Workshop

Metaphor, visual imagery and emotions

March 17th 2017 – 14:00 to 17:00 – Room 144.165

Swiss Center for Affective Sciences - Campus Biotech

Invited: Prof. Lawrence Zbikowski

During this workshop we will have five presentations and discussions on the relationships between emotion, conceptual metaphors, linguistic, and music.

Abstracts:

Is conceptual metaphor useful to the affective sciences?

Cristina Soriano & Anna Ogarkova

This paper explores the value of Conceptual Metaphor Theory (CMT) in the interdisciplinary study of emotion. It does so by looking at the conceptualization of anger across languages. Although anger has received extensive attention in CMT, for the most part this cognitive linguistic research paradigm and its findings remain fairly invisible to other disciplines in the affective sciences. Two limitations in CMT may contribute to this lack of dialogue. The first is a focus on basic-level categories (e.g., "ANGER") at the expense of variants of the emotion (e.g., anger vs fury vs irritation). The second is a lack of systematic effort to evaluate the mutual convergence or complementarity of the methodologies in different disciplines. This paper addresses both of these concerns comparing the results of two independent studies on the conceptualization of several anger variants in English, Russian, and Spanish. In the first study, the meaning of 20 anger terms (e.g., anger, fury, irritation, etc.) is described using 'metaphorical profiles', a corpus-based quantitative approach to the study of conceptual metaphors. In the second study, more psycholinguistic, we apply the GRID approach to elicit the prototypical 'feature-based profiles' of the same terms by means of speakers' self-report. Two main questions are addressed: (a) Do the two methodologies yield convergent results concerning the representation of the emotion? ; (b) What insights are afforded by one of the methodologies only? Evidence is discussed with regard to the overall semantic organization of the ANGER domain and the clusters of features (or of conceptual metaphors) underlying this structure. The study concludes that interdisciplinary comparisons are valuable for the sake of result triangulation and to complement alternative methodologies where they fall short. A second conclusion is that, in order to contribute to the interdisciplinary understanding of emotion, CMT requires a quantitative approach and a translation of findings into a more interdisciplinary language.

Metaphor, time and affective valence in language use

Anna Piata & Cristina Soriano

This presentation reports on our ongoing research on different ways of metaphorically representing events and time (cf. "We're approaching Christmas" and "Christmas is approaching"; Lakoff & Johnson 1980, 1999) and affective valence, that is, whether the event talked about is perceived as positive or negative. Research thus far has provided psycholinguistic evidence that negative events are more likely to be expressed as approaching the experiencer (e.g., "Our deadline is approaching") whereas positive events are more likely to be construed as destinations towards which Ego is moving (e.g., "We're approaching our summer holidays") (Margolies & Crawford 2008; see also Lee & Ji

2014). In this study, we consider this time-affect association, yet unlike previous accounts we shift the focus to actual language use. To this end, we performed a corpus study of the motion verb "approach" in the British National Corpus; after charting all instances of "approach" that involve lexemes denoting events, we analyzed them in terms of their metaphorical pattern (i.e., Ego or time moving) and affective valence (i.e., positive or negative). Our findings confirm our initial hypothesis, in line with the psycholinguistic evidence, yet they also add linguistic factors not previously acknowledged in the literature; "approach" appears in so-called syntactic collocations (i.e., fixed word combinations) and seems to preferentially opt for Ego-moving when collocating with personal events along one's life (e.g., "approaching retirement") and Time-moving when collocating with social recurrent events (e.g., "as Christmas approached"). At the same time, our findings suggest that the affective valence of events should not be taken at face value but is rather discursively constructed in their context of occurrence (e.g., spending Christmas on duty or dealing proactively with the challenges of retirement). It thus transpires that, although on the right track, the time-affect association is more perplexed than what was initially assumed and a linguistic analysis can offer important insights in this direction.

References:
Lakoff, G. & Johnson, M. (1980). Metaphors we Live by. Chicago: University of Chicago Press.
Lakoff, G. & Johnson, M. (1999). Philosophy in the Flesh. New York: Basic Books.
Lee, A. & Ji, L. (2014). "Moving away from a bad past and toward a good future: Feelings influence the metaphorical understanding of time". Journal of Experimental Psychology 143 (1): 21-26.
Margolies, S. O. & Crawford, E. L. (2008). "Event valence and spatial metaphors of time". Cognition and Emotion 22 (7): 1401-1414.

Visual Imagery Evoked by the Sound of Classical Music: Characterization, Classification, and Measurement

Simon Schaerlaeken, Donald Glowinski, Marc-André Rappaz & Didier Grandjean

Visual imagery is one of the mechanisms by which music induces emotions. It consists in the images that are conjured to one's mind when listening to music, e.g. a beautiful landscape. Three successive studies involving 540 participants in total were carried out to explore the possibility of narrowing down the infinity of possible images to thematic categories. Study 1 was based on a list of terms judged and collected at a concert and was asking participants to rate these in accordance with their own personal experience of music. Study 2 provided the participants with a smaller subset of terms based on the study 1 results and asked them to rate them after listening to classical excerpts. An exploratory factorial analysis extracted 5 factors out of the ratings combining expressions together. The expressions related to these factors were used in study 3 with a confirmatory factorial analysis in order to model more accurately which expressions were related to which factor. A model using 5 factors, namely lightness, movement, large, internalization, and space, was retained as best fitting our data. Such model provides music education, musicians, and Guided Imagery and Music (GIM) practitioners with scientific grounds to improve communication and teaching. It also creates a new way to label musical excerpts and classify them. This research offers a basis for studying the important role of visual imagery in music communication and expressivity in classical music.

Does one need to master a musical grammar in order to understand a musical metaphor (and other types of musical meaning)? A case study on Western and South Indian classical music.

Constant Bonard

I will briefly present the methodology and part of the theory behind a study on the perception of South Indian and Western classical music by Western and South Indian participants, both musicians and non-musicians. This study (which is still ongoing at the moment) inquiries on how the understanding of a certain musical idiom might differ in populations that are more or less familiarized with the idiom in question. The main hypothesis is that musical communication, just as linguistic communication, rely to an important degree on the mastery of a musical grammar, even though musical idioms don't have vocabulary. For instance, as Westerners, we might be better at telling what is expressed in a piece by Mozart than people who are foreign to this music because we have implicitly acquired the grammar of Western classical music through repeated exposure. More concretely, I ask: can we partially predict the capacity of a listener to understand what is expressed in a musical idiom based on tests measuring his or her mastery of this idiom's musical grammar?

Is language the missing link in motor-perception coupling in music?

Donald Glowinski, Pauline Billard, Sélim Coll & Didier Grandjean.

Our present research focuses on understanding motor expertise and its missing link with semantic knowledge. Expertise, especially in area where motor capacity is key, seems to be reduced to sensorimotor abilities reinforced through intensive training. However, one can argue that the semantic knowledge is also important in the context of expertise. We assessed a possible interaction between motor and semantic sensitivity at subliminal level, using a priming-like paradigm on musicians. Subliminal words displayed after the point-light display of a violinist's movements revealed a facilitation effect in the recognition of action (e.g. playing with a specific musical nuance) when words and gestures shared the same meaning. Moreover, the instrumental practice interacted significantly with the congruence word-gesture. These results confirmed a link between action and semantic knowledge showing that gesture and speech are tightly integrated, and went further revealing a brand new breakthrough about the tri-relationship between action, perception and language.

Automatic recognition of emotion in music

Anna Aljanaki and Mohammad Soleymani

Automatic methods of music emotion recognition help to make big music collections (production music databases, services such as spotify) more accessible. In this talk we are going to describe the work done in developing such methods. End-to-end music emotion recognition requires solving such subtasks as segmenting a piece of music into emotionally stable excerpts (emotional segmentation), tracking emotional change over time, extracting relevant features from musical signal, dealing with subjectivity of the ratings. In this talk we will briefly describe the results from the projects on emotional segmentation, music emotion variation detection, static emotion recognition, and work in progress on cognitively meaningful feature extraction (mid-level features) from music.