

Lexical complexity: Metaphors and collocations in native, non-native and bilingual speech

Pascale Gouteraux

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Abstract

This paper reports on a study of metaphorical speech produced by forty native, non-native and bilingual students from University Paris-Diderot expressing themselves in English and in French. A corpus of spontaneous reactions to works of art was collected within the framework of *Emphiline*, an interdisciplinary project exploring the expression of surprise and associated emotions. Recent studies have bridged the gap between the Cognitive Linguistics definition of conceptual metaphor and literary stylistic approaches, pointing out strong links between idioms and metaphoricity. This research highlights invariant semantic and functional characteristics irrespective of the participants' status as well as individual linguistic variations and a cline in lexical complexity. Natives, bilinguals and learners with sustained exposure to English as a foreign language are more metaphorically proficient than academic advanced learners. Natives and bilinguals prove creative while learners tend to produce repetitive adjectival forms and conventional collocations. Awareness activities are suggested to boost metaphorical competence.

Keywords

Metaphorical proficiency-natives, bilinguals and learners -surprise and emotions-works of art.

1. Introduction

The use of metaphorical language and collocations is a frequently-used criterion for assessing the richness and sophistication of learner discourse. The written production of metaphors, metonymies and collocations by foreign language learners has been investigated (Nacey 2013, Nesselhauf 2003, Boers 2000) but little research has been carried out on the lexical richness of spoken productions. The Cognitive Linguistic theory defines conceptual metaphors as universal constructs by which a concrete domain and a more abstract one merge to build a common mental space (Kövesces 2010). Literature specialists adopt a more stylistic approach to metaphorical language based on the use of tropes and similes associating the literal to the figurative. By reconciling the linguistic conceptual and the literary stylistic definitions of metaphors, recent research has explored new trends in the investigation of lexical richness in native corpora, which is useful for learner corpus research. For instance, Steen's distinction (2013) between conventional metaphors and creative ones has raised questions for Second Language research: Are conventional metaphors transferable from one language to another? Is the ability to be metaphorically creative limited to native speakers? This paper presents an analysis of metaphorical emotion speech produced in a task-

based context. The study was carried out on a cross-sectional corpus of spoken productions by forty students (English or French natives, bilinguals and advanced learners of English) reacting spontaneously to pictures of aesthetic objects – paintings or sculptures –, and discussing their emotional stance in an ensuing interview¹. It was hypothesized that the task conditions would be conducive to the metaphorical expression of emotions, independently of the language used by the subjects. We looked for invariant features and linguistic variation in the metonymies expressing the paintings' or sculptures' emotional or surprising effect upon the speaker as well as in metaphors fulfilling a referential or communicative function. The productions of native speakers were compared with those of bilinguals and those of advanced learners of English².

2. Theoretical background

Native language is said to be largely acquired from ready-made idiomatic combinations (Wray 2000, Ellis 2012); formulaic expressions, also called lexical chunks or multi-words, which combine at least two words, eventually in the guise of conventional phrases (Meunier 2012), and cover a large range of collocations, phrasal verbs or compounds that contribute to linguistic metaphors and metonymies. The most common definition of collocations is the regular co-occurrence of words. However, relying on frequency measures when discussing metaphorical language and collocations is not always operational since we must differentiate frequently-used highly transparent collocations with literal meaning (*to play cards* or *you know*) from less transparent idioms (*rock the boat*) or semantically opaque ones (*red herring*)³, which are likely to take on a figurative meaning but appear with lower frequency.

2.1 Revisiting the Cognitive Linguistic Theory of metaphor: a blend of linguistic and literary features

Conceptual metaphor as defined by Lakoff & Johnson (1980) or Kövecses (2000, 2010) refers to the use of a figurative or concrete source domain to represent an abstract or conceptual target domain, both domains being connected by mapping elements pertaining to each of them and by merging them to build a common mental space. In the field of emotions, which is the object of this study, Kövecses (2010: 108) lists nine types of conceptual metaphors: *heat and fire, a natural force, a physical force, an opponent, a captive animal, a force dislocating the self, a burden, a fluid in a container, a social superior*⁴.

In the traditional cognitive semantic definition of metonymy, a part of the conceptual domain stands for the whole domain or the other way round. A metonymy can also express the consequences or effects of an event upon the self. While the metaphoric relationship between domains is one of similarity, the

¹ The data is part of the psycholinguistic corpus of the *Emphiline* interdisciplinary project, funded by the French Agence Nationale de la Recherche (*National Research Agency*).

² As the analysis of the productions in French is still in progress, the results are so far indicative.

³ These examples are from Webb et al (2013)'s article on the incidental implicit learning of collocations *vs* instructed explicit learning.

⁴ Except for the last two categories, all the other types of conceptual metaphors appear in the corpus.

metonymic relation is one of contiguity within the same domain. For instance such emotional metonymies as *burning with love* or *boiling with anger* express the physical impact (heat) of an emotion (love or anger) on the experiencer. Similarly, surprise metonymies – which constitute the main body of examples in this study – can be expressed by metaphorical words expressing a physical reaction, a mimic or a gesture, for instance French verbs like *abasourdir*, *ahurir*, *asseoir*, *confondre*, *ébahir*, *estomaquer*, *frapper*, *interdire*, *interloquer*, *méduser*, *renverser*, *saisir*, *scier*, *sidérer*, *souffler*, *stupéfier*, *éblouir* (Mathieu 1995: 98-106). Similarly, a search of lexical items associated with the word ‘surprised’ in the *Visual Dictionary* yields multiple conventional metonymic words such as *google-eyed*, *pop-eyed*, *open-mouthed*, *startled*, *dumbfounded*, *thunder-struck*, *stupefied*, *amazed*, *astounded* and so on, irrespectively of their frequency of use.

Linguists have recently attempted to reconcile the cognitive linguistic definition of metaphor with the literary/stylistic concept of figurative discourse. In *A Method for Linguistic Metaphor Identification* (2010: 96), Steen et al distinguish between conventional metaphors and creative or deliberate ones and between indirect and direct metaphors. The directly expressed metaphor frequently occurs in the form of similes, analogies and non-literal comparisons. These expressions are considered “direct” since the words on a page (the authors were discussing written text material) activate concepts that refer to their referents in the text world, that is the source domain terms are used directly (‘literally’) at the linguistic level. Steen and al add that direct metaphors are often signaled by such discourse markers as *like*, *as*, *seem*, *appear*. Cameron & Deignan (2003: 150) also claim that in conversational mode, ‘tuning devices’ such as *sort of*, *like*, *kind of* (also called *vague language* or *hedging*), may inform the interlocutor that an utterance or a phrase must be interpreted metaphorically rather than literally. Speech markers pointing out metaphorical lexical units are possible research tools, along with contextual clues and metaphorical ‘clusters’ or ‘bursts’. Cameron & Stelma (2004: 108) found that both the ubiquity and the uneven spread of metaphors in a discourse or a text are good indicators of conceptualization at work.

Clustering seems to have the potential to reveal something of the conceptualization and thinking processes of speaker or writer at points in talk or text where producers do something out of the ordinary with metaphor.

They concluded that metaphorical clusters are often produced by speakers dealing with complex, unfamiliar or abstract topics, who explain them by making use of similes and analogies linked to a single root metaphor (p. 114). They presented studies dealing with the identification of metaphorical clusters in academic lectures and school talks by statistical procedures (i.e. cumulative frequency) and suggested more qualitative ways to locate metaphorical clusters in interactional discourse through visualization.

In this study, we have adopted a broad view of metaphorical language, following Steen et al’s approach (2010) to the discourse material we collected. Metaphorical clusters have been investigated as linguistic tools by which speakers refer to the semantic and aesthetic representations inspired by the pictures and endeavor to make sense of them. In speech as in written discourse, metaphorical language is a means to build cognitive, affective and linguistic representations of an event (here a pictorial representation) and a communicative tool to express one’s

reactions and feelings and clarify them; Steen et al (p. 80) indicate that it is not always easy to differentiate metaphors and metonymies in speech:

Within conversation there are many cases where both the degree of contiguity and the degree of similarity are simultaneously present, often with a seemingly stronger tendency towards metonymy. Examples include phrasal verbs, delexicalized verbs and [...] idioms and proverbs.

Goossens (1990: 383) coined the word *metaphonymy* to account for this ambiguity and claimed that even if metaphors and metonymies result from two different cognitive processes, they can combine in figurative natural language. In our corpus of emotional reactions to aesthetic pictures, most metaphorical clusters were located in the second part of the transcripts as the interviewees searched their memory for the most striking pictures in the series (referential function) and communicated their reactions and interpretation. However, the asymmetrical format of the interactions limited the building of a common conceptual space through metaphorical language, since the interviewer was instructed to refrain from elaborating on the interviewee's reactions and interpretations.

2.2. Second Language Acquisition and Metaphorical Competence

This research also draws on the field of second language acquisition and learning and explores metaphorical competence in terms of native, bilingual and non-native lexical richness and learners' general proficiency. To what extent can one internalize and produce metaphorical markers (an umbrella term for metaphors and metonymies) in another language? Are metaphors semantically and linguistically transferable from one language to another? Are advanced learners capable of being metaphorically creative in a foreign language or bound to produce conventional frozen metaphors and similes at best? Are bilinguals as productive as monolinguals in expressing their emotions metaphorically? This link between idiomaticity and metaphoricality is pointed out by Boers & Lindstromberg (2012: 85):

Metaphor and phraseology are interconnected, of course, since words that are used in a conventionalized metaphorical sense tend to occur in a narrowly restricted range of word combinations (when ride is used metaphorically it is typically preceded by bumpy or rough).

The authors discuss the reasons why native speakers process idioms holistically and faster compared with non-native adult learners who tend to adopt a componential approach to conventional strings of words. Because of the figurative nature of idioms, natives tend to "process idioms fast because they map these word strings directly unto their non-literal idiomatic meaning", contrary to non-natives. Finally, it would seem that non-native speakers tend to store high frequency formulaic strings of words or routinized building blocks (which are not always metaphorical) while natives also use less frequent collocations and idioms with a robust semantic bond between words. The written production of metaphors and idioms in a foreign language has been analyzed in the production of secondary school learners (Boers 2000), college level essay writers (Nacey 2013) and German learners of English producing noun-verb collocations (Nesselhauf 2003) among others. When looking into the metaphorical competence of advanced learners of English in the Norwegian component of the *ICLE* corpus, Nacey (2013: 111)

noticed that the figurative metaphorical competence is never mentioned in the *Common European Framework of Reference* but is indirectly connected at the C2 level with proficiency in the use of semantically opaque idioms, frozen metaphors and colloquialisms. A few studies have been carried out on formulaic language in spoken productions - see De Cock's comparative analysis of evaluative collocations in native and non-native speech (2004), Goutéraux (2015b) on the expression of appraisal in a corpus of French advanced learners of English and Goutéraux (2015a) on surprise in native and non-native speech. Although native conversation is reportedly lexically less complex and less dense and the repetition of lexical bundles is a characteristic feature of spoken discourse (Biber et al, 1999: 53, 1049), this research hypothesized that a task designed to elicit a more sophisticated discourse register, by merging the lexical fields of aesthetics, appraisal and emotion, is likely to trigger the production of collocations and metaphorical language.

3. Experimental Psycholinguistic Study of the *Emphiline* Corpus

The study looked into the production of metaphorical affect speech in a task-based context conducive to the expression of emotional imagery by way of figurative language. It was based on a cross-sectional corpus (about 130 000 words) of spoken emotional reactions by forty university students (natives, bilinguals and advanced learners of English). They were asked to react verbally to works of art and discuss their emotional stance. The expression of surprise and emotions was analyzed from a comparative perspective. However, the boundaries between the bilingual and advanced learner categories were blurred since the bilingual status was sometimes difficult to ascertain and we had to combine biographical criteria retrieved from a sociolinguistic metadata survey (one English-speaking parent and a French one, time spent in the other country extending beyond five years, schooling in one country and then in the other for consecutive bilingualism, early bilingualism or late bilingualism) with informal information from the interview transcripts. The advanced learner category also covered a range of linguistic experiences: from students with academic proficiency mostly, who had never or sporadically visited an English-speaking country, to participants who had benefited from one or two-year immersion experience abroad.

Each subject was shown a series of twelve anonymized paintings or sculptures presented in a fixed order and likely to trigger affect or surprise reactions. The first part of the experiment consisted in recording the viewer's spontaneous reactions to each visual. An edited version of *Rock me!* (a recording program) enabled the experimenter to show a stimulus picture on a computer screen and record the subject's emotional verbal reaction simultaneously. The first part was carried out in English or in French. During the second part, a native speaker conducted a semi-directed interview in the same language. The interviewees were asked to remember the emotional episodes they had experienced and talk about the most striking ones; then they were shown the pictures again to confirm (or disconfirm) their initial reaction and discussed the reasons for their feelings. Here's a sample of retrospective interview questions in English:

- *Did you find any of them more striking than others?*
- *So what did you ask yourself when you saw that picture?*

- *And when we were looking at that picture what were you telling yourself/ what were you thinking?*
- *So what do you think originally triggered your reaction?*
- *Could you say whether the emotions you had were positive or negative or kind of neutral and what words come to mind?*
- *Also, I was wondering, do some of the pictures bring back some good or bad memories or dreams or experiences?*

The bilinguals and advanced learners were shown the two series of pictures and instructed to react and discuss the first series in English and the second series in French. The recordings for the second series were shorter to avoid the repetition of some questions in the other language. The corpus was screened in terms of frequency, variety and accuracy (for foreign learners) by sorting out the reactions to each picture and the individual interviews. *Wordsmith 7* was used to retrieve emotional and emotion-laden words and collocations in English and French, to draw frequency lists of metaphorical collocational patterns and to contextualize them with the concordancer. The corpus was also hand-searched for metaphorically related words and phrases by applying the *MIP (Metaphor Identification Procedure)* developed by Steen et al (2010: 96) to analyze words or formulaic expressions, decide whether the basic meaning contrasted with the contextual meaning and check conventional or creative metaphors and metonymies.

If the lexical unit has a more basic current/contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it. even if a metaphor is so conventionalized that there simply is no other way to express its meaning, we can still show that there is a contextual meaning that is abstract and a basic meaning that is concrete and that these meanings can be contrasted and compared, which entails that the lexical unit has been used metaphorically.

4. Results and Discussion: Invariants and Variation across French and English

Regardless of the linguistic status of the participants and of their language, either French or English, the analysis of the data revealed some common features in the metaphorical language used to react to aesthetic pictures and make sense of them.

4.1 Metaphorical Invariants and Linguistic Variation: the case of surprise

A good example is the metaphorical expression of surprise by French and English natives, bilinguals and advanced learners of English. Surprise has been defined as the cognitive disruption of pre-constructed semantic and cultural representations filtered by individual experience of the world and this disconnection is verbally expressed by broken speech, exclamations, interjections and silent and full pauses, semantic noun, adjectival or verb forms and disorganized syntactic structures (Goutéreaux 2015a). Kövesces (2000: 5) describes the ‘emotion of surprise’ as a physical force entailing destabilization and loss of

control⁵. Like emotional discourse, the discourse of surprise is replete with metonymies, whether a specific feature stands for the visual source⁶ (the part for the whole) or the metonymic form expresses the mental or physical impact of the visual on the experiencer (a cause to effect process). The speakers frequently described the sensation of surprise they had as a blow or a shock; they used adjectives referring either to the semantic properties of the visual, which was said to be *striking, shocking, startling, disturbing* in English or *choquant, frappant, impressionnant, perturbant* in French. They produced multiple metonymic adjectival forms to describe their emotional state and their surprise: *shocked, startled, appalled, impressed, disturbed* in English (*choqué, interloqué, horrifié, impressionné, perturbé* in French); they also used metonymic verbal clauses in French (*qui vous frappe, ça me choque*) and onomatopoeias in English (*bang, splash, eegh, aargh, wee*). While English-speaking participants selected phrasal and prepositional verbs to describe this irresistible force of attraction, the French natives used looser verbal formulaic expressions. Although the purpose of this study is not to contrast linguistic metaphors and metonymies in natural languages, the way the French and English natives in the corpus metaphorically expressed themselves is useful for assessing learner speech.

For instance, *Implosion*, a painting by Paul Rebeyrolle (1994), systematically caused surprise mixed with horror, shock and dizziness expressed through conventional metonymic markers, adjectival forms or phrasal verbs (ex. 1 to 3).

(1) English native speaker: *That's quite shocking (erm) kind of grotesque I also feel quite taken aback by it disturbing (erm) [...] mangled and twisted and yeah shocking.*

(2) Bilingual: *like it's the sheer goriness of it, it kind of takes you aback.*

(3) English native speaker: *makes me feel a little bit (er) wobbly and dizzy the middle section is a bit twisted and that makes me feel (erm) unstable.*

Some paintings triggered invariant powerful metonymies through various linguistic markers, depending on the language. Gustave Doré's *Paradiso* elicited surprise, referred to as an irresistible sweeping or drawing force one must fight to retain control as shown in the examples regrouped in Table 1.

⁵ We chose to differentiate surprise from emotions even though the two types of reaction are often mixed (*cf.* the literature on surprise and emotions in Goutéraux, 2015a).

⁶ The word 'source' was coined by Plantin (1991) as an equivalent for an event that triggered an emotional or a surprise reaction.

(4) Bilingual	<i>Wow feels almost like <u>I'm falling into the picture with the spirals and everything [...]</u> It does <u>pull you in.</u></i>
(5) English Speaker	<i>I sort of feel <u>sucked in</u> cos of the spirals that are around</i>
(6) Advanced Learner	<i>Oh I'm drawn into it yes it's like a tunnel [...]</i> <u>I felt drawn into it like there's a force like a tunnel</u>
(7) Bilingual	<i><u>I'm just drawn by the center</u> of of the picture [...]</i> kind of <u>lifts me up a little bit.</u>
(8) French Speaker	<i>Émerveillée ... des rêves [d'enfant] où je tombais perdue.</i> Amazed ... childhood dreams when I fell and got lost.
(9) French Speaker	<i>On <u>se laisse emporter un petit peu</u> comme les anges.</i> One gets a little bit swept away like the angels.

Table 1. Metonymies and Collocations in French and English (*Paradiso*)

Similarly the visual impact of an unexpected painting or sculpture is “naturally” expressed by a network of linguistic forms connecting the literal (*the eye*) and the figurative domains of vision as well as the abstract and concrete expression of movement and stillness (*captured/hypnotized, drawn*); aesthetic sources inspire eye metaphors, all the more since works of art are artistic metaphors *per se*, mapping an abstract domain (death, love, horror, infinity) and a concrete aesthetic object. The following examples display metaphorical invariance and linguistic variation around the eye metaphor in reaction to several paintings.

(10) French Speaker (Rebeyrolle, <i>La Banquière</i>)	<i>Les yeux vont directement à la tâche rouge en fait.</i> The eye is attracted to the red spot straight away.
(11) French Speaker (Beuckelaer, <i>Slaughtered Pig</i>)	<i>Directement l'œil est directement attiré par ce cochon éventré.</i> Right away the eye is attracted by this gutted pig right away.
(12) French Speaker (Doré, <i>Paradiso</i>)	<i>On est <u>captivé</u> par cette lumière.</i> We're fascinated by this light.
(13) Bilingual (<i>Paradiso</i>)	<i>On est <u>éblouie</u> (souponne) c'est très beau.</i> We're amazed. <sighs> it's beautiful.
(14) French Speaker (<i>Paradiso</i>)	<i>Mais cette lumière au centre vraiment attire l'œil et nous laisse sans voix.</i> But this light in the middle really attracts the eye and we remain speechless.
(15) Advanced Learner (<i>Paradiso</i>)	<i>We're <u>hypnotized</u>.</i>
(16) English Speaker (<i>Paradiso</i>)	<i>It is <u>strong to the eye</u> [...] kind of <u>tiring on the eye</u>.</i>

Table 2. The Eye Metaphor and Metonymies

4.2 The Referential Function of Metaphorical Language

Indeed, the task favored the use of referential metaphors filtered by individual subjectivity since the participants had no information on the artist or the title of the work of art but were asked to remember the most striking visuals, assess them in terms of emotional valence and associate them with memories of dreams or personal and aesthetic experiences. This part of the article deals with the way speakers refer to their semantic representation of the aesthetic object and relies on examples in English mostly. The frequent use of markers like determiner 'the' and pro-form 'one' characterizes these partly creative, partly conventional phrases, which appear in the retrospective interviews mostly. By repeating lexical features relating to properties attributed to a work of art and using varied linguistic forms of the same metaphor, the speakers attempted to work out their semantic interpretation and build a fixed reference for themselves. Some linguistic constructs attest to metaphorical representations shared by several speakers. For instance, *La Banquière* (Table 3, ex. 17, 18, 19) inspired a series of metaphorical references to *a corpse on a cross* or a *Christ-like figure* - an interpretation far removed from Rebeyrolle's intention to paint a symbol of rebellion against monetary power represented by a naked female banker). Singular metaphorical representations reflected individual subjectivity: the *whirlwind*, the *spiral*, the *tunnel*, the *insect* or the *stone* metaphors (ex. 20, 21, 22, 23, 24). Native speakers and bilinguals produced more frequent complex multi-word units (ex. 21, 24, 25) than learners (ex. 19, 22).

(17) Bilingual (Rebeyrolle, <i>La Banquière</i>)	<i>the horrid corpse, I don't know if it was a corpse or anything, <u>the horrid one</u>, <u>the horrible horrid art piece</u></i>
(18) Bilingual (<i>La Banquière</i>)	<i>looks like a man on a cross, <u>the decomposing body on a cross</u></i>
(19) Advanced Learner (<i>La Banquière</i>)	<i><u>the man on the cross</u>, <u>the Jesus-like one</u></i>
(20) Bilingual (<i>Paradiso</i>)	<i>whirling things, <u>the world with the whirlwind</u>, <u>the whirlwind world</u>, <u>the whirlwind one</u></i>
(21) Bilingual (<i>Paradiso</i>)	<i><u>the purple and yellow sun spiral paradise thing</u>, <u>the spiral purple yellow one</u></i>
(22) Advanced Learner (<i>Paradiso</i>)	<i>A force like a tunnel, <u>the tunnel one</u></i>
(23) Bilingual (Bourgeois, <i>Janus Fleuri</i>)	<i>One big block, makes me feel heavy, <u>the kind of like big stony</u>, <u>that stone thing</u>, <u>the boulder one</u>, heavy, intrusive</i>
(24) English Speaker (<i>Janus Fleuri</i>)	<i>Looks like some insect is exploding, <u>the gross insect exploding</u></i>
(25) Bilingual (Petro, <i>Cosmic Angel</i>)	<i><u>the angel new-age eighties colored tie-dye disaster</u></i>
(26) Bilingual (Kusama, <i>Pumpkin</i>)	<i>Sort of happy fun kind of element</i>

Table 3. The Referential Function of Linguistic Metaphors

4.3 The Communicative function of Metaphorical language

The communicative function of metaphorical language consists in explaining the event (here the work of art) to oneself and one's interlocutor and communicating its effects upon the self. The directives of the experiment allowed for little 'feedback' from the interviewer and it was a one-way communicative process rather than the actual building of a common space of shared representations. All the participants endeavored to make sense of what they were seeing and verbalized their interpretations through comparisons, analogies and similes introduced by vague 'tuning devices' (*kind of, sort of, like*) and collocational verbal structures in English or in French, e.g. *it makes me think of* (*ça me fait penser à*), *it reminds me of* (*ça me rappelle*), *it looks like* (*on dirait*).

(27) Bilingual in French (*Janus Fleuri*): *Je me suis dit que ça me faisait penser ... penser à une ... c'est la première chose que j'ai pensée ça me fait penser à une tumeur je sais que c'est dégueulasse mais tout tout l'intérieur on dirait un ... on dirait une tumeur.*

I told myself it made me think of ... think of ... it's the first thing I've thought it makes me think of a tumor I know it's ... but all all the stuff inside looks like a ... it looks like a tumor.

However, complex lexical forms such as metaphorical creative clusters (ex. 28) or a series of direct metaphors resulting from a linguistic scaling operation (ex. 29) are more commonly found in English native and bilingual discourse. Example 28 combines a creative noun compound (*an horror disturbing death life picture*), with a more conventional metaphor (*it looks very bony*) as well as similes (*looks like something's hips*) and comparisons with creatures from the fantasy literature (*something from The Lord of the Rings*). In Example 29, the speaker expresses her failure at making sense of the sculpture (*wasn't able to figure it out*) after trying out several interpretations through a series of similes signaled by *look like* and *like*.

(28) English Native (*Janus Fleuri*): *Oh this is an horror disturbing death life picture to me it looks like something's hips and they've been cut off and strung up and like it's been amputated (er) yeah it looks very bony and unpleasant like something from the Lord of the Ring.*

(29) Bilingual (*Janus Fleuri*): *I wasn't able to to figure it out. It looked like it could be like a brain, a croissant, or a mix of the two, or male genitalia or something like that.*

Negative or positive emotions are frequently mapped onto the domains of bodily sensations or space displacement through direct metaphors and metonymies. Example 30 displays kinesthetic adjectives and compounds relative to the sense of touch to convey fear and disgust; the speaker in Example 31 interprets the painting as a divine world beyond this one (*otherworldly*) and a spiritual or cosmic journey through physical displacement (*zooming out*).

(30) English Speaker (*Oppenheim, Breakfast in Fur*): *ha <laughs> this is like a hairy plate to the hairy bowl a hairy brush (er) I don't like this very much because I don't like hairy things [...] it's whiskery it looks like it would be prickly to touch oh my I wouldn't like to see it in real life. [...] one I find quite quite (er) disturbing probably more <laughs> than the others because of the physicality of it it's something you can actually touch and feel [...] er a slight fear I think and a kind of disgust actually from the from the thought of it touching me.*

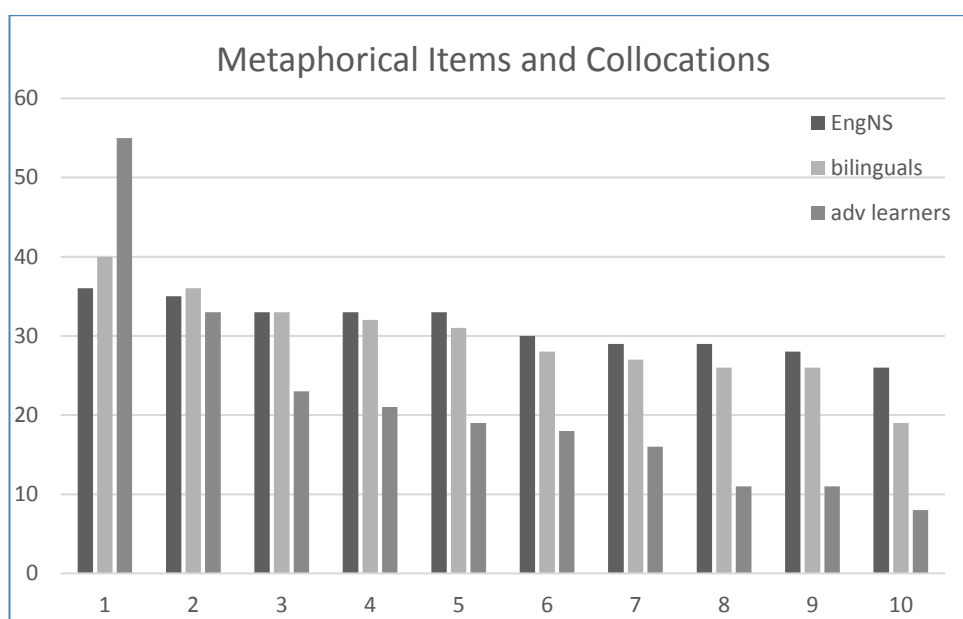
(31) English Speaker (*Petro, Cosmic Angel*): *Wow (erm) well immediately my thought was kind of meaning of life extra like you know (erm) otherworldly [...] (er) (er) I feel like you could sort of zoom out and there'd be a much bigger picture.*

5. Quantitative and Qualitative Analysis of Emotional Discourse in English

To analyze the amount of metaphorical language produced by speakers of English, we selected a sample of thirty reaction and interview discourses by ten English natives, ten bilinguals⁷ and ten 'miscellaneous' advanced learners (cf. Graph 1 below). With a few exceptions, the graph shows a decreasing cline in metaphorical production (regrouping metaphors, metonymies, analogies and

⁷ Six bilinguals had English as their dominant language and four had French as the dominant one. All had spent at least five years in immersion in the country of their 'weaker' language which they spoke at home, at work or at school. The amount of figurative language in French produced by the French natives or the bilinguals has not been assessed yet.

similes with a contextual sense different from the literal common meaning) from the English natives to the bilinguals and the advanced learners. The use of sophisticated lexical forms, collocations and idioms, which make the basis of metaphorical language in English, supports the hypothesis that metaphorical productivity and variety depend on proficiency in a language. It should be noted that to the exceptions of one advanced learner with a two-year immersion experience, who produced a total of 55 metaphorical tokens, 36 of which were different types, and a bilingual speaker who was a literary translation major (40 tokens), the ten English natives were clearly the most productive, followed by the bilinguals and the group of advanced learners.



Graph 1. Metaphorical Production of Natives, Bilinguals and Learners of English

Non-native speakers tended to rely on a limited array of metonymic adjectival forms and they rarely created metaphorical noun phrases or compounds. On the contrary, natives, bilinguals and advanced learners with an extended immersion experience frequently retrieved stock formulaic language, particularly phrasal and prepositional verbs, to express the emotional and physical impact of a visual: *suck in, fall into, dive into it, drawn in, lift up, pull in, grossed out, thrown, taken aback, caught off guard, torn out, ripped open, ripping something out, it turned me off, flashed out at me, jumped out at me, struck a chord, in your face*⁸.

Screening the frequency word list for types and tokens helped distinguish between frequent and repetitive forms and more unique markers. A case in point is the learner cumulating 55 tokens. He actually produced a number of repetitive lemmas: 9 tokens for *disturb* (*disturbed, disturbing,*), 8 for *repel* (*repelling, repelled*), 6 for *appeal* (*appealing, appealed*) and 6 for *attract* (*attractive, attracting, attracted*). The high number of repetitive forms may have been a side

⁸ Besides emotional and surprise markers, they also commonly used customary collocations and idioms (i.e. *to figure something out, it reminds me of, makes me think of*).

effect of a particularly lengthy interview (6,256 words), since the longer the text the more likely the repetition of words, as commonly attested in the corpus linguistics literature. This speaker also produced varied conventional metaphorical collocations (*i.e. warm colors, torn between two feelings, intruding in a very private moment, caught off guard*) as well as a few personalized metaphorical forms (*this is quite raw*) but didn't succeed in being both creative and idiomatic (*I would *be on the fence, a *setup feeling*⁹). A fine-grained hand-searched analysis also reveals a clear-cut separation between speakers who acquired idiomatic skills in a natural environment and three advanced learners with no or only sporadic experience abroad. The latter produced no collocations, no phrasal verbs and no creative referential metaphorical forms, but a lot of metonymic adjectives (respectively 11, 11 and 8 tokens). However, the lack of immersion is occasionally compensated by specific academic skills: a 'literary translation' major with little experience abroad was quite productive (23 tokens), probably thanks to intensive practice of the translation techniques of metaphorical markers in both French and English.

Learners tend to use fewer, more simple, repetitive, less idiomatic forms than the other categories but all speakers rely on preferred or familiar forms in a conversational setting (Biber et al, chapters 4 and 5, 1999). The use of conventional metaphorical idioms and collocations is a strategic means to save processing time, obey the fluency constraints of the speech flow and fulfill the need to get one's message across as quickly as possible. Although English natives and bilinguals were the most lexically creative and used varied and numerous collocations and phrasal verbs, it is worth noting that individuals occasionally displayed personal idiomatic preferences: for instance, such lexical items as *jarred, jarring, it jars my imagination* were produced by two speakers only; similarly, *grossed (out)* was uttered four times by an American and once by an Australian-French bilingual.

(32) Native American (*Janus Fleuri*): (*mm*) *I don't like it I'm grossed out*<laughs> *that's a really quaint term to use but [...]* <laughs> (*er*) *I feel (er) (er) yeah grossed disgusted.*

(33) Bilingual: (*Freud, Naked Man, Back View*): *I was a little bit grossed out with all his lower back.*

Motivational factors explain possible fluctuations within each category as individual speakers may or may not choose to use imagery to express their affective stance. The interviews also showed that students with an interest in art tended to be more talkative and involved in the exploration of their own aesthetic emotions. As concerns learner speech, the semantic content of the sources and the nature of the task triggered discourse associating the conversational and aesthetic registers and was conducive to attempts by learners to use metaphorical language. Even when flawed by semantic or linguistic inaccuracies, their productions (examples 34, 35, 36) confirmed Swain's Output hypothesis (2000) that learner's production is not only a sign of competence but of learning at work.

⁹ The asterisk is commonly used to signal an erroneous segment in learner production.

(34) *and we have to to be *to go in the center of the painting but I don't want I want to to stay I want to stay out of it [...] it gives the (er) us the the (er) *the wish to to go into the painting [...] we are hypnotized (er) *into the center.*

(35) *As if you were like *going towards the the middle of the picture I think it's I don't know if it's a sun or something but it's like *a real light you want to go there.*

(36) *It seems to be quite like a good *way to follow when we are like attracted by this.*

Although these utterances lack idiomaticity (*gives us the wish, hypnotized into the center, going towards the middle of the picture, a good way to follow*), the speakers master the vague language typical of spoken register (*as if you were, like, it seems to be quite like*). They may have picked up these casual collocations incidentally through exposure to films and TV series or immersion. Metaphorical conventional collocations and idioms being less frequently encountered and addressing cultural and semantic representations as well as linguistic ones would be more difficult to internalize. A common characteristic of learner speech is a tendency to overcrowd spoken discourse with “lexical teddy bears” (Hasselgren 1994, Ellis 2012) and tuning devices (Goutéraux 2015b, De Cock 2011, Nesselhauf 2003).

(37) *It seems to be kind of like a creature something like *it, it seems to be like a monster (*Implosion*).*

(38) *It seems to be like a nightmare, it seems like a kind of a skeleton or something like this (*La Banquière*).*

(39) *She seems to be like a dream girl, she seems to be like a goddess (*Mabuse, Danaé, 1527*)*

6. Conclusion

This small corpus of emotional verbal responses to works of art reveals a discrepancy between those who acquired a language naturally or benefited from long immersion periods and those academic learners who lack emotional lexical repertoire and figurative proficiency in the foreign language. Learner discourse combines specific features such as a plurality of adjectival forms characterizing the aesthetic source or the emotional effect on the subject, the repetition of a few conventional metonymies and the use of referential metaphorical similes introduced by a limited number of tuning devices. The ten bilinguals expressing themselves in English appear to be as proficient as the English natives. The view that they favor one of their languages for affect-laden metaphorical expression because emotion and emotion-laden words are more deeply encoded in their dominant language (Pavlenko 2008) is currently being tested with the analysis of their production in French. As the study is still work-in-progress, these first results must be confirmed by further analysis of the data (around 260 000 words), since the *Emphiline* corpus includes 75 speakers.

Although immersion and natural acquisition appear to be major influences on the production of metaphorical language, other factors are at play in academic environments. In fact, a mix of strategies relying on both implicit acquisition and explicit learning could also contribute to developing metaphorical competence. The

incidental learning of collocations through reading and listening as well as the traditional decontextualized rote learning of idioms and phrasal verbs expressing conventional metaphors are some traditional techniques advocated to boost lexical complexity. A few novel propositions have been recently put forwards. Since the original literal meaning can often be discerned in figurative speech (Stöver 2013), consciousness-raising methods (Boers 2000, Boers & Lindstromberg 2006) may help advanced learners to deconstruct metaphorical phrases by looking for collocational literal and figurative meanings in reference books (i.e. *The Macmillan Dictionary's* metaphorical entries). They could also carry out contrastive analysis studies of metaphorical data in their mother tongue and the target language, a technique that seemed to have benefited the two literary translation majors in the corpus. Competence can also be increased by training learners to spot multi-word-chunks and collocations in authentic electronic corpora in a variety of registers and to analyze them in context (Meunier 2012). Task-based activities such as the one conducted in this experiment could improve the internalization and production of emotional metaphorical language in an academic environment and could be made more robust by combining teacher feedback and learner self-assessment and designing additional metaphorical language awareness activities based on native and bilingual data. Using the *MIP* method to focus on metaphorical specificities is a way to move beyond the ongoing debate (see Wray 2012, and others) on the superiority of 'formulaicity' - the holistic learning of strings of words, over 'analyticity' - focusing on the grammatical and semantic properties of the constituents, as regards the acquisition of metaphorical collocations and idioms.

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