

Defining Semantic and Prosodic Tools for the Analysis of Live Metaphor Uses in Spoken Corpora

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ABSTRACT: Considering metaphors as hypercoding elements in a genetic outlook, a corpus of twenty six scripted interviews, in British and American English and in French was labelled morphosyntactically and with lsa (latent semantic analysis) coefficients which assess semantic “distance” between words (grammatical words included) and the general topic of the discourse — music in our case. The corpus was first hand-searched then searched by XSLT stylesheets for potentially live metaphors using the lsa tags.

Metaphors in oral discourse differ from those in written discourse in more than one way: They are more spontaneous when innovative, less contrived and linked are endowed with a recognisable intonation. The scrutiny of all the live metaphors trawled from the corpus was carried out and resulted in the establishment of prosodic patterns for assessing metaphoricality. The pattern is not live-metaphor specific, but used along with other factors such as semantic distance, being a good enough indicator for both languages. As a case study, [MUSIC IS A PATH/JOURNEY] metaphor uses are looked into.

An intended live metaphor corresponds to a specific attitude and emotion on the speaker’s part. Maturity and Tonus (Piot 2002) are two concepts that can account for the prosodic contours. This feature may be added to the pattern bundle for metaphors which Lynne Cameron and Alice Deignan have coined *Metaphoreme*. Establishing what is metaphorically alive is a fruitful way of contrasting how cognitive models at play in metaphor are translated in oral discourse and may be seen as the ecology of metaphors, seeing how they coexist in their cognitive milieu. French, English and American radio stations, France Musique, Radio 3, and NPR provided material to test with some success the efficiency of the prosodic template.

Keywords: oral corpus, prosody, maturity, tonus, contrastive linguistics, metaphor, mapping, music.

RESUMEN: Considerando las metáforas como elementos de hipercódigo desde una perspectiva genética, se etiquetó un corpus de veintiseis entrevistas transcritas, en inglés británico y americano y en francés, morfosintácticamente y con los coeficientes del lsa (análisis semántico latente) que determinan «distancia semántica» entre las palabras (palabras gramaticales incluidas) y el asunto general del/la discurso—música en nuestro caso. El corpus se analizó primero a mano, y posteriormente por las hojas de estilo de XSLT para

las metáforas potencialmente vivas usando las etiquetas del lsa. Las metáforas en discurso oral se diferencian de las del discurso escrito en más de una forma: Son más espontáneas cuando son innovadoras, menos elaboradas y ligadas, se dotan de una entonación reconocible. El escrutinio de todas las metáforas vivas recopiladas dio lugar al establecimiento de los patrones prosódicos para determinar la metaforicidad. El patrón no es específico de la metáfora viva, sino que se utiliza junto con otros factores tales como distancia semántica, siendo un indicador bastante bueno para ambos idiomas. Como estudio de caso, hemos analizado usos de la metáfora [la MÚSICA ES UN CAMINO/VIAJE]. Una metáfora viva prevista corresponde a una actitud y a una emoción específicas del hablante. La madurez y el tono (Piot 2002) son dos conceptos que pueden explicar los contornos prosódicos. Esta característica se puede agregar al paquete del patrón para las metáforas que Cameron y Deignan han acuñado como Metaforema. Establecer qué está metafóricamente vivo es una manera fructífera de contrastar los modelos cognoscitivos en juego en la metáfora y su traducción en discurso oral. A su vez, se pueden considerar como la ecología de las metáforas, viendo cómo coexisten en su entorno cognoscitivo. Las emisoras de radio France Musique, Radio 3, y NPR proporcionaron material para probar con éxito la eficacia de la plantilla prosódica.

Palabras claves: corpus oral, prosodia, madurez, tono, lingüística contrastiva, metáfora, proyección, música.

Introduction

Metaphors are an invading figure of linguistics. However most of the times they are a window onto other phenomena. For Lakoff that window gives out on the workings of the mind, for Freud and Lacan it gives out on the unconscious. Here metaphors are used to shed light on how large corpus may be searched, not just for metaphors, but in terms of meaning intensity or coding capacity in a genetic perspective.

This paper looks at new ways of analysing metaphors in a multilingual corpus. It concentrates on the use of prosody as a tool to search and assess metaphorical uses.

26 interviews of music-related speakers, both in English and in French were scripted labelled with p.o.s tags and with latent semantic analysis tags (LSA). The LSA tags (<http://lsa.colorado.edu/>) give an indication as to the semantic “distance” between words (grammatical words included) and the general topic of the discourse — music. The corpus was first hand-searched, then by XSLT stylesheets to detect words semantically distant from the topic. Metaphors hedgers were used — repetitions, pauses, discourse markers (*you know, a bit like*) but the asset of an oral corpus is the raw data provided by the sound signal. Prosodic contours obtained by the software Praat (prosody analysis tool) turned out to be the only safe indicator of live metaphors, those intended to be live by their speakers, which is what metaphor liveliness means in the context of oral discourse since it is the informer’s privilege to choose to signal the conjuring up of both source and target domains, which is what live metaphors seem to be, as opposed to dying metaphors where mainly the target concept is referred to. Consequently, it was then possible to produce a prosodic pattern for live metaphors, and to see how it differed from

one dialect of English to another, and from one language to another. Differences seem to originate not from the metaphor-signalling function but from the prosodic idiosyncrasies of the dialects.

The pattern is not live-metaphor-specific, but used along with other factors such as semantic distance, and information structure, it is a good enough indicator for both languages, and helps redefine what metaphoricality is in the context of oral discourse. In this paper, as an illustration of a prototypical metaphor identification process, ROUTE DIRECTION metaphors are examined. Beyond metaphor spotting, it investigates new ways of coping with the translation of metaphors.

1. Lexicalised and Live Metaphors and Cognitive Mappings

When seen in a genetic perspective, the difference between dead and live metaphors takes on a whole new dimension. Lexicalised metaphors may be seen as a mutation in the semantic evolution of a word, or in the translation of deep semantic structure to a spoken message. These mutations are the result of image schematic models, experiential and ontological models, and also culture dependent stereotypical models (Lakoff; Johnson 1980) which we organise our understanding of the world with. The life expectation of any mutation depends on the environment, in this case the linguistic and cultural environment. Lexicalised metaphors cannot be translated literally since the cultural context they were born in has changed. This is the case for most food metaphors in French the origins of which no French speaker is aware anymore (*arrête de raconter des salades!* à stop telling fibs) which are culture dependent and have become the most obvious means of expressing the target concept. The source concept is often not translated in English in the same conceptual domain:

- (1) *Mêle toi de tes oignons* (mind your own business)
Cornichon, patate, petit chou, aubergine (daft thing, silly thing, darling, traffic warden)

However, lexicalised metaphors, by definition, may be found in dictionaries, and may be translated with some degree of efficiency (though even lexicalised metaphors have a breath of life remaining in them, and translating them without a metaphor is not satisfactory). This is not the case for innovative metaphors, since by definition they are absent from dictionaries or unregistered.

Innovative metaphors use mappings which are common to most cultures ([PROGRESS IN ACTION IS PROGRESS IN SPACE]) with a few exceptions (Lakoff; Johnson). Live metaphors in oral discourse are either real innovations, or dead metaphors which are reborn by the speaker with a will to superimpose the two original concepts at play, a source concept which is partially projected onto a target concept (only some characteristics of the source domain are concerned). Translations will depend on this status of liveliness, since if ever the metaphor corresponds to a culture dependent-mapping, it will have to be transposed to another mapping. Whereas lexicalised metaphors may sometimes be translated by a non metaphorical term in another language because in those cases the superimposition involved in metaphorsing is less of an issue,

live metaphors cannot be. Most metaphors are semantically transposable between French and English (British or American) which are the expression of two very close western cultures. However they may vary in surface morphosyntactic realization, since the constraints are different in both languages at that level.

The hypothesis is that one of the underlying functions of the prosody of metaphors is to point out to the listener and decoder of the message their less obvious decoding, in other words that they are not a literal usage of the term, but also that they are the expression of a conceptual association — a mapping. Major mappings in the corpus are the following.

Table 1. Contrastive distribution according to the main mappings organizing metaphors in the corpora

| | Metaphorical mapping | Example in both English and in French |
|---|---|--|
| 1 | [MUSIC IS A VERBAL LANGUAGE] | it's like writing your name you know writing a note la musique en fait a traduit ce cet état là et |
| 2 | [MUSIC HAS POWER OVER BODY AND MIND] | and we we connected with these few people who were dancing around the bar at the back c'est le c'est la communion euh |
| 3 | [MUSIC IS A VIOLENT FORCE, A LIVING BEING] | our music was a little hot-tempered for the set éduquer la brute à la souplesse à l'intelligence c'est à dire le côté moteur |
| 4 | [MUSIC PIERCES, GOES IN AND OUT OF THE BODY] =[MUSIC IS AN OBJECT, TOUCHES THE BODY] | something else is sort of playing the music through you comme une espèce de d' ouverture supplémentaire physiquement qui me donnait le petit peu d'air |
| 5 | [MUSIC IS A CONTAINER, A BUILDING] | but I think it's I think it's there to to contain that de mettre de une partie de moi-même dans le dans le morceau dans l'expression |
| 6 | [MUSIC IS A PATH, A JOURNEY] | and the singer is the main I guess vehicle for the band members je peux gérer mon atterrissage c'est le côté instinctif |

Metaphors are already a translation from one concept to another. Some characteristics of the source concept are mapped (*translatées* in French) onto the target concept. A multi-language corpus, provided it is large enough, is another form of translation, for speakers from two linguistic cultures are expressing their minds about music. Consequently, realisations of mappings in one sub-corpus are likely to be found 'culturally translated' in the other. The surface expressions of those mappings are sometimes surprisingly similar:

- (2) “il y avait ce que j'appelais on va pas reparler de la mer hein ce que j'appelais du **flux** et du **reflux** c'est à dire que les mot ...mais c'est pas une question de d'accélérer le

tempo c'est une question de de en fait **d'énergie que l'on donne**' (F5)" is almost translatable by "we kind of kind of make things **ebb** and **flow** a lot you know that contrast **in terms of energy level** and and volume' (210, F7)"

Here, not only do we get the exact translation of *ebb and flow* in the French *equivalent*, but both metaphors are phrasal or organic ones, and both are continued by adding the concept of *energy* (*une question d'énergie que l'on donne à in terms of energy level and volume*, which tends show they are being used as a realisation of similar meaning.

2. The Metaphors of Music and the Music of Metaphors: A Prosodic Template for Live Metaphors

2.1. Salience Metaphor and Oral Discourse

Live metaphors are, in informational terms, a subclass of focus. They introduce novel information, and they do so in two ways — new information about the referential external world, and also a novel association of lexicon and concept. The prosodic data show live metaphors to be narrow focus, and also emphases.

The concept of **salience** is crucial in the surface realization of cognitive model mappings. True live metaphors have the source and the target coexist at the same level, though one is seen as the comment of the other. The reading path in a sentence, indicates which is topic, which is focus. But the essential ingredient needed in oral language to determine what is salient is prosody especially in the jumbled syntax of oral discourse. In the example below, there is no knowing which is which without the intonation: "et euh sinon ben les mots c'est c'est les notes en fait (88, F3)". It may look as if the topic is *mots*, and that words are compared to musical notes, but it is in fact the opposite, and there are two clues to the answer:

- 1/ [music is a language] is a conceptual mapping, as the findings in the corpus illustrates. The opposite is not.
- 2/ Prosodic contours show that *notes* is not realized with focal contours, and though the speaker usually finishes with a high rise, here *mots* has a higher frequency peak (F0max) and is emphatic by its duration. So prosody is at the origin of the focussing process.

Metaphors just as other displacements or tropes (irony, mockery, sarcasm) are recognized for having a specific intonation. They all represent a high input of information which needs to be signalled. In the case of live metaphors, there seems to be an indication of an arduous delivery of the message. Innovative metaphors are often preceded and followed by a pause, repetitions, hesitations.

2.2. Metaphor, Focus and Prosody in the Corpus

The prosodic norm of a term which comments upon the topic by adding new information should be that of a focus, or even a narrow focus.

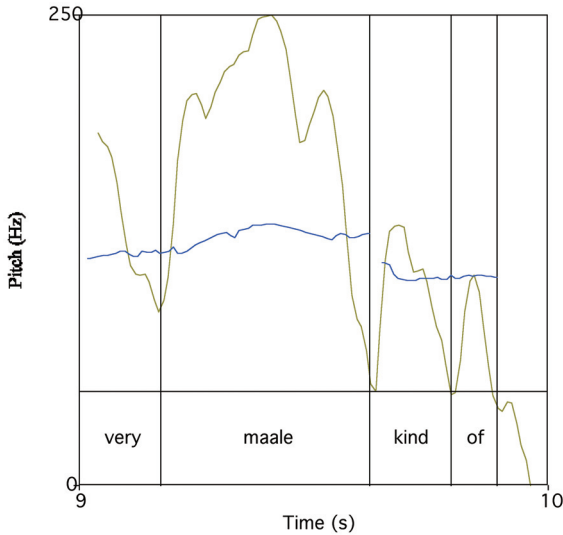


Fig. 1. (3) *it's a very it's a very sort of er what's the word I 'm looking a very sort of er what's the word I'm looking for a very **male** kind of thing* (26, E1)

The emphasis is strong in that non-innovating metaphor, but the contours are those of typical focus, though stretched out. Coming back to example (2) the contours show approximately the same phenomenon in French:

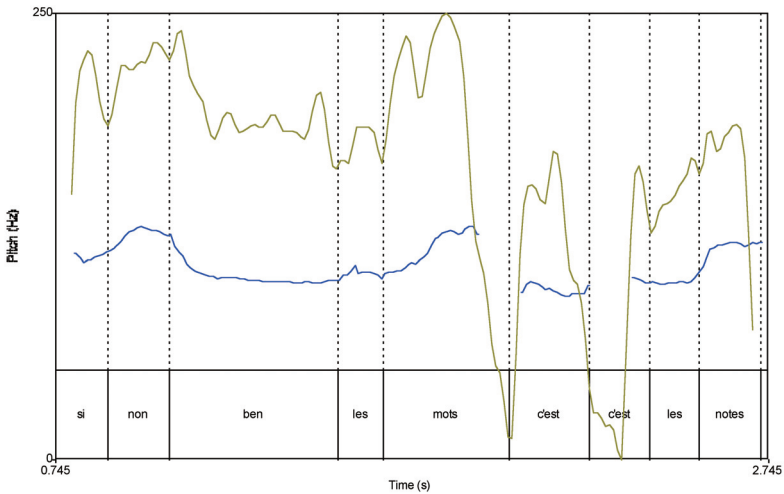


Fig. 2. *ben sinon les **mots** c'est c'est les notes*

Results were obtained thanks to Praat. For all contours in this paper, unless mentioned otherwise, the intensity contour is in olive green, and the frequency in blue.

Topic and focus are almost equivalent in this second example. In terms of category, they are basic-level, and in French, both could be focus out of context. The higher F0max peak for *mots*, and the greater intensity, but most of all, the substantial emphasis in syllable duration (363 ms for *mots*, 172 ms for *notes*) leaves no doubt as to the focus — *mots*.

There is an emphasis due to the special attention the speaker is drawing to its metaphorical use but not that typical of live metaphors. The previous clause was: “*il y a la **punctuation** ça serait plus ou moins le rythme*” which follows the same information pattern, so the speaker is relating to the discourse itself, and is entering a metalinguistic phase, in which language speaks as much about its functioning as it does about the extralinguistic world it refers to. So to conclude on metaphor informational structure and prosody:

1. Some metaphors do not have focal prosodic contours, are only references to the object they wish to conjure up and do not bring new information—they are lexicalised.
2. Others bear neutral focal contours and fit focal patterns which have been defined for French and English (Féry, 2002; Delais-Roussarie, 2006) according to the position of the stressed word.
3. The third category is innovating metaphors that seem to bear a form of emphasis with different subcategories. Most innovative metaphors are produced in the presence of a reference to the topic (in presentia), which enables searches with lsa coefficients.

The contours of live metaphors deviate from that of narrow focus in several ways, these depend on whether the stressed syllable is word final or not, sentence (or rhythmic phrase—RP) final in English, and whether it is RP final or not in French (see Féry, 2002; Delais-Roussarie, 2006). Also referential values used as a gauge to calculate deviation have to be different for short and long syllables, and were worked out per speaker. Most live metaphors in French tend to appear at the end of the rhythmic group where the pitch accent typically occurs. The deviations caused by the realisation of a metaphor are superimposed on focal contours in accordance with the parallel theory of prominence (cf. Xu *et al.*).

2.3. The Nature of Metaphorical Prosodic Contours

Prosodic parameters characteristic of LM were established by working out deviation from average values for a given speaker and a given position within the word and the RP were worked out in percentage of the whole syllable duration or pitch range. LMCs (Live Metaphor Contours) were found to have the following characteristics:

A duration corresponding to that of narrow focus (average value for syllable type and speaker) *E(C2-C1)*

A smaller pitch range $E(dF0)$ than narrow focus
 A fundamental frequency peak (F0max) shifted to the right, measured by looking at the distance from frequency peak to syllable offset (C2) $E(dC2-F)$
 A widening of the proportionate distance from intensity peak to frequency peak at peak delay $E(Delay/C)$

All prosodic parameters including intensity, are taken into account. For end-of-rhythmic-group stresses in French for instance, the only difference between a classic boundary tone and a LMC lies in the syllable duration, and/or in the position of the intensity peak.

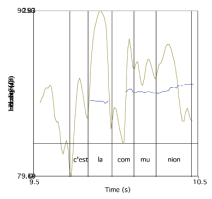
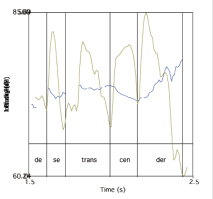
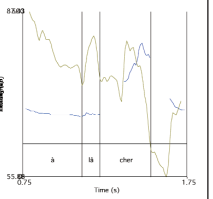
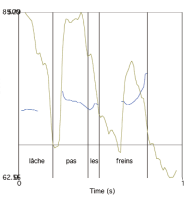
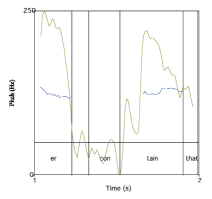
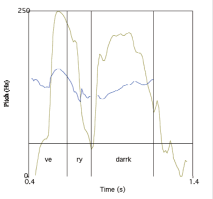
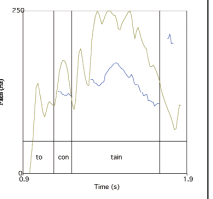
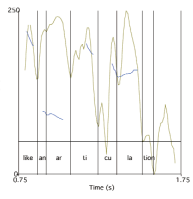
| | LMC1 weak F0max gradient + long Duration | LMC2 steep F0max gradient+ long Duration | LMC3 narrow focus + peak delay | LMC4 same as Type1,2 but shorter duration |
|---------------------------|--|--|--|---|
| FRENCH |  |  |  |  |
| | <i>C'est la communion</i> (110, F3) | <i>De se transcender</i> (238, F5) | <i>ça a lâché</i> (216, F5) | <i>elle lâche pas les freins</i> (227, F5) |
| ENGLISH + AMERICAN |  |  |  |  |
| | <i>to be there to contain that</i> (26, E1) | <i>It's very dark</i> (175, A5) (American speaker) | <i>there to contain the pain</i> (43, E1) | <i>An articulation</i> (90, E2) |

Fig. 3. Typical prosodic contours for live metaphors in French, British and American English

Typical prosodic contours for both French and English LMCs (live metaphor contours) were classified. They all have in common the deviation in delay of the F0max peak with regard to that of intensity. What are the underlying functions at work? Two notions must be introduced, **maturity** and **tonus**.

2.4. Maturity

Maturity is the assessment of one's familiarity or ability to understand a concept, or the probability that one can cope with it. Maturity is linked to frequency, for we tend to fix frequency at a level which corresponds to the mean frequency at which we spoke at the age when we had this degree of maturity (see Piot, 2002). So if something is really obvious for the speaker the following sentence,

- (3) You've never heard of that!
T'as pas entendu parler de ça!

will therefore finish by a high rising pitch, expressing incredulity on the surface, and reflecting the mapping between lack of knowledge and a certain frequency level.

According to the theory developed in Olivier Piot's thesis, (Piot, 2002) both maturity and pitch become associated, or mapped together; and this is an experiential mapping for with age, from birth onwards, mean frequency decreases steadily till the age of 25, whereas knowledge increases (in theory). For interrogations the assessment of this maturity is mostly that of the speaker, for assertions, that of the addressee with regard to the information (his likelihood to know it) or the concept (his likelihood to be able to deal with it) and also sometimes that of the speaker. We can thus assess via frequency our representation of the world (the speaker's view of the world linked with one event), our representation of the addressee's world, the addressee's world and the addressee's representation of our world. A long pitch curve may then in turn be the assessment of the addressee and then the addresser's knowledge and familiarity with what is at stake, not only the "thing" we are talking about, but the language we use or the time when the addressee may take the floor. This could be one explanation of the high rise in conversational French — as long as there is this high rise, the speaker is signalling that the other is not ready, mature, to take the floor.

2.5. Tonus

Tonus is linked to the somatic nervous system which provides a quicker response to emotions than the autonomous nervous system which is seen as a regulator. Tonus may be seen as the outlet for a nervous charge created by a restraint, an absence or a problem. The resolution of the problem goes with the release of the nervous charge. Both are associated, this is why pain triggers crying and shouting. The lack of a term to encode an existing representation is a form of problem, which is solved when a term is found. The solving of this lexical problem releases almost simultaneously the tonus energy, which works on the respiratory muscles, the phonic system, sub glottal pressure and vocal chords. As an effect, frequency rises steadily, and intensity is quickly released, because it is not regulated.

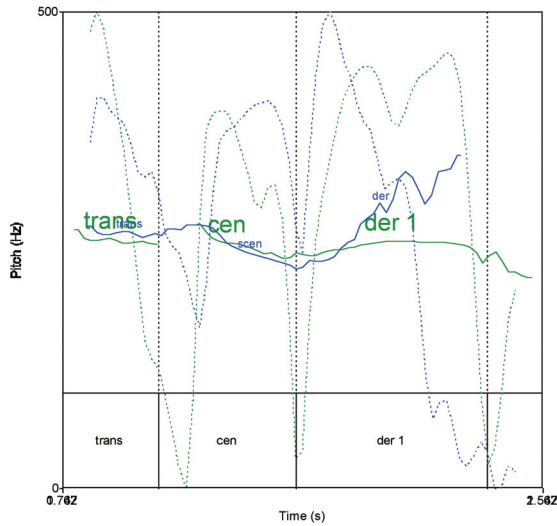


Fig. 4a. *ça peut être un révélateur d'une personnalité de transcender de se transcender* (238, F5)

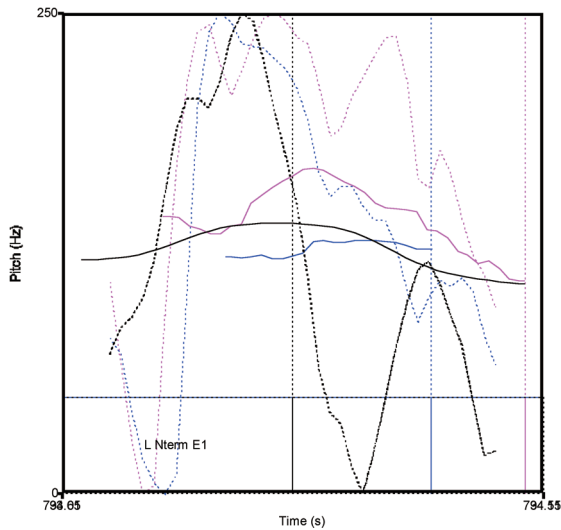


Fig. 4b. *I think the structure has to be there to contain if you like the pain (...)yes I think it's there to contain that* (46, E1)

Figure 4a: Contours for the same word said in what seems to be a normal emphasis and a metaphorical one show the effect of maturity and tonus on frequency and intensity. The intensity peak in the LMC contours (in blue) falls from the syllable onset steadily, whereas the frequency rises steadily. In the neutral emphasis, the intensity is more regulated and the frequency rises to a peak and falls. Both uses are metaphorical but one is meant to be felt as such by the speaker, and that is the second utterance (*de se*

transcender). The latter section of the frequency contours in the LM would theoretically correspond to the self assessment of the speaker with regard the lexical use (its appropriateness), which is a reflexive use of the verb *transcender*. The tail end of the frequency curve remains high, meaning that the speaker herself is not familiar with the usage or has doubts as to its appropriateness.

3. Results of the Use of the Prosodic Template with the [MUSIC IS A JOURNEY] Mapping

Metaphorical utterances with prosodic values that differ enough (>10%) from narrow focus may be classified under the metaphorical prosodic model established (LMC) and considered as being live metaphors.

3.1. Results in French

| sp | word | MS | LSA | Environment | <i>E(dF0)</i> | <i>E(C2-C1)</i> | <i>E(F -I)</i> | <i>E(dC2)</i> |
|----|---------------|-----------|-------|--|---------------|-----------------|----------------|---------------|
| F9 | routière | | 0,07 | C'est un peu comme une carte routière | -65,45 | -14,35 | 57,17 | -36,70 |
| F2 | partir | VER:infi | 0,19 | ça c'est pour dire attention pour dire attention on va partir | -97,2 | 12,6 | 70,6 | -50,9 |
| F5 | mouvance | NOM | 0,03 | il y a un genre de euh comment de de liberté de mouvance enfin | -83,7 | -5,5 | 53,7 | -39,2 |
| F5 | accélère | VERB:pres | -0,01 | on reprend cette énergie on la freine on l' accélère | -13,3 | -1,9 | 51,5 | -34,6 |
| F9 | sortir/sillon | VER:infi | 0,18 | la métaphore du sillon (...) ça implique que c'est quelque chose dont tu peux pas sortir | 100,5 | 3,8 | 48,2 | -34,9 |
| F5 | mouvement | NOM | 0,14 | mais euh et qui donne du mouvement en fait de dans le | -80,6 | -7,3 | 31,4 | -19,2 |
| F8 | mètres | NOM | 0,04 | c'est comme le gars qui qui fait les cent mètres et le gars qui fait les mille mètres mais les gars | -29,2 | 27,7 | 27,2 | -35,6 |

| | | | | | | | | |
|----|---------------------|-----------|------|---|-------|-------|------|-------|
| F5 | coincé | VER:pper | 0 | donc on est coincé par le par le parcours | -50,2 | -35,8 | 26,4 | -11,1 |
| F5 | partent | VER:pres | 0,11 | il fallait que les choses sortent il fallait que les choses se ouais partent | -91,9 | 4,1 | 20,3 | -17,9 |
| F9 | repères/ paumés | ADJ | 0,05 | des fois l' autre te donne des repères des fois les deux sont paumés | -9,9 | 31,6 | 19,5 | -24,7 |
| F8 | quelque part | VER:infi | 0,16 | on va se rejoindre quelque part dans une autre direction | -1,0 | 41,9 | 18,5 | -15,3 |
| F5 | sorties | NOM | 0,08 | t'as des entrées des sorties | 56,0 | -4,6 | 18,0 | -26,3 |
| F2 | machine en route | NOM | 0,04 | enfin je veux dire euh enfin de moteur qui met la machine en route | 10,0 | -22,4 | 16,0 | -8,6 |
| F5 | avancer | VERB:infi | 0,06 | il y a des moments où j'avance où je freine et j' avance | -21,3 | 35,3 | 14,0 | 0,1 |
| F9 | entre | PRP | 0,23 | t'as des entrées des sorties et entre tu fais ce que tu veux | 57,0 | -40,3 | 13,3 | 2,2 |
| F9 | endroits | NOM | 0,06 | tu sais que t'as des t'as des stops à certains endroits t'as des entrées des sorties | -30,2 | -7,0 | 9,8 | -9,8 |

Table 2. Extract of French metaphors classified under [MUSIC IS A PATH]

Metaphors are first classified according to the peak delay parameter then by syllable duration. The potential live metaphors are highlighted in green. The code for speakers is located in the first column

Live metaphors are all variations of a clear cognitive mapping. Music is a road, a journey, a route with stops and turnings, on which musicians move forward, drive, run, and accelerate. Both live and reborn metaphors are present in the classifications and form two subcategories of emphases. Every stage of the metaphorical journey is present:

starting off à (*qui met la machine en route*/switches the engine on), the speed (*on la freine on l'accélère*, you put the brakes, you slow it down)

the route itself à *carte routière* (road map), *parcours* (the route) , *liberté de mouvance* (freedom to roam), à *certaines endroits* (in some places), *route* (road), *quelque part* (somewhere), *une autre direction* (another direction)

the navigating process à *t'as des stops*, *des entrées* (inlets), *des sorties* (turn off), *les deux sont paumées* (both are lost)

Most metaphors classified under that conceptual mapping are phrasal and range from very low (*accélère* à 0.01) to medium (*partir* à 0.19) in terms of semantic distance from the topic. There is no clear correlation with semantic distance (worked out from written corpora (Isa)), but a clear correlation between mapping and metaphorical emphasis:

- (4) *des fois l' autre te donne des repères des fois les deux sont paumés*
- (5) *on va se rejoindre quelque part dans une autre direction*

Here for instance both metaphors develop the same model and are realized with approximately the same prosodic contours, they also express the same idea, (*sometimes you follow one another, sometimes you get lost, and sometimes you meet up again*).

3.2. Results in English

| sp | word | MS | LSA | Environment | <i>E(dF0)</i> | <i>E(C2-C1)</i> | <i>E(F -I)</i> | <i>E(dC2)</i> |
|-----|------------|----|-------|--|---------------|-----------------|----------------|---------------|
| A2 | full blown | IN | 0,14 | we don't necessarily go full blown into but it 's just like a little hint of this | -69,09 | 10,26 | 58,74 | -30,94 |
| A9 | deviation | NN | -0,03 | you do n't have no room for deviation | -80,17 | -19,93 | 27,69 | 0,81 |
| A2 | on/loosely | IN | 0,17 | you always fall back on your tracks (...) but loosely | 234,87 | 9,24 | 22,97 | -16,29 |
| E12 | journey | NN | 0,05 | the musicians do take you on a journey into into and er it it can be on two levels I mean there's there's there's the the there's the surface there's just the enjoyment of it | -31,25 | 77,78 | 21,47 | -30,47 |

| | | | | | | | | |
|-----|-----------------|-----|-------------|--|--------|--------|-------|--------|
| E12 | underneath | IN | 0,04 | I think it 's on the journey to that change underneath the just the enjoyment so | -25,57 | -18,42 | 20,51 | -6,26 |
| A7 | Along | IN | 0,13 | 'll record himself and play along with it | 15,35 | 34,02 | 19,62 | -5,31 |
| A4 | flowing | VVG | 0,04 | it 's like you know everything is flowing but it's real light | -25,31 | -11,62 | 18,21 | -7,99 |
| A10 | out | JJ | 0,15 | he just really he really played it out | 79,33 | -18,97 | 14,52 | 12,50 |
| A7 | go | IN | 0,1 | that you that you think about where you might want to go | -89,85 | 62,13 | 14,32 | -32,34 |
| A5 | vehicle | NN | 0,04 | and the singer is the main I guess vehicle for the band members | 265,57 | 27,39 | 12,00 | -45,50 |
| E12 | journey | NN | 0,05 | I think it 's on the journey to that change underneath the just the enjoyment | 105,33 | 22,11 | 8,37 | -9,42 |
| A7 | dynamical | JJ | 0,02 | that we do play with dynamical levels | -29,28 | 17,06 | 6,73 | -9,45 |
| E11 | boundaries | NNS | -0,02 | he's he's within known boundaries you know he's not as er he's not as off on a tip as as as Kelly Joe Felps | -48,11 | 32,04 | 4,19 | 28,48 |
| A2 | room | NN | 0,11 | and often times there's not a lot of room within that because it has to be very arranged | -33,82 | -50,25 | 2,60 | -1,87 |
| A3 | wide open space | NN | 0,06 | then it 's just like wide open space er I mean it kind of | 250,22 | 32,68 | 2,40 | 1,56 |

Table 3. Extract of English metaphors classified under [MUSIC IS A PATH]
A codes for American speakers, E English speakers

The metaphors considered live by the speakers according to the prosodic gauge vary very slightly from the French findings. They seem to stem to a great extent from the landmark — trajectory — trajector (cf. Cappelle; Declerck, 2004) conceptual model just like their French counterparts, but are more organised around uses of *in/into*, and *on*. Uses of the three prepositions *in*, *on*, and *at* may be seen as being functions of *identification*, *differentiation* without rupture, and *rupture* (Gilbert 2002). In other words, the same as for IN, not the same as but continuous to some degree for ON, and separated from, unrelated for AT. Many of the metaphorical uses in English seem to involve this model. Here, the liveliest metaphors (or those intended to be so by the speakers) are a variation on the prepositional model:

- (6) *we don't necessarily go **full blown into** but it 's just like a little hint of this*
 (7) *you always fall back **on** your tracks (...) but **loosely***
 (8) *the musicians do take you **on a journey into into** and er it it can be **on two levels***

into in (6) is opposed to *hinting at*, and thus coherent with identification. In (7), ON is clearly an expression of differentiation, the musician is on and off the “tracks”, and *loosely*. This could be opposed to the use of IN in the expression ‘in the groove’. In (8) we clearly have a hesitation between IN and ON, *on a journey into into (...) on two levels*, as if the prepositions came first, as a germ around which the discourse is then organised. So apart from the metaphors which may found literally translated in the French corpus there is, to a certain degree, a specificity of the English prepositional model. But the mapping remains the same. Music is seen as a trajectory along which or on which the trajector (moving object) moves, but music may also be the trajector:

- (9) *you can feel that feel that **move** the improvisation **moving into** the next section you know it 's coming (E5)*

In that case the musician is seen as being with the music (*I was into it into it E10*), identified with it. Here the PATH model overlaps that of the CONTAINER. Music and the musicians are both conceptualised as containers which are either connected, communicating, or merged into one.

However, if a systematic search is carried out in the French corpus for prepositions that are close to the topical terms, most metaphorical prepositional uses seem to be present in French, and with prosodic evidence of liveliness:

| | | | | | |
|----|---------|------|-----|------|---|
| F1 | 266,348 | sur | PRP | 0,25 | il est arrivé sur un rythme de house euh et |
| F1 | 266,348 | vers | PRP | 0,22 | ou ça emmène trop dans le truc là vers quelque chose d'un peu euh ouais je sais pas |
| F9 | 522,089 | sur | PRP | 0,25 | un entrecroisement de de rythmes sur les éléments |
| F9 | 2721,25 | sur | PRP | 0,3 | jouait euh jouait pas mal sur les mètres |
| F5 | 1225,63 | vers | PRP | 0,2 | on va vers la tonique et la note sensible |
| F8 | 197,91 | vers | PRP | 0,2 | peux amener vers un autre rythme ouais et il |

Table 4. Prepositional metaphor heads trawled by xslt stylesheet in French

The difference lies in the flexibility offered by lexical innovation and freedom. Prepositions glued to phrasal verbs offer a freedom in the expression of spatial mappings that French seems to lack.

4. Discussion: Metaphors as Hypercoding Strands of Discourse

Live metaphors may be seen as hypercoding inasmuch as contrarily to lexicalised metaphors, they refer both to a notion and to the metaphorical process itself. They are also hypercoding in the sense that they innovate and are thus on a higher informational level — a double focus. This double focus is voiced with a specific emphasis the parameters of which were modelled by computing the prosodic data. This template was then tested on English and French samples of radio broadcast.

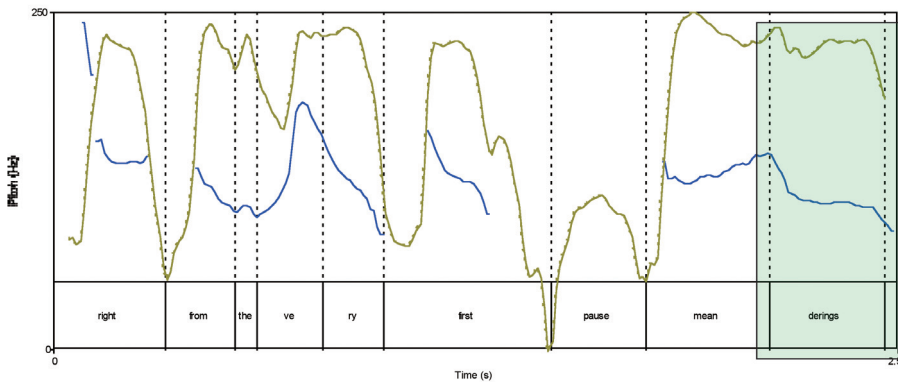


Fig. 5. 'right from the very first meanderings of writing' a LMC type 1 (Broadcast on Radio 2 - Wed 06 Jun 2007 - 23:00)

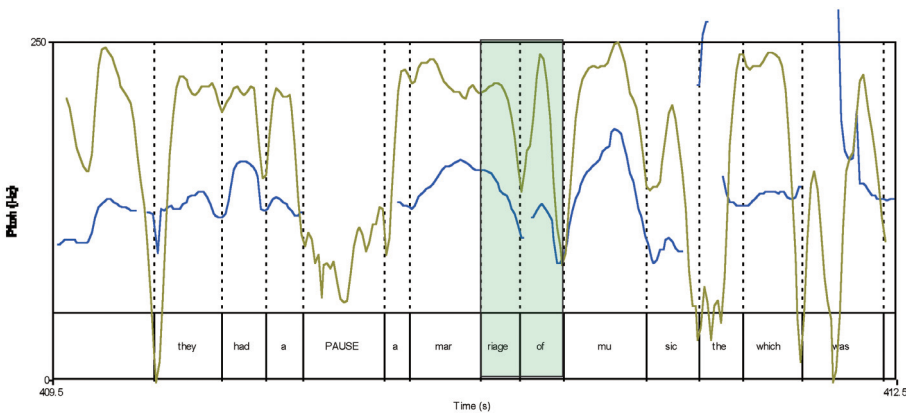


Fig. 6. They had a (pause) a **marriage** of music which was not (Broadcast on Radio 2 - Wed 06 Jun 2007 - 23:00) a LMC type 3 (lexicalized metaphor brought back to life by speaker)

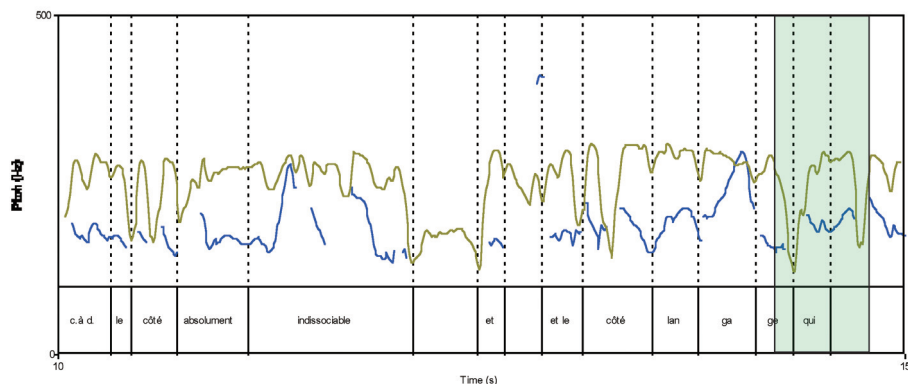


Fig. 7. *c'est à dire le côté absolument indissociable et le côté langage* (france musique Feb, 2007) a LMC type 3 (a refocussed dead metaphor, a process underlined by the discourse marker 'le côté')

Searching for the prosodic template revealed some metaphors which seem to abide by the characteristics established from the corpus findings. Larger corpora will have to be tested in order to refine the template and see what other emphases it might cover. Determining how speakers in different languages cope with innovating metaphorically in one particular conceptual domain may be helpful in many ways. It seems from the findings that the importance of the organisation of spatial cognitive models centred on prepositions in English makes these easier to produce.

So all in all, the ROUTE DIRECTION mapping are close in both languages and three dialects (French, British English and American English), and so are most experiential-based and ontological mappings illustrated in the corpus.

Live metaphors such as these recycling the [MUSIC IS A PATH] mapping, by their very liveliness are often translatable, allowing a few morphosyntactic transpositions. Hence the use of differentiating them from lexicalised metaphors in the context of translation.

5. Conclusion: Redefining the Metaphoreme

Metaphors are the surface realisation of conceptual mappings which do not only work as vectors connecting source and target concepts but also whole networks of concepts giving birth to conceptual models and structural models. Amongst the forces at play in the *metaphoreme* bundle (Cameron; Deignan, 2006), prosodic characteristics, along with other classical markers (pauses, repetitions, discourse markers, informational structure and semantic distance), seem to be a good indicator of metaphor liveliness. Some lexicalised metaphors are prosodically given a new lease of life, and they are coherent with other innovating metaphors pertaining to the same conceptual domain.

The first conclusion which the prosodic approach enables us to reach is that metaphor liveliness is not entirely linked to a deep semantic level of conceptual mappings but to morphosyntactic realization, which may be innovative or not. In French the use of *dedans* in "quelque part t'es pris dedans" is more live and innovative than

“you’re into it” though a literal translation and the expression of the same conceptual mapping. Metaphors are created along the networks made available by the mappings, they both have to abide by and break the morphosyntactic rules of the language (*les choses elles ont lâchées quoi on va dire ça a lâché*, F9 à things let loose, you can say that it loosened up). Metaphors may be brought back to life by speakers and signalled as such by means of an emphasis on the metaphorical process itself. Metaphoricity in oral discourse can only be seen in time, and not as fixed for a given usage.

A second research direction is opened up by the capacity to track metaphoricity. Metaphors are a level of enunciation at which there is a switch from the purely notional referential (referring to the external world) to a mixed reference to both the world outside and the words themselves. This seems to be signalled by prosody, through specific patterns of intensity and fundamental frequency contours. Using these as a gauge allows a form of assessment of metaphoricity.

Why should it be interesting to track metaphoricity? One obvious reason is translation, and especially oral translation. Whether lexicalised or live, metaphors are not straightforward to translate. It is the very nature of the difference between both which makes their translation a different issue. Lexicalised metaphors do not conjure up both source and target concepts, but only the target concept. So if the metaphor is not acknowledged in the other language a literal translation completely often misses the point. As for live metaphors, they need to call up both concepts and provided the mappings exist in both cultures, they will be directly translatable.

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Online Tools

LSA demo site: <http://lsa.colorado.edu>

Prosody analysis tool: <http://www.fon.hum.uva.nl/praat/>