

REGULARITY, MELODICITY, AND STEREOTYPING, IN FRENCH AND ENGLISH INTONATION SYSTEMS.

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ABSTRACT

Within an autosegmental framework, I will argue that it is necessary to distinguish two types of strongly melodic realisation.

The first concerns the organisation of tones within a single T.G. (intra-contour patterning) typical of the "chant" or "the melodic cliché" frequently discussed in the literature

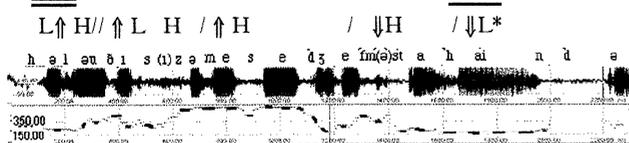
The second concerns the rhythmic organisation of contours between themselves possibly across T.G.s(inter-contour patterning) for which the term "Sing-songy", or "Swinging" realisation, would seem more appropriate.

After comparing the stress-aligned pattern of an English professional chant with the syllable alignment of similar patterns described for French, I will contrast the form and function of "Sing-songy" variants in English and French. In particular I will examine the contour used by two French children 'transferred' from the 'il était une fois' scene-setting stereo-type, which they developed to set the premise in their own 'let's pretend' games.

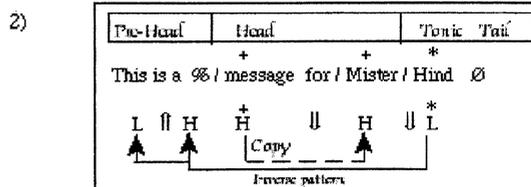
1. STEREOTYPED "CHANT-LIKE" REALISATIONS

It has often been claimed that chant-like realisations of contours tend to be appropriate to stereo-typed exchanges where the speaker is not personally engaged in the outcome of the speaker/addressee relationship(Ladd [7] and [8], Hind[4] and [5], and within a psycho-phonetic approach for French by Fónagy [2]). An example of this appeared on my answering phone, when a young lady called me in her professional role as clerk to leave me this introduction to a message:

1) Hello, (this is a) / message for / Mister / Hind



This pattern appears to be obtained by associating a simplified chant-like contour ($H^*L \rightarrow H+ \downarrow L^*$) so that the complex nuclear H^*L Falling contour is associated over the whole Tone Group(H to the Head, L to the Tonic) to avoid creating the assertive pole normally created by H^*L being centred on a particular nuclear syllable. Any other strong syllable within the Head receives a Down-stepped(noted " \downarrow ") High tone through "copy"('assimilation' within the Head); but the Pre-Head receives an inverse L H pattern ('dissimilation' according to the "inverse slope" principle [8](here, re-interpreted as inverse tone value).



According to Fónagy [2], the characteristic of this type of realisation, which would account for its melodicity, is the relative stability of the intonation contour within the syllable("régularité micro-mélodique"). This intra-syllabic regularity would form the necessary reference for recognition of the specific interval of the inter-syllable pitch changes. Although this is no doubt true for the syllable-timed realisations of French, in English, the melodic regularity tends to involve the foot. In (2), <message> and <mister> are aligned with a single tone. However, as the stressed vowels of the Head([mɛs] and [mɪs]) are both followed by unvoiced consonants, these vowels can not support the increased duration necessary for perceived melodic regularity. In this case, it is the following unstressed syllable(in which vowel duration is not so restricted) which is lengthened. The vowels of the unstressed syllables are in fact longer than those of the preceding strong syllables of the foot(the reduced [ə] vowel being given the quality of a full vowel by this speaker as shown in (1)). This would give a pseudo syllable-equal-timed effect.

Tests underway involving native English speakers producing similar chant-like utterances with the word 'cable' etc... substituted for 'message' ("Hello, this is a cable for Mister Hind") show, that when the strong syllable of the foot can support increased duration there is a strong tendency for this syllable to be lengthened to give the sustained tonal stability.

The melodicity due to the simplified stepped realisation, and sustained level within the foot, is similar to that occurring in 'naturalistic' song, when the melody, as in the 'Land of hope and glory' extract, (3), closely echoes English speech patterns(the trochaic rhythm, and the non-final Fall-rise($H^*L + H$) followed by final Fall($H^*L + L$) being typical of standard English speech). These are realised as simplified stepped contours(approximately Fall-rise : [$H^+ \downarrow L^* + \uparrow H$], Falling ([$H^+ \downarrow L^* + \downarrow L$]) very much as in the chant-like realisation above. The melisma occurring on 'hope', as well as the alignment of the High tone of the Falling nuclear contour with the unstressed syllable 'and', also occurs in chant-like realisations when there are insufficient syllables to align with the tones of the contour (according to the principle of 'no more than one tone per syllable, but each tone to some syllable'), Hind [5].

3)	T.G.1			Fall	+	rise	T.G.2			Falling
	Head		Tonic			tail			Tonic	tail
Re							↑ and			
Do	/L ⁺ and -		of		↑ope					
Si	/ ↓ H ⁰									
La							/ U G I ⁰ -			
So ^l							↓ ry			
	H		↓ L* + ↑ H		H		U L* +		L	

Inversely, the success of the 'Land of 'Hope and 'Glory' extract as the 'other popular English national anthem' might, in part, be due to this 'naturalistic' and stereo-typical Englishness.

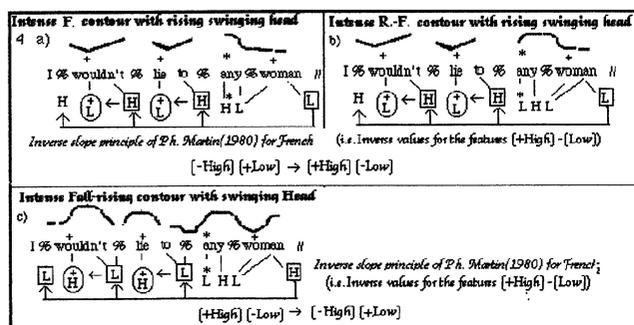
2 "SING-SONGY" REALISATIONS

The "Sing-songy" realisations, on the other hand, owe their 'melodicity' to the fact that the whole, or part, of a contour is repeated; thus producing a "swinging" effect, because of this cross-contour regularity.

2.1. The English Left-strong swinging head.

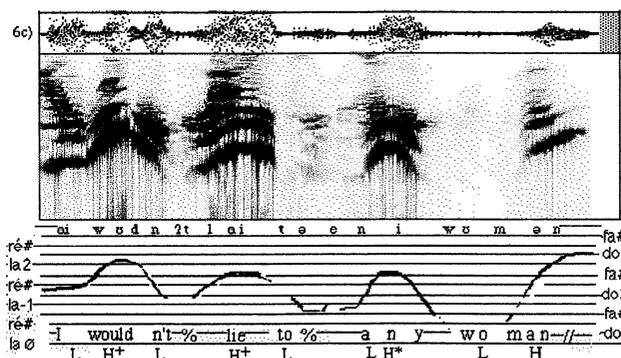
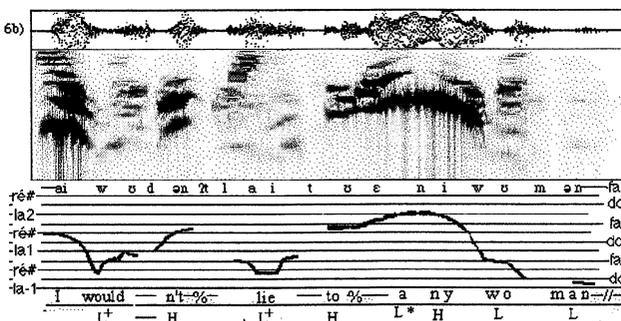
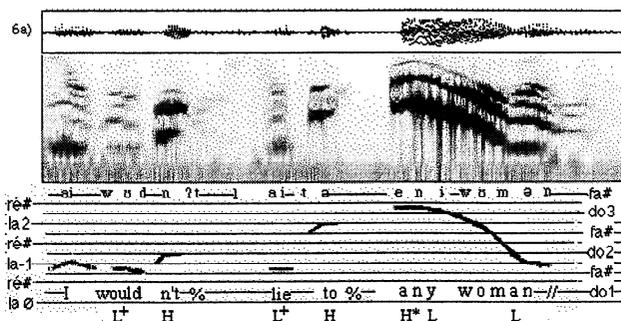
In the Intense sing-songy realisations of the basic contours (Hind (6) interpreting Halliday (3)) this 'Sing-songy' melody is obtained by repeated association of a prenuclear contour to each foot of the Head, giving what Halliday calls the 'intense swinging head' (as in examples (6a) Falling, (6b) Rise-falling, and (6c) Fall-rising). The intensity of emotion results from the salient rhythm being given more importance than the syntactic or semantic grouping. ¹

The Pre-nuclear contour would be derived, as in (4) below, by associating a juncture tone to the final weak syllable of each foot of the head obtained by inverting the value of the final T.G. boundary tone (dissimilation); and each strong-initial syllable of the foot would receive its tone by continued cascade-inversion from that.



The extreme rhythmic patterning can even involve aligning a syllable containing a reduced vowel with a strong rhythmic position, if this results in a regular trochaic pattern. This can be seen on 'Pamela' in the following example as spoken by an exasperated parent who has already had to give this information before.

- 5) + - + - *
 /Pa me /la is /out
 L⁺H L⁺H H* L

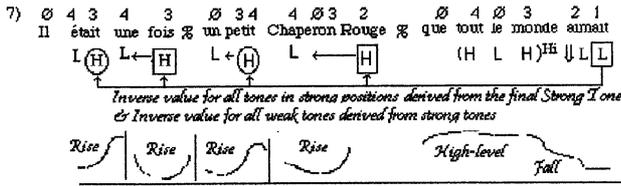


Sing-songy realisations in English can also involve the rhythmic organisation of contours within a paratone group. In this case the non-final T-Gs are often rhythmically organised as 'super-trochees' (see example (9) below) and an identical contour (frequently LH* + L) is associated to these structures. The final TG of the paratone generally interrupts the pattern, Hind [6].

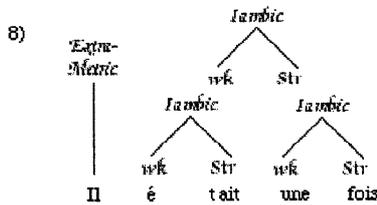
2.2. The French Right-strong swinging head.

A contour with a 'swinging head' can also be heard in French on the <Il était une fois> story-telling scene-setter frame. However, while in the English examples above the repeated contour on the Head is aligned with the initial-strong ('trochaic') foot, in French it aligned with end-strong ('iambic') rhythmic groupings.

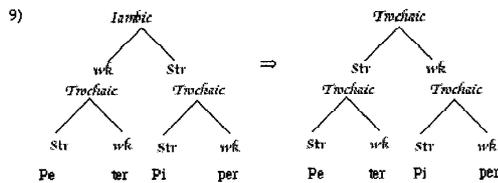
The Intense swinging contour would be associated to the Head in a very similar manner in both languages (see above (4) for English). In French, the "swinging head" is achieved by repeatedly associating a final high juncture tone to each final strong syllable of the end-strong rhythmic grouping through dissimilation from the utterance final boundary tone (as in (7)). ²



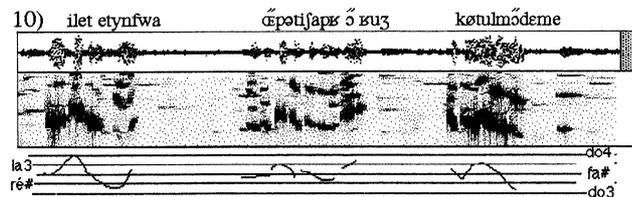
In fact, the 'Il était une fois' stereo-type is rhythmically more complex than (7) rather as shown in (8).



It involves a complex 'super-iamb' which is the inverse rhythmic pattern from the 'super-trochee' that occurs in some eurhythmic passages in English as shown in (9). I call this the "Peter Piper stereo-type", as it is this pattern (rather than the syntactic determined Iambic pattern) that appears in such tongue-twisters, and indeed in other passages of highly rhythmic speech, [6].



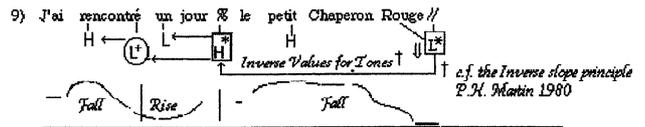
Realisation (10) is that of Child A at the age of about four years old, showing that she had already mastered this stereo-type from which she would operate the intonation transfer described below.



Experiments with French speakers show that this 'swinging' pattern is automatically associated with the 'il était une fois' scene-setter; and the contour differs from the more neutral French contour generally associated with an utterance like that of (9) below. Of course, the intense 'swinging' pattern can be associated with 'J'ai rencontré un jour...'; but in that case the realisation is generally felt to sound 'gossipy'. The basic function of the 'swinging' pattern, therefore, is to draw in the listener and key up his expectations.

For young children, however, immersed in the story-telling phase, a parasitic function can also be automatically associated with the 'Il était une fois' scene-setting stereotype (pragmatic inferring): both the pattern and the morpho-syntactic frame may appear to function together as a signal that all that follows

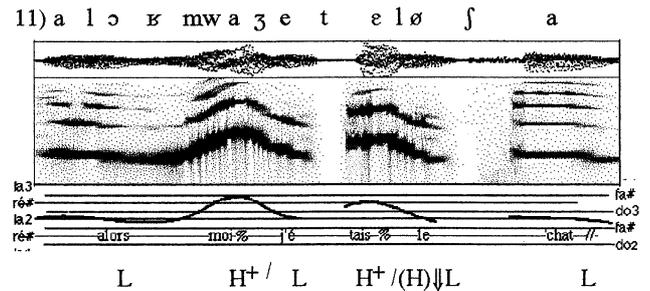
will be part of the story-telling convention. This would be the necessary condition for a metaphoric transfer to take place.



2.3. An intonation transfer.

Now I have found evidence that two Parisian children (between the age of four and six years old) had indeed operated this intonation transfer; and had used a "caricature" of the stereotyped contour (along with the 'scene-setting' preterit tense/aspect) to set the scene in their own games of make-believe.

At the earliest stage (four years), the utterance «moi j'étais le petit chat» with the relevant intonation (11) would signal the beginning of a game where one of the children would pretend to be the cat, while the other would then speak to her using the cat's name with the voice-type adults frequently take when speaking to small animals (and children).³

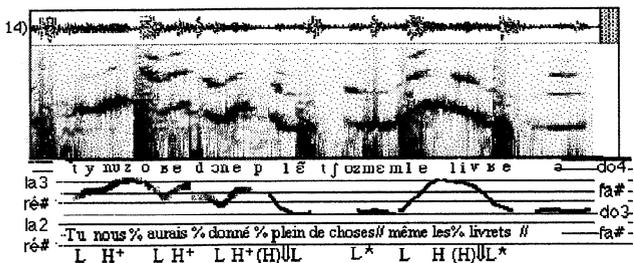
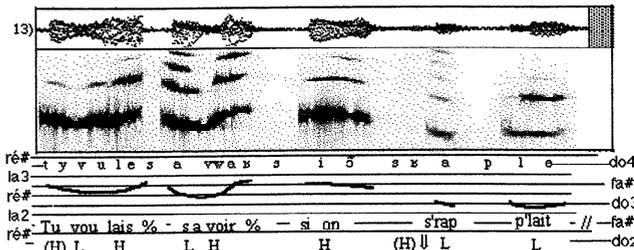
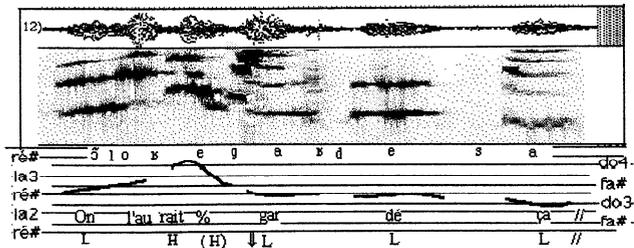


As the games became more complex, the conditional replaced the preterit in this type of condition setting utterance, while the preterit could still be used (with the same intonation), but only on utterances which formed a "stage direction prompt", as it were, within that premise.

At this stage the two girls had distinct roles in the game which generally now concerned coming to terms with whatever had happened during the preceding days in school. There was clearly a therapeutic 'acting out' function to the game.

One of the children, child A, would be called upon to play the school-mistress. This would mainly involve scolding the dolls and other teddy bears lined up for the occasion. The other child, child B, would usually want to be the only good child in the class. Interestingly it would always be child B (the one not playing the mistress) who would impose the 'premise'. This mainly involved child B letting child A know the new context according to which she would scold the lined up teddy bears and take child B herself as the model of how the children ought to behave.

The special intonation would only occur on child B's scene-setting utterances (see 12-14 on the next page). In between each "stage direction" there is no hint of this intonation type, except for child B's "stage direction" prompts in which she attempts to re-set the discourse direction within the 'premise'.



At first the intonation had the rather ponderous 'super-iambic' rhythm of the 'Il était une fois' stereotype (see (11) above); but by now, the children appeared to have 'taken control' of the pattern; and a lighter, more lively, but simpler iambic rhythm developed, better adapted to the obvious conflictual nature of the 'scene-changing' which was the only way child B could take charge of the discourse orientation (see particularly example (14)). These realisations both give evidence for the fundamental end-strong (iambic) rhythms of French (compared to initial strong (Trochaic) rhythms of English) but also show that these patterns are acquired at a very early age. The children were sufficiently aware of the rhythmic pattern at the age of four to be able to operate the intonation transfer. However, the use they made of these patterns show that they were still exploring the full potential the system would allow them; at the same time as they were discovering the subtleties of 'turn-competitiveness' within the unstated code of the game that both had clearly accepted.

3. CONCLUSIONS :

In this article I have argued that, although it is useful to distinguish two melody-types both for English and for French, the way these two languages realise these intonation types differs in relation to the timing and rhythmic settings of both languages. In French the chant-like realisation would be characterised by the micro-melodic stability of the syllable, in English the phonological foot would also be a factor. The "sing-songy" realisation, in both languages, would be characterised by a derived contour being repeatedly aligned with a regular rhythmic pattern. In English it is aligned with an initial strong simple or complex foot. In French it would be aligned

with an end-strong simple or complex rhythmic group (the 'rhythmic group' not having exactly the phonological status of the phonological foot in English).

The intonation transfer of the 'Il était une fois' stereotype that I have described in two Parisian children's speech, proves that these children had 'received' the basic end-strong rhythm of French at a very early age (before the age of four). However, they had learnt to make it their own through a phase of verbal play which goes on somewhere between the ages of four and seven years old. After that age their use of the pattern dwindled. Presumably, by then, the phase of rhythmic investigation was complete.

Several nursery school teachers in Paris have told me they have heard similar patterns in children's 'let's pretend games'. It would be interesting to discover whether young English children might use "sing-songy" realisations in similar discourse contexts, and if so, whether such patterns could be shown to have been borrowed from the English 'Once upon a time' scene-setter. Furthermore, if that were the case, the obvious question to ask would be, whether the pattern they develop from it, manifests the inverse initial-strong rhythms of adult English speech.

NOTES

1. In all cases the Fo was both analysed using a narrow spectrogram and the Signalyze FFT comb setting. The laryngealisation present in examples (6) and the poor technical quality of recordings (12 - 14), recorded during the children's game, make the narrow spectrographic results more satisfactory. The representation in quarter tones is based on considering the results of both methods.
2. To save space, I have adopted a system of numbered values ('Ø', '4', '3', '2', '1') both to account for the relative strength of syllables in French (where 'Ø' is weakest and '1' is strongest), and to account for the fact that French is basically a syllable timed language: '4' has the value weak but for a vowel which counts for the rhythm; 'Ø' is only used for a weak syllable that does not count for the rhythm. Notice, however, that as (10) is a strongly rhythmic realisation, the vowel of the first syllable of <petit> (in <petit/ Chaperon/ rouge/>) is treated as non-reducible. It has to receive the Low of the alternating /L H%/ contour.
3. At this time it was impossible to make a spontaneous recording of the pattern, the game only lasted a few minutes. Recording (11) was made by one of the children at a later date, attempting to imitate the pattern. I judge the imitation quite close to the original.

References

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