Applications of Discourse Intonation II: Rhondda Valley English

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Introduction

Tone-unit theory (for example Halliday, 1967; Crystal, 1969; O'Connor and Arnold, 1973; Brazil, 1997) concentrates particularly on forms and functions to be found in the segment of the tone-unit that stretches from the onset of the nuclear accent to the end of the tone-unit. This paper will use the term 'nuclear segment' to refer to this, and the term 'intonational phrase' (IP) to refer to 'tone-unit'. Its purpose is to give a short account of nuclear-segment form and function in Rhondda Valleys English (RVE), a variety of Welsh English. The paper is based on a study of RVE prosody (Walters, 1999), reported in Walters (2003). References throughout will be made to insights gained from Discourse Intonation theory (Brazil et al, 1980; Brazil, 1997). David Brazil, with whom I corresponded on RVE, would have been interested in this paper (if not in agreement with all its arguments!), since he himself was convinced that DI could be applicable 'across dialects' (Brazil, 1986).

The nuclear segment

The account of RVE prosody starts out from a different theoretical assumption as to the nature and contents of the nuclear segment. It abandons the traditional tone-unit theory notion of 'nucleus' as being the 'phonetically the most salient' prominence (Halliday, 1967, p.14; Crystal, 1969, p.205) or 'main focus of information' (Halliday, 1967, p.22; Gussenhoven, 1986, p.78) in a tone-unit. It maintains, instead, that such a 'nucleus' or 'tonic' can be viewed as a conflation of two separate elements (1) the final accent of the tone-unit with an information focusing / highlighting role and (2) the 'terminal tone', which is the final single pitch movement of the IP (falling, rising or level). The stance is similar to that taken by Brown et al (1980, p.157) and by Ladd (1996, p.87), while 'terminal tone' is similar to the 'finality contours' of Pike (1945), 'terminal junctures' of Trager and Smith (1951) and 'terminals' of Bolinger (1986).

The Rhondda Valleys lie just north of Cardiff in South Wales. They were home to a huge coal-mining industry which at its height between 1800 and 1950.

The theoretical issues involved cannot be discussed here, but the utility of the position adopted in this paper can be illustrated by looking at a problem that is often encountered by tone-unit theorists. This is the analysis of IPs in which there appear to be two competing candidates for 'nucleus', the first typically being the more salient phonetically and carrying a falling tone while the second has a rising tone. Crystal, D. (1969, pp.218-220) gives as an example the phrase *'I'm sorry about the bookcase'* (Figure 1).

// I'm SOrry about the BOOKcase //

Figure 1. Competing 'nuclei' (capitalisations = prominences).

Such a sequence may produce a variety of analyses in tone-unit theory:

1. a nucleus on *'sorry'* with the tone spread over the 'tail' (the stress on *'bookcase'* being judged to be merely rhythmical)
2. a non-nuclear prominence on *'sorry'* followed by nucleus on *'bookcase'*
3. Crystal himself describes such a sequence as a 'compound tone' (1969, pp.218-220), and O'Connor and Arnold (1973, p.28) refer to it as a 'compound tune'
4. Halliday (1967, pp.13-18, 1970, p.12) proposes the solution of 'compound tone-group' or 'double-tonic tone-group' i.e. a single tone-unit with two nuclei
5. Discourse Intonation (DI) (Brazil et al, 1980, p.8), rejecting the concept of 'double-tonic tone-groups', would maintain that if there are two nuclei there are two IPs.

'...RVE analysis finds much in DI theory that is a powerful descriptor of the discourse 'meaning' of intonation.'

The example *'only the fight mind'* (Figure 2) is taken from an auditory experiment reported in Walters (1999, pp.220-244), in which six intonationalists – 5 with published work in the field – listened to passages of RVE spontaneous conversations. For the utterance in Figure 2, not only auditory clues but the full context of the situation was available to them. As can be seen in the acoustic record in Figure 3, the word *'only'* is phonetically much the most salient word in the IP; and the conversation leading up to it identifies it as the 'contrastive' information. With *'fight'* also marked as 'prominent' by all six volunteer intonationalists, the familiar dilemma for tone-unit theorists presented itself as to where to place the nucleus. Their decisions are shown in Figure 2. ('V1', 'V2' etc. refer to their code-names.)

V1,6	/ ONly the fight mind /	Nucleus on *'only'*
V2,3,5	/ only the FIGHT mind /	Nucleus on *'fight'*
V4	/ONly the FIGHT mind /	Two nuclei

Figure 2. Listener's different analyses of the phrase 'only the fight mind'. (underlining = prominences; capitalisation = nucleus)

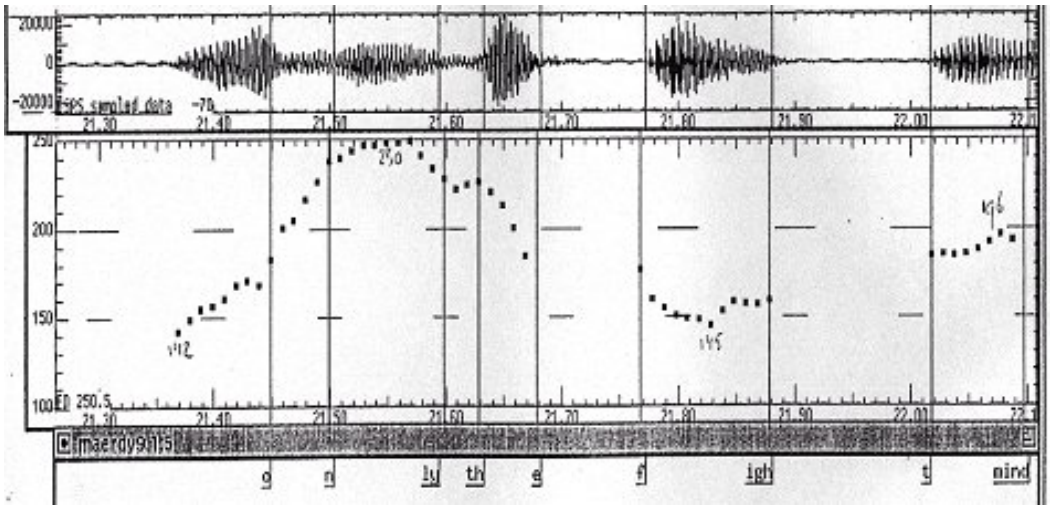

Figure 3. Acoustic record of the phrase 'only the fight mind.'

Abandonment of the traditional notion of nucleus as 'phonetically the most prominent' or 'main focus of information' enables a somewhat more straightforward analysis to be made (Figure 4). In this, one is not forced to choose between *'only'* and *'fight'* as 'nucleus'. Both of them may be judged to carry accents. The second, on *'fight'*, begins the 'nuclear segment' of the IP. The nuclear segment also contains the 'terminal tone' (final single pitch movement), which is rising – the rise beginning on *'fight'* and finishing on *'mind'*. The speaker might well, however, have used a different terminal tone

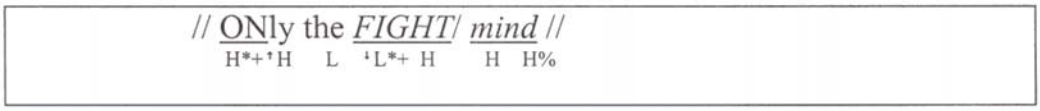

Figure 4. Transcription of 'only the fight mind'

KEY	
//	IP Boundary
/	minor demarcation within the IP (cf. intermediate phrases, Beckman & Pierrehumbert: 1986)
mind	stress (underline)
ONly	accent
H	a contour-point which is higher in pitch than the previous one marked
L	one which is lower
↑ ↓	pitch movement of 3 – 6 semitones
H*+H	an accent contour; the star denotes the centre of stress.
H%	the final contour-point of the IP
italics	the nuclear segment

contour on *'mind'*. For example, if he had finished L L% the terminal tone would have been falling. Although the break-down of nuclear segment into 'final accent' + 'terminal tone' represents a somewhat different theoretical stance from tone-unit theory, cross comparisons can be made: a falling terminal tone would be the same as saying, in tone-unit theory, that a 'nuclear tone' is ultimately falling, and a rising terminal tone that it is ultimately rising.

Rhondda Valleys nuclear segment

Final (nuclear) accent contours

The actual configuration of final ('nuclear') accent contours in RVE is extremely variable. Almost any combination of 'H' (pitch goes up), 'L' (pitch goes down) and '0' (pitch stays the same) occurs in the RVE data. Yet all of them perform the same accentual / information highlighting role. This being so, and because the various factors that influence contour shape are mostly tangential, it is difficult to see in what way differences in contour type could be viewed as 'phonological'. Examples of the different final (nuclear) accent contours are seen in Figure 5.

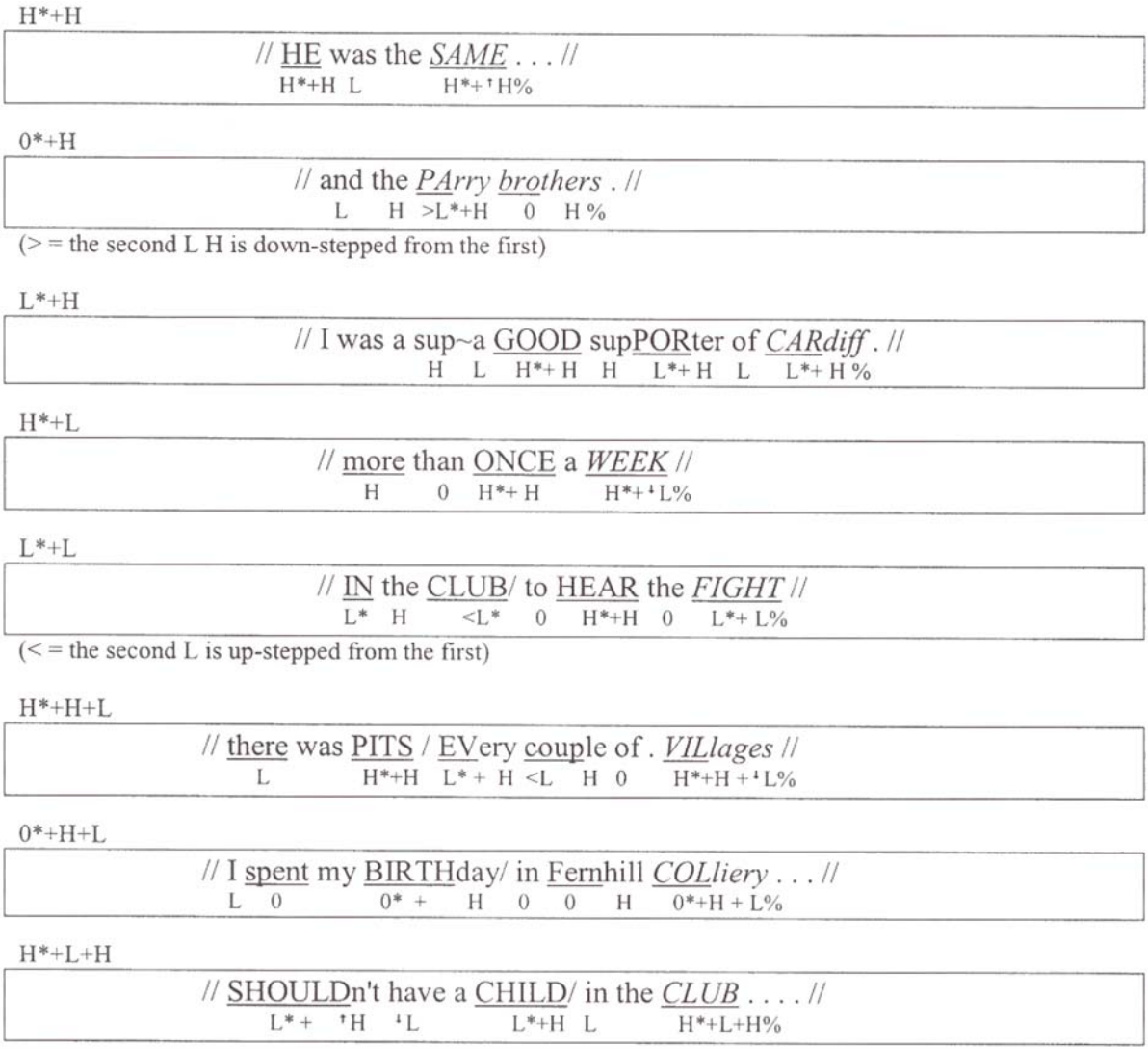

Figure 5. Examples of the contour types occurring in RVE

The different influences on contour shape include:

· the surrounding tune – e.g. if rising, H*+H is more likely than L*+H

· the amount of segmental material available for accent realization – e.g. if on a monosyllable containing a short vowel, H*+L is more likely that H*+H+L

· the tendency in RVE for the pitch obtrusion to the stressed syllable to be downwards (50.4% of cases in non-final and 55.8% in final [nuclear] accents) – hence L*+H is by far
the most common accent (whether non-final or final) in the data

· the strong tendency for pitch movement ('tone') from the stressed syllable to initially rise – 87% of non-final and 75.7% of final (nuclear) accents

Because contour shape is influenced by such various factors, it is difficult to see in what way differences in contour type could be viewed as 'phonological'. Examples of the differeent final (nuclear) accent contours are seen in Figure 5.

Terminal tones

Terminal tones appear to have at least two clear functions in RVE: (1) they help to *demarcate* the IP by means of segmental lengthening (being 'drawn out') and (2) they signal general discoursal meanings, the end of an IP being reached, of *finality* vs *non-finality*. The latter is done via a binary contrast between falling and rising – level being subsumed with rising, since speakers plainly intend the pitch to 'stay up' and 'not go down'. The terms 'finality / non-finality' are those suggested by Bolinger (1998: 48), who states:

A fall is 'finality' in any sense (end of a series, end of a main part, 'nothing more worth saying' hence positiveness); a rise or high pitch is 'non-finality' in any sense ('not through speaking', 'answer my question', 'incomplete utterance', 'too excited to calm down', 'give me feedback').

In the RVE data, two discoursal aspects of such finality / non-finality are continually present:
(1) *informational (text-orientated)*, as when a proposition embarked on is signalled as being completed with a falling terminal tone, or incomplete ('more to come') with a rising one
(2) *interactional (listener-orientated)*, where a falling tone *proclaims / asserts* by virtue of its finality sounding to 'close the matter off', and a rising one *refers* by sounding open to completion / response from the listeners. Such contrasts of discoursal meaning clearly identify terminal tones as the most phonological of the intonational forms contained in the nuclear segment. Examples can be seen in Figures 6 and 7.

// not *WOMen* . . . . . // *SOCcer* . . . . //
H L*+'H% H*+ H+L%

Figure 6. Rising terminal tone on 'women' signals informational non-finality; falling on 'soccer', finality.

// but unFORtunately/ we LOST the *STRIKE*. . //
H L L* + H L H*+H L H*+H%

Figure 7. Rising terminal tone on 'strike' signals interactional non-finality - it refers the completed information to the listeners for their comment.

In the informal conversations that form the data, it is found that listener-orientated meanings of terminal tone can clearly outrank text-orientated ones, since information that appears (from studying the full context) to be completed is frequently referred via a rising tone to the listener. An example has been seen in Figure 7. A further example can be found in Figure 8, *'I walked from Cardiff'*. The rising terminal tone on Cardiff is clearly referred by the speaker to the listeners for comment, since the walking from Cardiff involved a distance of over 20 miles.

do you *KNOW* // I WALKED from *CARdiff* //
L H <L*+H% L 'H* + H 'L L*+H%

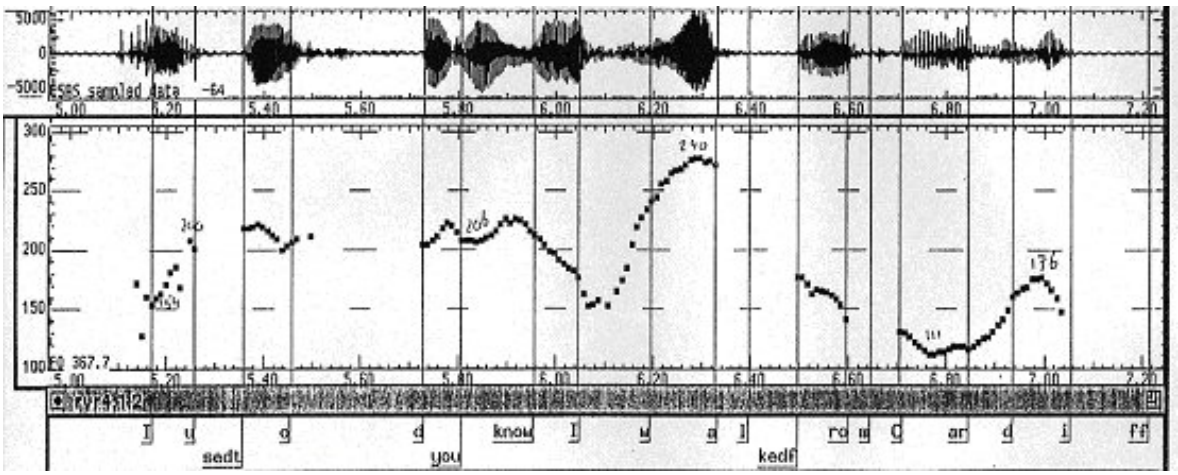

Figure 8. Rising terminal tone on 'Cardiff' refers to the listeners for comment.

It will not have gone un-noticed by the reader that such findings are generally supportive of tenets of Discourse Intonation (DI) theory (Brazil et al, 1980; Brazil, 1997). 'Text-orientated' and 'listener-orientated' speech is similar to the distinction made by Brazil et al (1980, p.87) between a speaker's 'set towards the language' ('oblique orientation') and 'set towards the hearer' ('direct orientation'), while the use of the terms 'proclaim' vs 'refer' to describe the meaning difference in listener-orientated speech are a direct borrowing from DI.

Pitch level

A further meaningful element in the nuclear segment is pitch level. Firstly, pitch level helps to signal an ordering of prominence in the IP – if there are two or more accents in the IP it is the one whose H-peak reaches the highest pitch that is perceived as being the most prominent.

A further role of pitch level is to indicate *termination height*, the perceived height reached at the end of an IP. Here, along with Brazil (1997, p.11), the analysis uses a three-term system of *high termination, mid termination and low termination.* The features that make an ending sound 'high' or 'low' are not always straightforward. Relative as well as absolute pitch is involved, so that what may appear as high termination in one IP may appear as mid or even low termination in another. In falling terminal tones, the critical height is that of the onset of the final accent (or of the H-peak immediately following it in rising-falling-tone contours). In rising terminal tones, it is more straightforwardly the finishing point of the rise.

One effect of termination height is to modify the meaning of terminal tone. High termination increases the referring power of a rising terminal tone (cf. high-rises of Halliday, 1967) – it may even have a strong referring power with a falling terminal tone – and low termination increases the proclaiming/ asserting power of a falling one. An example of high termination with a rising terminal tone can be seen on 'Cardiff' in Figure 9. Low termination height, with other prosodic clues such as slowing up and diminuendo can also be used to help indicate end of topic or speaking turn.

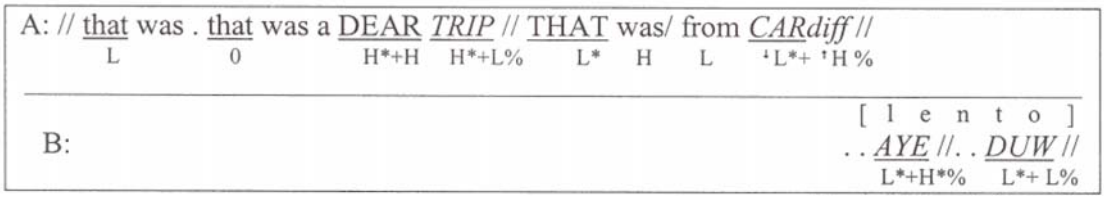

Figure 9. Speaker A's high termination on 'Cardiff' brings a response from Speaker B.

References:

Bolinger, D. (1986). Intonation and its parts. Stanford, California: Stanford University Press.

Bolinger, D. (1998). Intonation in American English. In: D. Hirst and A. Di Cristo (editors) *Intonational systems.* Cambridge: CUP.

Brazil, D., Coulthard, M. & Johns-Lewis, C. (1980). Discourse intonation and language teaching. London: Longman.

Brazil, D. (1986). *Intonation and the study of dialect*. In: Annual Report of Dialectology. Tokyo. 29.

Brown, G., Currie, K. & Kenworthy, J. (1980). Questions of intonation. London: Croom Helm.

Crystal, D. (1969). Prosodics and intonation in English. Cambridge: C.U.P.

Brazil, D. (1997) The communicative value of intonation in English. Cambridge: CUP.

Gussenhoven, C. (1986). *The intonation of "George and Mildred".* In: C. Johns-Lewis (ed.) Intonation in discourse. London: Croom Helm.

Halliday, M. (1967). Intonation and grammar in English. The Hague: Mouton.

Ladd, D.R. (1996). Intonational phonology. Cambridge: CUP.

O'Connor, J. & Arnold, G. (1973). Intonation of colloquial English. London: Longman.

Pike, K. (1945). The intonation of American English. Ann Arbor: University of Michigan Press.

Trager, H. & Smith, H. (1951). *An outline of English structure.* Studies in Linguistics Occasional Papers 3. Washington D.C.: American Council of Learned Societies.

Walters, J.R. (1999). A study of the segmental and suprasegmental phonology of Rhondda Valleys English. Unpublished PhD thesis. Pontypridd: The University of Glamorgan.

Walters, J.R. (2003). On the intonation of a South Wales 'Valleys accent' of English. In *Journal of the International Phonetics Association.* (forthcoming)