

HIBERNO-ENGLISH: EMPIRICAL MODEL OF A PHONEMIC SUBSTRATUM

1. EMPIRICAL MOTIVATION FOR THE SUBSTRATUM THEORY

The substratum theory, as originally devised by the Italian linguist Graziado Isaia Ascoli in the late nineteenth century,¹ affirms that, in cases of language change, some peculiarities of the old language L₁ will be carried over into the new language L₂. In other words: Suppose a given speech community gives up its language L₁ in favour of a new language L₂, it will speak L₂ 'with an L₁-accent', carrying over into L₂ habits of pronunciation, syntax, and the lexicon. In order to recognize such a carry-over, we should be able to establish that the peculiarities concerned (besides being present in L₁) are present not in L₂ generally, but specifically in those sub-communities of L₂ which have changed to L₂ from L₁. Additional confirmation comes from former L₁-communities that have changed not to L₂, but to some different language L₃ – again assuming that the peculiarities in question are present not in L₃ generally, but just in those L₃-communities which have changed from L₁.

Ever since Ascoli's '*lettere glottologiche*' of 1886, the favourite empirical model of the substratum theory has been Gallo-Latin, i.e. Latin (L₂) as adopted by the Gaulish (L₁) speech community. The adoption, presumably, occurred in the second and third centuries AD, and the star example is claimed (even by Ascoli) to be Gaulish [ü] in place of Latin [u·], as in Fr. *dur* < Latin *durum*, Fr. *nu* < Lat. *nudum*. Two supplementary examples are Lat. *-kt-* > Fr. *-it*, Welsh *-ith*, as in Lat. *factum* > Fr. *fait*, Welsh *ffaith*, and the 'lenition' of the medial and final stops Lat. /p t k/ > /b d g/ etc.² The geographical boundaries of these carry-overs are said to coincide with the settlement area of the former Gaulish speech community.³

The 'same change' [u·] > [ü·] has also occurred in the geographically adjacent Germanic languages (L₃), namely in Dutch (e.g. M.Du. *huus* /hüs/ < Pr.Gm. */hu·s/ 'house') and in some varieties of Alemannic (e.g. /hüs/ < Pr.Gm. */hu·s/ 'house' – witness the local pronunciation of the Alsatian place name *Mülhausen* /milüzə/). The Gaulish speech community is well attested at least on what is today Alemannic territory, so this can be taken as confirmatory evidence.

¹ As reported by H. Arens, *Sprachwissenschaft: der Gang ihrer Entwicklung von der Antike bis zur Gegenwart* 2nd ed. (Freiburg i.Br. and Munich 1969) 379–80.

² Cf. H. Weinrich, *Phonologische Studien zur romanischen Sprachgeschichte* (Münster-W. 1958) 59–63.

³ Cf. W. v. Wartburg, *Evolution et structure de la langue française* 4th ed. (Bern 1950) 22–3.

Fierce controversy has been raging for over 100 years over the explanatory value of substratum theory as applied to Gallo-Latin.⁴ True, the substratum theory has also been tried out on other material, notably by Julius Pokorny on the presumed Berber substratum of Irish⁵ and by N. J. Marr on the presumed Caucasian ('Japhetite') substratum of Indo-European.⁶ Heretofore, it was being tried on prehistoric material. Inevitably, the languages involved are known only very fragmentarily to us, so the interpretation of what evidence there is must remain highly speculative. Substratum explanations were, indeed, the fashion between the two World Wars – much as creole explanations are in the present decade.⁷ As one wit put it:⁸

Wo man nichts erklären kann,
Nimmt man ein Substrat schnell an.

Now whatever the faults or merits of substratum theory, we would suggest that a couple of sound laws reconstructed for some poorly documented language provide a less than ideal testing ground. Did Gaulish have a rounded vowel [ü]? Should we, daringly, infer the existence of Gaulish [ü] from the similar [ü] of Modern Breton (as in *du* /dü/ 'black')? Or from the strikingly different-sounding [u] of northern Welsh (in the same word)? Or from the Brythonic change Indo-European /u/ > Brythonic /i/ (as in the placename *Din-bych* 'small city', cf. Ir. *dún*)? Indeed we have plenty of [ü]s to choose from, and the choice is very speculative. Nor can we be certain at what time prehistoric French changed /u/ > /ü/. Was it during or after the period of Gallo-Latin bilingualism? In Alemannic, at least, the change /u/ > /ü/ must be very recent, as French has borrowed the placenames before the change occurred, witness Fr. *Mulhouse* /müluz/ < Alem. /mü'luzə/ (this phonetic form remains common in many neighboring varieties of Alemannic, e.g. of Basel and Freiburg i. Br.). For Dutch, the change /u/ > /ü/ has been dated in the thirteenth century,⁹ but the M.Du. /ü./ has since diphthongized, and a new /ü./ appears in French loans (as in Du. *duren* < Fr. *durer*) and in words with Pr.Gm. */iu/, as in Du. *vuur* /vür/ 'fire'.

⁴The latest contribution is by Rudolf Windisch, 'Zwischen Substratomanie und Substratophobie: die Grenzen eines sprachgeschichtlichen Erklärungsprinzips am Beispiel des Lautwandels von lat. [u] zu frz. [ü]', *Festschrift zum 75. Geburtstag von Oswald Szemerényi* (ed. B. Brogyáni, in press).

⁵'Das nicht-indogermanische Substrat im Irischen', *Zeitschrift für celtische Philologie* 16 (1927) 95–144.

⁶Arens, *Sprachwissenschaft*, 480.

⁷Cf. J. Wallmannsberger, 'The "Creole hypothesis" in the history of English', in *Karl Brunner memorial volume* (ed. M. Markus, Innsbruck 1988) 19–36.

⁸I learned the motto from my teacher, Alfred Rammelmeyer. I do not know who coined it nor whether it was directed against anybody in particular.

⁹A. van Loey, 'Altniederländisch und Mittelniederländisch', *Kurzer Grundriß der germanischen Philologie bis 1500 I: Sprachgeschichte* (ed. L. E. Schmitt, Berlin 1970) 253–87, notably p. 254.

Where we find far better empirical motivation for substratum theory than in isolated prehistoric sound changes, is in the 'foreign accent' which we hear all around us from foreign language learners and which we plausibly explain as a carry-over of L₁-phonetics into L₂ – for instance, the German speaking English with the rounding correlation for vowels (as in *mystery* /müsteri/), but without the voice correlation for consonants (as in *craze* = *grace*), the German speaking Russian with a vowel length correlation (as in *dam* /dam/ 'I give' ≠ *dam* /da-m/ gen. pl. 'ladies'), the Frenchman speaking German without word stress (as in *August* = *Augúst.*)¹⁰

A language change differs from foreign language learning just by the fact that, eventually, L₂ only (but not L₁) is transmitted to the next generation – provided, of course, the speech community remains together, so the children learn L₂ within the given speech community, not from L₂-speakers outside the speech community (who have no 'L₁ accent' to transmit). For instance, in many parts of Germany, the regional dialects (L₁) are dying or have already died, the *Hochsprache* (L₂) only being transmitted. Yet the latter preserves its regional 'accents' (i.e. its L₁-phonetics), as L₂ was and is being transmitted by local parents and teachers, who speak it with those very regional accents.

By the same token, Hiberno-English is being transmitted by Irish parents and teachers (not by Londoners). In fact, Hiberno-English should be a much better test case of substratum theory than Gallo-Latin. It is, so far as we know, English (L₂) as spoken by a speech community which was bilingual in the nineteenth century and monoglot Irish (L₁) some centuries earlier.¹¹ As both Irish and General English (i.e. for the present purposes, varieties of English other than Hiberno-English) continue to exist, it is relatively easy to document what Hiberno-English has in common with Irish, but not with General English. Thus the full evidence of living languages for and against substratum explanations is there to take for anyone who cares.

¹⁰ Abundant evidence has been collected in the last few years of language learners' 'faults' in school teaching, and interpreted in terms of carry-over from the mother tongue; cf. O. Burgschmidt, *EB-Fehlerkartei Englisch* (Nuremberg 1979); A. Barrera-Vidal and W. Kühlwein, *Angewandte Linguistik für den Fremdsprachenunterricht* (Dortmund 1975).

¹¹ We are being vague on purpose as to the duration of the bilingual period, as it is not relevant to our argument.

2. THE ENGLISH ELEMENT OF HIBERNO-ENGLISH

As we all know, many Irish elements have been recognized in the lexicon of Hiberno-English (e.g. *art* 'direction' < Ir. *aird*, as in *an art of wind* 'wind from a certain direction'), the same in syntax (e.g. the predicative syntagm with a prepositional complement, e.g. *on you*, as in 'it will be a good hour's walk on you'),¹² even affixes such as the Irish diminutive suffix *-ín* in *girl-een* 'little girl'. What has been controversial is those elements of Hiberno-English that could be carry-overs either from Irish or from non-standard varieties of English (including Early Modern English). A case in point is the double stop with friction noise¹³ [D] (this is the Hiberno-English diaphone of Gen.E. /ð/, as in *that*). It could be the Irish broad /d/ (as initially in *dún* 'fort'). At the same time, a similar sound has been observed in the dialects of northern England and transcribed as [dð].¹⁴ Both Hiberno-English and Irish have a quantity correlation for vowels, while General English (British, American, Australian etc.) has not. Yet Early Modern English had one,¹⁵ and it has been preserved to this day in the regional standard of northern England. In fact, the vowel length correlation of the latter standard has the same structure as that of the Hiberno-English standard, as far as the inventory of long and short vowels is concerned:

i i·	u u·
e e·	o o·
æ æ·	ɑ ɑ·

What differs is a few details, notably the coalescence, in Hiberno-English, of /e/ and /i/ before nasal consonants (as in *pen* = *pín*). The lexical incidence of /u/ is limited, in Hiberno-English, to words with /u/ < ME. /o·/, e.g. *look*, and to the past tense forms of the auxiliary verbs *should*, *would*, *could*. This vowel /u/ is different from /o/ (< ME. /u/) in Hiberno-English (but not in the speech of northern England), as in *luck* /lok/, *cut* /kod/.

On the other hand, Hiberno-English has an additional subsystem of retroflex vowels:

i ^r		u ^r
e ^r	ə ^r	o ^r
a ^r		ɑ ^r

¹²Cf. A. G. van Hamel, 'On Anglo-Irish syntax', *Englische Studien* 45 (1912) 272-92, esp. 281-3. Syntactically, *on you* depends, in this syntagm, not just on the verb (as it does in *depend on you*), but on the whole of the subject-predicate construction, i.e. (dependency noted by arrow):

(*it will be a good hours' walk*) ← (*on you*)

¹³On the acoustics of this sound, cf. H. Pilch, 'Neue Wege der englischen Phonetik', *Anglia* 77 (1959) 407-28, esp. pp. 421-2.

¹⁴J. Wright, *English dialect grammar* (Oxford 1905) § 314.

¹⁵Cf. H. Kökeritz, *Shakespeare's pronunciation* (New Haven 1953) 340.

Similar subsystems exist in the speech of south-west England and of North America, but not in Irish.

In many instances, Hiberno-English preserves historical forms that have been subject to change in General English. One case in point is the vowel /a/ of *any*, *many* (the /e/ which General English has in these words today is unexplained).¹⁶ Another case is the full vowel alias 'tertiary stress' in the second elements of compounds like *Englishman*, *Irishman*, *twopence*, *threepence* (the vowel has been reduced in General English).

What is less easy to pass on is the primary stress, in Hiberno-English, on the verbal formatives *-ate*, *-ize*, *-y*, as in *educáte*, *specialíze*, *occupý*. On the one hand, this is isomorphic to the stressed verbal formatives of (Munster) Irish, as *-áil* in *feiceáil* 'see', *-í* in *taithníonn* /tañ'i-n/ 'is agreeable', *-ó* in *lorgeód* /lur^ok'o-d/ 'I'll seek'. On the other hand, I have observed similar stress placement in Cockney (where it could be due to an Irish superstratum).¹⁷

Obviously, the Irish substratum cannot simply be used as a catchall to explain all those 'deviations' of Hiberno-English from the 'received pronunciation' (RP) of southern England. Indeed, we can safely conclude that any explanatory model which compares Hiberno-English just to RP and to Irish is too narrow to be useful. Nor can Hiberno-English be 'derived' just from one particular dialect of England or Scotland, but the whole of General English must be considered as comparative material.

Let us generalize: Suppose we launch a hypothesis which explains peculiarity *ɸ* of Hiberno-English as a carry-over from Irish. Such a hypothesis could be weakened by showing that:

(i) *ɸ* is not known to exist in Irish. A case in point is the retroflex vowels of Hiberno-English mentioned above. However, should *ɸ* be known to exist at least in some (even though not in all) varieties of Irish, a weakening instance will not be recognized. A case in point is the medial /h/ of Munster Irish and Hiberno-English (see section 3.3 below).

(ii) *ɸ* is not known to have existed in Irish at the time when the Hiberno-English speech community gave up Irish (i.e. in the nineteenth century). A case in point is the 'lenition', in Hiberno-English, of /t/ > /h/ (see section 3.3 below). Some partisans of substratum theory refuse

¹⁶W. Horn und M. Lehnert, *Laut und Leben* (Berlin 1954) 145-7, 718-19.

¹⁷The odd alternant with the primary stress on the suffix *-ise* (e.g. *supervise*, *rebaptise*) has been recorded in D. Jones, *Pronouncing dictionary* 6th ed. (London 1944), quoted by Bror Danielsson, *Studies on the accentuation of polysyllabic Latin, Greek, and Romance loan-words in English* (Stockholm 1948) 193. There appears to be no good reason to assume that the words concerned were first borrowed as oxytones from French into Middle English, then shifted their stress forward at a later date: 'As a result of my own investigations I can only point out that, as regards the accentuation of polysyllabic loanwords . . . no stressings have been found which may be quoted as evidence of oxytone accentuation of such words in Middle English' (*ibid.*, 32). Consequently, the Hiberno-English place of stress should not be taken as an archaic survival of earlier English stress conditions.

to recognize this as a weakening instance.¹⁸ This refusal constitutes what Leonard Bloomfield called 'the mystical version' of the substratum theory.¹⁹

(iii) β is known to exist not only in Hiberno-English, but also in other varieties of European English. A case in point is the vowel quantity correlation described in section 3.2 above. However, should β be known to exist both in Hiberno-English and in certain overseas varieties of English (e.g. in Newfoundland), a weakening instance will not necessarily be recognized, as β could have been carried overseas through Irish emigration. Recognition would, in fact, depend on the extent to which the Irish were a linguistically influential element of the overseas speech community concerned (as they were in Newfoundland).

On the other hand, a weakening instance will be recognized if β exists both in overseas English and in European English outside Ireland. A case in point is the coalescence of /e/ and /ɛ/ before nasals (as in *pen* = *pin*), the vowel /e/ in *catch*, /ɛ/ in *get*.²⁰

3. THE IRISH ELEMENT OF HIBERNO-ENGLISH

Using these criteria of refutation, let us now look at some phonetic/phonemic peculiarities of Hiberno-English which we are tempted to attribute to its Irish substratum:

3.1. *The broad-slender correlation*

Broad and slender consonants can often be distinguished in Hiberno-English, e.g. final slender /k'/ in *speak* /spek'/,²¹ initial slender /g'/, in *garden* /g'a^rdn/. Notably, the initial *w*-clusters of English sometimes correspond to Hiberno-English broad consonants, as in Hb.E. *twist* /tis't/, and the initial *j*-clusters to Hiberno-English slender consonants, as in *new* /n'u/.²² The Irish broad (bilabial) fricative /β/ has been observed finally in the name of Queen *Medb* /me.β/.

Even so, the carry-overs are erratic rather than reducible to general sound laws – except, possibly, for the alveolar consonants [t d s']. For these consonants, a case could be made to the effect that the Irish broad /t d/ and slender /s'/ reappear as the Hiberno-English diaphones of Gen.E. /p ð s/:

¹⁸J. Pokorny, *ZCP* 16 (1927) 102–4, hypothesized that the time gap was only apparent, as the substratum was limited to low-class sociolects which were not documented till much later. This is perfectly plausible, even though necessarily speculative.

¹⁹*Language* (New York 1933) 386; cf. also 'Wenn ein Volk eine neue Sprache lernt, so wird es manchmal seine Artikulationsbasis beibehalten . . . Die Einwirkung der verschiedenen Artikulationsbasis wird sich demnach nicht sofort, sondern erst in späterer Zeit auswirken' (H. Hirt, *Indogermanische Grammatik* I (Heidelberg 1927) 69).

²⁰Wright, *English dialect grammar*, § 55, index s.vv. *catch*, *get*.

²¹In the transcription, the slender consonants are followed by 'l', leaving the broad ones unmarked (as above).

²²Cf. P. L. Henry, 'A linguistic survey of Ireland: preliminary report', *Lochlann* 1 (1959) 49–208, pp. 112, 116–17. S. Bertz, *Der Dubliner Stadtdialekt* (Freiburg i. Br. 1975).

Hb.E. (= Irish)		Gen.E.	
/t'/	≠	/t'/	≈
/d'/	≠	/d'/	
/s'/	≠	/s'/	

This is, at least, one way to account for the 'strange' Hiberno-English diaphones of /p̥ ð/. Even so, there is weakening evidence:

(i) The diaphone [d̥ð] of northern England (see n. 14 above). However, as no similar diaphone is known for its voiceless correspondent /p̥/, the explanation in terms of the Irish substratum is more complete than in terms of dialectal English.

(ii) The Hiberno-English neutralization, before /r/, of /t/ = /p̥/, /d/ = /ð/ has also been reported in the rural dialects of south-west England.²³

(iii) In some Irish loanwords, Hiberno-English substitutes slender Hiberno-English for broad Irish consonants, e.g. in *the garda* /g'ardə/ (< Ir. /ga.rdə/) 'police'. Presumably this occurs because of a tendency generally in Hiberno-English to use slender consonants initially before dark vowels,²⁴ but this is hard to explain in substratum terms.

3.2. *The 'gliding vowels'*

The vowels of Irish sound 'polyphthongal' to the outsider notably when positioned between broad and slender consonants, e.g. /i:/ in *daoine* /di.n'ə/ 'people' and *bliain* /bl'i.n'/ 'year', /u/ in *beag* /b'ug/ 'small' and *cuid* /kud'/ 'piece'. Often 'glides' are used in the transcription (and in the orthography), as in [b'l'iən'] 'year' [bjüg] 'small', [kwid] 'piece'. Analytically, however, such 'glides' are not segments, but timbre characteristics of the surrounding consonants, while the vowels themselves are monophthongal (as reflected in our transcription).²⁵

The diaphone of /ai/ heard in the 'Upper South' of the United States glides towards *i*-timbre before voiceless consonants (as in *right* /ra^ht/), toward *a*-timbre before voiced consonants (as in *ride* /ra^hd/). The latter sounds very similar to Irish /a/ between a broad and a slender consonant, as in *amháin* /əva.n'/ 'only'. It is part of what in America is pejoratively called 'the Southern drawl'. In fact, in the Southern drawl, the vowels generally 'glide' either toward an *i*-timbre consonant, a *a*-timbre consonant or an *u*-timbre consonant,²⁶ as in *egg* /e^hg/, *flash* /flæ^hs/, *ten* /tɛ^hn/, *enough* /in'ə^hf/, *all* /a^hl/, *bought* /ba^ht/.

These long drawn-out vowels with their 'gliding' timbre do sound similar to the long vowels of Irish. Tempting though it is to attribute them to an Irish substratum carried by emigrants, there is insufficient

²³Wright, *English dialect grammar*, § 313.

²⁴Bertz, *Der Dubliner Stadtdialekt*, 266-7, 306.

²⁵Cf. H. Pilch, 'Unterscheidbarkeit in der irischen Phonetik', *Festschrift Gearóid McEoin* (ed. H. Tristram, Hamburg 1990) 269-91.

²⁶Cf. H. Pilch, *Manual of English phonetics* (to appear in Munich in 1991, Wilhelm Fink Publishing House) § 7.215.

evidence to confirm that the Irish were, indeed, a linguistically influential element in Southern United States society.

3.3. *The split t*

The 'split *t*' of Hiberno-English is – by virtue of its distinctive features – an allophone of /h/ (not of /t/). It is a voiceless spirant with channel noise (i.e. the noise cannot be judged to emanate from a specific location within the vocal tract such as labial or palatal). The 'split *t*' is usually heard finally (as in *hot* /hah/) and medially (as in *hotter* /hahr/). At the same time, it is in complementary distribution with initial /h/, as in *hot*.

From the point of view of Irish, the 'split *t*' reproduces the lenition paradigm. This changes /t/ > /h/ diachronically²⁷ between vowels, synchronically under mutation. The fact that the 'split *t*' has, occasionally, been observed even initially (between vowels)²⁸ further supports the idea that it is, historically, conditioned by the intervocalic position, but is being replaced by the standard /t/ in the initial position.²⁹ What again mars this explanation, however, is the time gap. Diachronically, the lenition happened quite a few centuries ago in Irish. It is productive in Irish today just as a morphophonemic alternation paradigm, not as a sound law converting medial and final /t/ into /h/. In fact, /t/ (< /tt/) does exist medially and finally in Irish today, e.g. in *litir* < Lat. *littera*, *cat* < OIr. *catt*), while medial /h/ is today limited to the Munster dialect (it was lost in Connemara and Donegal probably at a recent date).

Tempting as it is to interpret the 'split *t*' in terms of the substratum theory, the interpretation forces us to speculate that unknown Irish sociolects are surfacing (see n. 18 above) in which lenition is still productive, and that it is productive in these sociolects just for /t/ (not for other consonants).

Another blemish on such an explanation is the fact that at least medial /t/ is also unstable in General English, changing either into /d/ or /ʔ/. The change into /ʔ/ applies even to final /t/ in British and Scottish English, notably so when a consonant follows, as in *I gót thát much* /gɑʔ ðæʔ məʔs/. The change (into either /d/ or /ʔ/) is limited to the medial position in American English, as in *writer* = *rider* /d/, *kitten* /kɪʔn/, *sentence* /sɛʔs/.

3.4. *Enclitic consonant groups*

Hb.E. *different* sounds like [dif^ərnt], *film* sounds like [fl^əm] to the outsider. In my experience, distinctions such as between the enclitic groups /-f^ərnt/ ≠ /fr^ənt/, /-d^ərn/ ≠ /-dr^ən/, /-str^əs/ ≠ /st^ərs/ (as in

²⁷Presumably via /p/ (cf. the analogues /p/ > /f/, /k/ > /x/ in the lenition paradigm).

²⁸S. Bertz, *Der Dubliner Stadtdialekt*, 277–80.

²⁹This is analogous to what happened in prehistoric Gallo-Romance; cf. Weinrich, *Phonologische Studien*, 63–81.

modern ≠ *children*, *mistress* ≠ *masters*, *actress* ≠ *actors*) do not exist in Hiberno-English, at least not in the western varieties.

In General English, this is a distinction between 'medial consonant clusters' (such as /dr str/) and 'enclitic groups' (such as /d^ər st^ər/). To explain these concepts in more familiar terms,³⁰ a 'medial consonant' (including consonant clusters) is one between a stressed and an unstressed syllable, as /d/ in *modern*, /ldr/ in *children*. An 'enclitic group' comprises a medial consonant plus the following 'enclitic consonant' (including consonant clusters), i.e. the final consonant of the following unstressed syllable, e.g. /d^ərn/ in *modern*, /str^əs/ in *mistress*.

The two enclitic groups are, in the example above, separated by the neutral vowel /^ə/, the opposition between them hinging on the exact location of the neutral vowel /d^ərn/ in *modern*, /dr^ən/ in *children*. As far as my experience goes, such oppositions do not exist in Hiberno-English. On the contrary, the enclitic group of *modern* /drn/ sounds the same, in some varieties of Hiberno-English, as of *children* /drn/, of *masters*, *actors* /strs/ the same as of *mistress*, *actress* /strs/. In the transcription, we can insert neutral vowels or omit them. What matters is that /dr^ən/ is not, in certain varieties of Hiberno-English, distinguishable from /d^ərn/, nor /str^əs/ from /st^ərs/.

The situation is analogous in Irish.³¹ The enclitic consonants of spoken (not written!) Irish have automatic offglides, e.g. /l^ə/ in *bolg* /bul^əg/ 'belly', the same in *Nollaig* /nul^əg'/ 'Christmas', /r^ə/ in *farraige* /farəg'ə/ 'sea', the same in *airgead* /ar^əg'əd/ 'money' – regardless of the spelling. Indeed, we would suggest that the numerous 'rules' of elision and accretion propounded in historical grammars and generativist disquisitions (e.g. elision of *a* in *foclóir* 'dictionary', compared to *focal* 'word') apply just to Irish spelling conventions.

In the case of these enclitic groups, the substratum explanation appears obvious. The structural analogy is there between Irish and Hiberno-English, and none of the weakening considerations (see section 2, conclusion, above) is applicable.

4. SUBSTRATUM AS LINGUISTIC STRUCTURE

Useful as the Irish speech community is as an empirical model of the substratum theory, it presents one puzzle. According to conventional wisdom, we should affirm that the 'articulatory habits' of Irish (say 'the Irish basis of articulation') have been carried over into Hiberno-English: 'Wenn ein Volk eine neue Sprache lernt, so wird es manchmal seine Artikulationsbasis beibehalten',³² 'Anders ist es mit der Lautlehre,

³⁰For a fuller explanation, cf. H. Pilch, *Manual of English phonetics* (to appear in Munich in 1991, Wilhelm Fink Publishing House) § 4.512.

³¹The data are not from textbooks, but from the author's own observation during three stints of study in Inis Meáin (1985), Dingle Peninsula (1987) and Connemara (1988); see n. 25 above.

³²Cf. Hirt, *Indogermanische Grammatik*, 69.

die natürlich an den Bau der Sprechwerkzeuge gebunden . . . ist'.³³ If this were so, then monoglot speakers of Hiberno-English should easily learn to pronounce Irish. After all, the 'basis of articulation' should be the same, and so is the 'hereditary build of the organs of speech' (as assumed by Julius Pokorny). However, we all know that this is not the case. On the contrary, most speakers of Hiberno-English struggling to learn Irish find Irish pronunciation very hard. And yet – the Irish 'lilt' of Hiberno-English is very obvious to any unsophisticated listener. So why do they have to struggle so hard, even though they have the same 'basis of articulation'?

This seems very odd indeed. We try to solve the puzzle by reinterpreting substratum theory in terms of a carry-over of (abstract) linguistic structures rather than just (concrete) articulatory habits (though we will not necessarily rule out the latter). Needless to say, we will not invoke the 'basis of articulation', as this concept is too obscure to be useful. Nor do we accept the proposition that the Irish have a peculiarly 'Irish anatomy' to their organs of speech. On the contrary, it is a matter of general experience that any healthy human being – at least in his childhood – will learn to speak any language without a 'foreign accent'. It follows that the anatomical and physiological peculiarities of the individual speaker's vocal tract are not relevant to the particular language(s) he learns as his mother tongue. They can be safely neglected by the linguist. Are those peculiarities attendant, perhaps, not on the individual speaker, but on the speech community as a whole? Even as a hereditary 'basis of articulation' (see n. 19 above)? We dismiss this idea as utterly implausible – witness 'melting-pot' speech communities such as American English.

The reinterpretation of substratum theory in terms of linguistic structure is necessary even for our most plausible Hiberno-English example, the automatic offglide of enclitic consonant groups (see section 3.4 above). Viewed as physical articulation, Ir. *Nollaig* and Hb.E. *film* both have more or less of an offglide [l²] each time they are pronounced, and it is (in terms of articulation) easy for any speaker with a modest amount of phonetic training, on request, to reduce the offglide either to zero or to pronounce it very clearly. The point is that neither Irish nor Hiberno-English use this 'either . . . or' in their linguistic structure. To put it more technically, the physical 'either . . . or' is not attributable, as a distinctive feature, to any linguistic distinction of Irish or Hiberno-English.

The carry-over of the broad-slender correlation into Hiberno-English (see section 3.1 above) is, we suggest, comparable to the carry-over of the vowel quantity correlation into second-language Russian, of the rounding correlation into second-language English (see section 1 above). In all three cases, the L₁ speaker uses (in L₂) a distinctive feature he does

³³Pokorny, *ZCP* 16 (1927) 98. The language-specific build of the organs of speech is hereditary, according to Pokorny.

not need. Consequently, the lexical incidence of this feature becomes somewhat (though not entirely) erratic, leaving much room for idiosyncracies.

As regards the different consonantal timbres involved in the 'Southern drawl' of American English (see section 3.2 above), their similarity to Irish is one both of structure and manifestation, and so is the analogy between the split *t* of Hiberno-English and Irish lenition (see section 3.3 above) – even though the structural similarity is, on its own, not enough to warrant an explanation in terms of substratum theory. The similarity may be just typological – as is the similarity between the Irish broad-slender correlation and the correlation of palatalization in Russian, Polish and Romanian.

The reinterpretation of substratum theory in terms of linguistic structure is necessary even for its generalized application to second language learning (see section 1 above). To cite the familiar example of the northern German who carries over his 'Auslautverhärtung' into English and French: He is carrying over not an articulatory habit – he does habitually pronounce voiced consonants, for instance initially in *dir* (\neq *Tier*), medially in *leiden* (\neq *leiten*). What he carries over is an abstract linguistic structure, namely the neutralization in the final position of the voice correlation under the voiceless member, e.g. final /t/ in *Leid* = *leiht*. By the same token the Frenchman who misses the wordstress of German and Russian is, of course, in the habit of pronouncing his 'syllables' with different envelopes of intensity, pitch, length and timbre. Where he fails is in associating the latter with culminative stress as a linguistic structure.

For fear of being misunderstood: The interpretation of substrata in terms of linguistic structure does not reduce our procedure to a game of algebra. On the contrary, it includes the physical manifestation of linguistic structures within its purview. After all, the physical manifestation is the only mode in which linguistic structures are transmitted from generation to generation. Ruling it out would be just as pointless as, inversely, focusing on the physical manifestation to the exclusion of the linguistic structures which they manifest (traditional substratum theory does not, in practice, disregard linguistic structure, but it considers it in a haphazard way). To cite the stock-in-trade of substratum theory: It is strictly as physical manifestation that the change [u] > [ü] is 'the same' in French, Dutch, Alemannic and Breton (see section 1 above), while the linguistic structures involved are quite different.

On the other hand, the purely physical 'sound' can be carried over even into quite different structures (as we all know from foreign language teaching – witness the Frenchman speaking English with a uvular *r*). For example, the vowel /o/ (as in Hb.E. *luck*, *Dublin*) sounds, to my ears, very much like the Irish vowel /u/ (as in Ir. *dubh* /duv/ 'black', *luch* /luχ/ 'mouse', *loch* /luχ/ 'lake'). Yet it is integrated into a non-substratum vowel system (see section 2 above). It is a moot point

whether the Hiberno-English diaphones of /b ɔ̃ ʃ/ sound 'similar enough' to Ir. /t d s'/ to qualify for a substratum explanation (see section 3.1 above). Suppose we did accept the Irish substratum explanation for the 'gliding vowels' of the Southern drawl – surely the carry-over would involve not the Irish broad-slender correlation, but just the physical manifestation of certain vowels, e.g. Southern United States *live* /lav'/ (adjective) carried over from the Irish dat. sg. *láimh* /la.v'/ 'hand' (see section 3.2 above).

It has been argued that the most striking bit of Irish substratum evidence is the intonation of Hiberno-English. Now, viewed just as physical manifestation (i.e. as sequences of 'kinetic glides' such as rises, falls and level stretches), the intonation of Irish appears surprisingly similar to the intonation of Standard British English.³⁴ So the intonational difference between General English and Hiberno-English cannot be in the physical manifestation – it must be due to the different phonological structures which are being manifested in Irish and General English. However, these structures have not been analyzed so far – even the very quest for them is poorly understood.³⁵ So we cannot say anything about them at this juncture.

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³⁴Cf. V. S. Blankenhorn, 'Intonation in Connemara Irish: a preliminary study of kinetic glides', *Studia Celtica* 16–17 (1981–2) 259–79.

³⁵Cf. H. Pilch, 'La tonalité linguistique', *La Linguistique* 20 (1984) 29–48.