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A Preliminary Study of Written Intonation

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Written Intonation¹

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Authors, poets, journalists, academics and even private individuals are often at pains to ensure their readers make the judgement about focus and ‘tone of voice’ that their chosen words are intended to convey. We find this in a wide range of published and unpublished (*published* and ***unpublished***) writings in English. These italics not only demonstrate how a highlighted word on the printed page can be used to correspond to the intonational nucleus in speech. The nucleus, of course, draws the whole word (and possibly more) into focus, not just the literal syllable on which the pitch movement begins (and as a trained phonetician, my instinct would be to have written *published* and ***unpublished*** here) but can possibly also tell us something about the phonetically untrained native-speaker’s intuitions about intonation. This paper begins a study of intonation in the written text. I have called this ‘written intonation’.

0. Introduction

For most of the last fifty years, I’ve been interested in the attempts made by authors to indicate intonation by using orthographic emphasis. It is all around us. We see it in cartoons and headlines in the press, in student essays and academic papers and in literary texts – novels and poetry. It can even be found in papers written in phonetic transcription, such as the example below – a paper on pitch movements in remote speech by Jack Windsor Lewis, where italics are employed to focus on the contrast between ***descent*** and ***ascent***:

¹ An earlier version of this study was presented to a special meeting of the English Phonetic Society of Japan in Tokyo (Senshu University), in September 2016.

in prɪzjuməblɪ ɔl læŋgwidʒɪz ðeər ɪz ə fʌndəmentl dɪfrns bɪtwɪn
pɒsəbɪlətɪz fər ʌpwəd ən daʊnwəd təʊnl muvmənt : nɒn mənəsɪləbɪk
dɪsɛnt meɪ bɪ aɪðər ɪmɪdɪət ɔ dɪstrɪbjʊtɪd, nɒn mənəsɪləbɪk æsɛnt kən bɪ
əʊnli dɪstrɪbjʊtɪd.

[Lewis 1970: 34]

Sometimes, this is simply a strategic highlighting of particular words in a narrative, as in the example above, but often, in literature, it involves direct speech as characters participate in conversations on the printed page. In either case, there can be an underlying intonational correlation.

Intonation has always been a subject that students believe is a difficult one to study. Some years ago, glancing at headlines in tabloids such as *The Daily Star*, *The Daily Sketch*, *The Daily Mirror* and the *Sun*, I began to wonder what, if anything, the habit that I noticed here of highlighting a significant word – a word which often corresponded to an intonational nucleus – what, if anything, this could tell us about our untutored intuitions regarding intonation and whether or not this has anything to contribute to the teaching and learning of English intonation. Phonetically untrained authors (including students!) are quite comfortable adding emphasis to what they write. First and foremost, then, we need to know in what way, if at all, this ‘written intonation’ matches reality – can we say categorically, for example, that something is right or wrong?

Very little (if anything) is written about this. I have not even been able to find discussion in the stylistic or literary linguistic literature. This paper reports preliminary findings in a new project which attempts to explore the communication of intonation and ‘tone of voice’ in printed texts. I have called this *written intonation*.

For the purpose of this preliminary report, I have restricted the data (with a couple of exceptions) to the use of typographic emphasis in novels, taking an early work by each of three well-known authors for analysis and comparison. These are *Nicholas Nickleby*, the third novel of Charles Dickens (hereafter CD)

first published in 1839, *Flight into Camden*, the second novel of David Storey (hereafter DS) published in 1961, and *Waldo*, the first novel of the American writer Paul Theroux (hereafter PT) published in 1967. The novels differ in length, but that is not relevant here. The relevant consideration is that each author makes use of italics as a means of adding emphasis. The novels offer a chronological spread (19th century English and 20th century English) and represent the two most well-documented and described varieties of English – British English and American English. This investigation disregards any discursive description of tone of voice made by the authors and concentrates exclusively on the overt use of typographic emphasis strategies.

1. Emphasis, accents and the nucleus

1.1 Emphasis

In order to give emphasis to what they have written, authors employ a variety of strategies to attract the reader's attention. Typically, we see:

- *Italics* Yes, *really*!
- CAPS Yes, REALLY!
- **bold** Yes, **really**!

And in the tabloid press, font size and font colour are further strategies that have been used (as in the *Daily Star* front page in Figure 1, where font colour emphasizes *all* in the main headline and caps are used in the subheading to emphasize *every*).

Books and websites on writing, including *The Chicago Manual of Style*, all offer advice on the use of these devices. Most advise using italics for titles of independent works/publications, including books, newspapers, internet sites, etc; titles of entertainment, including plays, works of art, pieces of music; letters and numbers (where letters stand alone and numbers are used as terms); words used as terms; foreign words and expressions; and also for adding **emphasis**.

The purpose of emphasis is to draw the attention of the reader to a specific

word or phrase on the printed page which is judged by the author to be crucial to the message being conveyed. As we read (either reading aloud or just 'hearing' the words in our head as we read silently to ourselves), instances of emphasis appear largely to coincide with prosodic accents (stressed syllables with pitch prominence in speech – syllables with noticeably higher or lower pitches than an immediately preceding syllable or syllables with kinetic pitch). Very often, this accent will be what we understand as the intonational nucleus – the last accented syllable in an intonation phrase (IP). I will call this kind of typographic emphasis *intonational emphasis*.



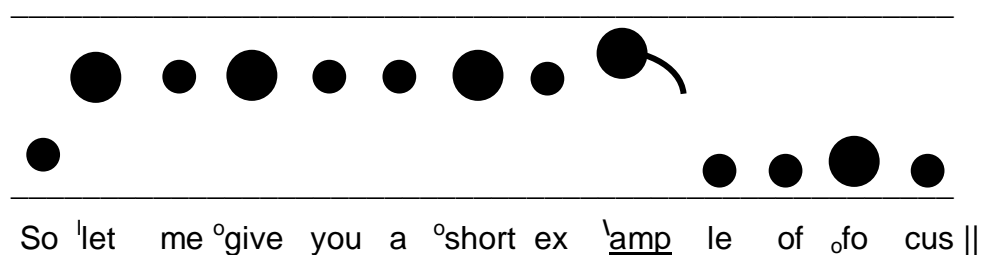
Figure 1: Colour (ALL, in red) and block caps (EVERY) used to add intonational emphasis to a newspaper headline

Possibly because of its pitch prominence and possibly because it is the last such token in the IP, the nucleus is frequently described as the most prominent syllable in an IP. In practice, however, this often turns out to be untrue. The

nucleus – a single syllable – commonly coincides with the stressed syllable of the last word carrying new information. It functions to ensure this word, and the whole IP up to that point, is ‘in focus’ meaning that it is ‘noticed’ or ‘attended to’ by the listener. Very often, the nucleus occurs very near to the end of the IP and will also often involve the last content word used. This is called end focus and is considered to be the unmarked form or the norm in English intonation. We can illustrate focus with a brief example. At this point in the narrative, if I was speaking rather than writing, I might say:

So 'let me °give you a °short example of °fo cus ||

We can illustrate the pitch movements using an interlinear representation:



Here, the nucleus is on the stressed syllable of *example* (underlined in the marked up text above). The reason for this is because the word *focus* has already been used. I have just been talking about focus and I used the word in the previous sentence *We can illustrate focus with a brief example*. ‘Focus’ is therefore old information – we know we are talking about focus so it is unnecessary to emphasize it again in the example sentence. The last item of new information here is the introduction of the idea of an ‘example’ and that is precisely where the nucleus is located.

It is also worth mentioning here that phonetically untrained writers would normally italicize the whole word in which the nuclear accent is located, not just the accented syllable itself. If this example was written, rather than spoken, you might expect to see:

So let me give you a short **example** of focus.

This is usually the case, although just occasionally an author will emphasize only the nuclear syllable. In the novels I have selected for this preliminary study, there are a few instances of that, showing the writer's sensitivity to the spoken word – these are rare, but they are always correct. Instances include: (PT₁₆₇) 'Stop **arguing**,' said Mona; (PT₁₆₈) Wally leaped into the air and yelled, 'Margue**reet**!'; and (CD₅₂₂) 'I leave such society, with my pa, for **hever**,' said Miss Squeers [...]. If we were to mark these up for intonation, we would find something like the following: 'stop \u0027arguing,\u0027 said \u0259Mona || (one IP with the nucleus on the stressed first syllable of *arguing*); Wally \u02c8leaped into the \u0259air and \u02c8yelled, 'Margue\u0027reet!' || (one IP, with the nucleus on the stressed third syllable of *Margueret*); and 'I \u02c8leave such so\u02c9\u0027ciety | with my \u02c9Pa | for \u02c8hever,\u0027 said Miss \u0259Squeers, || (overall, three IPs, the last one with the nucleus on the stressed first syllable of *hever*).

1.2 Accents and the nucleus

But sometimes in speech, the nucleus is preceded by at least one other accent, marking the beginning of a head (a pre-nuclear tune) in an IP. This accent is often referred to as the onset (a term used by Palmer 1922). Such an accent can be found in our example on the word *let*. So \u02c8let me \u02c8give you a \u02c8short ex\u0027ample of \u0259focus ||. The pitch on the stressed syllable *let* is perceived as being higher and louder than that of the unstressed prehead *so* (see the interlinear representation above), but it is often the case that it is also more prominent than the pitch and loudness of the following nucleus, too – an impression supported by physical measurements (see, for example, Figure 2, a phrase from a 2005 BBC news bulletin, where the onset accent on *take* is considerably higher in pitch than any part of the nucleus, *march*).

Unsurprisingly then, untrained listeners often perceive this pre-nuclear accent, the onset, and **not** the nucleus, as being the most prominent syllable –

it is the first accent to catch their attention, and the tendency is then to stop listening! This could be problematic for phonetically untrained authors.

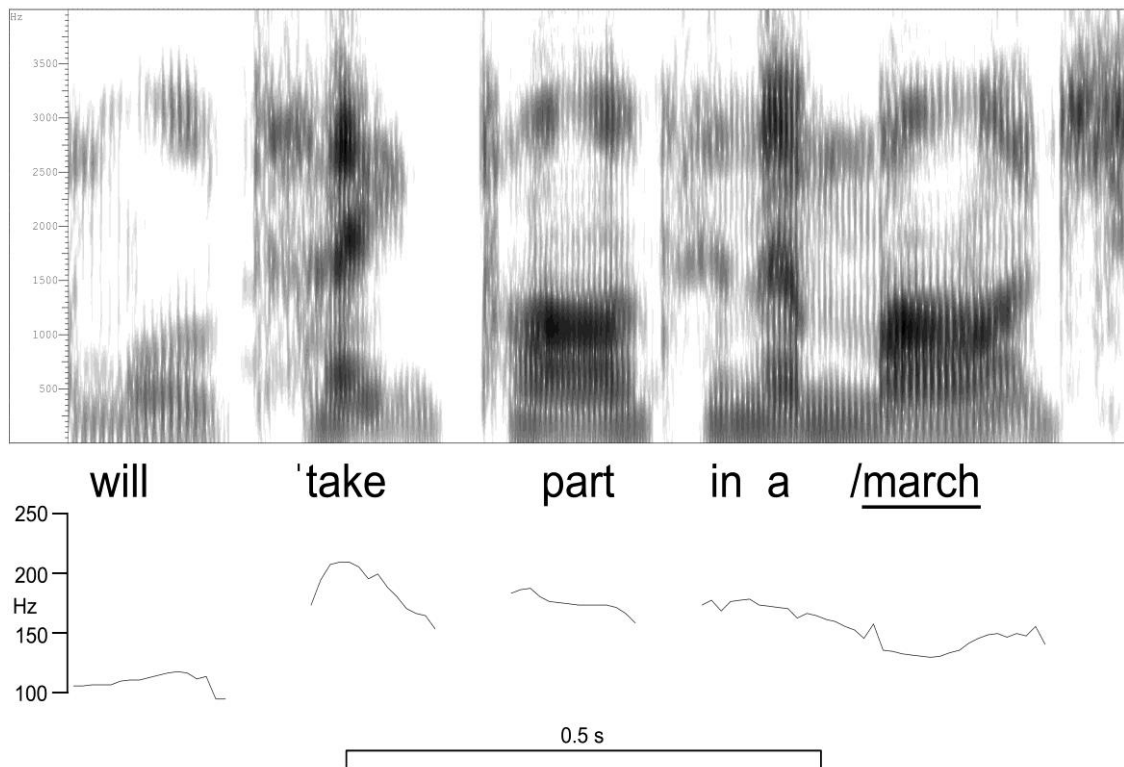


Figure 2 Onset prominence compared with the nucleus

2. Selecting data

Each novel was carefully scrutinized, making a note of every instance of italic script. The tokens were categorized, and the following categories noted:

- Intonational: It's picking *on* us, not picking *at* us. (PT₄₁)
- Foreign words: *lignum vitae*, *mouchoir* (CD_{161, 345})
- Reported speech: 'I told you six times, *don't look!*' (PT₂₁₉)
- Representing thoughts: *What am I doing?* Waldo thought. (PT₂₁₂)
- Quoted texts (songs, letters, etc.): *Thank you, Margaret, for coming. You've made it all worthwhile, 'Howarth'.* (DS₁₃₃)
- Pronunciation features (e.g. h-insertion): *honours* (CD₁₈₃)
- Imitating sounds: *fika-fika-fika-fika*; *ploop* (PT_{236, 238})
- Longer phrases: (CD₅₀₀) [...] only *it was the wrong lady*.

Categorization in this way facilitated exclusion of any application that was not intonational (with the exception of one or two viable items in the ‘longer phrases’ group) and quantification of the categories served to demonstrate that intonational

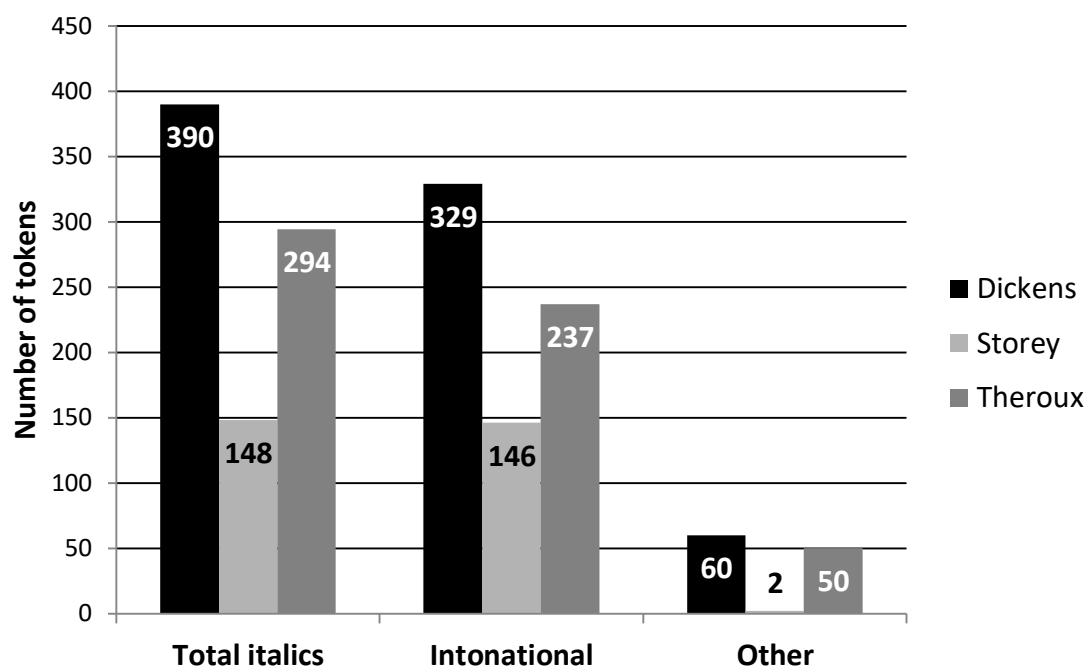


Figure 3: Italics and their applications

emphasis was the dominant use of italics for all three authors. Figure 3 shows 390, 148 and 294 instances of italics in each of CD, DS and PT respectively. Of these 329 or 84% were intonational emphases in CD, 146 or a massive 99% in DS, and 247 or 81% in PT.

The intonational emphases were then further categorized by word class in order to determine whether any word class dominated and whether different classes behaved differently in terms of accuracy of emphasis. Thirteen word classes were identified. Some of these, however, were sparsely represented with just a single token and others only appeared in a subset of the three novels. Under-represented instances of this kind were also disregarded for the purpose of the present study. This left 7 word classes (emphasized adverbs,

auxiliary verbs, negatives, nouns, prepositions, pronouns, main verbs) giving a total number of 589 eligible tokens. As we can see in Figure 4, the largest groups were pronouns – 243 or 41%, 145 (25%) main verbs (called ‘Verb’ in Figure 4), 58 (10%) auxiliary verbs (called ‘Aux’ in Figure 4) and 57 (10%) nouns – and for the purpose of this preliminary study, I have taken only the four largest groups for detailed analysis: pronouns, main verbs, auxiliary verbs and nouns.

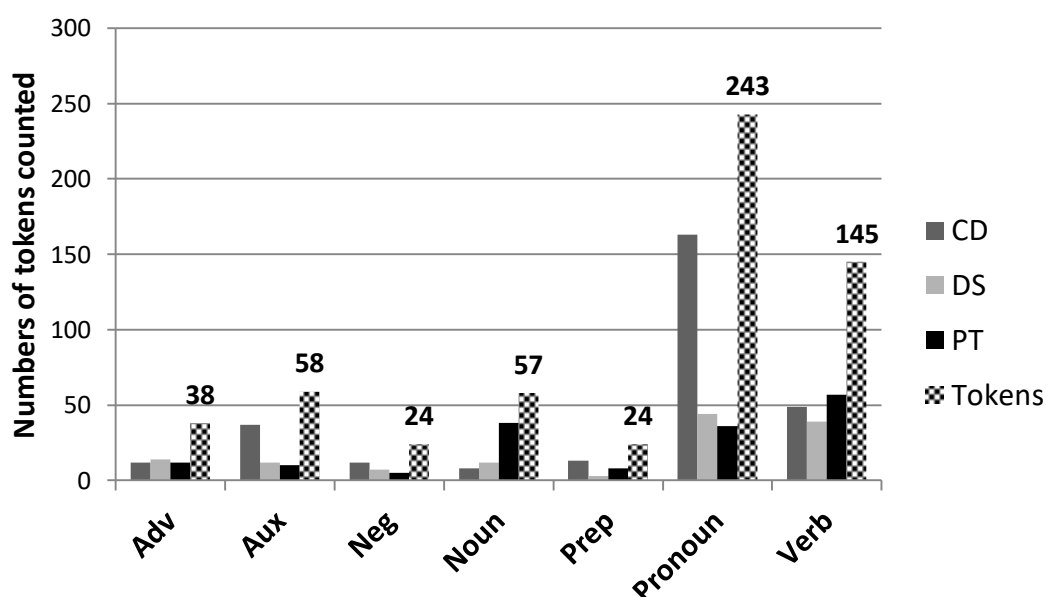


Figure 4: Word classes eligible for comparison

3. Detailed analysis

3.1 Procedure

The detailed analysis of the selected data was undertaken using an established descriptive framework (Wells 2006, based on the O'Connor & Arnold 1973 model) such as is widely used to teach intonation.

In addition to using the tonetic stress system for marking up intonation when making the analyses, I approached the data bearing in mind widely held assumptions about English intonation such as:

- English avoids refocusing on old information

- In any IP, English puts the nucleus as near to the end of the phrase as possible – on the stressed syllable of the last word to contain new information
- English avoids emphasizing pronouns (unless for contrastive purposes)

For each eligible token, I compared the author's use of italics with the intonation one might expect to use if making a traditional intonational analysis (prompted by the premises and assumptions mentioned above) of the relevant portion of text – the type of analysis one might expect to see if the material was being used for pedagogical purposes. Where this differed from the intonation implied by the author's italics, the token was deemed 'moot' or sometimes even 'wrong' and became the subject of discussion. All tokens where the expected intonation and the author's italics coincided were judged as being 'right'. Analysis began with the largest word class, pronouns, and then continued with the main and auxiliary verbs and the nouns.

3.2 Analysis of pronoun tokens

The majority of pronoun tokens are considered as being right (see Figure 5) – readers can easily 'hear' appropriate 'tunes' or 'tone of voice' when reading:

- '***She*** is the lady I speak of,' said brother Charles. (= identifying a young lady he'd seen fainting, CD₅₆₅)
- '[...] He lives in the cellar of my rooming house... By the way, where are ***you*** living? || (PT₉₇)

These tokens are clearly contrastive in nature and are easily assigned intonation contours: 'She is the °lady I °speak of,' said brother °Charles. || and '[...] He °lives in the °cellar of my °rooming house...|| °By the °way | °where are °you °living? ||

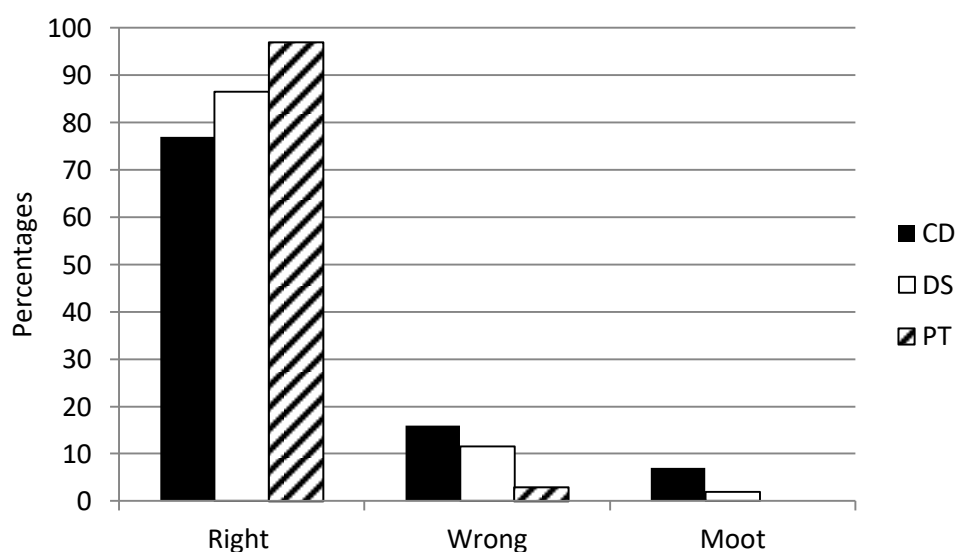


Figure 5: Initial judgement of the accuracy of intonational emphasis of pronouns

While this shows sensitivity to intonation on the part of the authors, given that students often find identifying the nucleus so challenging, the sheer number of completely correct tokens is interesting and worth noting. The most accurate is Theroux with a score of 97% correct. Storey is right 86.5% of the time, and Dickens 77% of the time. These scores suggest that our untutored intuitions about tonicity, are usually quite reliable, at least when dealing with pronouns.

The next step, then, was to investigate the tokens classified as ‘moot’ and ‘wrong’. Within the pronoun word class, two such examples occurred in Storey:

Example 1 (DS₁₂₂) *Margaret arguing with her mother about bringing her married boyfriend into the house says she doesn’t care what the neighbours think. So, (not) caring has been mentioned and her mother then replies:*

‘But / do care. We’ve got to go on living here, woman, long after you’ve gone
gallivanting off.’

The expectation here would be for the nucleus to fall either on the auxiliary verb, contrasting positive and negative: But ^l \do ˌcare || (orthographically: But I *do* care.) or multiple nuclear tones: But ^vl / \do ˌcare.||

(orthographically: But *I do* care.). Storey, however, emphasizes what I would consider to be a more marked nucleus, with the mother apparently using the pronominal reference to herself in contrast to *you* (spoken later and referring to her daughter). This would give us a more unusual tune such as: But ¹ ₀do ₀care.|| However, although this is more unusual, it is not completely unimaginable. The implication would be that I care, and never mind about you. Alternatively, as I discussed above when talking about the learner's perception of accents, Storey may simply have made a mistake here, misinterpreting the pre-nuclear accent on *I* in my suggested linguistically unmarked version which uses a high head preceding a high fall nuclear tone for the nucleus (But ¹ ₀I do ₀care.||).

Example 2 (DS₁₅₀) *Margaret arguing with Howarth, her boyfriend. 'Pride' has not been mentioned – it is new information – but Howarth says:*

'Do you despise me,' he asked, 'because I've given you all *my* pride?'

Here, with 'pride' being new information, and with no obvious contrast for *my* (nobody else's pride was mentioned!), we would expect end focus: [...] because I've ¹given you ⁰all my pride ||. It is not clear here why Storey emphasizes the possessive pronoun. The word *my* would be unlikely to carry even an ordinary stress and would therefore also be unaccented. On the basis of the present analysis this would appear to be a straightforward error.

Some rather less straightforward examples were found in the data from Dickens.

Example 3 (D₆₉₂) *Ralph Nickleby and Arthur Gride are discussing the fact that Peg Silverskew (who is not present) is the only person who could make money out of a document they've found. She needs to see it, they argue. Dickens continues:*

'She don't know what it is; she can't read,' shrieked Gride [...]. 'There's only one way in which money can be made of it, **and that is by taking it**

to her. Somebody will read it for her [...]

The contentious IP here is highlighted using bold. The referent 'her' is Peg Silverskew, who has just previously been mentioned by name. The two speakers definitely know they are talking about her. Pedagogically at least, this context would lead us instinctively to avoid placing the nucleus on the final pronoun. 'her' is not in contrast with anyone else and there is no doubt at all about the referent. However, given that English likes to put the nucleus as near to the end of the IP as possible, the penultimate and antepenultimate words are also not immediately obvious candidates – another pronoun, *it*, and the preposition *to*. The last lexical item with new information would appear to be the introduction of the idea of *taking* the document (*it*) to Peg (*her*). We might therefore expect *and that is by taking it to her*, giving the possible intonation [...] and ^lthat is by taking it to her.||. This also sets up a contrast between *take* (*to*) here and *read* (*for*) in the following IP. Another possibility, however, would be to argue for the nucleus on the preposition *to*, emphasizing the need for action or movement, *and that is by taking to her* giving the possible intonation [...] and ^lthat is by ^otaking it to her.|| (This would also serve to reinforce the unspoken understanding that Peg is unlikely to come to them.)

Dickens's version, however, focuses on the final pronoun: 'There's only one way in which money can be made of it and that is by taking it to *her*, [...]' implying an intonation such as: and ^lthat is by ^otaking it to her.|| However, this appears to be wrong on two counts: it is wrong because it places the focus on old information and it is wrong because it emphasizes a pronoun for which there is no apparent contrast. (It is easy to see how teachers might count it wrong, if marking student work.) But maybe it can be interpreted pragmatically as being resonant of horror on the part of the speaker – of all the possibilities, the only viable one is that they will actually have to speak to this reviled individual, **her**, someone they would prefer not to associate with. If that is the case, the tone is going to be as relevant to the analysis as the tonicity, and maybe Dickens had other prosodic characteristics such as width of pitch movement and even voice

quality in mind here. Nonetheless, as it stands, these italics don't flow easily for the phonetically trained reader and for me Dickens's choice is more linguistically marked than the previous two options I discussed. This leads me to propose a scale of acceptability or markedness, such as:

Scale of markedness

Unmarked	by taking it to her
↕	by taking it to her
Marked	by taking it to her

Example 4 (CD₅₇₆) *Newman Noggs is waiting for Ralph Nickleby who is late coming back to the office and stopping Noggs from going for his lunch. Dickens continues with Noggs saying:*

I might have a little bit of hot roast meat spoiling at home all this time –
how does *he* know I haven't? ||

The contentious IP is again highlighted in bold here and again, my own initial analysis would avoid placing the nucleus on *he*. My instinct this time would be to contrast positive and negative, *have* and *haven't*, giving something like: 'how does he °know I \u025chaven't? ||. Failing that, I am comfortable 'hearing' the nucleus on the main verb in the main clause *know*, 'how does he \u025cknow I °haven't? || which seems to say 'how can he be so certain?'.

But Dickens's voice is different. This author, who so enjoyed and was so experienced in reading his work aloud, writes *how does **he** know I haven't*, giving something like [...] 'how does \u025che °know I °haven't? ||. This again leaves the phonetically trained reader seeking an explanation. Again, the pronoun is emphasized and there is no obvious source of confusion that would require Noggs to single the referent out. He has only been surmising about Ralph Nickleby. There can be no confusion. One possible construction is that it allows Ralph to be more effectively disparaged. Perhaps Dickens again had in mind an actual tone, rather than just a choice of tonicity – perhaps he is intending a more sneering low fall tone, rather than the neutral high fall I've given this

above: [...] ^hhow does he know I ^hhaven't? || implying 'him, of all people'. Again here we have a choice which at first sight we might say is wrong, but which, with further consideration can be given a more or less plausible interpretation. This example is very like Example 3, in fact, and I would also contend that we have a similar scale of markedness, running from the unmarked end focus, contrasting positive and negative, through the choice of the main verb in the main clause, to the pronominal referent *he*:

Scale of markedness

Unmarked	how does he know I haven't
↕	how does he know I haven't
Marked	how does he know I haven't

One reason for trying to find acceptable interpretations of the author's own choice of emphasis, rather than just dismissing the more contentious examples out of hand, is because Dickens in general gives the reader so much evidence of his obvious sensitivity to and creativity with the spoken language. Elsewhere, for example, we find a delightful and humorous exchange involving the more comic characters Pyke and Pluck.

Example 5 (CD₃₃₁) *Pyke and Pluck visit Mrs Nickleby*. Dickens writes:

[...] two gentlemen, both perfect strangers, presented themselves.
 'How do you *do*?' said one gentleman, laying great stress on the last syllable of the inquiry.
 '*How* do you do?' said the other gentleman, altering the emphasis, as if to give variety to the salutation.

The opening salutation is fine. The first of the duo to speak produces the usual ^hHow do you do? || with the nucleus on *do*. The reader's expectation is to hear an identical utterance from the second. But Dickens puts airs and graces into the mouth of the speaker this time, with the narrator explaining that the unexpected nucleus on *how* is in order to add variety – and in so doing, he adds

humour and at the same time the unexpected location of the nucleus becomes both 'right' and witty!

This leaves the phonetically trained reader scratching his head, when elsewhere in the novel, we find the following:

Example 6 (CD₆₉₄) *In this exchanges between Ralph Nickleby and Mr Squeers, nobody has yet spoken or said hello; Ralph Nickleby is the first person to speak:*

'Well, Mr Squeers,' he said, welcoming that worthy with his accustomed smile, of which a sharp look and a thoughtful frown were part and parcel:

'How do *you* do?'

The intonational emphasis in the opening salutation here is not the usual How do you *do*? Unexpectedly, the emphasis is placed on the pronoun. In an attempt to interpret this, by analogy with a question such as *How are you?* one can perhaps imagine an exchange in which the emphasis is placed on the pronoun by a second speaker, So:

1st spkr How do you **do**?

2nd spkr I'm very well. How do **you** do?

But even this would be considered linguistically marked if we remember that English avoids emphasizing pronouns in this way when there is no possible confusion of identity. There must, then, be a reason behind Dickens's deliberate choice to emphasize the personal pronoun here in an opening greeting.

Like examples 3 and 4, one possible interpretation is that Dickens is asking the reader to hear extreme negativity in the welcome given to Squeers by Nickleby. Squeers is a man Nickleby dislikes intensely and for whom he has no respect. We must assume, I think, that as well as tonicity, Dickens yet again has tone in mind here – a sort of 'oh dear me, look what the cat's dragged in' tone: 'How do you do?' with the very narrowest of low falls. As before, this places an onus on the reader to guess/imagine what the author had in mind. At the same

time, it reminds us yet again of the onus on the teacher to be maximally flexible when marking student work.

3.3 Analysis of other word classes

The other word classes that we identified earlier for inclusion here were the main verbs, auxiliary verbs and nouns. Accuracy in emphasizing words in these classes is pretty comparable with accuracy in emphasizing pronouns, as can be seen in Figure 6, in most cases, there is 80% - 90% or above accuracy. This suggests that there is very little difference, if any, between word classes – accuracy is independent of word class.

Among the remaining tokens, a couple in particular could be indicative of the difficulty experienced by the untrained ear in distinguishing the onset accent from the nucleus.

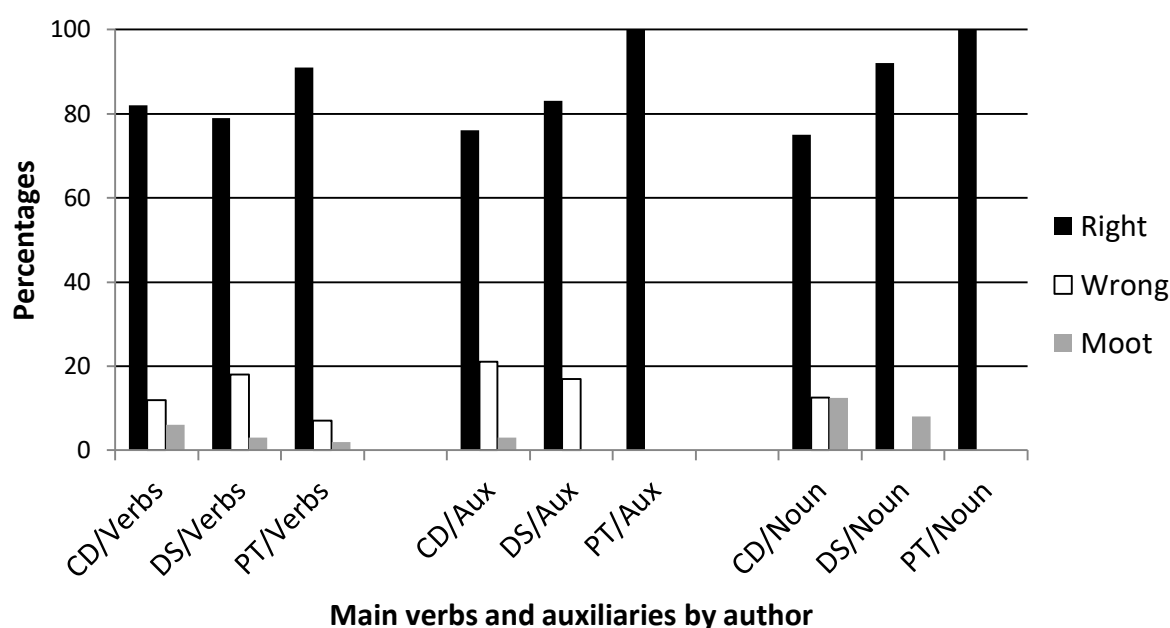


Figure 6: Accuracy of emphasis of verbs (main and auxiliary) and nouns

Example 7 (CD₇₃₉) *The ex-criminal Brooker is describing the occasion on which he told the famously unfeeling Ralph Nickleby that his only son was dead and buried; surprised by Ralph's reaction, which showed unexpected emotion, he*

says:

‘[...] He might have been disappointed in some intention he had formed, or he might have had some natural affection, but he *was* grieved at *that*.’

Given the position of the emphases, there are two possible interpretations here. The first is multiple nuclear tones, for example: but he ^Vwas grieved | at ^Vthat || (or even simple falling tones: but he \was grieved | at \that ||). The second possibility is identification by Dickens of an onset followed by a nucleus, for example: [...] but he \was grieved at ^Vthat || with an onset on the stressed syllable *was* marking the beginning of a falling head, preceding a fall-rise nuclear tone on *that*. In this instance, my preference is for two nuclei, multiple nuclear tones – complex fall-rises or just simple high falls.

Example 8 (CD₅₉₇) *The narrator is describing people present at the farewell party for the Crummleses including ‘a literary gentleman who had dramatised in his time two hundred and forty-seven novels’; the narrator continues:*

and **was** a literary gentleman in consequence. ||

Example 8 is another example where it seems possible that CD may be identifying the onset rather than the nucleus, really meaning to convey, for example: and ^lwas a literary ^ogentleman in \consequence ||. However, since in this context an onset on literary might be even more likely: and was a ^lliterary ^ogentleman in \consequence ||, the emphasis of the verb is not easily explained. It seems that this, unlike Example 7, could be a genuine perceptual error and *was* really is an onset.

Initially, I also chose to disregard instances in the final category on the list of applications, where the author has italicized longer phrases. Occasionally, however, only a couple of adjacent words are emphasized, and closer scrutiny suggests that these could also be interpreted as being indicative of pitch prominences relating to the onset and the nucleus. While the very long

stretches of italics (three or more words) are probably not possible to interpret, I believe the following two word sequences actually support the findings so far – that in some cases the author is responding to the wrong accented syllable in the utterance and that in some cases, it seems that he may be responding to tone as much as to tonicity.

Example 9 (PT₂₀₆) *In Waldo, when Waldo is talking to Mrs Czap about her dead son, Theroux gives him the words: **I'll say** ||*

The colloquial realization of this expression could use the compound tune: **'I'll** /say ||. The italics across both words suggest that Theroux is intuitively sensitive to the difference between a complex fall-rise and the unique compound tune, high fall + low rise. Like the earlier cases identified in Dickens, the author here might well be emphasizing tone rather than simply tonicity. That being so, the italicizing of two words, far from being a mistake, can be judged as perfectly correct here.

Example 10 (PT₂₀₃) *In Waldo again, Mrs Czap is describing her dead son's incurable illness, and tells Waldo that a doctor had told her anyone could contract this. But people have accused her of infecting the child. Theroux gives her the words:*

'You don't think that I gave it to him, do you? || Well, **do you?**' ||

The colloquial realization for this repeated question would likely use a high rise: **'Do** you ||. Again, the author, Theroux, appears sensitive to both tonicity and tone, the high rise starting on *do* making the pitch on *you* noticeably higher than that of the preceding syllable. Emphasizing both words, while not strictly correct, certainly gives the phonetically trained reader an idea of the extreme distress of the speaker.

4. Humorous intonation

4.1 The theory behind the joke

Literary linguists and others who may be interested in these ideas are not always trained in phonetics. Before introducing my final example, therefore, I will briefly summarize the theory that lies behind the use of emphasis (this time using bold print) in my final example.

In English, a change of emphasis (stress) differentiates between a number of compound nouns and noun phrases. Examples include:

<u>Compound nouns</u>	~	<u>noun phrases</u>
a 'bluebottle (<i>fly</i>)		a blue 'bottle
'lighthouse-keeping		light 'house-keeping
a 'grave-digger		a grave (<i>serious</i>) 'digger <i>etc.</i>

We are very sensitive to these differences when speaking and listening, but representing the contrasts in ordinary writing, without recourse to the use of tonetic stress marks, is challenging. The emphasis shifts from the first part of the compound to the second, and the meaning changes as the syntax shifts in parallel from noun + noun (a compound noun) to an adjective + noun (a noun phrase). For a phonetically untrained author, this is not straightforward and the question arises of exactly what to emphasize. Representing these three examples in writing requires the reader's attention to be drawn to the whole of the noun in each case – a compound in the first column, and the shorter simple noun at the head of the noun phrase in the second:

<u>Compound nouns</u>	~	<u>noun phrases</u>
a bluebottle		a blue bottle
lighthouse-keeping		light house-keeping
a grave-digger		a grave digger

4.2 The joke itself

This was exactly the challenge facing the cartoonist, Howie Schneider, in his joke about a *tightrope-walker*² (reproduced here in Figure 7).

In the final frame, Schneider faces the dilemma of distinguishing for his readers between a sober tightrope walker and a drunk one! Not the easiest when the written word is all you have at your disposal and when the concept of a ‘rope-walker’ is moot anyway! Phonetically, I suppose you would need to write **tightrope-walker** vs tight **rope-walker**. But this, of course, to the phonetically naïve reader, fails to highlight the word *tight* which is at the centre of this joke and which the cartoonist is at pains to draw to his readers’ attention. So, understanding the semantic significance of the word *tight* here, Schneider emphasizes it for his readers in bold print (see Figure 7).

Interestingly, however, although potentially incorrect, this also seems to be the first instance of tonality coming into play – the ‘T’ that is still missing from this analysis. Schneider’s solution seems to be to split this noun phrase into two IPs, according the adjective its own IP. This analysis would give the first IP ‘**tight-rope** walker’ (effectively: *\tightrope-walker ||*) with the nucleus correctly positioned, starting on the stressed first syllable of the compound noun, *tightrope-walker*. **tightrope-walker** vs two further IPs which can be interpreted as splitting the noun phrase into adjective *tight* in the first and the new compound noun *rope-walker* in the second. Schneider chooses to indicate only one further nucleus, emphasizing the only word in the first IP, *tight*, and leaving the intonation of the second IP to the reader’s imagination. For example: *\tight | \rope-walker ||* (giving a noun phrase – adj. + noun – **tight** (meaning drunk) *rope-walker*).

² I have searched unsuccessfully for the provenance of this cartoon in order to properly attribute it and seek permission to reproduce it here. I am therefore reproducing it without attribution and without permission strictly for the purpose of education and research.



Figure 7 Howie Schneider cartoon

5. Discussion

5.1 Scope and accuracy of intuitions

Two things are particularly noteworthy here. The first is that the evidence seems to indicate that the intuitions of phonetically untrained individuals about intonation could be more comprehensive than initially supposed. My interpretation of some of the applications of emphasis presented above suggests that authors may be responding not only to tonicity, but also to tone and even to tonality. If this is true, this insight could have particularly valuable pedagogical applications. More data is needed to substantiate this impression and analysis will continue.

The second finding is the surprising level of accuracy. There have been very few instances of emphasis that could be dismissed as being categorically wrong – possibly only one instance out of ten here, in fact. Of course, the data so far is very limited, and more is needed in order to confirm or refute this impression. However, if this initial impression is true, it could be a resource worth tapping into for pedagogical purposes. Analysis of the complete works of Charles Dickens is intended and, in time, it is hoped to add further, more contemporary authors to the database.

In stylistic terms, of course, the sporadic and even random use of italics

raises many other questions. If intonation is rule-governed, why bother with emphasis at all? And where a contrast is obvious, why can't this be left to the readers' intuitions? In the more subtle and difficult to interpret tokens, the question also arises as to whether this adds anything at all for the phonetically untrained reader or whether it could even be confusing.

However, what is particularly valuable in what we have seen so far is what it has to tell the teacher of intonation in terms of reinforcing the need to be flexible and imaginative. As we saw, there may be multiple possible interpretations in a given context and the teacher's expectations when marking students' work (spoken as well as written) needs to take this into account. The rules which we often consider to be so fundamental do not always seem to be so black and white. Solutions may be judged to be better or less good, but it is often not possible to simply discount variants as being categorically wrong.

5.2 The way ahead

Prompted by the findings of this preliminary study, two separate investigations have now been identified.

First, completion of the analysis of Dickens' use of italics is ongoing. It is hoped that this will lead not only to an expanded database but that it will enable comparative analysis of additional word classes and may help to further clarify the naïve author's response to each of the three Ts – tonality, tonicity and tone.

The second project will make use of audiobooks, comparing the printed text with the interpretation given to them by professional readers. Interpretations found in the two text types will then be compared.

There are, of course, a number of other steps which could also be of interest and reveal more about our intuitions. Several are being considered, including:

- stripping the author's italics from sections of text and inviting reading by groups of phonetically trained and phonetically naïve readers;

- inviting phonetically trained individuals to rank the likelihood and/or acceptability of proposed variants in selected contentious tokens in order to determine how far these ‘markedness’ rankings (which I suggested above) concur with our assumptions, in particular, about tonicity.

While the investigation so far has revealed a possible pedagogical value in written intonation – if phonetically untrained authors can do this so successfully, written intonational emphasis could possibly be exploited in teaching intonation and used as a starting point for the acquisition of practical skills – I think it is almost certainly the case that this is an under-investigated stylistic device and an area where phonetics might make a direct contribution to literary linguistics.

In conclusion, then, I believe the preliminary/explorative evidence that we have seen here shows that this *is* a topic that is worthy of investigation.

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