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Is there a role for prosody within Register studies: and if so what and how?

Gerard O'Grady

Orcid ID [0000-0003-1730-9074](https://orcid.org/0000-0003-1730-9074)

Cardiff University UK

Abstract

This article examines whether the incorporation of prosody within register studies can lead to a richer description of what speakers can mean in a specific environment. In order to situate how prosody resets the probabilities of contextual variables, a number of texts are examined and it is argued that prosodic systems at and above the rank of tone group are meaningful and situated on the content plane. The article concludes by suggesting some redrawing of the standard SFL stratification model by arguing that the view that *meaning redounds with wording which in turn redounds with sounding* needs some revision to incorporate the higher units of the phonological rankscale bring situated on the content plane.

Key Words

Register, prosody, stratification, redundancy, realization.

1. Introduction

Prosody has been conspicuous by its absence both within the SFL and the non SFL traditions of register studies for a number of reasons. Firstly, much work on register has been on written registers such as student essay-writing, the language of science, literary stylistics and business promotion/advertisement literature where prosody is not relevant. For instance, Halliday's seminal work on the language of science identified a number of features that characterise scientific discourse such as grammatical metaphor, passivation and generalisation (Halliday & Martin 1993, Halliday 2005). These features clearly do not depend on prosody. They exist regardless of how they are spoken or indeed whether they are spoken. Secondly, much of the work on register has looked at formal features in texts which have then been presented in terms of frequencies. Thirdly, (accurate) prosodic transcriptions may not always have been

available or considered. Fourthly, there is the issue of translation. Studies of dialects rather than registers have intensively examined phonetic realizations of phonemic features where their correlation with social variables such as class, gender and age has been ascribed as functional. Dialects refer to the same meanings produced by different forms and cannot be preserved in translation. Registers conversely refer to different meaning choices and hence as a meaning choice is not associated with a single form, are translatable (Moore 2017: 420). It is by no means clear how one would go about translating prosodic features or indeed why one would attempt to do so.

Register is a semantic concept which can be defined as a configuration of meaningful choices that are usually associated with particular situations. In other words, registers are identified as configurations of Field, Tenor and Mode variables (Halliday & Hasan 1989). Within SFL Field is expressed by experiential meanings, Tenor is expressed by interpersonal meanings and Mode is expressed by textual choices.¹ Thus, in discussing the issue of where, if at all, prosody sits within register studies, we must first consider the relationship of prosody with the Field, Tenor and Mode variables. In the next section we will examine more closely what register is and how it relates to linguistic choices.

2. Register within a Systemic Architecture of Language

In the SFL literature, register can be understood either as a functional variety of language (Halliday, McIntosh & Stevens 1964) or as a stratum within the contextual stratum (Martin & Rose 2007). In this paper, I will use the term to refer to the former and not the latter meaning. As a functional variety of language, a register is situated along the cline of instantiation where it represents a particular configuration of semantic choices which are realized by the lexicogrammar at the next stratum down or it can be defined as a systemic resetting of the probabilities in the texts belonging to the register (Halliday 1978, Lemke 1995).

¹ Halliday & Greaves (2008: 69) note that one of the meanings of intonation is to signal tactic relations between tone groups. While the logical meaning is usually linked with the experiential meaning and considered part of the Ideational metafunction, it is by no means clear what role, if any, logical meaning plays in configuring Field, Tenor or Mode variables (Halliday & Hasan 1989: 25).

Language is a resource from which speakers draw while (i) construing the material and social world surrounding them and (ii) interacting and engaging with it. Instances of language, which are realizations of semantic choices occur in individual but re-occurring contexts. It is the reoccurrence of the contexts that results in language instances (the realizations of meaningful choices into a repertoire of text types) to converge into identifiable registers. Thus a register represents a subpotential. System as a resource and instance/text occupy and define the poles of the cline and are related through instantiation. Register as an intermediate pattern can be viewed either from the perspective of the instance or from that of the system. Fig1 based on Halliday & Matthiessen (2014: 28) schematises the situation.

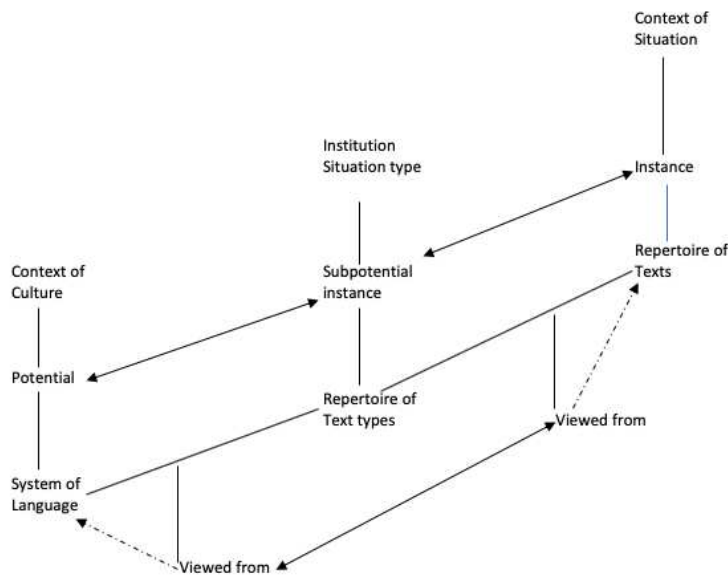


Figure 1: Register as Subpotential: Viewed from the perspective of Instance and System

If we examine language as instance we are confronted by a material object; a string of graphemes or phonemes which are, as Thibault (2004: 26) reminds us, the result of interaction between the environment and the soma. In spoken discourse the phonic channel is frequently accompanied by gestures: even people conversing via telephones can be observed to produce culturally appropriate but redundant gestures to accompany their words.² Gestures may well be the vestiges of an earlier protosemiotic system which was

² Redundancy, as will be shown in the discussion of register from the perspective of the system is a key mechanism in enabling the creation of novel meanings.

eventually overridden and subsumed by spoken language.³ In a sense gestures can be compared with the vestigial human organ the appendix which no longer needs to function in humans to help digest cellulose rich flora. Gesture too is a vestigial function: present but not necessary.⁴ We will examine whether the same is the case for prosody.

Articulation is a form of gesture produced by a modulation of (usually) a pulmonic egressive airstream by a combination of glottal, velum, lingual and labial movements and positions. As there is no natural link, excluding minor exceptions of sound symbolism/phonaesthesia e.g. (Firth 1957, Willett 2015 and Elsen 2017) between an articulation and a concept, the articulatory gesture's role in semiosis seems to be restricted to mode.

Example 1 which is a transcript of W. B. Yeats' own reading of his poem, "The Lake Isle of Innisfree", on BBC radio in the 1920s illustrates the semiotic potential of prosody. All tones are level (tone 3) unless indicated. The intonation conventions used here are found in footnote 12.

(1) The Lake Isle of Innisfree

1. |* I will arise|* and go now, |* and go to Innisfree | (7)⁵
2. |And a small cabin | build there, | of clay | and wattles made | (7)
3. | Nine bean rows | will I have there, | a hive for the honey bee | (7)
4. | And live | alone in the bee-loud | /glade | (5)

5. |* And I shall have some peace there | for peace | comes dropping slow | (7)
6. |Dropping | from the veils of | the morning | to where the cricket sings | (6)
7. | /There | mid nights all a glimmer | and noon a purple glow | (8)
8. | And evening | full of the linnet's wings | (4)

³ Numerous scholars have proposed a gestural origin for language see for instance Corballis (2017) and Tomasello (2008).

⁴ In fact, this analogy is likely to be an overstatement which while useful for expository reasoning is not fully accurate. The appendix may not be completely non-functional and it has been suggested that it plays a key role in the regulation of maintaining intestinal bacterial fauna and as a component of the immune system. Similarly, gestures are not always redundant. Tom Bartlett has suggested to me that the reason why there is no unmarked mood choice for an offer in English is that the unmarked way to offer something is through a physical action or gesture. And one can easily imagine situations where a gesture on its own is sufficient to convey an intended meaning irrespective of whether or not it is accompanied by words. Though such gestures are unlikely to be productive in the sense that such a gesture will only realise one function.

⁵ The numbers indicate the amount of beats (salient and tonic syllables) per line.

9. | * I will arise | * and go now | for always | night and /day | (7)
10. | * I hear lake water | lapping | with low | sounds | by the shore | (7)
11. | While I | stand on roadway⁶ | or on | the pavements grey | (6)
12. | I hear it | in the deep | heart's | core | (4)

The poem as intoned by Yeats does not confirm to our expectations of the prosody of speech. The saliences do not seem to be informational but rather chosen to ensure a roughly regular beat across each line – see the tonicity choice on *there* in lines 2, 3 and 5. Halliday & Greaves (2008: 98–99) describe a tone group as a line of melody and note that it frequently coincides with a written line of poetry which itself frequently coincides with a clause. But in Yeats' reading of the 42 tone groups none are coextensive with the written line and only 7 tone groups are coterminous with clauses as indicated by the diacritic*. Yeats has not segmented his words into quanta of experience but rather into chunks where modifiers, adverbials and even prepositions are presented as significant pieces of information.

Scholars such as Tench (1996) and Cauldwell (1999) have reported that in non-communicative or purely aesthetic readings of poetry that speakers tend to select level tone. By so doing they signal that their reading is not intended to be received as anything other than a specimen of language; the speaker does not relate the languaging event to the context in which the speaker and his/her hearers exist. Tench (1996) notes that the same prosodic patterning can also indicate chanted public prayer in traditional liturgical services. So can we argue that the widespread use of level tone by Yeats is part of the probabilistic configuration of functional choices which allows us to recognise the language event as non-communicative i.e. neither grounded in the here and now, nor intended to alter the hearer's understanding of the world? This seems unlikely as poetry reading and chanted public prayer as registers are inherently non-communicative speech events where the speaker primarily projects aesthetic value or community membership.

It is clearly true that the regardless of how the poem is intoned, it is very easily recognisable as a poem. The printed text is lineated according to poetic conventions. It is divided into three stanzas. There are a regular number of syllables per line. The use of rhyme signals that the

⁶ The printed version of the poem contains an additional indefinite article, e.g. the roadway and not roadway, which Yeats did not read out.

text is a piece of verbal art. Moreover, had Yeats engaged in a communicative reading of the poem and selected from the full tonal inventory, he would have produced a text that remained recognizably a poem. A further example of how the recombination of lexicogrammatical and phonological choices results in novel meaning is noted by Tench (1996) who suggests that the articulation of communicatively appropriate tones in public prayer in evangelical church services signals a personal relationship between the supplicant and the deity: answers are asked for and are expected. What was once a signalling of an identity as a member of a spiritual community is recast as a deeply interpersonal communicative interaction with the supreme deity. The (re)combination of communicative prosody and lexicogrammatical choices in poetry and church services clearly has the potential to create new meanings and perhaps transform a closed register into a more open one (Halliday & Hasan 1989: 39). I will return to this point after considering how prosody fits into a stratified system of language.

2.1. Register viewed from the perspective of System

As is well known, Halliday's views on stratification were influenced by Hjelmslev (1963) who stratified language into content-form and expression-form and within each level into substance and purport. Taverniers (2011: 1114) illustrates that it is generally understood that the SFL strata of semantics and lexicogrammar map on to content-form and content-substance respectively. Similarly, the SFL strata of phonology and phonetics map onto expression-form and expression-substance, though see Bache (2009) who argues that much SFL writing has misunderstood and misrepresented Hjelmslev. He argues that Hjelmslev was interested in language as an object in its own right and that Hjelmslevian stratification is two dimensional with a first order stratification between content and expression and a second order of stratification where the first order stratified sign is the expression plane for a connotative semiotic see Figure 3.

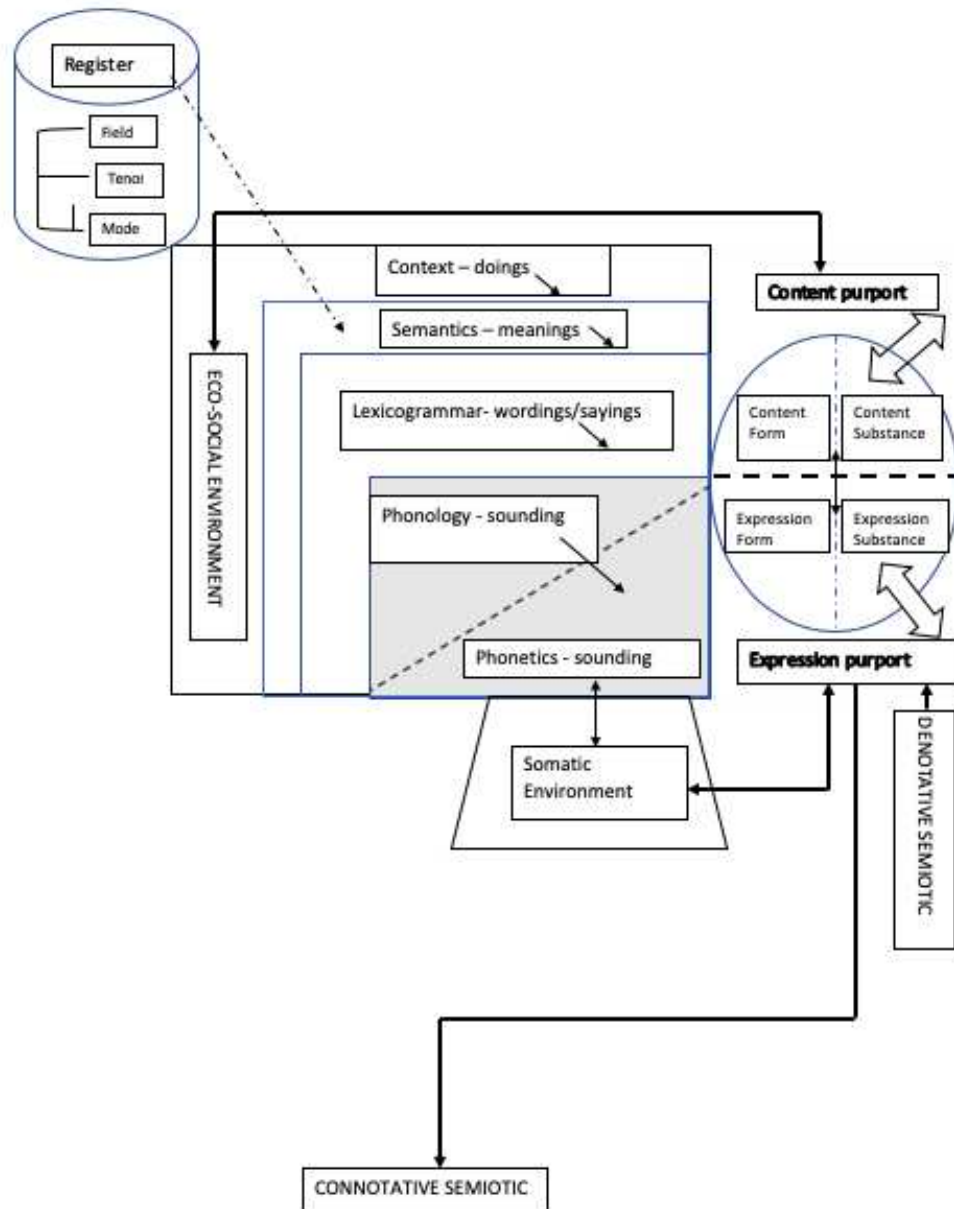


Figure 2: Halliday's and Hjelmslev's concept of Stratification compared.

Figure 2, compares Halliday's and Hjelmslev's views on stratification. On the right within the circle we see the Hjelmslevian sign stratified into two planes, content and expression which are equivalent to Saussure's signified and signifier. Like Saussure, he sees the sign as an entity generated by the connection between an expression and content. Both planes are further divided into substance and form which together make up the purport. The sign itself is a two-sided entity with an outward face towards the expression substance and an inwards face towards the content substance. Within the content plane, purport refers to an unanalysed

thought mass which is formed by the conventions of a particular language variety into content-substance. So as Figure 2 indicates content-substance is the subset of content-purport which is formed in a particular language. Expression-purport refers to the range of possible vocal gestures which are formed into the expression-substance by the expression-form. The expression-substance plane itself consists of an arrangement of phonemes or phoneme like units (Garvin 1954). As Figure 2 indicates expression-purport seems to be identical to somatic environment in Halliday's model.

Hjelmslev's first order semiotic sign is itself the expression plane for a connotative semiotic detailed in Figure 3. The description of a connotative semiotic is extremely underdeveloped comprising just a single section of the Prolegomena. Nonetheless, it is clear that this is where Hjelmslev's theoretical description approaches language usage in that he takes note of sociolinguistic variables and how they are instantiated in text. This is a very different perspective from Halliday's who would classify Hjelmslev's connotative content plane, *aspects of style*, in terms of Field, Tenor and Mode variables.

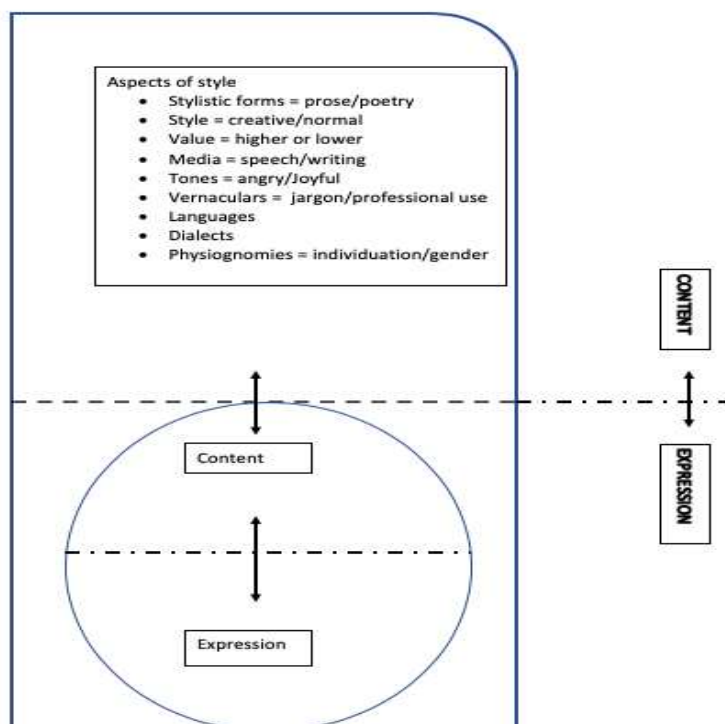


Fig 3 Hjelmslev's connotative semiotic.

On the left of Figure 2 we see a series of overlapping boxes which demonstrate the redundancy/realizational relationships between higher strata and lower strata in Halliday's thinking. The single facing arrow between strata indicates realisation. Content is realized by the semantics which itself is realized by the lexicogrammar which is itself realized by the phonology. Register as a configuration of meaning choices is found in the semantic stratum. Following Lemke (1995), Halliday (2002) reconceptualised realization in terms of redundancy relationships. Redundancy is itself a technical term and does not simply convey its dictionary meaning of excess, expendability or unnecessariness. Halliday notes that for language to be a truly open and dynamic system the relationship between strata is not determined but predictive. So a form on the higher strata does not actualise a form on the lower form; rather it predicts it. Halliday explains:

Consider a minimal semiotic system, such as a protolanguage — a system that is made up of simple signs. When we say that contents **p**, **q**, **r** are “realized” respectively by expressions **a**, **b**, **c**, what this means is that there is a redundancy relation between them: given meaning **p**, we can predict sound or gesture **a**, and given sound or gesture **a** we can predict meaning **p**. This relationship is symmetrical; “redounds with” is equivalent both to “realizes” and to “is realized by”. (Halliday 2002: 356)

Language is not a minimum semiotic system instead in Halliday's terms it is tristratal, i.e., consisting of an additional stratum of lexicogrammar and so meanings are realized as wordings which are themselves realised as soundings. Thus, a wording redounds and makes possible a sounding. Lemke (1995: 168–169) describes this a redundancy of redundancy or metaredundancy. In other words, the predictable connection between two things can itself be redundant.⁷

Following Halliday (2003: 13) and Moore (2017: 419), we in figure 2, schematise the Hallidayan view of language as a stratified social-semiotic resource. The line between the

⁷ Halliday's view of stratification arose from his intensive observation of child language development (Halliday 1975). He noted the need for a stratified system to explain how a child meant. Child language, as a dynamic open and emerging system unlike for instance the warning cries of vervet monkeys does not exhibit a single form function fit and hence meanings cannot be realised directly by sounding but must be realised by sounding in wording.

lexicogrammatical stratum and the shaded in expression stratum is the content/expression interface. The Context is recast as the eco-social environment which indicates that the world we interact with is simultaneously social and material. Register, we see is positioned in the Semantic Stratum and exists in a predictable relationship with the non-linguistic eco-social environment and is itself realized by the realization of wording by sounding (Halliday 2002: 357). As with Hjelmslev phonology is very clearly confined to the expression stratum.

Matthiessen (forthcoming) states that the relations within the context and expression strata are natural but the relationship between the content and expression strata is arbitrary.⁸ His (forthcoming: 11–12) observation, that the textual, interpersonal and logical metafunctions exhibit a greater potential for a natural relationship with semantics than does the experiential metafunction suggests, that linguistic systems which chiefly convey textual, interpersonal and logical meanings are in a more natural relationship with semantics. Despite this he argues that despite intonation systems conveying textual, interpersonal and logical meanings that as the highest phonological rank they are in the expression strata. This view implies that units of the same rank scale cannot occur in different strata. This though is an assumption which needs empirical verification.

Hjelmslev (1975: 136) in a very complicated and almost incomprehensible discussion labelled the elements which form the expression plane *Cenemes* (from the Ancient Greek *κενο΄ς* for empty) and contrasted them with *pleremes* (from the Ancient Greek *πλη΄ρης* for full or meaningful) which form the content plane. Therefore phonological systems unlike lexicogrammatical ones are formed out of meaningless elements. This as I'm sure readers will have noted is the classic definition of the phoneme (see O'Grady 2012: 107). Indeed, I have been unable to find any reference to intonation systems, or indeed guidance to how they might be situated, within Hjelmslev's oeuvre⁹. For instance, his discussion of the expression plane (1963: 62–69) is almost entirely restricted to phonemes despite his early work

⁸ There are clearly minor exceptions as sound symbolism, onomatopoeia and phonaestemes demonstrate the existence in restricted cases of a natural relationship between sounding and wording. In line with the appendix metaphor used earlier it is possible that such relationships, while remaining potentially productive, are vestiges from a phylogenetically prior system of meaning making.

⁹ This may well be because as Bache (2009) notes Hjelmslev was more interested in discovering universals than in exploring meaning making in texts.

discussing prosody, under the term prosodeme. Like Firth he recognised that phonetic features can spread beyond the segment¹⁰ (Canalis 2007). But he does not appear to have systematically described intonation as part of a stratified system and unlike Halliday he never considered it in terms of meaning making systems. Therefore, Hjelmslev is unable to assist us in considering whether or not intonational systems are content or expression.

Halliday (1967) and Halliday & Greaves (2008) are detailed and systematic investigations of the relationship between intonation and grammar in English which have established detailed prosodic systems of English with tonality and tonicity projecting Textual meaning and tone projecting Interpersonal and Logical meaning . Yet, Figure 4 presented below suggests that this may not be the entire story. Consider hearing the clause *The hospital sent John a doctor* and decide whether the clause is better represented by figure (4A) on the left or by figure (4b) on the right.



Figure 4: The number of participant roles in *The hospital sent John a doctor*

In the (4A) two participant roles are construed; the Hospital as Actor/Agent and the Doctor as Goal/Medium. In (4B) there are three participant roles construed. Namely the Hospital as Actor/Agent, the doctor as Goal/Medium and John as *Client*. In other words in (4A) John is a

¹⁰ Thus, he accounted for features such as aspiration, nasalization and especially *stød* in Danish phonology (Hjelmslev 1963: 84-93). One of the problems a reader has in attempting to reconstruct Hjelmslev's theory is that he did not publish his complete theory of glossematics in a coherent and unified form. And as Bache (2009: 2568) notes what has been published is aptly described as a terminological nightmare.

doctor while in (4B) he is a patient. Without taking account of the intonational system of tonality it is impossible to disambiguate the case.

(2) | The hospital sent John | a doctor |

(3) |The hospital sent John a doctor |

In (2) the tonality choice signals that John is encoded in the lexicogrammar as the direct object with *a doctor* clearly being in apposition. In (3) by presenting the entire proposition within a single tone group/information unit the tonality choice signals that the clause is a ditransitive construction analogous to *The hospital sent a doctor to John*, with *a doctor* as direct object and *John* as the indirect object. In other words differing tonality choices project different events or frames.¹¹ The potential meanings realized in this examples are not easily described as occasions where the proposition is realized by the realization of sounding in wording which itself is realized in meaning. Perhaps both the prosody and the wording are themselves realized in meaning simultaneous to the realization of sounding in wording. In the next section I will compare a written and a spoken weather-forecast in order to see whether the prosodic choices are of relevance to the study of meaning-making in the texts.

3. Meaning making in written and oral texts

In this section we will examine two text texts in terms of Field, Tenor and Mode variables in order to see what if any role prosody plays. First, we will compare two texts from the same Field: weather forecasting and then we will compare a written and spoken version of a short political statement

3.1 The weather-forecast texts

Both texts were taken from the BBC weather website <<https://www.bbc.com/weather>> on September 25th 2018. The short written text is presented along with a commentary in Figure 5.

¹¹ The spoken form of examples such as: (i) *The nurse delivered Mary a daughter*, (ii) *The farmer brought Betty a sheep* and (iii) *The sailor sold Jane a mermaid* exhibit similar ambiguity in the absence of prosodic disambiguation..

.....
Another fine day for southern Britain with warm sunny spells after a chilly start.

Rheme

Residue

Minor Clause (Or possibly ellipted relational (Token ^ Value)

Northern areas **will be rather cloudy and breezy with spells of rain, some heavy in the morning, but easing later.**

Theme

Rheme

Mood Declarative

.....

Figure 5: The written weather forecast and commentary

The written text is very brief and consists of a minor clause followed by a major clause in declarative mood. The initial moodless clause does not contain a Theme. As such it is difficult to assign an information structure though as it is referring to the future it presumably signals new information. If so the text consists of almost exclusively new information with the exception of *Northern Areas* presumably recoverable through the contrast with the previously mentioned *Southern Britain*. There is an absence of modality and personal opinion. The writer signals that his/her text is not open for discussion. He/she is the expert with the reader positioned as a passive recipient. The lexicogrammar construes the text in terms of a static token ^ value relationship. The sole dynamic process *ease* is rankshifted and functions as a postmodifier. The lexis identifies the text as meteorological. The lexicogrammatical choices redound with a semantic configuration of a field construing weather, a mode signalling primarily new information and a tenor where the information is monoglossic and unmodulated.

On the BBC website the written text was placed to a right of a small window which if clicked on played a short video clip of the weather forecast. I transformed the video into audio and with the assistance of Praat software, which allowed for a visualisation of both the wave form and the F0 curve (Boersma & Weenick 2013), transcribed it intonationally. The text is presented below.¹²

1. \(\H)Hello there

¹² The conventions used are \ = fall (Tone 1), / = rise (Tone 2), – = level (Tone 3), √ = fall-rise (Tone 4) and ∧ = rise-fall (Tone 5). For reasons explained in O’Grady (2010) and also Tench (1996) I do not transcribe so called compound tones (13 and 53). The tone groups are presented on their own line. Salient or prominent syllables are underlined with the final one being the tonic or nucleus. The H and L in tone group initial position signal key and the H and L in final position signal termination (see Brazil 1997, and 2017a). The functions realized by key and termination choices will be explained in the discussion of the text as when needed.

2. \for (H)most of England and Wales
3. /it's (H)another (H)lovely
4. /\(H)sunny (H)day today
5. \after that cold
6. \and locally frosty start
7. \this morning
(.....)
8. \But for (H)Scotland and Northern Ireland
9. \it's a (H)different story
10. /we've got more of an Atlantic influence
11. \that's dragging in
12. \much more cloud around here
13. \and we're going to find some outbreaks of rain (L)too
.....
14. /\ (...) already had a (H)little bit of rain
15. /for Northern Ireland
16. \ (...)not a great deal to come
17. /\through the rest of the afternoon
18. \but the wetter weather
19. \is pushing itself up the western side
20. \of Scotland
(.....)
21. \ (H) (...) some sunshine
22. \for eastern Scotland
23. \ (...) temperatures fourteen or fifteen degrees
24. \there are (L) sunnier skies
25. \as you head further (H) south
26. \across England and (L) Wales
(.....)
27. \ (...) highs of eighteen degrees Celsius
(.....)
28. \ (H) here
29. \it is a little (H) breezy
30. \ (H) perhaps the strongest winds
31. \are where we have the rain
32. \in the north west of (H) Scotland
33. \ (H) (...) gusts of fifty
34. \to sixty miles an (L) hour
.....
35. \ (H) overnight the winds will
36. \ (H) lessen
37. /a little bit
38. /\but (...) will keep blowing
39. /in a lot of cloud (L) around
(.....).
40. \and (...) will (L) continue to see some outbreaks of (L) rain
41. \ (...) always wettest
42. \over the hills
43. \in (L) western (L) Scotland
.....
44. \so (H) here
45. /across the (H) north of the UK
46. \ temperatures aren't going to change much from
47. \ during the (H) day
48. \ but further (H) south

49. \it is going to be quite a bit **(H)**colder
50. /across parts of Wales
51. \the Midlands
52. \and Southern England
53. \we could see temperatures just above freezing
54. \in the **(L)**countryside
(.....).
55. \but that is an improvement
56. \on what we had
57. \last **(L)**night
.....
58. \the **(H)**cloud
59. /and the rain
60. \ (...) coming courtesy of this
61. /weather front here
62. \which is sort of stuck really
63. \on Wednesday
64. \across ... all Northern parts of Scotland
65. \b(H)higher pressure to the south
66. \means more sunshine
67. /and a bit of **(H)**cloud to greet the day
68. /across Northern England and North Wales
69. /one or two spots of rain
70. /most of the **(L)**rain though
71. \ (...) becoming confined to the northern **(L)**half
(.....)
72. \of Scotland
73. \allowing some brighter conditions
74. \for Northern **(L)**Ireland
(.....)
75. \Eastern Scotland
76. \and the North East of **(L)**England
(.....)
77. \and here
78. \it is going to warm up
79. \as well
80. /(...) so much warmer than today
81. /temperatures could get twenty one degrees
82. /in Aberdeen
83. \and with the sunnier skies
84. \towards the South East
85. /and East Anglia
86. \twenty two (...)
87. \not out of the **(H)**question
(.....)
88. \b(H) (...) sunny start
89. \for England and Wales
90. \on Thursday
91. \that band of cloud and rain
92. \is **(H)**starting to move
93. \southwards on **(L)**Thursday
(.....).
94. /across **(L)**Scotland and Northern **(L)**Ireland
(.....)

95. \the *same* time
96. \the rain is just (**L**)petering out
97. \ (...) sunny spells
98. \following a few showers
99. \in the (**L**)north west
-
100. – (**H**)here
101. \the air is going to be much (**L**)cooler
(.....).
102. \you can (**L**)see from our temperature chart here
103. /still warm
104. \for the time of year
105. /across Wales
106. /the Midlands
107. \Southern England
108. \we may get temperatures
109. \twenty three (**H**)degrees or so
110. /underneath
111. \that band of cloud
112. \it will be cooler
113. \and behind it
114. \in the sunshine
115. \we have got (**L**)cooler
(.....)
116. \and (**L**)fresher (**L**)air
(.....)
117. \and a north-westerly (**H**)breeze
118. \and (**H**)that will push its way down
119. \across the whole of the country
120. \in (**L**)time for Friday
121. \ so temperatures dropping everywhere
122. \and there's still high pressure
123. \(\bH)lingering across the UK
124. /until the (**L**)weekend

Figure 6: The spoken weather forecast text

Prior to examining the meaning of the prosodic choices I will first describe how the lexicogrammatical choices realized the semantic variable of Field, Tenor and Mode and compare and contrast these with the semantic variables in the written text. Unlike the written text there are some instances of marked theme which are mostly used to assist the hearers in following the presenter's movement from place to place¹³. The two exceptions tone groups (35 and 110–111) function to direct the audience to a change in temporality and to zero in on a particular weather phenomenon. As in the written text, ellipsis¹⁴ is frequent resulting in numerous moodless clauses. By removing the mood element, the speaker makes

¹³ In the text above marked themes are set out in italics.

¹⁴ Ellipsis is marked by the symbol (...).

his statements (albeit fragmented ones) not open to challenge. As in the written text, the mood is declarative and with minor exceptions there is an absence of modality. The speaker presents his words as bare assertions with the hearers positioned as passive receivers. The exceptions are found in in tone groups (81) *could get twenty one degrees* and (108) *we may get temperatures* and signal low modalization probability values. Additionally, in (30) the comment adjunct *perhaps* signals assessment of low possibility. The weather-forecaster in these cases signals some uncertainty towards his assessment of the weather patterns. But it is not the overall weather pattern that is presented as being in doubt but rather local instance values that are not certain. Overall as with the written text the relationship between speaker and hearers is unequal.

The most frequent process type is relational and this as in the written text construes the predicted meteorological patterns in terms of token and value. There is one existential process tone group (24) which construes the sunnier skies on the border line between relational and material process: things exist and are presumed to have duration.¹⁵ There are a number of material and behavioural processes which metaphorically construe the weather as Actor/Behaver and signal that it is the meteorological phenomena which underlays the weather patterns perceived by (us?) in (13), (53) and (103). As in the written text the lexical choices unambiguously construe the text as concerning weather prediction. To conclude our analysis of the lexicogrammatical choices it like the written text is an instantiation of a reporting register where the information presented is monoglossic and primarily unmodulated.

However, this text was designed to be read and consumed as a transitory aural product. This raises the question as to what role prosody played (if any) in (i) the reception of the text and (ii) in the recognition of the register. Or is simply that prosody's role is confined to mode? The text comprising 124 tone groups is described in Table 1.

As we would expect the overwhelming majority (76.6%) of tone choices are falling (\ or /) with 92.6% of the falling tones signalling neutral certainty. Thus the weather forecaster

¹⁵ Matthiessen (1995: 211) considers existential processed as subtypes of relational process.

articulates most of the forecast dispassionately and in a neutral tone. The tone choices in the majority of cases exist in a tight redundancy relationship with the lexicogrammatical choices. However, 23.3% of the tone choices are doing something else other than signalling declarative mood. The rising tones operate to most frequently signal (i) the location of a weather event e.g. tone group (45), (ii) to modify the prior information e.g. tone group (37), (iii) to signal apposition or predictability e.g. tone group (59) and (iv) to indicate tactic closeness e.g. tone group (67). The level tone coincides with a marked theme e.g. (tone group 100) which as noted above signals exophoric reference. The fall-rises primarily signal a contextually bound implication e.g. tone group (104) though they also correspond to Theme. In short these choices function to manage the hearer uptake of the information flow and so function within mode.

Table 1: The tonal composition of the text

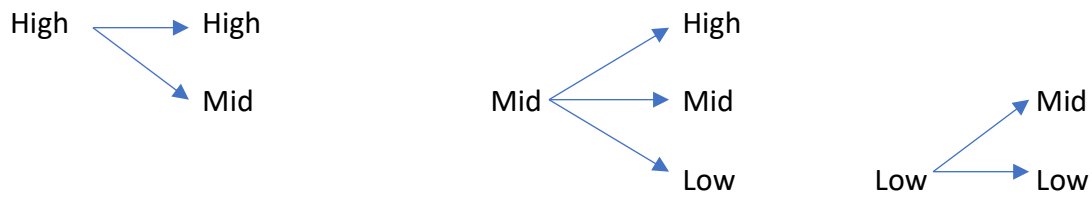
Tone	Number of
\	88
/	18
-	1
∨	10
∧	7

However, the speaker's use of rise-fall and key signal his intrusion into the text; they signal his commitment to his words and how he positions his hearers in relation to the upcoming message. The selection of rise-fall in tone groups (4) and (14) signals the speaker's commitment to the contrast between the sun and the rain across different regions. By so doing he provides the audience with a reason to listen – after all they know the weather where they are! In (81) and (109) the speaker articulates news of seasonably remarkable temperatures with a rise-fall which warrants that he is committed to the information.

The term key was first introduced into intonation studies by Henry Sweet and it referred to the general pitch height of the tone group which is signalled by the initial pitch level of the first prominent/salient syllable.¹⁶ In this paper – (see Brazil 1997, O'Grady 2014) for further

¹⁶ It is important to note that this is not the same definition of key as used in Halliday (1967) or Halliday and Greaves (2008).

details – key is a relative concept and can be high, mid or low as compared with the key of the previous tone group. The options and the functions they realize are outlined below.



High Key	The speaker signals the proposition expressed in the following will be contrary to the previously created expectations.
Mid Key	The speaker signals the proposition expressed in the following will be accordance with the previously created expectations.
Low Key	The speaker signals the proposition expressed in the following will be equivalent to the previously created expectations.

Figure 7 Key and its functions

Scholars such as Brazil (1997), Tench (1996), O’Grady (2014), Wichmann (2000) have proposed that a high key immediately following a fall to low in the speaker’s pitch range which is usually accompanied by an extended pause signals a shift to a new topic. These units which may be considered a unit above the tone group in a phonological rank scale. Matthiessen (forthcoming) argues that such units are better treated as tone group complexes. For present purposes it is irrelevant whether paratones are an element of structure or a complex as in either case they realize the textual function of signalling a shift of topic.¹⁷

In Figure 6 and elsewhere below the dotted lines notate paratone boundaries while bracketed dotted lines indicate points in the text where one but not both of the high pitch reset or preceding low pitch were found at a point of possible syntactic transition.¹⁸ It is obvious that the speaker has not consistently utilised the textual resource of organising his message in paratones. This has the effect of making his speech less formal and more conversational (Tench 1996).

¹⁷ In his earliest work Halliday (1962/2002) too argued for the inclusion of such a macro unit, he dubbed paraphone, in the phonological rank scale. See O’Grady (2014) for arguments in favour of paratones being the highest unit in the phonological rank scale.

¹⁸ So for instance a potential boundary hasn’t been drawn between tone groups 122 and 123.

Both marked theme and high key function to orient the hearer to the future direction of the unfolding text (O'Grady 2017b). Of the 14 marked themes in the text, half of them are produced with high key. And while in some senses this represents overkill it is the combination of prosodic and thematic choices which creates the meanings that brings the spoken text to life. And without the redundant elements, the spoken weather forecast would be harder to comprehend.

The choice of high key at other locations in the text signals the speaker's expectation of his audience's reaction to his words. For instance, tone groups (2, 3, and 4) are all articulated with high key creating a sequence of information units projected to be contrary to expectations. As these tone groups are found at the start of the text they refer to common ground shared by speaker and hearer namely typical autumn weather in the UK. The speaker intrudes into the text by enacting a world where (i) the geographical extent, (ii) the temporal duration and (iii) the quality of the weather are not what the audience would have expected. In tone group (67) the contrast between the cloud and the prior sunshine is signalled by the high key which contrasts with the addition signalled by the linker *and*. The preceding co-textual *higher pressure* and *sunshine* create an expectation of blue skies which is further suggested by the linker *and*. But in fact the speaker's proposition concerns *cloud*.

The selection of key grounds the text in the presumed interaction between weather forecaster and audience. It signals presumed, though unverifiable shared knowledge and expectations. The effect of this that while the experiential meanings realising the field variables are unchanged the interpersonal ones realising the tenor variables have shifted. The speaker is no longer a distant purveyor of authority but someone situated in the community who is sensitive to his hearer's expectations and prior experiences. The speaker's prosodic choices reset the tenor relations as less distant and hierarchical and the audience is enacted as co-constituting the instantiated meaning.

The next section will examine the will examine the Field. Tenor and Mode meanings realized by the combination of lexicogrammatical and prosodic choices in a political statement

3.2. The political statement

On the morning of July 7 2005, a series of explosions, which were initially attributed to accidental causes, occurred in London. However, it soon became clear that the explosions were terrorist related. London had been awarded the right to host the 2012 Olympics the previous day and the country was hosting the G8 meeting at the Scottish resort of Gleneagles. Tony Blair, the then Prime minister, made a short statement to the country a few hours after the bombing.

1. – I am just going to **(H)** make a short
2. \ statement
3. √ to you on the terrible events
4. / that have happened
5. \ in London
6. √ (L)earlier today
(.....)
7. √ and I hope you understand
8. \ that at the (H) present time
9. √ we are still trying to establish exactly
10. \ what has happened
11. / and there's a limit
12. \ to what information
13. / I can **(H)** give you
14. \ and I'll simply try and tell you
15. – the information as
16. \ as best I **(L)** can at the moment
.....
17. \ it's (H) reasonably clear
18. \ that there have been a ... a series of terrorist attacks
19. \ in **(L)** London
.....
20. – there are (H) obviously
21. \ casualties
22. √ both people
23. / that have died
24. \ and people seriously injured
25. \ and our (L) thoughts and prayers of course are with
26. \ the **(H)** victims
27. \ and their families
(.....)
28. \ it's my (H) intention to
29. \ leave the GEight
30. \ within the next couple of hours
31. \ and [I] go down to London
32. / and get a re[↑]port
33. \ face to face
34. \ with the police and the emergency services
35. \ and the ministers that have been **(L)** dealing
36. / with this

37. – *and then [!]* to
38. – *return*
39. \ *later* this **(L)** *evening*

40. \ *it is the **(H)** will of all*
41. \ *the leaders at the GEight*
42. / *however*
43. \ *that the meeting*
44. – *should continue*
45. \ *in my absence*
46. \ *that we should continue to discuss the issues*
47. \ *that we were going to discuss*
48. / *and [that we] reach the conclusions*
49. \ *which* we were *going* to **(L)** *reach*

50. – **(H)** *each* of *the*
51. \ *countries* around that *table* has some *experience*
52. \ of the **(H)** *effects* of *terrorism*
53. \ *and all the **(L)** leaders*
54. \ *as they will indicate*
55. \ *a little bit later*
56. \ *share* our *complete* *resolution*
57. \ *to defeat this **(L)** terrorism*

58. \ *it's **(H)** particularly barbaric*
59. \ *that this has happened*
60. \ *on a day when*
61. / *people* are *meeting*
62. – *to try to*
63. / *help* the *problems* of *poverty* in *Africa*
64. \ *and the long term problems*
65. \ of *climate* *change* and the **(L)** *environment*

66. \ *just as it is **(H)** reasonably clear*
67. \ *that this is a \ terrorist attack*
68. \ *or a series of terrorist attacks*
69. \ *it is also reasonably clear*
70. – *that it is*
71. \ *designed*
72. / *and aimed*
73. \ *to coincide*
74. \ *with the opening of the GEight*
 (.....)
75. \ *there* will be **(H)** *time* to
76. \ *to talk **(L)** later about this*

77. \ *its **(H)** important however*
78. \ *that those engaged in terrorism*
79. / *realize*
80. \ *that **(H)** our determination*
81. / *to defend our values*
82. \ *and our **(L)** way of life*

83. \ is greater
84. \ than their determination
85. \ to cause death and destruction
86. \ to innocent people
87. \ in a desire to impose extremism
88. / on the **(L)** world
(.....)
89. \ whatever they **(H)** do /
90. \ it is our determination
91. \ that they will never succeed
92. \ in destroying
93. \ what we hold dear
94. \ in this country
95. \ and in other civilized nations throughout the world
96. \ **(L)** thank you

Figure 8: The political statement

The short statement comprises declarative mood utterances, primarily propositions. The propositions are unmodalised, indicating that Blair has situated himself as the authority figure with sole access to the knowledge encoded within his utterances. He assumes the role of the primary knower (see discussion in Berry 2016 and Muntigl 2009). In the statement there are two modalised proposal/offers, (14 and 75) both of which contain the finite operator *will*. These signal Blair's high inclination to perform the proffered acts but they do not commit him to so doing.

There are a number of other modals and adjuncts found within the residue e.g. *as best I can* (16) which signal Blair's assessment of his ability to carry out his promise. The finite operator *should* is found twice (44 and 46) and signals a median obligation towards the proposal/offer of the uninterrupted continuation of the summit and the discussions. In both cases the modal operators are themselves embedded within two unmodalised propositions. The effect is that Blair, on the one hand, asserts his rights to claim knowledge, but on the other hand acknowledges that he does not have the sole actional rights sufficient to warrant the uninterrupted continuation of the summit.

Unlike the weather forecaster Blair signals his stance towards the message he is expounding though he does so only sparingly. The lexical items *terrible*, *terrorist*, *terrorism* and *barbaric* indicate negative judgement of the propriety of the bombers and of those who have engaged in similar actions (Martin and White 2005). As evaluations are inherently gradable, speakers

may either turn up or turn down the strength of their evaluations. In the Appraisal framework this can take two forms (i) Focus and (ii) Force. Focus refers to the resource that boosts or scales down the prototypicality of an experiential category in an evaluation. Force is the resource that boosts or scales down the intensity or quantification of an evaluation (Martin & White 2005). In the short statement there are five examples of Focus. In four cases Blair intensifies the prototypicality of the experiential category. For instance, people are not injured but are *seriously* injured, acts are not barbaric but are *particularly* barbaric, leaders do not share a resolution but rather a *complete* resolution and the bombings resulted not only in casualties but it is implied that the bombings were so heinous a series of actions that they resulted in *obvious* casualties. The sole down-scaling of the prototypicality of the evaluated experiential category *terrible* events indicates Blair's horror at what has occurred in London and by so doing implicates a negative judgement of the bombers and their supporters.

In the short statement force is used to downscale the strength of some claims: allowing some wiggle room if facts change. Blair states on two occasions that it is *reasonably* clear that there has been a terrorist attack. In this statement his caution seems unnecessary but at the same time he also claims much more controversially that it is *reasonably* clear that the attack was aimed to coincide with the G8. But again his downscaling provides him with some wiggle room. He indicates an upscaling of his *trying* on two occasions (9 and 14) and thus succeeds in signalling an expectation that his audience will judge his diligence and perseverance in a positive manner.

The thematic selections are italicised with elliptical elements added within square brackets. One of the most interesting aspects of the thematic structure is what is missing. There are no interpersonal Themes: Blair does not employ Interpersonal resources to orientate the audience towards either sympathy for the victims or condemnation of the perpetrators. Nor does he employ contrastive textual Themes to orientate the audience towards any understanding of how expected or unexpected the bombings were. Instead the Theme selections signal a very static orientation largely centred on the speaker himself. The opening Theme selection is *I* which as Berry (2013) notes is the most frequent Theme choice in

dialogue. Blair grounds his message deictically in himself as an interlocutor in a conversation with his audience.

There is a change of focus in the Theme selection from tone group (40) where Blair angles his message through the lens of the international community. By so doing he indexes his membership of two communities: one where he is united with his audience and the other where he is part of the international community. This has the effect of implying a dichotomy between the international community which includes the audience and the terrorists. This allows for Blair to orientate his condemnation of the bombings as an attack on the norms of the international community. The Theme choices in the final paragraph orientate towards the futility of the terrorists' actions: no matter what they attempt their actions will prove to be futile. The Theme selection in the final paragraph further reifies the contrast between the terrorists and the rest of us.

The short statement contains mostly material and relational processes. Blair chooses himself, either singularly or collectively as a political leader, as Actor. However, the actions he construes that he is or will be doing are themselves rather restrained and cautious. He construes himself as a cautious figure: one who will not be rushed into hasty and perhaps misjudged responses. Instead he will wait until the facts of what has occurred emerge before committing himself to any definite action. He construes himself as a leader capable of balancing competing priorities – his hosting of the G8 summit and his need to return to London to assume control of the investigation. Simultaneously though he construes a world where the G8 meeting will reach the only conclusion that can be reached. In other words, the bombings have not impacted upon the political success of the summit.

It is noticeable that in Blair's construal the bombers, with one exception, (tone groups 91 – 92) are not construed in the Actor role. The effect of this is again to bring calmness to the chaotic flux of the news. The sole process in which the bombers are represented as actor is DESTROY but the process itself is contained in a rankshifted clause which functions as the attribute of the matrix clause and the presence of the adverb *never* further construes the futility of the bombers' actions.

The G8 leaders, the representatives of the International community are represented as actor, (tone groups 53–57) for the process DEFEAT but the process itself is found in the attribute of a relational process and does not contain a finite. Thus, Blair construes a world where there is no temporal indexing of when the bombers will be defeated: he indicates that it is likely to be a hard and long struggle.

Within the statement the event of the bombing and its effect is construed as a series of relational and existential processes in the opening section of the statement (1–27). Blair informs that the bombing exists and with it casualties. Once effect of presenting the bombing as an entity rather than as a process is to suppress discussion of the reason as to why the bombing occurred and to remove it from a historical timeline of cause and effect. Furthermore, Blair construes the murder of the civilian commuters as a behavioural process and by not directly ascribing blame for the deaths: the effect is to indicate calmness. Blair construes the relationship between the international community and the effects of terrorism as a relational possessive process. This construal represents a world where terrorism is a widespread fact of life and backgrounds discussion as to potential motivation for the bombings.

The lexicogrammatical choices redound with tenor relationship signalling a leader addressing his citizens: it is neither equalitarian nor completely hierarchical but one where the leader represents the interests of his citizens. The leader signals his expectation that he and his citizens are part of a larger world community and united in the fight against terrorism. The leader enacts an open and honest relationship both with his citizens and with the other leaders; thus creating a contrast between us in the international community and those who oppose it. By grounding theme consistently in himself, Blair both adopts elements of conversation and presents himself and the contrastively identified you as relatively equal interlocutors. He construes a world where terrorism is a long-standing intractable issue aimed not a single community but rather globally while being at the same time futile. Ultimately, it is a problem that will be defeated through the action of calm, cautious and resolute leaders who enjoy the trust of their citizens.

But Blair’s statement was not designed to be read, it was heard and the issue arises as to whether the prosodic meanings are largely redundant or whether the recombination of lexicogrammatical and prosodic choices instantiates novel meanings. Table 2 details the prosodic choices

Table 2: The tonal composition of the text

Tone	Number of
\	63
/	14
–	9
∨	9
∧	0
Key	
High	15
Mid	77
Low	3

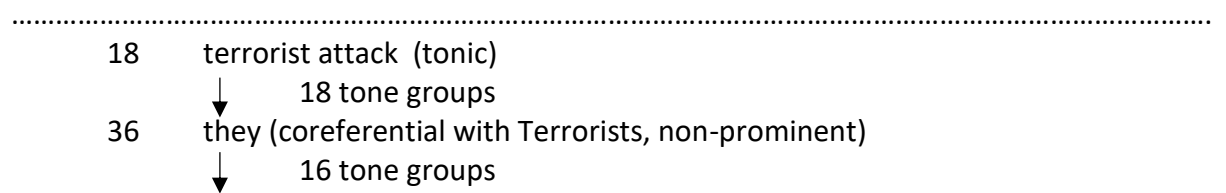
The majority of Blair’s tone choices are predictable from his mood choices and signal that he is construing a world where he transmits information and his audience receives it. He neither expects nor requires his audience’s input. His prosodic choices accordingly construe a hierarchical world where leaders speak and citizens listen. Unlike the weather forecast text there are no examples of rise-fall tone; Blair does not intrude in his report by projecting his heightened commitment. Blair’s choice on 7 occasions of level tone construes two different meanings; the first of which is to signal that he is struggling to find the most accurate words to convey his intended meaning e.g. tone group (70) and secondly that the actions he reports are routine, (Tench 2003) e.g. tone groups (37– 38). They are what would be expected of a leader in his position. The effect is to further construe a world where political leaders have and deserve trust.

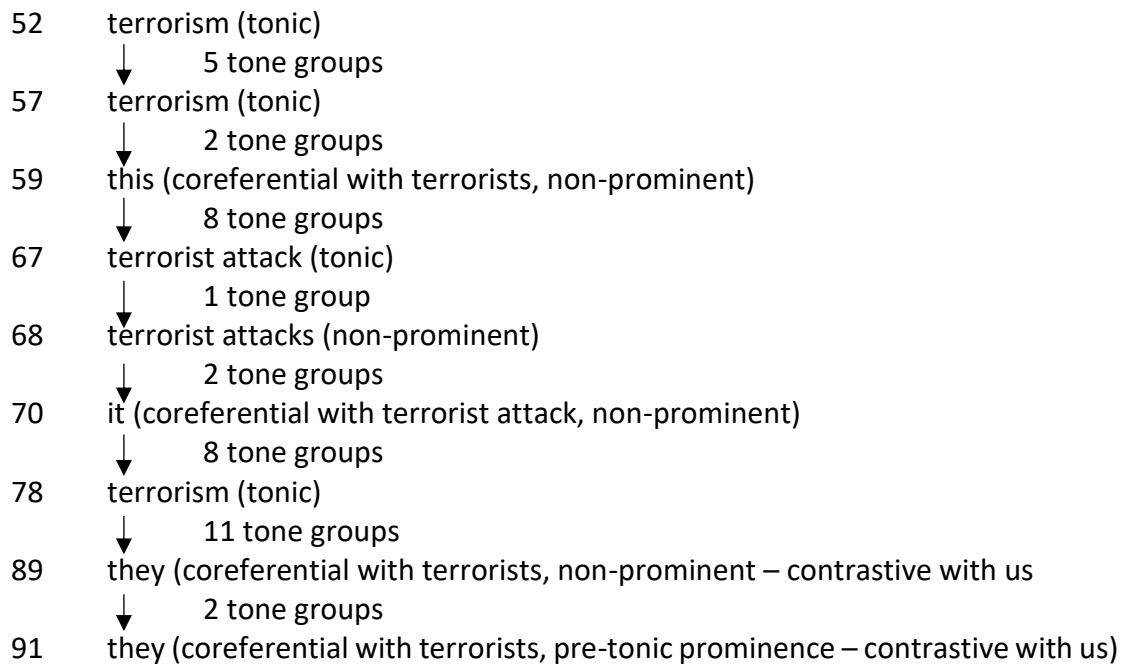
Fall-rise tone is selected primarily in the earlier part of the statement in order to project a shared context between Blair and his audience; the implications he projects are common to his audience and himself. Rising tone is selected primarily to signal continuation within propositions e.g. tone group (63) where the recombination of tone choice and the lexicogrammar is to signal that the information unit containing the rising tone contains incomplete information and is dependent on what follows. The effect is to introduce some

shared purpose to the speech but one that remains ultimately embodied in Blair's role as a responsible and trusted leader.

Blair uses the resource of high key preceded by a low pitch to segment his statement into paratones. The effect is to convey the thought out and pre-planned nature of his statement and not as in the weather forecast to foreground counter expectations. Two of the high keys tone groups (52 and 75) in combination with the lexicogrammar are used to suggest an unusual thesis. The first focuses attention on what is presented as surprising that terrorism is a global problem and not restricted to countries with active military engagements in the Middle East. The second signals that perhaps contrary to expectations that there will be time to examine how the bombings and the summit were linked which generates an implication that as a responsible leader Blair is withholding important and relevant information until a more appropriate time. The world construed is one where leaders are invested with the responsibility to decide when information should be released.

Perhaps the most salient phonological feature of the statement is Blair's choice of tonic and pre-tonic prominences. Theory would predict that once a lexical item has been introduced into a discourse that it becomes recoverable and that it is likely to be articulated without an pitch prominence or as a pronoun. Yet, if we trace the lexeme *terrorist* in the short statement we see that it does not follow the expected pattern. Figure 8 details. The number refers to the number of the tone group. As can be seen despite being prefigured by *terrible events* in tone group 3, the first overt mention of *terrorist* is in tone group (18) where as a freshly introduced lexical item it receives tonic prominence. However, what is unexpected is that 34 tone groups later *terrorism* is once again made prominent in tone group (52). As noted above the choice of the high key signals that the content of the tone group is contrary to previously created expectations and the selection of *terrorism* as the focal point of the tone group projects it as the lexical item with the highest news value. Blair ensures that the destruction caused by terrorism remains very much the nub of his discourse.





.....
 Figure 8: terrorist/ism – reference chain

Five tone groups later *terrorism* is once more selected as tonic. Had it been ellipited from the context it is hard to see how the object of the material process *defeat* could have been misconstrued. But by being once again made focal the semantic field of *terrorism* and all the associated negative consequences remain imprinted in the audience’s consciousness. Towards the end of his statement Blair’s prominence patterns foreground the alterity of the terrorists which has the effect of backgrounding discussion of the fate of the victims and of what may have caused the terrorists’ actions. Thus, prosodic choices that initially appeared redundant are in fact creative and enable the speaker to produce subtle meaning through the recombination of lexicogrammatical and prosodic choices.

4. Conclusion

We have seen that while the written weather report and the audio weather report on the same website are representatives of the reporting register with a difference primarily in mode variables, prosodic choices may reconfigure the tenor relations. In the political statement the prosodic choices while largely predicted by the lexicogrammatical ones nevertheless projected subtle meanings where Blair intruded into the text by offering a subtle personal assessment of the target of the terrorists and construed a world where leaders are honest, responsible and trusted. In both cases consideration of prosody resulted in a resetting

of the tenor and mode variables and expanded the repertoire of text types by pushing prime facie reporting registers in a more conversational direction

More generally the theory and analysis presented above has suggested that in some cases prosodic choices are in and off themselves meaningful. Thus, the phonological rankscale consists of pleremes in the content plane and cenemes in the expression plane. The highest ranked units (paratones and tone groups)¹⁹ are themselves entry points for semiotic systems. Hence we need to reserve the term “sounding” for the expression of phonological features below the rank of tone group and employ a new term ‘intoning’ for the realisation of phonological features at tone group or above. This view entails some slight revision to the view that *meaning redounds with wording which in turn redounds with sounding* which we can reconceptualise as *meaning redounds with wording and meaning redounds with intoning, wording redounds with sounding and intoning redounds with sounding*. Figure 9 illustrates:

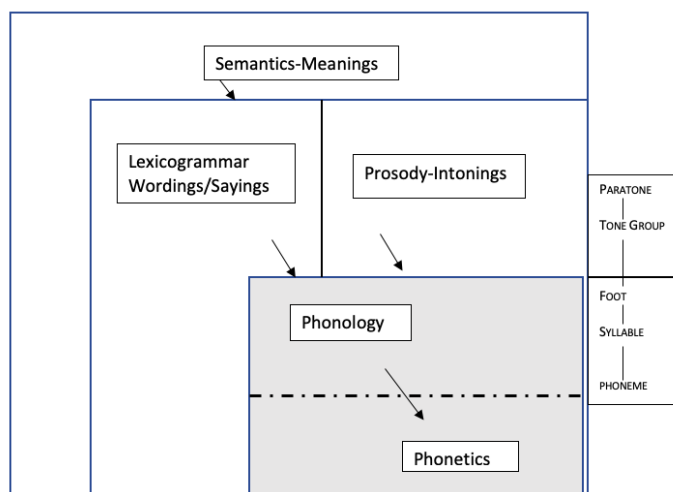


Figure 8: A revised model of Stratification

The suggested revisions to stratification entail the future incorporation of realizational statements for prosodic systems within semantic networks. Existing networks such as Hasan (1996: 120ff) grounded in message semantics and Berry (2016) grounded in exchange structure seem flexible enough to allow for the incorporation of prosodic systems perhaps

¹⁹ While I have placed the foot within the expression plane, I suspect that it may well be the case that it is itself the entry point for semiotic system of rhythm with the potential to reconfigure mode and perhaps tenor variables. Hence this classification is very provisional.

through an expansion of delicacy relations. But regardless of how prosody is included, Hasan's view (1996: 114) that a semantic network represents what a speaker can mean in a specific environment can only be truly achieved if the semogenic potential of prosody is incorporated within the description.

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Address for correspondence

Gerard O'Grady

Centre for Language and Communication Research

Cardiff School of English, Communication and Philosophy

Room 3.59 John Percival Building

Colum Drive

Cardiff University

Cardiff CF10 3EU

UK

ogradyn@cardiff.ac.uk