH displays instances of hypercorrection with multiple backed FOOT tokens, whilst both actors' productions display acoustic similarity to their own native speech counterparts.

Minimal vowel trajectory was observed by SB in both his GOAT and FACE YE monophthongal variants (Figures 2 and 3). RM and KH both produce the vowels with substantial trajectory movement incompatible with YE monophthongs. Overall, the non-native YE actors were unable to imitate YE speech and produce the distinctive variables with acoustic similarity to native YE speech. RM and KH

displayed instances of hypercorrection and inability to alter production from their native accents. YE portrayals in GOT are acoustically inconsistent amongst the actors.
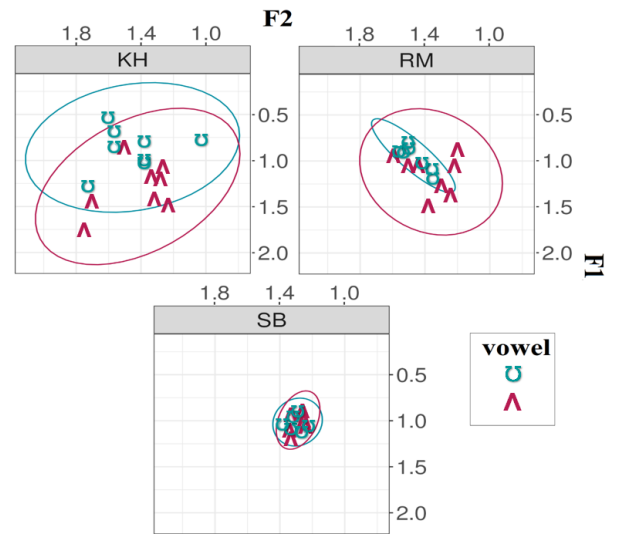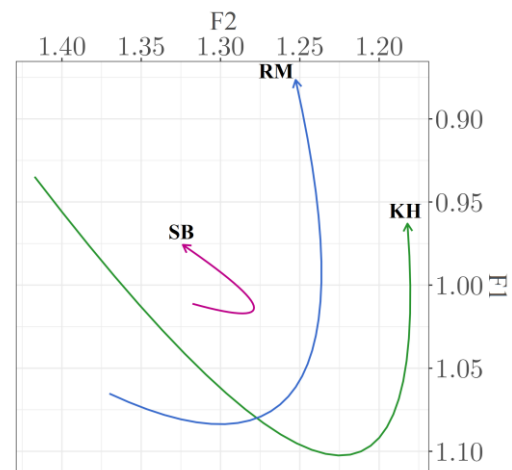

Figure 1: STRUT-FOOT distribution in GOT

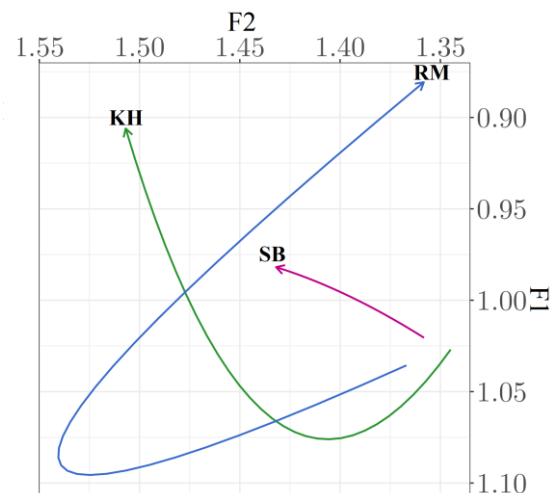**Figure 2**: GOAT trajectory in GOT

Figure 3: FACE trajectory in GOT

3.2. Listener Perception Task

The majority of listeners across both conditions identified the 3 actors' speech performance to be in a YE accent, with RM and KH receiving mixed results due to their acoustic inconsistencies (e.g., Yorkshire, Manchester, Northern English portrayals). Table 3 shows highest perceptual ratings for SB in relation to a credible YE accent. Non-YE actors received greater variability amongst perceptual ratings, with notable higher ratings for KH by non-YE listeners and conversely, higher ratings for RM by the YE listeners.

Actor	Native YE Listeners		Non-YE Listeners	
	Mean	SD	Mean	SD
SB	4.6	0.5	4.3	0.71
KH	2.7	0.97	3.2	1.39
RM	3.2	1.39	2.4	1.13

Table 3: Credibility Ratings of YE Portrayals

Table 4 demonstrates a high success rate in accurately identifying SB as native YE. Over half of listeners correctly identified KH origins to be London/Southern England. RM performed better in concealing his origins from the listeners. However, all Scottish listeners in the non-YE condition accurately identified his origins, with lay-person qualitative feedback on short vowels, which can be assumed in reference to the Scottish Vowel Length rule [32].

Actors	Overall	Native YE Listeners	Non-YE Listeners
SB	83%	88.8%	77.7%
KH	55.5%	44.4%	66.6%
RM	33.3%	11.1%	22.2%

Table 4: Accuracy rates on Speaker Origin Identification

Listeners showed meta-awareness of phonetic characteristics to form their perceptual judgements: *'The 'ow' in throne sounds too forced… like a posh person trying to sound rough'* [discussing SSBE speaker, KH speech]. *'The way he said the 'O' in home sounded like how I'd say it…really elongated and flat. A bit like the 'a' in chase too'* [Discussing native YE speaker, SB speech].
At the end of the social evaluation task, listeners provided qualitative answers on their expectation of the YE characters' appearances and behaviours. Qualitative data found patterns in YE character descriptions to be *'rough, dirty, strong, warriors'* and lacking any regality or finery. Overall, character

behaviour expectations were loyal (*'a man of his word'*), surviving hardship and intent on fighting for justice and family.

4. DISCUSSION

4.1. Stylised YE portrayal in Game of Thrones

The acoustic analysis demonstrates non-native YE actors' unsuccessful attempts of credibly performing the YE variables: lacking in consistency in merging the STRUT-FOOT set or minimal vowel trajectory movement in GOAT and FACE. Lay listeners were found to be able to report on fine-grained phonetic cues to identify YE portrayals, perceptually rate credible YE speech and even detect actors' accent and geographic origins.
The salient, indexical link between a linguistic variety and its social meaning was exemplified through listeners' social evaluations of characters, which paralleled with present societal attitudes of the enregistered YE repertoire [33]. These social evaluations of predicted character appearance and behaviour were similar to actual YE character depictions in GOT, demonstrating how semiotic resources (linguistic and non-linguistic) mutually interact to perform and interpret social identity and personae. Arguably, the most iconic phrases from GOT are *'Winter is coming'* and *'You know nothing, Jon Snow*. Both phrases are frequently produced by 'northern' voiced characters that realise the YE merger set and monophthongal GOAT variables. With GOT becoming a global pop culture phenomenon, YE was commodified via these iconic stylised utterances marketed onto merchandise (e.g., clothing, cups, board games) [34].
Media reliance on sociophonetic variation and its indexical meaning to construct character identities and fictional worlds has reinforced the YE variety and its ideologies as a heavily typified form [33]. This reliance results in the mass-scale reinforcement of the variety and its ideological values in the social landscape and quotidian social interaction [34, 7].

4.2. Wider Implications

This small-scale study has shown how sociophoentic analysis of media accent portrayal can inform on sociophonetic variation and language ideologies in interaction, and the permeace of accent bias and its real-life implications [35]. Accent discrimination has been found to impact job prospects [9], and the likelihood of being convicted of a crime [36]. Research into media performance can inform on sociophonetic theory and our understanding of media influence on accent bias, through its use of the phonetic signal and its social indexicality.

5. REFERENCES

[1] Eckert, P. 2019. The limits of meaning: Social indexicality, variation, and the cline of interiority. *Language (Baltimore).*

[2] Jackson, L., Gold, E. 2018. An investigation into Bradford speakers' ability to imitate a SSBE accent: Implications for forensic phonetics. *IAFPA 2018,* Huddersfield UK.

[3] Earnshaw, K., & Gold, E. 2018. Variation in the FACE vowel across West Yorkshire: Implications for forensic speaker comparisons. *Interspeech 2018*, Hyderabad.

[4] Shen, C., Watt, D. 2015. Accent categorisation by Lay Listeners: Which Type of 'Native Ear' Works better?

[5] Androutsopoulos, J. 2014.Mediatization and sociolinguistic change. Key concepts, research traditions, open issues. In *Mediatization and Sociolinguistic Change,* 3-48. Berlin: De Gruyter

[6] Stuart-Smith, J., Pryce, G., Timmins, C., Gunter, B. 2013. Television can also be a factor in language change: Evidence from an urban dialect. *J. Ling. Soc. Am. 89,* 501-536.

[7] Eckert, P. 2008. Variation and the indexical field. *Journal of Sociolinguistics, 12*, 453-476.

[8] Moore, E., Podesva, R. 2009. Style, indexicality, and the social meaning of tag questions. *Language in Society, 3,* .447-485.

[9] Sharma, D., Levon, E., Watt, D., Ye, Y., Cardoso, A 2019. Methods for the study of accent bias and access to elite professions. *J. Language and Discrimination*, 150-172.

[10] Haigh, S. 2015. Investigating Regional Speech in Yorkshire: Evidence from the Millennium Memory Bank.

[11] Baxter, J.L. 1977. The origins of the social war in South Yorkshire – a study of capitalist evolution and labour class realization in one industrial region. PhD thesis, University of Sheffield.

[12] Koditschek, T. 1990. *Class formation and urban industrial society: Bradford, 1750-1850.* Cambridge University Press.

[13] Blewett, M. 2006. Yorkshire lasses and their lads: Sexuality, sexual customs and gender antagonisms in anglo-american working-class culture. *J. Social History, 40*(2)*,*317-336.

[14] Yorkshire Network – Facts and Statistics. https://www.yorkshirenetwork.co.uk/yorkshire-facts-and-statistics/.

[15] Numbeo Crime Index. https://www.numebo.com/crime/region_rankings.jsp?title=2022&region=150.

[16] The Yorkshire Post. https://www.yorkshirepost.co.uk/lifestyle/money/one-in-three-yorkshire-children-living-in-relative-poverty-shock-figures-show-3764495.

[17] Coupland, N., Bishop, H. 2007. Ideologised values for British accents. *J. Sociolinguistics, 11*(1), 74-93.

[18] McKenzie, R. M., McNeill, A. 2022. *Implicit and Explicit Language Attitudes: mapping linguistic prejudice and attitude change in England.* Routledge.

[19] Beal, J.C., Carmela, N., Massimo, S. 2009. Perspectives on Prescriptivism. *English Language and Linguistics, 13*(3), 510-516.

[20] Trudgill, P. 2000. *Sociolinguistics of Modern RP.* University College London.

[21] Edwards, J., Jacobsen, M. 1987. Standard and regional standard speech. *Language in Society, 16*(3), 369-379.

[22] Lippi-Green, R. 2012. *English with an Accent: Language, ideology and discrimination in the United States.* London: Routledge.

[23] Kjeldgaard-Christiansen, J., Henjá, M. 2022. The Voices of Game Worlds: A Sociolinguistic Analayis of Disco Elysium. *Games and Culture, 0*(0).

[24] Boersma, P., Weenink, D. 2022. Praat: Doing Phonetics by Computer [Computer program]. Version 6.3.03. Retrieved 17 December 2022 from http://www.praat.org/.

[25] Knooihuizen, R. 2016. Accuracy and acceptability of second-dialect performance on American television. *English Language and Linguistics, 23*(2), 229-252.

[26] Haddican, B., Foulkes, P., Hughes, V., Richards, Hazel. 2013. Interaction of social and linguistic constraints on two vowel changes in northern England. *Language Variation and Change, 25,* 371-403.

[27] Wells, J. C. 1982. *Accents of English: An Introduction.* Cambridge: Cambridge

[28] R Core Team. 2022. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. https;//www.R-project.org/.

[29] Fabricius, A. H., Watt, D., Johnson, D. E. 2009. A comparison of three speaker-intrinsic vowel formant frequency normalisation algorithms for sociophonetics. *Language Variation and Change, 21*(3), 413-435.

[30] Heeringa, W., Velde, H.V. 2017. Visible Vowels: A Tool for the Visualisation of Vowel Variation. *Interspeech.*

[31] Gold, E., Ross, S., Earnshaw, K. 2018. The 'West Yorkshire Regional English Database': Investigations into the generalizability of reference populations for forensic speaker comparison casework. *Interspeech 2018,* Hyderabad.

[32] Trudgill, P., & Hannah, J. 1982. *International English.* London/New York: Arnold.

[33] Agha, A. 2003. The social life of cultural value. *Language & communication, 23*(3), 231-273.

[34] Johnstone, B., Andrus, J., Danielson, A. E. 2006. Mobility, Indexicality, and the Enregisterment of "Pittsburghese". *Journal of English linguistics, 34*(2), 77-104.

[35] Sharma, D., Levon, E., Ye, Y. 2022. 50 years of British accent bias. *English World-Wide. A Journal of Varieties in English.*

[36] Paver, A., Wright, D., Braber, N. 2021. Accent Judgements for social traits and criminal behaviours: ratings and implications.