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LANCASHIRE AND RP: A COMPARISON OF PROCESSES OF CONNECTED SPEECH

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ABSTRACT

The paper reports the results of a study on connected speech processes in the Lancashire dialect. Auditory and acoustic analysis was performed on 4.5 hs of speech of 9 speakers of Lancashire from the Phonologie de l'Anglais Contemporain corpus. Filling a gap in the literature (Lancashire is neither discussed by Wells 1982 nor by Kortmann, Upton 2008), a list of connected speech processes is provided. Comparison of processes found in Lancashire to RP and other dialects of English (Lodge 1984) reveals that Lancashire has a number of processes, absent from the highly codified variety but found in other dialects of English. In fact, Lancashire exhibits the processes of Yod dropping, fricativization and g-dropping which are unattested in RP. Age, education and duration of residence, factored in for explaining the use of dialect-specific processes, produced mixed results.

1. INTRODUCTION

Lancashire, often described or even stereotyped in terms of diachronic reduction (Jones 2002), still remains a highly understudied variety of English. In fact, the classic works on British varieties such as John Wells (1982), Edgar Schneider et al. (2004) or Bernd Kortmann, Clive Upton (2008) fail to refer to Lancashire pronunciation specifically. Ken Lodge (1984), the only cross-dialect comparison of reduction, does not include it either. Even within the region of Northern England, Lancashire has attracted very little scholarly attention compared to e.g. Yorkshire (French et al. 1986; Tagliamonte 1998, 2001; García-Bermejo Giner, Montgomery 2001) or Liverpool (Knowles 1975; Honeybone 2001, 2005, 2007; Watson 2006a, 2006b, 2007), remaining an understudied variety of English. Therefore, a study in linguistic variation within Lancashire is well worthwhile. This refers to connected speech and its processes. In the paper, the notion of *connected speech processes* is used as an umbrella term to cover processes which occur due to the informal speech style, such as /d/ deletion or fricativization. Some of these processes have extensive sociolinguistic literature, acting as markers of social class (e.g. glottalization, l-vocalization, r-sandhi or g-dropping). The purpose of the study, however, is to provide a comprehensive description of all possible changes that speech

sounds undergo in connected speech in Lancashire on one hand, and to compare them to a standard dialect such as Received Pronunciation (RP) on the other.

Given the above observations, the first objective of the study aims to fill the gap in the literature by providing a complete description of connected speech processes in Lancashire. The second aim is to perform a systematic comparison of the processes with the standard (i.e. Received Pronunciation, RP) on the basis of the current literature. In particular, the study tests the hypothesis that certain typologically common grammatical phenomena are reported to be non-existent in highly codified standard varieties such as standard English, but are attested in non-standard dialects (Kortmann, Wagner 2005: 1). Testing the Kortmann–Wagner hypothesis in phonology, it is hypothesized that the dialect will exhibit the processes of connected speech which are not attested in standard English. The third aim of the study is to establish a correlation between the dialect-specific processes and social variables such as age, education and duration of residence in Lancashire.

2. METHOD

2.1. The corpus

The study is corpus-based in using the *Phonologie de l'Anglais Contemporain* corpus (referred to as PAC, Durand, Pukli 2004). It contains recordings of 10 speakers of Lancashire, collected between 2001–2002. PAC's structure is as follows: a list of words, a read passage, formal and informal interview. Both interviews were loosely structured and conducted in an informal setting, at informants' homes or workplaces. The formal interview was conducted by a French speaker of English, a stranger to informants whereas the informal interview was carried out by a native speaker of Lancashire who was either a relative or a friend (or a family friend) of informants. Due to these differences, topics in the formal interview covered past events, memories from school, family situation, jobs, travels abroad. The informal part, on the other hand, concerned current topics such as housing problems, plans for Christmas and gossip about common friends, relatives and neighbours. The study analyzed both formal and informal interviews, the speech material totalled 4 hours and 27 minutes, having subtracted the duration of fieldworkers' speech.

Apart from the PAC corpus, the other existing corpus of Lancashire is the North West Sound Archive (NWSA), compiled at Lancaster University (Hollmann, Siewierska 2006). The corpus contains 55 hours of (mostly orthographically) transcribed speech and is made up of very loosely structured interviews with local people about their childhood, carried out by interviewers who are from Lancashire as well. NWSA was collected in the 1970s and, unlike PAC, did not follow Milroy (1980) in employing the method of recruiting the speakers from a network of family members, friends or neighbours. It seems that NWSA contains recordings of randomly selected speakers. Besides, exploitation of a purposely built, phonological corpus such as PAC is very much in the spirit of the recently developing corpus phonology (Durand, Gut, Kristoffersen (eds.) 2014). Thus,

despite the relatively low number of subjects, the study was performed on PAC alone due to reasons described above and in order to fill the gap in the literature.

2.2. The speakers

The speakers from PAC were recruited following James Milroy (1980), i.e. by means of the snowballing technique. They derive from the Southern area of Lancashire, three speakers are from Bury, three from Bolton, two from Burnley, one from Rawtenstall and one from Colchester/Rossendale.¹ Age varied greatly, from 23 to 83 years old. So did education, from 6 to 17 years of schooling (as calculated following the Education GPS website, maintained by OECD). A more detailed description of the speakers' social background proceeds along the following criteria: gender, age, place of birth, previous places of residence, profession and education. Instead of numbers, the speakers are identified by their initials.

DK, male, aged 29 (at the time of recordings), was born in Bury where he lived until he was 19. Then, he moved to Reading for one year and next, to Bury where he lived for 7 years. His current place of residence is Edinburgh. He is a student of computer programming with a university degree. LB, female, 38 years old, was born in Burnley but lived in Bolton all her life. She is a unit manager in school catering and has college education. JM, female, aged 23, born in Bury, lived in Rawtenstall for the first 18 years of her life, spent 3 years in Newcastle to earn a college degree (Master's degree in Personnel) and then, one year in Manchester. She works as a Personnel Officer. LC, female, 77 years old, was born in Manchester. It must be noted here that the choice of speakers to be included in the corpus was not the author's and LC obviously considers herself a Lancashire speaker, possibly due to numerous shifts in county boundaries and related administrative reforms (she was born in 1923. She spent the first 18 years of her life in Manchester, 1 year in Kent, lived in York for 18 months, in Cambridge for 1 year, in Surrey for 2 years, in Manchester again for 13 years. Her current place of residence is Bolton, she claimed 30 years of residence in the questionnaire. By profession, she is a school teacher, now retired. Her education is elementary, with an emergency teacher's course for 13 months due to WW II. MC, female, is 71 years old, born and raised in Burnley apart from 7 months in Africa and one year in Hamburg, Germany. Burnley is her current place of residence. Retired, claims to have worked as a shorthand typist, a shop assistant and a hospital domestic. MC has secondary education. MD, female, aged 23, was born in York, lived in Colchester until she reached 10 and then, spent 8 consecutive years in Rossendale which largely overlaps with the development of her phonological system. She spent next 3 years at a university in Sheffield and 3 years at York University, but claims to visit Rossendale every weekend or more frequently during the course of her studies. She is a PhD student in psychology with an M.Sc. title. MO, female, 58 years

¹ The author is aware that Eivind Torgersen plans to collect a corpus of speech from Northern England and Northern Lancashire in particular in the future (Eivind Torgersen, personal communication).

old, was born and spent all her life in Bury. She is a tailoress, her education is a college one. SC, female, aged 40, was born and lived all her life in Burnley, employed as a display assistant in a supermarket, earned a college degree at the age of 34. ST, female, 30 years old, was born in Bury where she lived until she was 15. Because of her acting career, she spent one year in Leicestershire when she was 15 and moved to Bolton, her current place of residence. She works as a drama and English teacher, holding a college degree which she obtained at the age of 28.

Unfortunately, gender cannot be a factor in the study as all speakers but one are females; thus, due to this stark inequality, speaker DK was excluded from the analysis and the study was performed on 9 female speakers.

2.3. The analysis

To achieve the aims of the study, recordings of 9 female speakers of Lancashire from the PAC corpus were used. The recordings were annotated in Praat (Paul Boersma, David Weenink 2016), so were the processes of connected speech. From the annotation, geminates of the kind *want to* were excluded, so were all the lexicalized cases of yod coalescence, e.g. *education*, *gradual*. Their identification proceeded in three steps: first, auditory analysis was performed along with annotation of the speech in Praat; second, acoustic analysis verified the presence or absence of a process in the actual speech against the citation form. For /t, d/ deletion, a visible stop burst or lack thereof was adapted as a cue, lack of noise frication manifested as mid and higher frequencies darkening on a spectrogram and irregular wave on a waveform established the occurrence of /h/ deletion. Special care was taken to annotate only those cases where deletion was complete. Obviously, completeness does not apply for fricativization and assimilation, thus these processes were annotated when the process was under way. Fricativization was annotated if the stop in question clearly manifested an incomplete burst and released itself into preceding and following vowels. Assimilation of place was judged by adjacent vowels' formants, e.g. lowering of all four formants in /n/ towards the bilabial gesture such as in the phrase *in Bolton*. Yod coalescence was annotated if the average values of the /s/ formants were closer to /z/ than to /s/ and when they exhibited a significant raising toward palatal /j/ on a spectrogram. The third step of the analysis consisted in comparing the spectrographic cues of the sound affected by a process of connected speech with its citation form from structurally parallel lexical items, present in the word list and read text of the PAC corpus, the latter serving as a point of reference to reach citation form.

The method described above applies to the first two aims, i.e. description and comparison of consonantal processes identified in Lancashire, of processes in Lancashire. The third aim consists in teasing apart a link between the usage of a dialect-specific process and social variables such as age, education (counted as years of schooling consequently for all speakers on the basis of the OECD website) as well as duration of residence. Usage of a process was expressed as percentage within the category of a process, denoting the

ranking of speakers who applied the feature in their speech. To this end, the number of instances of processes which appeared in Lancashire but not in RP, was calculated on the basis of annotation and acoustic analysis. A Pearson correlation served to establish a correlation between dialect-specific processes and the speakers' population.

3. RESULTS

3.1. Connected speech processes in Lancashire

Thirteen processes have been found in the PAC corpus: /d/ deletion, 'ing' fronting, /h/ deletion, /l/ vocalization, /r/ sandhi, /t/ deletion, /t/ insertion, assimilation of place, tapping, fricativization, glottalization, yod coalescence and yod dropping. They are briefly explained (following Bussmann 1996: Trask 1996; Carr 2008) and exemplified below, the codes of the sound files denote: XY-initials, fc-formal conversation, ic-informal conversation.

3.1.1. /d/ deletion

This process occurs when the segment /d/ is elided and was annotated excluding the cases of the same segment in a cluster such as *kind during*:

- a) LBfc 8:09 *my last daughter was brought up by my mother really coz I was working am so my mother used to **childmind** for me I have a superb relationship with my mother,*
- b) MDfc 12:01 *I wanted just to concentrate on my work and I see Doug on **weekends** and I can't see him on a week coz he's at different university so I won't I don't want to work as well,*
- c) LCfc 13:02 *I never really felt one of them really there was always another side of me that was rather serious uhm and then at the retirement I **joined** the rambling club and that's.*

3.1.2. /t/ deletion

This process occurs when the segment /t/ is elided and was annotated excluding the cases of the same segment in a cluster such as *want to*:

- a) MCfc 3:43 *coz I was alone and the children had left the **nest** so I got more work and I went to the hospital the hospital gave me a job an evening job that's a job they could give me,*
- b) MCic 4:57 *I think I'll have one step made anyway from the front door because **it's** quite dropped before I go because erm you know I've got a builder that,*
- c) MDfc 13:12 *they need a lot of carrying and stand up **couldn't** walk so it's wasn't just like chatting to some old lady that would be really nice but erm so we'd get to wash them.*

3.1.3. /h/ deletion

/H/ deletion consists in elision of /h/ in function words in unstressed positions of pronominal and auxiliary forms; in Lancashire, however, the process was also found in lexical words.

- a) SCic 3:42 *We to drive round Blackburn and so we found **townhall** and he had to go into townhall,*
- b) LBfc 8:28 *over Christmas my mom move into my **house** uhm the kids I've been brought up uhm my last daughter was brought up by my mother really coz,*
- c) JMic 6:23 *bar for everyone just to drink mad this probably about four **hundred** so yeah yeah so really it's not that many drinks for when you think of it like that.*

3.1.4. Fricativization

This term is used in the paper as the “stop into fricative” kind of fricativization for want or a more appropriate concept; the notion of “lenition” seems to be too vague. Thus, *fricativization* in this paper refers to a less occluded pronunciation of stops.

- a) JMic 00:41 *he's going kind of this kind of way other than that kind of way he's going to America first but erm going to Australia as well and new Zealand and places **like** that so yeah,*
- b) LBfc 13:36 *because it was **absolutely** horrendous we had to stop the car we we're there where we were at pullover until that storm had passed,*
- c) LBic 12:16 *they'll come down and there's so much cheerio and eyes in it are you gonna eat your breakfast no well yeah in a **minute** and they get.*

3.1.5. 'Ing' fronting

It denotes the type of pronunciation with an alveolar /n/ rather than a velar nasal /ŋ/ and is often referred to as *g-dropping*. Apart from gerund forms, ‘ing’ fronting was evidenced in lexical nouns such as *nothing* and *something*.

- a) JMfc 4:09 *moment but he wants to go **travelling** so yeah with my brother or with my boyfriend,*
- b) PKfc 12:16 *well when I'm on holiday I'm not a I can't sit on the beach all day after we I have to be doing **something** so I'd like to go walking,*
- c) STfc 12:12 *is very **rewarding** it's great and my whole family my grandparents they're so proud like you know we're so proud of you you do so well and you know they're thrilled.*

3.1.6. Glottalization

Glottalization is “[...] a process in which the closure in an oral articulation is accompanied by a glottal stop articulation” (Carr 2008: 65):

- a) JMic 6:12 *they pay for **it all** they've put in like five grand behind the bar for everyone just to drink mad this probably about four hundred so yeah yeah,*
- b) JMfc 4:25 *eh with my brother I loved having him around and we're very close we've **got on** really well just have a drink we did uhm really well sometimes he,*
- c) SCfc 2:19 *I remember thing you know little bits but erm **not a** great deal really well I did go it was like.*

3.1.7. Tapping

This involves replacement of /t/ with a tap; true stops involve a ballistic movement which can be prolonged, whereas taps involve a more dynamic, 'hit-and-run' action of the tongue.

- a) LBic 9:48 *But because Pete comes snatch you see he comes in and If I'm **not up** he he asks to come and get me up because he doesn't go up before nine o'clock,*
- b) MCfc 4:55 *I liked the involvement of the school **but I** find some of it very stressful although I was only there ordinary day but I think it was the age thing with me,*
- c) PKfc 12:18 *after we I have to be doing something so I'd like to go walking **but if** you're on a boat you're a bit I say maybe yeah maybe when I've been to few different places.*

3.1.8. Yod coalescence

Yod coalescence is a special case of assimilation (e.g. *as you* æz ju: → æzju). Palatalization is distinct from other assimilatory processes due to its specific, prescribed phonetic environment: an alveolar sound must find itself in the vicinity of a palatal approximant.

- a) JMic 13:02 ***how's your** research going my dad was asking me what you do for your PhD and I really couldn't tell him and I felt awful is that what you coz your masters was a masters in,*
- b) PKic 0:04 ***Do you** want the radio timed to read I thought you would come far to radio times It would be it would be yes,*
- c) MOic 36:00 *When he **was younger** I mean he was in the dramatics society and musical music he was a bit of laugh really.*

3.1.9. Assimilation of place

This process stands for adaptation of speech sounds towards preceding or following sounds so that the feature of the neighboring sound is spread (e.g. labiality is spread *ten men* ten men → tem men, or velarization is spread *hard case* ha:rd keɪs → hark keɪs). As the result of assimilation, one place of articulation (bilabial, velar) is required for segments of the same manner (nasals, stops).

- a) PKfc 04: *57 yes well I suppose you just get used to place and it's **convenient** and it is so I think that's erm probably why there's nice other place it's lot of nice places but,*

- b) MOic 38:11 *Anyway you see they should have **done better** home was it betterhome but she was being away and they should have done Janet's,*
- c) STfc 12:01 *know I've always felt something was missing **in my** life and I used to regret not having done it and erm to finally you know go for it and have it have succeeded is is.*

3.1.10. /l/ vocalization

This term refers to the switch from dark /ɫ/ towards a semivowel or a vowel articulation.

- a) MCfc 4:54 *I liked the involvement of the **school** but I find some of it very stressful although I was only there ordinary day but I think it was the age thing with me then you see,*
- b) LCic 3:04 *Oh you were really lucky weren't you we only had cold **milk** that you drank through a straw,*
- c) LBfc 5:18 *he's only a human and he and if he could come over later we'll share uhm and then after I got the **children** and I needed something to fit in with my children I got divorced.*

3.1.11. Intrusive /r/

It involves the insertion of an r-sound at the end of a word ending in a non-high vowel where the next word begins with a vowel, as below:

- a) PKfc 10:57 *before they got married and had a family there and had a wonderful time that's what we'd like to do **Australia and** New Zealand yes yes but you need plenty of time but,*
- b) MDfc 12:53 *it's about reading development language development a little bit more reading really and erm **dyslexia and** that was really good erm worked with some really good people,*
- c) MCfc12:41 *I especially my age now you can't just uproot yourself and you know I've gone stay you know if they lived in **Australia and** New Zealand I've gone stay three months at a time.*

3.1.12. Yod dropping

It is the failure to articulate /j/ in between alveolar consonants and high vowels:

- a) MCfc 0:12 *No they were no it was quite interesting you know no no it was I've never done it before so it's all **new** to me so it's quite interesting well erm,*
- b) PKfc 3:24 *and make men **suits** because everybody had suits then it's not the same now oh we had the made-to-measure suits so and he I'd learnt all that there,*
- c) LBic 9:33 *washing up to do it's about time I sit down I sit down for every day at five seven o'clock and then at ten o'clock before the **news** comes up come to bed.*

3.1.13. /t/ insertion

In English, there is a process of consonantal epenthesis which inserts homorganic voiceless stop after nasal and before voiceless fricative followed by an unstressed vowel in the same word (e.g. *prince* *prns* → *prints*):

- a) STfc 17:30 *yes I used to go after brownies every I think I went **once** a week every week I went and oh just things I know I remember,*
- b) MCfc 9:53 *so I went out there he got moved on to Jakarta and joined another firm that's where he's been ever **since** my father after the war went to Germany I went there,*
- c) LCfc 1:57 *I was not allowed to go to secondary school I was furious because all the girls who were lesser of lesser **intelligence** then I was I knew though we know our pecking order don't we.*

In general, Lancashire is believed to be an h-less dialect in which /l/ is velarized. According to other, widely held belief, the areas of Bolton and Burnley are r-less which was evident in the PAC corpus. Thus, compiling the list of connected speech processes fills the gap in the literature, identified in Introduction and despite the preliminary nature of the description, the study makes a step towards describing a non-standard variety. The next step is to perform a cross-dialectal comparison of Lancashire to RP as well as to selected dialects of the UK on the basis of the literature.

3.2. Comparison of Lancashire to other dialects

3.2.1. Comparison to RP

Ulrike Altendorf and Dominic Watt (2008) enumerate h-dropping as a feature of RP, mostly in unstressed pronouns. 'Th'-fronting is also a prominent feature of the standard dialect, in comparison, it was entirely missing from the present study. Glottaling is another characteristic of RP which was found in Lancashire, too, especially in the speech of younger speakers. /l/ vocalization occurs in RP in post-vocalic positions (*milk*, *pill*) and pre-vocalic positions, across word boundaries (*roll up*). The former is a feature that RP and Lancashire have in common. Yod dropping is reported for RP and near RP (Wells 1982), it is also, to a small extent, identified in Lancashire in the PAC corpus, although only for 3 speakers out of 9. To compare, Wells (1982) defines the extent of the yod dropping phenomenon as "little". /l/ vocalization, by the same token, is described by Wells (1982) as "occasional" in RP. Elision of /d/ in the nasal context is also reported by Wells (1982). The current study identifies /l/ as responsible for 7 per cent of sounds preceding /d/ in the process of d-deletion. Place of assimilation is termed "frequent" by Wells (1982) in the standard variety. In the PAC corpus of Lancashire, distribution of assimilation is 3 per cent and 5 if one includes yod coalescence. As for the latter, Wells claims it is "[...] foreign to some accents within RP, though found in others" (Wells 1982: 323). In describing consonantal features of

RP, Wells (1982) discusses the phenomenon of intrusive /r/ for RP (where he claims it is used freely), with various modifications for varieties within RP. Intrusive /r/, although marginally represented in the present study, is found in Lancashire. Bente Hannisdal reports similar trends in her study of RP: “[...] the quantified results show that, as expected, r-link is favoured over r-suppression, as /r/ is used in almost 60% of the cases. The preference for linking /r/ is however quite small, and is far from the categorical usage often claimed for RP speakers (cf. 4.4.3)” (Hannisdal 2006: 157). Table 1 contains a comparison of Lancashire to RP as well as other dialects of English, described by Wells (1982):

	Lancashire	RP	Cockney	East Anglia
‘Ing’ fronting	+			+
Glottaling	+	+	+	+
T-deletion	+	+	+	+
D-deletion	+	+	+	+
Assimilation of place	+	+		
Yod coalescence	+	+	+	+
H-deletion	+	+	+	+
Lenition (fricativization)	+	+		
Linking /r/	+	+		
L-vocalization	+	+	+	
Th-fronting			+	
Yod dropping	+		+	
Affrication			+	

Table 1: Comparison to other dialects (author’s own study, based on Wells 1982)

3.2.2. Comparison to other dialects

Harold Orton and Wilfred Halliday (eds.) (1962) studied Lancashire, using 30 speakers from 14 localities. They mention the following phonetic features of Lancashire: varying degree of aspiration (from little to significant), /h/ dropping, flapping, tapping, ‘TH’ fronting, /t, d/ dentalization, geminated consonants and /r/ colouring. The present study overlaps with SED in two respects: h-dropping and tapping. Orton and Halliday’s (eds.) (1962) localities, however, do not overlap with those from the PAC corpus. These differences, apart from age and gender of the informants (SED’s ranged from 64 to 93 and were mostly males) can be accounted for particularly robust regional variety: “[...] local differences in dialect and accent as one moves from valley

to valley or from village to village are stronger in the north than in any other part of England” (Wells 1982: 351).

Among the consonantal features of Northern dialects, Joan Beal lists the g-dropping phenomenon, especially in the south-western corner of the North (from Liverpool and southern Lancashire to Sheffield): “[...] speakers in other parts of the North would often have [In] for the bound morpheme *-ing*” (Beal 2008: 137). In this context, Lancashire also exhibits g-dropping. As for /h/ dropping, Beal (2008) notes that in the North, it is developing as isoglosses for words such as *home*, *house*, *hear*. These words indeed were evidencing most /h/ dropping in the category of lexical words in the present study. Glot-taling, according to Beal (2008), is present in all Northern dialect except for Liverpool; instead, this dialect either affricates or lenites plosives (Watson 2006a, 2006b, 2007). Northern dialects are also reported to have tapping in their phonology, in the intervocalic position, before a morpheme boundary. In the PAC corpus, tapping was an occasional realization of /t/ for certain speakers.

Since Lodge (1984) systematically investigates selected processes of consonant speech, his cross-dialectal work merits special attention.

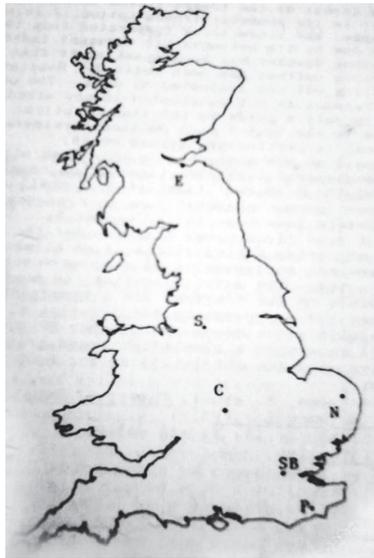


Figure 1: Lodge's (1984) localities.

Figure 1 depicts the localities which Lodge used in his cross-dialectal comparison of connected speech processes. The letters stand for: C = Coventry, E = Edinburgh, P = Peasmarsh, SB = Shepherd's Bush, N = Norwich, S = Stockport (Greater Manchester). Next, Table 2 summarizes his (and the present study's) findings for the six dialects:

	Stockport	Shepherd's Bush	Peasmarsh	Edinburgh	Coventry	Norwich	Lancashire
Fricativization	+	+	+	+	+	+	+
Glottaling	+		+	+		+	+
/L/ vocalization	+	+					+
Assimilation	+	+	+	+	+	+	+
Yod coalescence	+						+
/T, d/ deletion	+	+	+	+	+	+	+
/G/ dropping	+		+	+			+
Linking /r/	+	+				+	+
Tapping		+	+	+	+		+

Table 2: Comparison with Lodge (1984, author's own study, based on Lodge 1984)

Table 2 misses /h/ dropping on purpose as Lodge (1984) considers it a part of English phonology, rather than dialect-specific feature of colloquial speech. Apart from presence/absence of a process, Lodge (1984) reports his comments on interspeaker variability in the description of a process. For instance, only 4 speakers (out of 9) produce /r/ linking, whereas speaker G (Edinburgh) does not delete /t, d/ at all. In comparison with Coventry, Edinburgh, Peasmarsh, Shepherd's Bush, Norwich, Stockport, Lancashire ticks all the boxes. In addition, Lancashire has other processes which Lodge (1984) does not describe; or chooses not to analyze due to his theoretical bias;² they, however, are not unusual on the scene of English dialects. Beal (2010) lists the distinctive features of modern dialects. 'Ing' fronting is a general feature of the North West dialect and is "not at all stigmatized" (Beal 2010: 17). Yod dropping is in the inventory of East Anglia's dialectal features and can be found in London, whereas Merseyside is famous for lenition of the stop into fricative type (Beal 2010).

To sum up, Lancashire viewed against other, non-standard dialects of English, shares with them a number of processes. When compared to the standard variety, it seems that the Kortmann and Wagner (2005) hypothesis, originally formulated for grammatical phenomena, can be corroborated in phonology: Lancashire displays three processes, i.e. Yod dropping, g-dropping and fricativization which are absent from RP, at least according to a textbook descriptions. These processes, in turn, are subject to further analysis which includes social distribution of these processes.

² Lodge (1984) performed a comparison of cross-dialectal reduction processes which limits his selection of processes to the ones in which a segment is elided. He draws his conclusions using auditory analysis and phonetic transcription of the speech rather than spectrographic analysis, making this study relatively limited in regard to methodology.

3.3. Social factors in dialect-specific processes

Comparison of Lancashire, a non-standard variety of English, to RP, the standard variety of English, revealed that there exist three processes which are Lancashire-specific: yod dropping, ‘ing’ fronting and fricativization. In order to gain insight into social distribution of dialect-specific features, only these three processes are going to be considered instead of all processes, identified in Lancashire (cf. section 3.1). The procedure is as follows: within the category of a process, all speakers are compared by percentage of their use of this process in the PAC interviews. 100 per cent is the total number of instances of the process in question, annotated in the course of spectrographic analysis. Therefore, the tables presented below are designed to unfold the distribution of individual speakers in the use of a process.

3.3.1. Yod dropping

In all of the PAC corpus, only 8 instances of Yod dropping were identified (cf. 3.1.12). Figure 2 depicts to what extent individual speakers use the process:

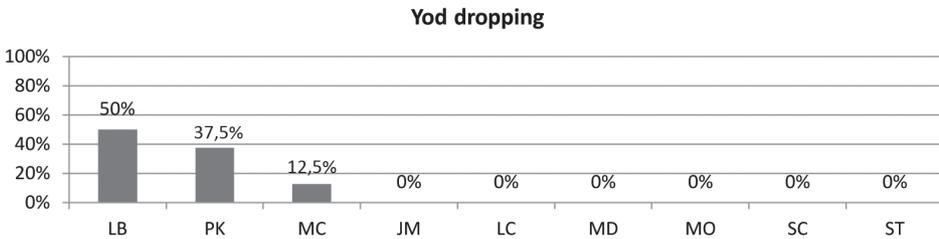


Figure 2: Distribution of ‘ing’ fronting among speakers (author’s own study)

Interestingly, yod dropping is not a process of Lancashire which is used consistently by all speakers: only LB, PK and MC do so. It seems that yod dropping exists only in the phonological inventory of three speakers only, whereas the rest does not employ it at all. Below is a Pearson correlation showing whether there is any correlation between age, level of education and duration of residence. From the correlation, speakers who displayed no single case of yod dropping were excluded. As evident in Table 3, the correlation between Yod dropping and social factors is very strong, although it trends in two opposite directions. Only education is correlated positively whereas age and duration of residence exhibit a negative correlation, i.e. the youngest speakers in the group of yod-dropping users, unlike the oldest ones, had the highest usage of yod dropping. This finding is actually consistent with duration of residence which ideally corresponds to age in the case of these three speakers.

Sp	Age	Edu	Residence	Yod dropping
LB	38	14	38	50%
MC	71	11	71	13%
PK	58	14	58	38%
<i>r</i>	-0.95173	0.944911	-0.95173	

Table 3: Pearson correlation for yod dropping (author’s own study)

3.3.2. ‘Ing’ fronting

272 cases of ‘ing’ fronting were found in Lancashire, as exemplified in subsection 3.1.5. This covers both morphological *ing* ending as well as ‘ing’ fronting found in lexical words. Figure 3 portrays the individual contribution of the speaker to this category of the process. Unlike yod dropping, ‘ing’ fronting seems to be a more prevalent feature of Lancashire, used to various degrees by nearly all speakers from the corpus.

‘Ing’ fronting

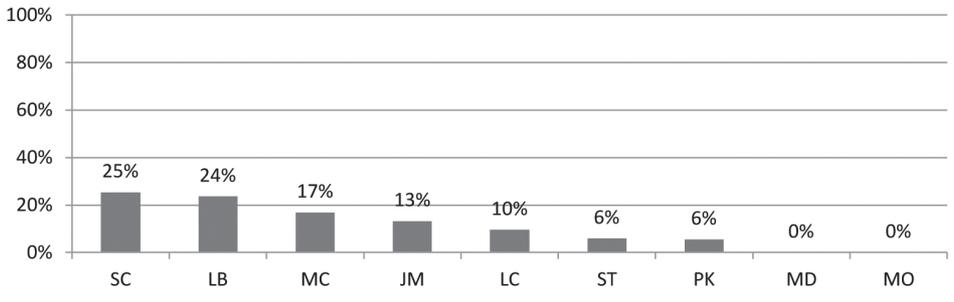


Figure 3: Distribution of fricativization among speakers (author’s own study)

Next, Pearson correlation established no connection at all between the feature of ‘ing’ fronting and age, education as well duration of residence in Lancashire:

Sp	Age	Education	Residence	‘Ing’ fronting
LB	38	14	38	24%
JM	23	17	18	13%
LC	77	6	30	10%
MC	71	11	71	17%
PK	58	14	58	6%

Sp	Age	Education	Residence	'Ing' fronting
SC	40	12	40	25%
ST	30	16	29	6%
<i>r</i>	-0.16818	-0.06896	0.077376	

Table 4: Pearson correlation for 'ing' fronting (author's own study)

3.3.3. Fricativization

The number of fricativization cases totalled 321 in the corpus. Distribution among speakers is captured in Figure 4. Here, again, only one person did not use fricativization at all.

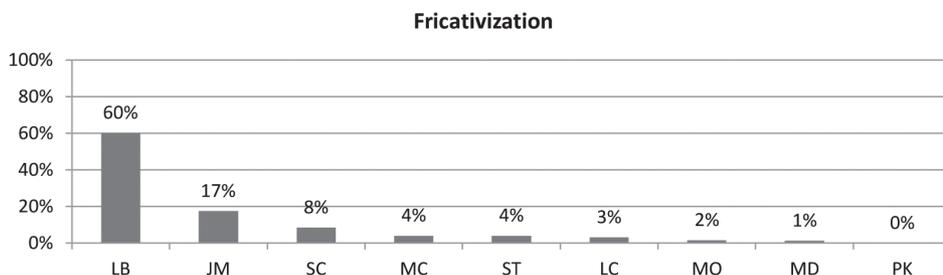


Figure 4: Distribution of fricativization among speakers (author's own study)

In parallel to 'ing' fronting, it transpires from Table 5 that age and years spent in Lancashire fail to play any role in the usage of the feature of fricativization. Surprisingly, the *r* value for education was 0.33, rendering a feeble correlation.

Sp	Age	Education	Residence	Fricativization
LB	38	14	38	60%
JM	23	17	18	17%
LC	77	6	30	3%
MC	71	11	71	4%
MD	23	14	8	1%
MO	83	6	83	2%
SC	40	12	40	8%
ST	30	16	29	4%
<i>r</i>	-0.28296	0.332866	-0.10951	

Table 5: Pearson correlation for fricativization (author's own study)

4. DISCUSSION

Thirteen processes of connected speech which affect consonants were identified for Lancashire and exemplified for various speakers (3.1), furnishing a description of the dialect in a corpus-based study. Comparison of Lancashire, a non-standard variety to the standard one, RP demonstrated that the former exhibits ‘ing’ fronting, fricativization and Yod dropping which are missing from the latter. These processes, however, are found in other dialects of English: fricativization in Scouse (Watson 2006b), Coventry, Edinburgh, Peasmarsh, Shepherd’s Bush, Norwich, Stockport (Lodge 1984), ‘ing’ fronting (Edinburgh, Norwich, Lodge 1984), yod dropping is reported for East Anglia (Wells 1982) and Cockney (Beaken 1971) which is very much consistent with the Kortmann–Wagner hypothesis (2005). A more interesting finding, evident in Tables 1 and 2, is that there are processes which all dialects considered here do exhibit (/t, d, h/ deletion, assimilation) and those which are linked to a dialect only (‘ing’ fronting, fricativization and Yod dropping was found in Lancashire, Yod dropping in East Anglia and fricativization in Merseyside). This might be taken as a step towards establishing what is language/dialect specific. The major obstacle is that various authors use umbrella terms for a process (e.g. lenition, flapping, assimilation) in an inconsistent way. For instance, Wells (1982) considers yod coalescence as a special case of assimilation (Sibilant Yod Assimilation), whereas for Lodge (1984), harmony denotes assimilation (of place, voicing and manner). Another factor which renders the comparison difficult is lack of quantitative studies, nearly all attempts to describe the processes boil down to descriptions such as “occasional, little, freely used” etc., forcing the binary (presence/absence) scale instead of a continuum of dialects’ similarities and differences.

Having found three processes typical of Lancashire relative to RP, one may observe that ‘ing’ fronting, fricativization and Yod dropping were not distributed evenly among all speakers from the PAC corpus. Specifically, 3 speakers out of 9 had any cases of yod dropping whereas 7 out of 9 and 8 out of nine applied ‘ing’ fronting and fricativization, respectively. This might lead to a preliminary finding that ‘ing’ fronting and fricativization are more Lancashire-specific than yod-dropping, assuming such hierarchy. In discussing individual differences, it has to be noted that the differences between speakers in using a process were remarkable, ranging from 0 to 60 per cent, in the wake of which the speaker-dependent variability might play a role in patterning of connected speech processes. Such possibility has been already suggested by Hans Georg Piroth, Peter Janker in their study of German dialects (2004): “[...] the significant main effects of SPR [speaker — M.K.] indicate a remarkable speaker-dependent variability” (Piroth, Janker 2004: 93). The attempt to explain the dialect-specific processes with a range of social variables (age, education and duration of residence) yielded mixed results. As for age, only yod dropping was positively correlated, albeit in the opposite direction: the younger the speaker, the more frequently she used yod dropping in her speech. ‘Ing’ fronting and fricativization displayed no such link with age. Turning to education, the second social factor, a relatively weak correlation was

found for fricativization, indicating that speakers who had longer periods of schooling fricativized stops more frequently than the speakers with lower education. In the case of yod dropping, the correlation was nearly perfect ($r = 0.94$). Again, the use of a dialectal process, unattested in the standard variety, seemed to increase with the level of education. This does not well agree with the assumption that dialectal features are prevalent in the group of poorly educated speakers. Duration of residence, the third social factor considered in the study, brought mixed results on one hand, no correlation with the number of years spent in Lancashire was observed for /g/ dropping and fricativization but there was a robust correlation with yod dropping on the other ($r = -0.95$). One may conclude that actually, lower number of years of residence promoted the use of yod dropping in the speech of three speakers which overlaps with the findings for age. Therefore, considering the three social variables, they seem to be valid for one process only ('ing' dropping), leaving ing-fronting and fricativization less sensitive to age, education and duration of residence.

5. CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The study is rather unique in exploring a number of connected speech processes in Lancashire and offers a new perspective on the role of interspeaker variability. It is not, however, devoid of limitations.

The aims of the present paper were to tease apart the processes of connected speech in Lancashire, to compare them to RP and to correlate them with age, education and duration of residence. The study as it currently stands needs to be treated as an introductory work-in-progress rather than a final study report due to a number of reasons. Firstly, the corpus used had only a few speakers which does not allow making generalizations from the preliminary findings. The second shortcoming of the study consist in analyzing a relatively small size of speech sample observations: yod dropping had only 8 occurrences in all of the corpus in comparison with fricativization and 'ing' fronting (around 300 instances in the recordings). Perhaps with a greater number of observations the link between processes and sociolinguistic variables will become clearer. For now, the conclusion that only one processes (yod dropping) out of three positively correlates with age, education and duration of residence is merely tentative. Thirdly, gender was not controlled for as the PAC corpus contained recordings of 9 females and only one male speaker; this highly uneven distribution would make the comparison statistically insignificant and as a result, only female speakers were considered.

In future research, other accents than Lancashire should be considered with a view of answering the question to what extent processes of connected speech are dialect- or language-specific and of testing social variables in dialect-specific features. In addition, future studies might as well pursue the diachronic perspective: both Lodge (1984) and Wells (1982) conducted their research in late seventies or early eighties of the 20th century, thus, using a corpus of Lancashire older than PAC (e.g. the NWSA corpus mentioned in Introduction) might prove useful.

Nevertheless, the study has broadly fulfilled its aims, providing answers to research questions by establishing a comprehensive list of processes of connected speech in Lancashire and comparing them to the standard (RP) as well as other dialects. The study also positively verifies the Kortmann–Wagner (2005) hypothesis: Lancashire exhibits ‘ing’ fronting, fricativization, and Yod-dropping which are absent from RP. The investigation has also attempted to correlate the use of dialectal processes with age, education and years of residence, with robust correlation for one process only. The preliminary results of the study provided evidence that the topic of connected speech, especially in the context of sociolinguistic analysis, is worth pursuing further and deserves a more exhaustive treatment.

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STRESZCZENIE**Porównanie zjawisk językowych w dialekcie Lancashire do Received Pronunciation**

Słowa kluczowe: Lancashire, Received Pronunciation, dialekty języka angielskiego, korpus mowy, procesy mowy potocznej.

Celem badania jest opis procesów mowy potocznej występujących w dialekcie Lancashire, niestandardowej odmianie języka angielskiego. Badanie to uzupełnia istniejącą lukę w literaturze przedmiotu: prace Wells (1982) lub Kortmann i Upton (2008) nie zawierają systematycznego opisu cech Lancashire. Badanie zostało przeprowadzone za pomocą analizy akustycznej na korpusie mowy Phonologie de l'Anglais Contemporain, zawierającym 4,5 godziny nagrań mowy potocznej dziewięciu rodzimych użytkowników Lancashire. Porównanie listy procesów występujących w Lancashire w stosunku do Received Pronunciation pozytywnie zweryfikowało hipotezę Kortmanna i Wagnera (2005). Według niej w odmianach niestandardowych języka występują zjawiska językowe nieobecne w standardzie. Trzy cechy typowe dla Lancashire, usuwanie /j/, /g/ oraz lenicja spółgłosek, zostały skorelowane z wiekiem, wykształceniem i długością pobytu w Lancashire, a wyniki okazały się niejednoznaczne.