ILLUSTRATIONS OF THE IPA

Liverpool English

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Liverpool English (LE) is the variety of English spoken in Liverpool and much of the surrounding county of Merseyside, in the north-west of England. After London, the north-west of England is the most densely populated of all regions in England and Wales, with the population of Liverpool standing at around 450,000. LE itself is said to have developed in the middle of the 19th century, after rapid immigration from Ireland during the Irish potato famines of 1845–1847 (see Knowles 1973). Arguably as a result of this immigration, as we will see, there are some similarities between LE's phonological system and those of Irish Englishes. Of course, as we might expect, the phonological system of LE maintains its connection with other northern Englishes, too.

There is a greater amount of previous work on LE than on many other accents of British English, particularly other varieties of the north-west of the country. The earliest systematic study of LE, Knowles (1973), remains the seminal work and is where the widest range of phonological features is considered. Later work, including De Lyon (1981), Honeybone (2001), Sangster (2001) and Watson (2006, 2007), has tended to restrict its focus to a smaller number of variables which are amongst the variety's most characteristic features. This article bases most of its descriptive detail on data gathered during fieldwork carried out by the author (see Watson 2007), but at times information is gleaned from elsewhere (most notably Knowles' early work) to provide comparison.

The transcription of the reading passage is based on the speech of a 21-year-old workingclass female speaker who was born in the district of Netherton, in the north of Liverpool, and has always lived there. She self-identifies as having a 'broad' Liverpool accent, although the difficulty in remaining objective about such labels should be acknowledged. There is considerable phonetic variation in LE according to age, gender and socioeconomic class, although this is an area where modern research is lacking. In what follows, where the speaker produces some phonetic feature which is known to be atypical of LE or where a feature varies according to some sociolinguistic parameter, this will be pointed out.

Consonants

Whilst the consonant system of LE is phonologically identical to most other varieties of English English, there is much allophonic variability. Of course, this is to be expected in every variety, but as we will see, the realisational potential of certain LE phonemes is much greater than elsewhere.

			Lat	oio-					Pos	st-				
	Bilabial		dental		Dental		Alveolar		alveolar		Palatal	Velar		Glottal
Plosive	p	b					t	d				k	g	
Affricate									t∫	dz				
Nasal		m						n					ŋ	
Fricative			f	v	θ	ð	s	Z	ſ	3				h
Approximant								r			j		W	
Lateral approximant								1						

Dental fricatives $\langle \theta, \delta \rangle$ are often realised as dental stops [t, d] both word-initially, medially and finally, although dental fricatives are also found. This is arguably a feature which has been innovated into LE from varieties of Irish (Honeybone 2004). It has recently been suggested that TH-fronting, the process by which $\langle \theta, \delta \rangle$ are realised as labiodental fricatives [f, v] and which is frequent in many other British varieties (e.g. Milton Keynes, Reading, Hull (Williams & Kerswill 1999), Newcastle (Watt & Milroy 1999)), is infrequent in LE (Watson 2005). The speaker can be heard using both standard fricative variants ([θ] in *north*, [δ] in *other*) and the more localised dental stop ([d] in *then*). She does not use a labiodental variant.

Post-vocalic /r/ is absent in LE, so that words like *car*, *farm*, *park* are r-less. In prevocalic and intervocalic positions, /r/ is typically realised as [1] or [r]. The tap is common in intervocalic position (e.g. mi[r]or, ve[r]v) but can also occur when /r/ follows an onset obstruent (e.g. st[r]ip, b[r]eath, f[r]ee). The speaker's variety is somewhat atypical of basilectal Liverpool English in this respect, as she uses the standard variant [1] in all positions (e.g. ag[1]eed, a[1]ound, st[1]onger). The tapped realisation of /r/ is not categorically absent from her repertoire, however, as she uses [r] as the linking /r/ in *stronger*[r] of the two. The labiodental variant, [v], is not a feature of LE, despite it spreading in other accents of British English (Foulkes & Docherty 2000).

LE is similar to other accents in the north of England in that the /g/ in $\langle ng \rangle$ clusters is maintained. For example, the speaker realises *along* as [əloŋg]. In the $\langle -ing \rangle$ morpheme, forms with the velar nasal and plosive are found, as in *singing* [sıŋgıŋg], but a realisation of [ən] is also likely (e.g. *sing*[ən], *walk*[ən]). The speaker uses [ən] for the $\langle -ing \rangle$ of *making*. Another similarity between LE and elsewhere is the dropping of /h/, most often in high frequency grammatical words (e.g. the speaker's realisation of *him*, *who*, *his*). H-dropping is not categorical, however, as the speaker's maintenance of [h] in *more he blew* testifies. /h/ is frequently maintained in lexical words (e.g. as it is in the speaker's *hard*).

It is in the system of plosives where the widest range of phonetic variation is attested. As in other varieties of English, voiceless plosives /p, t, k/ are aspirated in word-initial position, except when following syllable initial /s/. /p, t, k/ can also be aspirated in word-final and utterance-final positions (Knowles 1973, Watson 2007). The voiceless stops are frequently realised with noticeable preaspiration utterance-finally, which might manifest itself either as a period of glottal noise or as oral frication which is produced homorganically to the stop. As is the case in Newcastle (see e.g. Docherty & Foulkes 1999), preaspiration in Liverpool English is primarily the domain of female speakers (Watson 2007).

As well as these aspirated and preaspirated variants, there is an additional range of plosive realisations which are more or less unique to Liverpool. Most of these realisations can be described as processes of LENITION – a term frequently used to group together a series of phonological weakenings which turn underlying plosives into affricates and fricatives (see e.g. Lass 1984; Harris 1990, 1994; Honeybone 2002). Indeed, plosive lenition is arguably one of the most characteristic features of Liverpool English, and one which forms a major part of the variety's stereotype.

For /t/, affrication is common word-initially, whilst spirantisation is common in intervocalic and word-final positions. The speaker uses an affricated /t/ in word-initial position in two (see figure 1). She spirantises /t/ as well, but there are a limited number of potential candidates in the reading passage due to phonological environment restrictions. The presence of sibilant fricatives for t/t does not lead to the loss of phonological contrast with /s/. Honeybone (2001) transcribes lenited /t/ as $[\underline{\delta}]$ which, following Pandeli et al. (1997), implies a fricative with a flat cross-sectional tongue shape (signaled by $[\theta]$) at a precisely alveolar place of articulation (signaled by the double-underscore diacritic which is adapted from the 'extended IPA' used in the transcription of disordered speech). There are durational differences, too, with a longer phonetic fricative for /s/ than for /t/ (Sangster 2001). Recent work has suggested that there is a wide range of possibilities of 'stopless /t/', which can all be described as fricatives, but which are all articulated with varying degrees of approximation (Watson 2007). Rather than these realisations being the result of articulatory undershoot, there is evidence that fine-grained phonetic differences provide indexical information in LE, as they have been found to do elsewhere (see e.g. Docherty & Foulkes 1999 for Newcastle, and Jones & Llamas 2003 for Middlesbrough). Thus, these realisations represent the learned articulatory behaviour of the speakers (Docherty & Foulkes 2000, Foulkes & Docherty 2006). For example, LE /t/ for male speakers is often realised as the $[\theta]$ described above, but for female /t/ the relationship between the oral and glottal gesture is more variable, so that realisations such as [hsh] are common. An example of a preaspirated, postaspirated fricative /t/ is provided in figure 2. Space restrictions inhibit detailed discussion of these realisations in this illustration, but see Watson (forthcoming) for a more detailed examination.

As well as realising t/a as an oral fricative, it can also be debuccalised to [h]. In older speakers, this occurs only in pre-pausal position in a small set of high frequency monosyllabic (pseudo)function words with short vowels (e.g. it [Ih], what [wph], not [nph], that [dah], lot [lbh]). For younger speakers, the realisation of /t/ as [h] can also occur in polysyllabic words which end in an unstressed syllable (e.g. market [ma:xih], maggot [maqih], aggregate [agrigh]). As the debuccalisation of /t/ does not occur in any other variety of north-western English, it has been suggested that the extension of the process to polysyllabic words is an innovation which represents phonological divergence from supralocal norms (Watson 2006, 2007). Because pre-pausality is a conditioning environment for the realisation of t/as [h], there are no potential candidates in the reading passage. Connected to the realisation of t/tas [h], in terms of the environments in which it occurs, is the realisation of t/t as a rhotic (typically [1] but also [r]). $/t/ \rightarrow [1]$ and $/t/ \rightarrow [h]$ can occur in a similar sets of monosyllabic words, but whereas pre-pausality is necessary for the realisation as [h], the conditioning factor for [1] is the presence of a following vowel (e.g. get off [ge10f], that apple [da1apal], lot of $[l_{DJ} = v]$). The realisation of t/as [1] is not unique to Liverpool English, but can be found in a range of northern English varieties (see e.g. Wells 1982). Like for $t/t \rightarrow h$, the tightly constrained phonological environment in which $/t/ \rightarrow [1]$ occurs means it is not produced by the speaker in the passage. The final realisation of t/t is one which is very frequent in just about all varieties of British English; the realisation of /t/ as [?]. Early accounts of LE noted that the glottal stop was rare (Knowles 1973), and more recent work has corroborated this (Watson 2005, 2006, 2007). Knowles (1973) does comment, however, that [?] is possible preceding /l/ or other syllabic consonants. The speaker can be heard using [?] in *disputing* [dispju:?n] and *immediately* [imi:dia?li:].

It is also common for speakers to realise /k/ as an affricate or a fricative, too, as the speaker's various tokens of *cloak* testify. The exact place of articulation of the fricative is mostly conditioned by assimilation to the preceding vowel. That is, palatal fricatives can be found following the close front monophthong [i:] and closing diphthongs [ei, ai] (e.g. *week* [wi:c], *like* [laic]), and more dorsal fricatives are attested following low and back vowels (e.g. *back* [bax], *dock* [dox]). These dorsal fricatives can be velar or uvular. Fricativisation of /p/ also occurs, typically to [ϕ], but this is much less frequent than that of /t/ or /k/.



Figure 1 An affricated /t/ (circled) in word-initial position in the speaker's production of the word 'two'.



Figure 2 A preaspirated, postaspirated sibilant fricative (circled) for /t/ in pre-pausal *out*. The speaker was a 15-year-old working-class female (Watson 2007).



Figure 3 Realisation of /d/ as $[\underline{\delta}]$ (circled) in the speaker's production of the pre-pausal word *could*.

Phonetic fricatives are also found for the voiced plosives /b, d, g/, although of these the lenition of /d/ is by far the most common. Because final-devoicing is common in LE, as it is in other varieties of English, the fricative realisations of /b, d, g/ are rarely voiced in final position. As with the lenited variant of /t/ described above, that of /d/ does not result in neutralisation with /z/. Instead, the fricative is articulated with a flat cross-sectional tongue shape which is not unlike the fricative variant of /t/ described above. The speaker does not affricate or fricativise /b/ or /g/, but /d/ is realised as a fricative in *could* (see figure 3). In the transcription that follows, taking Pandeli et al.'s (1997) lead, I transcribe the fricative variant of /d/ as [$\underline{\delta}$], with the caveat that it is frequently devoiced.

Vowels



Figure 4 Vowel trapeziums of monophthongs and diphthongs in Liverpool English.

heed	еі	hay
hid	аг	high
heard (also hair, her)	JI	boy
head	£н	hoe
had	aυ	how
hard ([aː] also used)	iε	beer
hod		
hoard		
who'd (also book)		
hood		
<u>a</u> bout		
	heed hid heard (also hair, her) head had hard ([a:] also used) hod hoard who'd (also book) hood about	heedeIhidaIheard (also hair, her)JIheadEHhadaUhard ([a:] also used)iEhodhodhoardwho'd (also book)hoodabout

The similarities between the vowels of Liverpool English and those of other northern English varieties are numerous. The distinction between [Λ] and [υ] that is found in accents of southern England (and elsewhere, e.g. in varieties of English outside the British Isles) is not found in LE. Thus, words such as *foot*, *put*, *butcher*, *bus* and *putt* all have [υ]. Similarly like other accents in the north, LE has the short [a] in words such as *bath*, *dance*, and *grass*, where southern English varieties have the longer [α :]. As might be expected, there is complex sociolinguistic patterning here. According to Knowles (1973, 1978), the lack of distinction between $/\Lambda$, $\upsilon/$ and the use of the short [a] in *bath* words is most robust in working-class speakers, with some middle-class speakers modifying towards higher prestige RP-like norms. Knowles (1978:

86) suggests that this differentiation often leads to hypercorrection, with speakers sometimes producing utterances such as *good luck* [gAd lok] and *black castle* [black kæs1]. Some middleclass speakers may have a [A]~[υ] type contrast by using a more centralised, schwa-like variant for one of the pair of vowels (e.g. *good luck* [g υ d lok]). Although the long [α :] is not used for *bath* words, it is used in words such as *start* and *palm*, as it is elsewhere England. In Liverpool, however, for some speakers the quality of the vowel is often more front, resembling [a:] (e.g. *start* [sta: $\underline{\theta}$], *shark* [[a:x]). Recent work has suggested that this fronter variant is used mostly by male speakers, with female speakers preferring the back variant [α :] (Watson 2005). The speaker follows this pattern, using [α :] in *hard*.

For many speakers of LE, there is a lack of contrast between the vowel in words like *square*, *hair*, and that in words like *nurse*, *her*. Typically, both sets have a front variant such as [e:] or [ϵ :], or even [r]. De Lyon (1981) establishes no less than 18 different realisations for the vowel in *square* words, ranging from [ϵ ə] to [3] to [3], and lists 15 different forms of the vowel for *nurse* words, including [3], [ϵ ϵ] and [∞]. It is not clear from de Lyon (1981), however, whether these variants pattern in sociolinguistically structured ways, as their distribution is not successfully quantified. It could be, for example, that the variation is more a result of phonological environment than any sociolinguistic patterning, but more research is required to investigate this further. According to Knowles (1973), middle class speakers are more likely to have an RP-like distinction between *nurse* and *square* words, using [3:] and something like [ϵ :] respectively. In the passage, the speaker uses a close front variant [r:] in *first*.

As with other accents in the north of England, words such as *book*, *cook* and *look* typically have a long vowel in Liverpool rather than the short [υ] found elsewhere. The long vowel is typically produced in an advanced position, most frequently as a central [μ] but also as a fully front [y]. This results in minimal pairs such as *look* [μ :k]/*luck* [$l\upsilon$ k], and *book* [$b\mu$:k]/*buck* [$b\upsilon$ k]. The use of [μ :] in *look* words occurs more often in the working class than the middle class for Knowles' (1973) speakers, but recent work has suggested that this feature is recessive, occurring less frequently in younger people (Watson 2005). The vowel in e.g. *goose* and *hoop*, is also typically articulated in an advanced position. The speaker produces an advanced variant in *blew* and *two*.

Perhaps the biggest difference between Liverpool English vowels and those of many other northern English varieties is that Liverpool English has diphthongs in words like *face* [feɪs] and *goat* [gɛut]. Diphthongs are also used in *choice* [t[ɔɪs], *price* [pɹaɪs] and *mouth* [mauθ], as they are elsewhere. For some speakers the vowel in *price* can monophthongise before certain consonants (e.g. *time* [ta:m], *five* [fa:v]) but this has not yet been systematically investigated. There is also variation in the vowel of *goat*, which most typically has a fronted onset and offset (e.g. ɛu) but can also be realised as [eu, ɛu, əu, eu] or the more standard [əu].

Stress and intonation

Previous work on LE intonation is minimal. Only Knowles (1973) has provided a systematic auditory investigation of prosodic issues, although more recent acoustic work is underway (Grabe 2004, Grabe, Kochanski & Coleman 2005). Knowles (1973) argues that LE pitch range is narrower than other varieties of English, and that this makes the distinction of tones difficult to detect. However, LE is known to have intonational similarities to other northern English accents, and also to share features with varieties of Irish English. For example, Knowles (1973: 188) refers to a tone which he calls the *step*, in which a high level tone follows the initial rise. This is comparable to the RISE-PLATEAU which is one of the most common tones in Belfast English (Grabe et al. 2005). More systematic investigation is required if we are to understand the relationship between the prosodic system of LE and that of other English varieties.

Transcription of recorded passage

Two transcriptions are provided. The first uses the phonemic symbols outlined above, whilst the second is a narrower phonetic transcription that focuses specifically on the pronunciation of the speaker and demonstrates some of the variation that has been encountered throughout this illustration.

Phonemic transcription

ðə nɔ:θ wind ən ðə sun wə dispjuttən wit wəz ðə strongə wen ə travələ keim əlong rapt in ə wo:m kleuk ðei əgriid ðat ðə won u: feist suksiidəd in meikən ðə travələ teik iz kleuk of jud bi: kənsidəd strongə ðan ði: uðə ən ðen ðə no:θ wind blu: əz ha:d əz i: kud but ðə mo: hi: blu: ðə mo: kleusli did ðə travələ feuld iz kleuk əraund im ənd at last ðə no:θ wind geiv up ði: ətempt ðen ðə sun jaind aut wo:mli ən imi:diətli ðə travələ tuk iz kleuk of ən seu ðə no:θ wind wəz əblaid3d tə kənfes ðat ðə sun wəz ðə strongə əv ðə tu:

Phonetic transcription

ðə no:θ wind n ə sum wə dispju:?m wit∫ wəz ð stiöŋgə wen ə t∫ıavlə k^heim əlöŋg ıap't in ə wo:m k^hleux dei gri:d ðat' ðə won u: fiis uksi:d^z im meiçən ə t∫ıavlə t^seiç iz kleux of ∫ub' bi k^hnsidəd st∫ıöŋə ðn ði: uðə ən den ə no:θ wim blu: əz ha:ð əz i: k^huð but də mo: hi: blu: ðə mo: k^hləusli: d^zid ðə t∫ıavlə fəulð: k^hleux əraund^z m ən a? las ðə no:θ win giv up ði: ət^semp't^s den ə sun ʃa:ind aup' wo:mli: an əmi:ðə?l i: ðə t∫ıavlə t^sux əz k^hleux of n seu ðə no:θ wim wəz əblais ə k^hnfes ðə? ðə sum əz: s∫trongər əv ðə t^su:

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