BOOK OF ABSTRACTS

The 12ᵗʰ International Symposium on Iconicity in Language and Literature (ILL-12)
3-5 May 2019
Centre for Languages and Literature
Lund University

Table of contents

Welcome to ILL-12!

Dear participants!

The Division for Cognitive Semiotics is happy to host the 12th International Symposium on Iconicity in Language and Literature (ILL-12) at Lund University in these days of May. **Cognitive semiotics** is a discipline that emerged during the past two decades, combing concepts and methods of semiotics, linguistics and cognitive science, with the aim to provide a comprehensive understanding of human (and animal) meaning-making, including its evolution, development and manifestation in socio-cultural practices. Language, gesture and depiction are three universal human semiotic systems that combine in an open-ended and evolving set of media in order to constitute the core of human communication, and semiotically-mediated thinking.

In this context, **iconicity - or meaning-making through resemblance** - plays a central role. Most familiar is the resemblance between expression and content (e.g. in language or gesture), but no less important is iconicity between expression and expression (e.g. across language and gesture), or between content and content, which is arguably the case in metaphor. Naturally, such resemblance and meaning in general, is *not found but made*, in consciousness and social interaction. That is why we chose this issue of the symposium to have the theme **Iconicity in cognition and across semiotic systems**.

We received over 110 abstracts, and could ultimately accept 64 oral presentations and 19 posters. The oral sessions are not organized in formal sessions, but nevertheless presentations are grouped thematically, with some central themes being *Sound symbolism, Iconicity in grammar, Signed languages and gesture* and *Metaphor*. Our 4 plenary speakers, the professors Fernando Andacht, Mutsumi Imai, Cornelia Müller and Göran Sonesson were cordially invited to represent different fields and methodologies in the study of iconicity. To deepen the interdisciplinary discussion, we also organize a round table with four other prominent members of the community: Christina Ljungberg, Pamela Perniss, Mark Dingemanse, and Lars Ellerström.

We hope that you will enjoy this conference at least as much as we who have been planning it over the past year, and that we may together probe further into the depths of the phenomenon of iconicity during these three days!

Lund, May 3 2019

Jordan Zlatev, professor in General Linguistics

Division for Cognitive Semiotics, Lund University

Practical Information

Centre for Languages and Literature (CCL)

Founded in 1666, Lund University is today one of the largest, oldest and broadest universities in Scandinavia and is consistently ranked among the world's top 100 universities. The 12th International Symposium on Iconicity in Language and Literature (ILL-12) takes place at CCL, which was established on January 1, 2006, combining the staff and students of the separate departments of the former section for languages, linguistics and literature. **The conference will take place in 4 rooms on the first floor of Humanisthuset: The Auditorium ("Hörsalen"), room H140, room H135b and room H135a.**
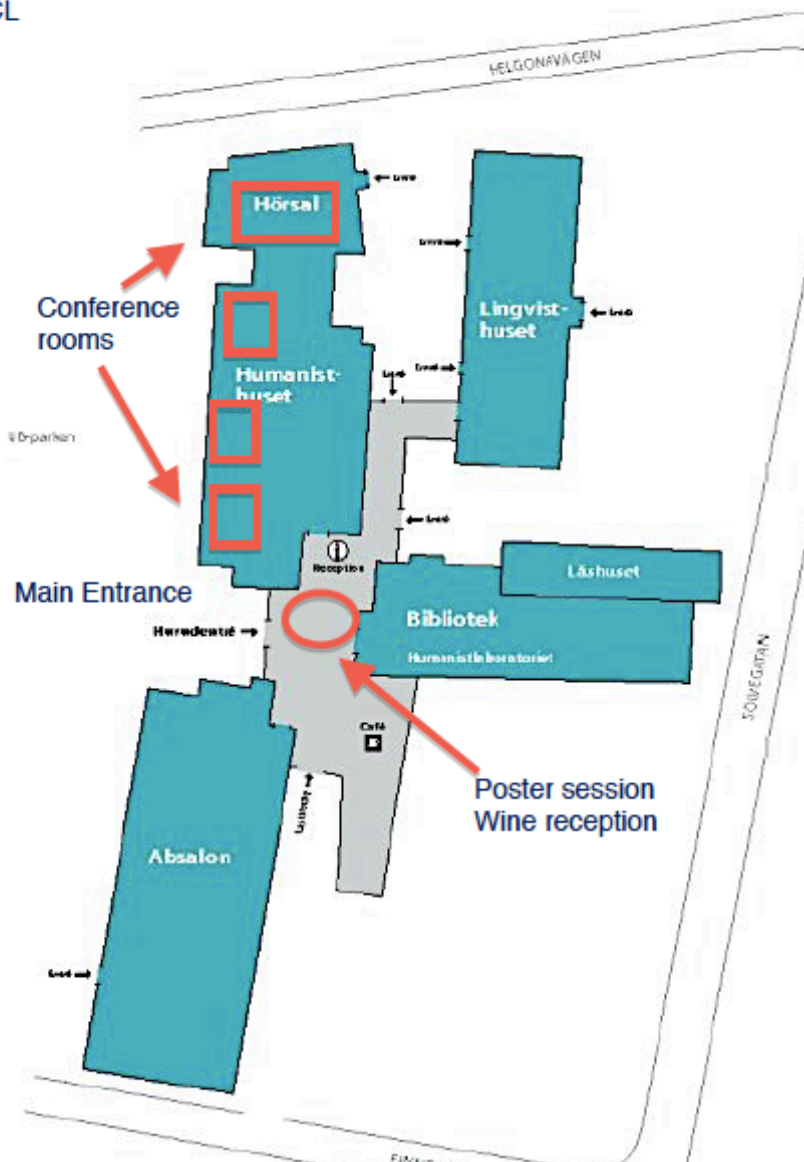
Registration desk and book tables

The registration desk is at the main entrance of CCL and will be open from 8:00 am on May 3, and all during the conference. On registration, you will receive a conference folder with material, and a badge with your name. Please carry your badges at all times – they will be necessary for attending talks, lunches and coffee breaks. If you have purchased it in advance, you will find your conference dinner ticket with your badge. Please take it and show it to the volunteer at the restaurant on Saturday.

Wireless Network

Lund University's wireless network is called Eduroam and is available at the University Library for students and employees. Eduroam is a secure wireless network used by many higher education institutions in Europe. Before you can use Eduroam for the first time, you will need to configure the correct settings on your computer/telephone/tablet.

If you are neither a student nor staff at university level, you can use a temporary login. Choose the wireless network called **LU Guest**. You register through a text message or mail and receive a code lasting a maximum of 12 hours.

Oral and poster presentations

Oral presentations should last 30 minutes followed by 5 minutes for questions, and 5 minutes for transition. There will be computers and projectors in each room. Speakers are asked to go to the room where their talk will be presented in the break that precedes the session, and make sure that their presentation is uploaded. If you wish to use your own laptop, you should also try it out in advance. Mac users should bring the necessary adaptors.

The poster session will take place 17:20-19:00 on Friday, 3 May, and will partially overlap with the Wine Reception, which will start at 18:00. Each presenter will have the chance to introduce themselves and their poster to the audience following the plenary talk by Göran Sonesson, which will precede the poster session.

*The format has to be at least A1 (60cm*84cm), but preferably A0 (84cm*119cm).*

Posters can be placed on the boards, which will be in front of the reception in CCL, from the lunch break starting at 12:30 on May 3.

Coffee breaks, lunches and Wine Reception

Coffee will be served in front of the Auditorium during every break. Lunches will be served on Friday in the vegetarian restaurant Govindas (ca. 200m from the venue, with volunteers leading the way,) and on Saturday and Sunday at the SOL-café (in the main hall of CCL/SOL). The Wine Reception on Friday 17:20-19:00 will be in the main lobby of CCL/SOL, and will be free of charge.

Conference dinner

The conference dinner will take place at The Museum of Artistic Process and Public Art - *Skissernas Museum* (ca. 50m from the venue) from 19:00 to 22:00, on May 4. Please take the ticket that you have purchased with you.

Skissernas Museum (https://www.skissernasmuseum.se/en/) is an art museum at Lund University in Sweden, dedicated to the collection and display of sketches and drawings for contemporary monumental and public art, such as frescos, sculpture and reliefs. Skissernas Museum is awarded the prestigious Museum of the Year 2019 by the Swedish Museums Association and Swedish ICOM (International Council of Museums).

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Plenary Talks

Iconicity as a key epistemic force of change in the self: the film The Life of Others (F. von Donnersmark 2006) revisited in the light of triadic semiotic

Fernando Andacht

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Poetry, music, elusive feeling all contribute as the fabric of our imagination, as pure icons, to the occurrence of change, despite the steady pull of permanence, in the self-construed as a triadic interpretative process (Colapietro). Cognitive elements and our perception of the world cooperate with the imagination in our endeavor to make sense of the world. To illustrate the relevance of iconicity in the development of human identity, I have chosen the German film The Lives of Others (von Donnersmarck, 2006). Its narrative depicts the dialectical tension between change and permanence in a most unlikely character, an officer of the dreaded Stasi. When the film begins, we see him as the embodiment of the darkest aspects of the ideology of an authoritarian regime, in the second half of the 20th century. The logician Peirce uses an unexpected term to describe the functioning of icons in triadic semiotic, namely, "dreams". Icons are the manifestations of the simplest phenomenological category, Firstness as the qualitative component of experience. Although they are only possibilities (qualisigns), which are not yet materialized, icons are what enables symbols to generate meaning, such is their "dream exciting power" (CP 4.56) claims Peirce. Far from subordinating images to words, the rationalistic bias that has haunted philosophy since the onset of modernity (Ransdell), triadic semiotic proposes to analyze meaning as the necessary triple coordination of absolute qualities (icons), resistant facts (indexes) and law-like regularities (symbols). I consider this film to be an allegory of what happens when spontaneity construed as the qualitative possibility of change in our lives, of imagining ourselves different from what we are at a certain point in time, is crushed under the oppressive burden of an unchanging Law that forbids and persecutes divergence, since any form of alterity is seen as a threat to an all-powerful State. Change in the protagonist takes place through the subtle irruption of some qualities in his imagination, such is the opening to iconicity that overthrows the monological and monolithic identity that had taken over the self (Wiley), which is conceived as the endless growth of reasonableness. Human

imagination is construed as the freewheeling, spontaneous influence of iconicity in our lives, a liberating path to regain freedom and the capacity to see oneself and others in a new light.

The role of iconicity in language acquisition and evolution

Mutsumi Imai

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Language is a system of abstract symbols. To address the symbol grounding problem (Harnad,1998), which is directly linked to key problems in language acquisition and evolution, we need to consider not only how children map their physical and sensory experiences to the first set of symbols but also how they de-ground from "here and there" and climb the ladder into an inter-connected system of abstract concepts, which are largely language-specific. In this talk, I propose the sound symbolism bootstrapping hypothesis (Imai & Kita, 2014) and discuss evidence for it. I first explore how pre-verbal infants break into the world of symbols with the help of sound symbolism, presenting results of a series of experiments using EEG and NIRS. I then discuss how sound symbolism can develop into language-specific systems, each of which has its own way in mapping meanings to sounds, based on the results of an experiment that elicited production of sound symbolic words in Japanese and English speakers. I finally discuss how children de-ground from direct iconicity and immerse into conventional language, much of which does not contain apparently sensible sound symbolism.

Cinematic Metaphor - An interdisciplinary framework to metaphor in audiovisual media and in face-to-face interaction

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Metaphors in audiovisual media as well as in multimodal interaction receive increasing attention across disciplines. The specific media character of film and the fundamental intercorporeality of face-to-face interaction, go, however, largely unnoticed. Audiovisual images are all too frequently understood as iconic representations and material carriers of information. Here is where Cinematic Metaphor proposes an alternative perspective: starting from film images as affective experience of movement-images, it replaces the cognitive idea of viewers as information-processing machines, and heals the break with rhetoric established by conceptual metaphor theory (Müller & Kappelhoff 2018). Cinematic Metaphor draws on theories of cinema that address this media specificity and extends them to other audiovisual forms such as television news, campaign commercials, or music video. Despite their differences, these forms share a fundamental mode of perceptual experience that Sobchack has characterized as "An expression of experience by experience" (Merleau-Ponty 1968 [1964], 155, in Sobchack 1992, 3). Following Vivian Sobchack's neo-phenomenological understanding of cinema, Cinematic Metaphor, thus, conceives of the narrative, the film, to be produced by spectators in their embodied experiences of film-viewing. Narratives are not the starting-point, but the product of metaphorical thinking; they are 'done' by the spectators. Rather than conceiving of metaphors as instantiations of image schemas or primary metaphors, metaphoricity is considered to be emerging locally from the spectator's experiencing of movement-images in the moment of film-viewing. 'Doing' cinematic metaphor is a co-production of two agents: the viewer and the film and this is one of the important connecting points between film-viewing and face-to-face interaction. Metaphors emerge dynamically from embodied interactions. Metaphorizing in face-to-face interaction shares this fundamental positioning with film-viewing. To sum up, by taking the mediality of audiovisual images as vantage point for theorizing metaphor, film-viewing as a specific mode of experience becomes

a starting point of an alternative theory of metaphor in audiovisual media and in face-to-face interaction. Against the backdrop of a dynamic, intersubjective and reflexive understanding of embodied experience, a shared vantage point for metaphorical meaning making in film-viewing and face-to-face interaction is outlined.

The intricate dialectics of iconization and structuration - Primary iconicity, secondary iconicity, and anything in-between

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About twenty-five years ago, I suggested that, to account for the workings of iconicity, it was necessary to make a distinction between primary iconicity and secondary iconicity. A primary iconic sign (such as a picture) is a sign in which the similarity between the expression and the content is at least one of the reasons for positing a sign relation. A secondary iconic sign, on the contrary, is a sign in which the existence of a sign relation is at least one of the reasons for positing a similarity between expression and content. The latter may happen, I went on to suggest, because you need a convention to see that something is a sign rather than an object in its own right, as for instance at a car exhibition. Or the reason for it may be that what might serve as the expression of the sign as such is too ambiguous to be given a specific interpretation without a "key" being supplied. My considerations were prompted by my study of iconicity of visual vehicles, but the distinction has later been taken up within linguistics, gesture studies, and the semiotics of music. At the same time, it has become clear to me that the distinction is not entirely satisfactory. To begin with, it obviously has to be understood, as the distinction between iconicity, indexicality, and symbolicity, in such a way that none of these labels exclude each other. But, more importantly, it would seem to involve a difference of cognitive operations rather than inert structures.

Oral and Poster Presentations

Onomatopoeia in Meänkieli – a lexicon study of similarities with Finnish and Swedish

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The question is whether a language in contact, Meänkieli, preserves onomatopoeic words and structures from its origin, whether it is affected by the contact language, or whether it creates its own onomatopoeic words and structures. Meänkieli is an under-researched language and the present study is an attempt to begin describing some of its onomatopoeic aspects, i.e. iconic relations between acoustics of pronounced initial consonant clusters and acoustics of non-speech environmental sounds.

Meänkieli is a Finnish-Ugric minority language in the north of Sweden. It has been developing in the area beginning in the 12th century (Winsa, 1996) emerging from dialects of Finnish but in contact with Swedish, a Germanic language. Finnish does not normally use initial consonant clusters, while Swedish does. Meänkieli can have initial consonant clusters, e.g. tr- (*tröijy: sweater; tröja* in Swedish), kr- (*kranni: neighbor; granne* in Swedish), especially in Swedish loan words (Nylund, Nylund & Nylund, 2012, Wande, 2001). Finnish can occasionally have initial consonant clusters in loan words, e.g. *kraatteri: crater* and *preeria: prairie.*

The online dictionary Meänkielen sanakirja containing 70 000 words from Meänkieli with translations into Finnish and Swedish, was excerpted. The new online dictionary for Meänkieli and Swedish, Meänkieli-ruotti sanakirja, was used for checking Meänkieli words, and a Swedish-Finnish dictionary, *Suomi-Ruotsi-Soumi Taskusanakirja,* was checked for Swedish translations into Finnish. A selection of onomatopoeic words was excerpted, following the phonaesthemic analysis of Swedish of Abelin (1999): Sl- is the most common clusters for Swedish phonaesthemes and 'wetness' is the most common onomatopoeic meaning of this cluster. Six words of the Swedish phonaestheme sl-: 'wetness', *slabba (splash), slafsa (squelch), slam (ooze), slask (slush), slem (slime), slipprig (slippery)* were chosen, together with three words from two phonaesthemes for 'wetness', skv- and pl-, *skvalpa (ripple), plaska (splash),* and *plumsa (plop).* Furthermore, fifteen words of the most frequent onomatopoeic clusters, kn-: 'strong sound' and kl-: 'strong sound', were translated and analyzed.

16

Results show an overwhelming quantity of onomatopoeic words in Meänkieli in comparison with Finnish. This could partly be due to the different purposes of the dictionaries. There are however qualitative observations to be made. First, in spite of the greater quantity of words in Meänkieli there are nevertheless words in Finnish which do not occur in the Meänkieli sources. Some Meänkieli words are phonologically similar to Finnish, but many have no phonological resemblance. Second, in Meänkieli there are many onomatopoeic words which begin with a consonant cluster, fr-, pl-, pr-, kn-, kr-, kl-, or tr- while there were no such words in the Finnish material. Third, these consonant clusters do not always correspond with Swedish phonaesthemes, e.g. Swedish *slabba*, Meänkieli:*frääkätä* (English:*slop*). Fourth, in some cases the onomatopoeias did correspond with Swedish phonaesthemes, as in Swedish:*knacka*, Meänkieli: *knakata* (English:*knock*).

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Iconicity in child reports: Does gesture-speech integration of preschoolers really differ from adults?

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The intriguing and still not completely studied issue is the role of iconic gestures in language development. We know from previous work that ∼54% of semantic features in the adult's gesture and speech are redundant. The work of Alibali et al. (2009) suggests that children (age of 5-10) produce more complementary gestures than adults. That is, apparently, the child gesture-speech system is less integrated than those of the adults. Alibali et al. (2009) proposed a coding system to study gesture-speech integration which is based on assigning semantic tags to speech and gesture separately (like, e.g., *spin* to the word 'spin' and to the corresponding iconic gesture). This system allows to assess whether particular gesture meanings are present in speech (redundant) or not. However, the authors did not consider the semantics of speech in the absence of gesture. Speech was only coded in combination with gesture but not separately. By doing so, individual differences among speakers are disregarded. There are persons who gesture more, others gesture less. Nevertheless, they all are able to express the same meanings either using 1. *gesture-only*, 2. *speech-only* or 3. *both* modalities. Moreover, as our empirical study reveals, there is more than a one-to-one mapping between speech and gesture semantics. Often, even when the gesture is redundant, there is an additional meaning present in the gesture that is not explicitly verbalized (e.g., the shape of an object when the object is named). In this case, the gesture should not be considered as redundant but rather as complementary.

We studied the semantic coordination of speech and gesture in a corpus of 40 4year-olds producing action descriptions in task-oriented dialogues (reports). We focused on *iconic gestures* (McNeill, 1992) and mixed forms including iconic elements. Iconic gestures represent meanings that can be also verbalized. That is, relating iconic gestures to speech allows to study

the individual variation among children speaking about the same events. We coded semantic features (Bergmann and Kopp (2006)) for each utterance or/and gesture related to the event of a report. This approach allowed us to quantify the amount of information present in speech-alone, gesture-alone and speech-gesture. In addition, we were able to get insights into the individual variation among children, i.e., their individual degree of gesture-speech integration.

Looking at the average of all children, we could confirm that 4year-olds integrate speech and gesture (gesture: 46 %, overlap: 54 %) similar to adults (∼50:50 Bergmann and Kopp (2006)). However, individual differences are substantial (mean *gesture-only*: 13, std: 13; mean *overlap*: 12, std: 12; mean *speech-only*: 16, std: 11), showing that gesture-speech integration cannot be reduced to a two-dimensional characterization.

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A Neurocognitive Approach to Affective Iconicity

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The focus of this work is on the existence of sound-meaning relationships in the affective domain, termed "affective iconicity". By taking an interdisciplinary approach, we combined phonological and acoustic analysis of a large-scale lexicon, with behavioral and neuroimaging experiments, in order to shed new light on a number of unanswered questions regarding the cognitive and psychological mechanisms underlying affective iconicity. Specifically, we aimed to address the two following main questions: i) Does the sound of words (i.e., phonemes, acoustic features) evoke affective responses observable at the behavioral and neural level? (Study 1, Study 2) ii) Can the affectivity in the sound of a word implicitly influence language users when giving their affective judgments on the meaning of that word? (Study 1, Study 3, Study 4).

Results of Study 1 and Study 2 indicated a high similarity between the affective potential of the sound of words and other types of affective sounds (e.g., nonverbal emotional vocalization and affective prosody) at both the level of psychological perception (Study 1) and the level of neural correlates and substrates (Study 2). Furthermore, when giving their affective judgments (valence and arousal) about the meaning of words, participants, as shown in Study 1, were implicitly influenced by the sound of words. Harsh-sounding words, for instance, were shown to make people feel more aroused so that they implicitly gave a higher arousal rating, even though they were instructed to only focus on the lexico-semantic aspect of words. These results were extended in Study 3 in which iconic words (e.g. grotesque) were shown to be evaluated more quickly and more accurately than their non-iconic counterparts, suggesting that a similarity between the form and meaning of a word may help language users to more readily access its meaning through direct form-meaning mappings. Study 4 investigated the neural mechanisms underlying the facilitative effect observed in Study 3. Results of this study showed an enhanced fMRI signal for iconic words in the left amygdala, known for its role in multimodal emotion integration, suggesting that iconic words (compared to their non-iconic counterparts)

profit from additional neural mechanisms which may provide an opportunity for the stronger embodiment of iconic signs.

These results provide empirical evidence for an insightful prediction that Jakobson (1937) made almost 80 years ago: "the intimacy of connection between the sounds and the meaning of a word gives rise to the desire of speakers to add an internal relation to the external relation, resemblance to contiguity, to complement the signified by a rudimentary image". Results of four studies were used to upgrade the standard models of language processing by conceiving corresponding modules responsible for the interactive effect of sound and meaning during affective evaluation of words.

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Iconicity and Word Order in the Languages of Northwest Iran

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In this study, I will focus on word order alternations in Mukri and Kurmanji Kurdish and Armenian in Urmia region located in northwest Iran. I will examine the triggering factors in the alternation of postverbal Target constructions, such as iconicity, light-before-heavy constructions, and contact-induced change. Target word order constructions (Asadpour 2018) refer to the sentences including Goals of MOTION and CAUSED-MOTION verbs, Recipients of GIVE verbs, Addresses of SAY verbs, Benefactives of Beneficiary verbs, and Goal of inchoative verbs (see Frommer 1981; Haig and Thiele 2014; Haig 2015; 2018; Jahani 2018 for Goal verbs). For example:

bā	*xełik*	*bē=n*	*āš-ī*
So that	people	come.PRS-3PL	mill-OBL

so that the people come to the mill (Öpengin 2016/ ČN.132a)

The different alternations to the above structures has been explored for some semantic, discourse-pragmatic and cognitive factors such as referential density, animacy, information structure and processing considerations (Hawkins 1994) like weight or heaviness parts of speech. The data show that different types of word order of Targets are permutations of a similar structure. Contrary to what Haig (2015) who considers language contatc as triggering factor in postvebral Goals in Kurmanji and neighboring languages, the results of this study show that different word order patterns in these languages are mainly due to morphosyntactic-pragmatic and cognitive factors. Semantic factors in this study show a side effect in combination to the above factors. In addition to these factors, the viewpoint and iconicity (Enkvist 1981; Haiman 1980) as a natural endpoint of Targets can be explain by the increase of frequency effect in different verb types for postverbal Targets. However, iconicity can potentially affect the orderings of Targets in Target constructions.

Hence, I examine spoken corpora including monologue free speech and narrations. The corpora include transcripts of audio taped free speeches for Mukri includes (corpus of Öpengin 2016 including 10 cases), Kurmanji (12 cases, personal field work) and Armenian (15 cases, personal

field work). The transcripts consist of single-sex and mixed-sex free speeches with 10 to 15 participants; each conversation is 3 to 15 minutes long. The total amount of data used is approximately 400 minutes long for all languages and 350 pages of transcripts (approximately 7000 clauses). The speakers are 19 to 70 years old and they used their local language variety. The recordings took place in different places. I selected 7 different verb types that possess the prototypical and semi-prototypical semantics of Target verbs that take several Target positions i.e. preverbal, incorporated and postverbal positions.

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The Iconicity of the Emotive Hijazi Non-Lexical Sounds

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In everyday speech, Hijazi Arabic is full of non-lexical sounds (NLSs) that constitute utterances by themselves. They convey the speaker's emotions, mental states, and reactions. For example, *afa!* conveys disappointment, *wah!* conveys surprise, *jɪʕ!* conveys disgust, etc. My study investigates the relationship between Hijazi NLSs (HNLSs) and their emotive, or expressive, meanings by considering them as semiotic signs. In semiotics, a sign is anything which refers to something else. Signs communicate meanings. NLSs signal mental states and hence are signs.

Saussure (1916) states that signs are arbitrary; their meaning is not predictable from the form. However, he allows for some exceptions such as interjections. I argue that the NLSs are similar to interjections, as both of them are "spontaneous expressions of reality dictated …by natural forces" (ibid 69). Poggie (2009) goes further and argues that interjections resemble complete speech acts that contain a particular performative and propositional content. In other words, they show the interaction between the socio-cultural and intrapersonal aspects of language (Wharton 2003; cf. Wierzbicka 1992). Like interjections, NLSs are inner expressive speech with unusual vocalizations depending on specific situational and socio-cultural contexts. I argue that NLSs represents the firstness (i.e., the vague blank thought-less feeling) of secondness (i.e., the real idea in the experiential universe) through thirdness (i.e., the mediator, or intellectual experience) (cf. Peirce 1931-58). In this study, the data indicates that iconicity is the mediator, or the thirdness, which relates the firstness and secondness.

This study examines 34 HNLSs whose meanings have been checked through an open questionnaire. The questionnaire elicited responses from Hijazi speakers of different ages, genders and educational backgrounds. I classify their answers to explore the iconicity of those HNLSs. They have been mapped by dividing them into two categories. First, the expressive HNLSs whose meanings were mapped with Parrott's (2001) emotion classification. Second, the conative HNLSs were mapped with Halliday and Matthiessen's (2014) types of speech functions: statement, question, command and offer (p. 135). In the current paper, I will focus on only the emotive HNLSs. The data analysis shows that the HNLSs of every primary emotion

24

are similar in their physical vocalizations. In other words, vocal gestures convey an iconic relationship with their emotive and cognitive meanings. Specific feelings or mental states motivate us to shape our mouth in a specific way. We produce those NLSs which have unusual phonological structures to communicate these meanings (c.f. Darwin 1872: 83, 91).

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Iconicity in ballet conversation scenes

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The research presented here focuses on the role of iconicity in meaning construal in ballet conversation scenes. In this genre communication rests entirely on gesture, both conventionalized (i.e. ballet pantomime) and non-conventionalized, i.e. representations of natural co-speech gesture. The corpus is compiled ad hoc from performances and rehearsals of famous ballets found in YouTube. From them a series of conversation scenes were selected for their visual quality to analyze some of the gestures used to construe the story being narrated.

The illustration of some of the different levels at which iconicity occurs is the main aim of this work. Iconicity in ballet gesture and pantomime does not only imply the reproduction of the shape of an object or the way of performing an action. For example, "saying something" is represented by the speaker simulating she is taking out entities from her mouth alternating both hands and drawing a path with them in front of her mouth. In this case, iconicity occurs in the representation of words (or propositional units) as contents taken out of the mouth-container, aspect is represented by means of a path schema, and the directionality of the speaker's hands motion forward mirrors the directionality of sound waves. Gestures which are iconic in relation to the metaphorical conceptualization of a concept are analyzed. Data evidence how iconicity reduces the conceptual distance between the source and target domains (Wilcox 2004). I also illustrate iconicity in metonymic gestures in which a source action (Mittelberg 2017) is iconic for the vehicle it represents. Other cases instantiate iconicity in relation to figure-ground configuration (e.g. Figure 1 and Figure 2):
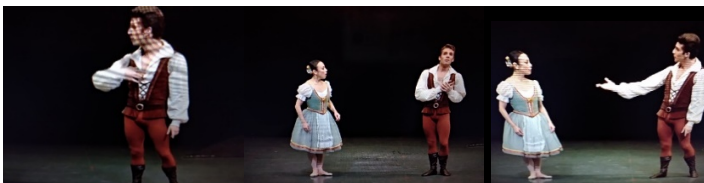

Figure 1. I love you

Figure 2. You (are) crazy

Among other levels at which iconicity occurs (e.g. complex event sequencing, causal chains) I will illustrate prosodic iconicity. In the image on the right in Figure 3, Giselle is performing the gesture for negation. This ballet emblem is performed in a neutral way in Figure 4.

Figure 3. I love you NOT
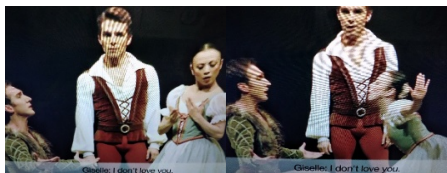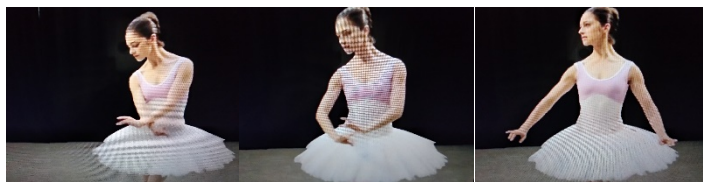

Figure 4. Gesture for negation.

Finally, some ballet emblems are explained from the perspective of their iconicity to shed some light into their motivation.

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Intersemioticity and iconicity in Jonathan Safran Foer's *Tree of Codes*

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At the beginning of the XXIst century, the presence and further development of a creative form of intersemiotic literature is perceived. Several publications around the world are created by combining different semiotic systems, such as the verbal system, photography, architecture, publicity, sculpture etc. One intriguing title that exemplifies this kind of cultural phenomenon is *Tree of Codes*, written (or more properly, *created)* by Jonathan Safran Foer. This book, published by London's publishing house Visual Editions in 2013, is exemplary in the way it takes different systems and puts them in relation. It articulates the graphic, sculptural, and written verbal systems in the production of an original and cohesive literary object. This very curious publication was created using the die-cut technique: each of its 134 pages features various cutouts. Safran Foer used what he considered his "favorite book", *The Street of Crocodiles,* by Bruno Schulz, as a basis and carved out a new story from the Polish writer's original work. The resulting codex presents a different die-cut on every single page. Safran Foer cut the words from Bruno Schulz's book and rearticulated them, producing a new written story embodied in an object that is also graphical and sculptural.

In order to analyze the construction of meaning and the role played by iconicity in this particular object, we relied on the general semiotic model that has been elaborated in France by A. J. Greimas and his collaborators. Greimas' concept of iconicity comes from the studies of plastic and figurative semiotics carried out mainly by Jean-Marie Floch (1985). For them, "iconicity" is the referential illusion that produces the sense effect of "reality" (Greimas and Courtés, 1979). In the act of reading a text, the reader imagines its textual world in a process that either makes it closer to the perceived "real" world, in the case of high iconicity, or takes distance from it, in the case of abstraction (Bertrand, 2000).

Our main objective was to better comprehend the processing of iconicity in the different systems of *Tree of Codes*. Our initial hypothesis was that figures which repeat themselves in more than one system would construct sense effects that are intensified in the reading

experience. Methodologically, we analyzed expression and content of each of the systems involved (verbal, graphic and sculptural), comparing the figures found on the discursive level. These figures were listed, evaluated according to their degree of iconicity or abstraction and then compared regarding the differences and similarities between them. We concluded that the figures repeated in more than one system ("traditional codex", "labyrinth", "city" and "cutouts") create indeed extended sense effects in the literary work, but they are not necessarily the most iconic figures.

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Vertical metaphors in sign language antonyms

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Metaphors are found in both the spoken and signed languages of the world (Cardona 2008; Lakoff & Johnson 1980; Meir 2010; Wilcox 2000). In the visual–gestural modality, some metaphors are based on spatial mappings, such that space, time, and valence may be metaphorically associated with relative configurations in space. This includes representing timelines ('then' vs. 'now') or valence scales ('good' vs. 'bad') along spatial axes (Cooperrider & Núñez 2009; Woodin & Winter 2018). This paper specifically concerns valence metaphors dealing with representations along the vertical axis (UP IS GOOD vs. DOWN IS BAD) in sign languages. Although vertical metaphors have been noted across sign languages (see e.g. Yap et al. 2014 for three sign languages), there has been no larger cross-linguistic investigation to date.

Here, I investigate the use of physical vertical space in 40 different property words across 27 sign languages found in the Spread the Sign online dictionary (European Sign Language Center 2012). The word items are sampled from a list of common antonym pairs (Koptjevskaja-Tamm et al. 2017) based on their categorization into positive vs. negative valence (e.g., positive: 'good', 'happy'; negative: 'bad', 'sad'). For each property word, the sign video entries in Spread the Sign matching the words were sampled for analysis. In total, 786 sign videos were collected (453 denoting positive property words; 333 negative). The aim of the study is to investigate whether positive and negative properties differ in vertical location/direction – that is, whether e.g. 'good' and 'happy' are more likely to be articulated higher/upwards than 'bad' and 'sad'.

First, all signs were coded manually for movement *direction*. Then, the sign height was analyzed automatically with the Openpose software (Cao et al. 2017), which identifies joints on the human body from image/video input. For each video frame, the coordinates of the dominant hand are extracted, and the mean value of the *y* coordinate – averaged across frames, normalized for signer size variation – for a single sign was recorded as the sign's *height*.

A mixed effects model (R Core Team 2017) – with valence (positive/negative) as fixed effect and language as random effect – shows that positive and negative property words are generally associated with different *directionality* in signing space (ANOVA: $\chi^2(1)=12.218$; $p=0.0004733$) –

30

in line with Yap et al.'s (2014) findings – whereas no difference is found for general sign *height*. Specifically, positive property words are associated with signs moving upwards in signing space. Thus, the location of a sign is not associated with valence *per se*, but the relative change in location height has the potential of representing a metaphorical valence scale in vertical space by associating upwards movements with positive meanings. The systematic pattern – visible across languages – of representing valence along a vertical axis, a known metaphor, is then iconically mapped directly onto sign articulation in physical signing space.

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Methodological contribution to the experimental study of sound symbolism: comparison of four different associative tasks

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Sound symbolism refers to the hypothesis that some phonetic units intrinsically carry semantic content. It can be assessed experimentally, with the bouba-kiki association task being undoubtedly the best-known paradigm. It consists in the presentation of two shapes - round and spiky - and two pseudo-words - 'bouba' and 'kiki' (Köhler, 1947). A recent meta-analysis estimates the proportion of agreement across different studies to be 84-94%, with 'bouba' associated with round and 'kiki' with spiky (Styles & Gawne, 2017). Many experiments however depart from this canonical experiment, with several sources of variation. The linguistic material can first vary, with various possible contrasts between consonants or vowels, as well as how it is presented, with written or oral stimuli (Cuskley, Simner, & Kirby, 2015; Fort, Martin, & Peperkamp, 2015). Shapes can also be replaced with other visual or conceptual stimuli, such as names of animals (Berlin, 1994). Additionally, the protocols used to introduce the stimuli differ with respect to the phonetic and visual/conceptual contrasts presented to subjects: 1) 2x2 - presence in each trial of both contrasts, i.e. two concepts or shapes and two pseudo-words (Nobile, 2015); 2) 1x2 - presence of a single phonetic contrast, i.e. a choice between two pseudo-words given a shape or concept (Chen, Huang, Woods, & Spence, 2016); 3) 2x1 - presence of a single visual/conceptual contrast, i.e. a choice between two shapes or concepts (Fort et al., 2015); 4) 1x1 - absence of contrast, e.g. in a congruency judgement task where one decides how well a shape or concept matches a pseudo-word (Nielsen & Rendall, 2012). Altogether, these variations explain why experimental results are difficult to compare.

To tackle this issue, we focused on differences between the four previous protocols. To compare them on shared grounds, ten sound symbolic associations were extracted from the literature and adapted to connect animal characteristics – size, biological class, repulsiveness and dangerousness – with vowels or consonants. We investigated whether one or both

contrasts were needed to reveal these associations. Effect size and statistical significance were assessed with regression models for each hypothesis in each protocol. 189 monolingual French speakers were tested.

Each hypothesis was confirmed at least once across the four protocols and some associations were systematically confirmed: 1) [i] with small animals and [a] with big ones; 2) [k] with repulsive animals and [n] with attractive ones. Furthermore, different contrastive presentations of the stimuli did not lead to contradicting sound symbolic associations. However, large differences in effect size were observed. Effect sizes were on average largest in 2x2 and smallest in 2x1 and 1x1. We thus suggest that a phonetic contrast may strengthen or sometimes reveal sound symbolic associations, and that its effect can be compounded by a conceptual contrast.

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Iconicity of gesture-speech correlations in interpreter-mediated events

Multimodal analysis of an authentic corpus of interactions in medical and social settings

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The uniqueness of community interpreters' profession consists in the fact that their role cannot be reduced to a simple voice over, as it is the case of conference interpreting. The body of a community interpreter is physically present and as such involved in the information exchange process implying the triadic structure described by Poyatos (1997) as follows: *language – paralanguage – kinesics.*

A number of studies analyze quality-related features that occur in the interpreting event. Nevertheless, the researchers investigating the role of nonverbal elements in interpreter-mediated events as signs of expression (Poyatos 1997, Collados A*í*s 1998, Rennert, 2008, Zagar Galvão 2013) still remain very few. The aim of this paper is to contribute to this emerging field of study by presenting extracts of an original corpus illustrating the use of iconic gestures in the interactions taking place in the presence of an interpreter.

After defining the characteristics of iconic gestures according to McNeill's terminology (1992), we shall compare gestural repertories and their discursive functions among social, legal and healthcare settings. These observations allow us to formulate a hypothesis that the interpreters would adapt their strategies of source messages' rendition according to the context of the interaction, opting either for reproducing the iconic gestures of the actors or, on the contrary, explaining their meaning verbally. Furthermore, the analysis of the available data suggests that the common imitation of iconic gestures among participants may lead to their ritualization, and therefore create a new shared gestural repertory enhancing mutual understanding in exolingual interactions.

The study is based on the observations of authentic face-to-face interactions including professional community interpreters working in Paris. The corpus is made up of an online

survey conducted on a sample of 60 interpreters using 43 different working languages, consists in semi-structured interviews with 10 of those professionals and a set of 50 video sequences collected during the field research; the latter manually annotated using ELAN software. Combining multimethodology, rich data and particular settings, we aim to present a complex semiotic portray of the gestures used in community interpreting sessions, a subject which is constantly gaining on interest of academic researchers.

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Comprehension of Iconic Vocalizations across Languages and Cultures

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It is widely observed that visual communication with gestures enables successful communication between speakers of different languages. When people lack common words to convey their meaning, they are able to improvise iconic gestures to ground communication about varied domains like actions, shape and size, and spatial relationships. This remarkable human ability is the foundation of the parlour game 'charades,' and it is thought to play an important role in language acquisition and evolution. But can people also innovate iconic vocalizations to communicate meanings? To find out, Perlman and Lupyan (2018) conducted a contest with a $1000 prize that invited participants to create novel vocalizations—no words permitted—for 30 different meanings. The meanings spanned actions, humans, animals, inanimate objects, properties, quantifiers, and demonstratives. The vocalizations were evaluated by the ability of naive listeners to guess their intended meanings from multiple alternatives, with the winning submission determined as the set of 30 that was guessed most accurately. Overall, guessing accuracy was well above chance for most of the submissions and across almost all of the meanings. Thus, the results suggested that people are able to communicate successfully with iconic vocalizations about various concepts, without the use of words. However, strong evidence for this claim depends on the potential for vocal communication across widely disparate cultures and linguistic backgrounds. Perlman and Lupyan's contestants were English speakers, and their listeners were all American English speakers, raising the possibility that culture-specific cues were used by listeners in determining the intended meanings.

The current project is investigating whether the vocalizations produced for the contest can be understood by people from a wide range of cultural and linguistic backgrounds. Using Percy (Draxler, 2011), a web-tool for experiments, we are conducting comprehension surveys with listeners from more than 20 diverse languages. Here, we report results from four languages: English (N = 67), German (N = 81), Polish (N = 49), and Japanese (N = 57). Participants listened to the three vocalizations for each meaning that were guessed most accurately in the English experiment, and for each, guessed it's meaning from six alternatives. Given that the vocalizations were produced by English speakers for an English-speaking audience, we predicted that the response accuracy of listeners would depend on the genetic distance of the given language from English, which we took as a rough approximation of cultural and linguistic overlap. The preliminary results of a generalized mixed model analysis show that speakers of all examined languages perform significantly above chance level (16.7%)—and even significantly better than 50%. As expected, accuracy was higher for languages closer to English: English (72%), German (71%), Polish (62%), and Japanese (60%). Overall, guessing accuracy was higher than chance for all 30 meanings. Guessers across the four languages were most successful with actions and animate nouns, while Polish and Japanese speakers, in particular, were less accurate with the other categories. These results provide the first strong evidence that people are able to improvise iconic vocalizations for successful, cross-linguistic communication about a variety of meanings. They also point to semantic domains where iconic vocalizations may be less effective. Altogether, they speak to the universal potential for vocal iconicity to scaffold communication between speakers without a common language and thus ground the formation of spoken symbols.

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A (morpho)phonological typology of demonstratives: a case study in sound symbolism

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We propose a (morpho)phonological typology of proximal and distal demonstratives. The focus is on phonology, and the other functions the discussed demonstratives may have are not considered. Moreover, only the most basic proximal ('this') and distal ('that') forms are examined, i.e. only two forms are examined from each language, and, e.g., potential more fine-grained distinctions based on proximity are not relevant. We focus on demonstratives, since their proximal vs. distal nature is easy to measure both non-linguistically and linguistically. Four different major types are distinguished:

1. Vowel type: front vs. back; high vs. low vowel

2. Consonant type: front-back consonants

3. Additional element type

4. Varia

The types can further be subdivided according to whether the attested difference concern only, e.g., vowels, or whether there are other changes as well. For example, the first type comprises both languages such as Betta Kurumba, where only the vowel changes (*i* 'this', *a* 'that', Coelho 2003: 181) and languages like Alyawarra (*nhinha vs. nhaka*, Yallop 1977:110-113), where there are also differences in the consonants. In type 2, front consonants (e.g., labial and dental) usually appear on proximal demonstratives, while distal demonstratives are associated with back consonants (such as velar or uvular consonants). An example is provided by Bunaq, where *bari* marks 'this' and *baqi* 'that' (see Schapper 2009: 239). In the additional element type, the distal demonstrative typically has an additional element, making it longer in form (e.g., Òko *òne* 'this', *ònébé* 'that', Atoyebi 2009: 188), but the type also comprises languages where the distal demonstrative is simply phonologically longer. Finally, a number of strategies are used by the languages in the Varia type.

The occurrence of the two first types can be explained by iconicity. In most cases, front or high phonemes appear on the proximal demonstratives, and back/low phonemes on distal demonstratives. Proximal demonstratives are thus pronounced at the front and/or high part of the oral cavity, while distal demonstratives are pronounced lower and more back, reflecting the proximal/distal nature of their referents in the physical world. The first type is the most common in our data, which suggests that iconicity plays a role here. Our findings support earlier findings (e.g., Ohala 1984) that proximal and distal demonstratives have an iconic phonemic manifestation. Previous studies, however, have not found systematic correspondences regarding consonants (Johansson & Zlatev 2013). The third type can be explained by both markedness and iconicity. The distal element is in most cases more marked than the proximal demonstrative, and some languages use less linguistic substance for referring to entities close to the speaker. The fourth type contains different kinds of cases, and systematic generalizations are hard to make.

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Iconicity and humour: triangulating collected and imputed lexical norms

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Iconic words are widespread in natural languages, and iconic methods of communication are common in everyday interaction. Scholars working on iconic words have long drawn attention to their expressive and playful nature, but empirical studies of when and why some words appear more playful than others are rare. Here we study the intersection of iconicity and playfulness using databases of humour ratings (Engelthaler and Hills 2017) and iconicity ratings (Perry et al. 2017) that have recently become available. We combine correlational evidence and linguistic analysis to understand what makes people rate words as playful and iconic. We also introduce and benchmark a method for imputing iconicity ratings using word embeddings. The method is applicable more generally to the task of increasing the intersection between iconicity ratings and other norm sets.

Ideophones are iconic words with sensory meanings found in many of the world's languages. Their marked phonology has been connected to playful and expressive functions of language, and they have been defined —only partly tongue-in-cheek— as "those words with are such fun to use" (Welmers 1973). In an independent strand of research, people have recently started to investigate the perceived humour of word forms. For nonwords, humour ratings appear to correlate with a measure of entropy which may be linked to phonological markedness. For existing English words, a new set of humour norms finds that the strongest correlates are with frequency and lexical decision time. The new ratings enable us, for the first time, to empirically test intuitions about the playfulness of iconic words.

Here we test the prediction that iconicity ratings will be positively correlated with humor ratings, controlling for frequency. We find that iconicity and humour are related with good accuracy across the entire range of judgments: many highly iconic words are rated as highly funny ('tinkle', 'oink', 'waddle'), and many words rated as not iconic are rated as not funny ('tray', 'spider', 'wait'). Using an independent set of data, we also find that imputed iconicity

values correlate with humour ratings at the same level as actual iconicity ratings, controlling for frequency. This demonstrates the utility of our imputation method for generalising beyond relatively small sets of seed words. Areas where the ratings deviate bring to light other mediating factors. For instance, "blonde" is rated as highly funny but not iconic; its humour rating is likely derived from co-occurrence relations (e.g. appearance in a genre of jokes) rather than from its formal characteristics. On the other hand, highly iconic words like 'crash', 'scratch' and 'roar' are low in humour ratings, likely because they are associated with negative events, pointing to valence and arousal as potential mediating variables.

Playfulness and iconicity are pervasive features of language, and their investigation can shed light on fundamental topics in language development and language use. This study makes four substantive contributions to experimental work on iconicity. Empirically, it (i) puts the playfulness of iconic words on firm empirical footing and (ii) illuminates what makes people rate words as funny and/or iconic by examining associations and dissociations between sets of ratings. Methodologically, it (iii) introduces and benchmarks a method for imputing leixcal ratings and (iv) examines strengths and limitations of iconicity ratings, both collected & imputed.

Explaining iconic words has been declared a risky enterprise: "linguists … cannot handle them. If they handle them carelessly, they will run into problems" (Gomi 1989). Likewise, explaining humour has been compared to dissecting an animal: you understand it better, but it dies in the process. If our study helps to explain the relation between humour and iconicity, at least we have killed two birds with one stone.

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Patterned iconicity for different semantic categories: Evidence from sign languages and gestures

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It has been well documented that a large proportion of signs in any given sign language lexicon as well as the gestures produced in accompaniment to speech by non-signers exhibit iconicity. Moreover, both signs and gestures can exhibit iconicity in different ways. A screwdriver, for example, can be represented with a 'handling' strategy, where the hand represents the human hand holding the screwdriver; with an 'instrument' strategy, using the hand to represent the screwdriver itself while performing a canonical action; with an "object" strategy, showing features of a screwdriver; or with a "tracing strategy", representing the shape of the entity by tracing its outline or surface.

Recent cross-linguistic research on sign languages and gestures has demonstrated the existence of *patterned iconicity,* the recurrent use of an iconic strategy across concepts in a semantic category (Brentari et al. 2015; Kimmelman et al. 2016; Padden et al. 2013, 2015). The present study extends this research to two sign languages used in Ghana (*Ghanaian Sign Language* and *Adamorobe Sign Language*) and the gestures used in the surrounding communities and across a range of semantic categories. In addition to representing African sign languages and gestures, underrepresented in cross-linguistic investigation, the communities differ in important ways: urban vs. rural community; age of sign language; language contact; Deaf/hearing community contact.

Signers of urban Ghanaian Sign Language (GSL; N=10) and rural Adamorobe Sign Language (AdaSL; N=10), and hearing non-signers of the surrounding communities (urban, N=6 and rural, N=4) were asked to provide signs and gestures, respectively, for a total of 48 concepts from a range of different semantic categories (handheld tools; clothing & accessories; furniture & household items; and appliances). Responses were coded in ELAN version 5.4 (Wittenburg et al. 2006) for type of iconic strategy (including handling, instrument, object, tracing) and consistency of use of strategy across participants for individual concepts (defined as >70% of participants using the same strategy; Padden et al. 2013).

42

Findings are discussed with respect to patterns of iconicity across semantic categories and similarities and differences between sign and gesture. Of particular note is that rural gesturers in the Adamorobe community do not show a clear preference for the handling strategy within the semantic category of handheld tools, in contrast to previous findings for gesturers. This seems to be due to the influence from AdaSL, which exhibits an instrument preference for the same category, and the high degree of contact between Deaf and hearing members in the Adamorobe community. Further, consistency in use of the same strategy for individual items was found to be higher in AdaSL than in GSL.

The study demonstrates that varied iconic patterns for different semantic domains emerge within sign languages and provides valuable insight into the typology of sign languages and into the community-mediated interplay between sign and gesture in their shared access to the iconic affordances of the visual modality.

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Iconicity in Gesture: How Czech Children and Adults Use Iconic Gesture to Deal with a Gap between Mental and Linguistic Representation of Motion Events

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Our presentation brings attention to co-speech gestures (Kendon 2004; McNeill 1992). More particularly, we focus on iconic gesture accompanying speech about motion events. There is evidence that languages across the world differ in the way they organize information about motion path (e.g. upward, across) and manner (e.g. walking, running) into words/clauses, and depending on cognitive demands, speakers of a given language tend to prefer some patterns over others (Slobin 2004; Talmy 1985). In Czech language (Fibigerova & Guidetti 2018), speakers typically convey path and manner jointly in a single verb (e.g. _přeběhnout_ silnici 'to _run_ _across_ the street') but can also easily express manner without path (e.g. _běžet po silnici_ 'to _run_ on the street'). However, it might be very difficult to express path but not manner (e.g. no true equivalent for 'to _cross_ the street'). Therefore, we wondered how Czech natives use co-speech iconic gestures to deal with situations where they have to describe path rather than manner.

72 participants (24 5-year-old, 24 10-year-old children and 24 adults) were asked to narrate 10 quick video clips (created for the purpose of our empirical study) showing different and very specific motion events (1 target event per clip) where path is visually foregrounded and easily identifiable while manner is backgrounded and hard to verbally depict in Czech. Using a film camera and ELAN multimodal data annotation tool, we first transcribed all motion related clauses and gestures to annotate them later (10% percent of data were double-coded) for semantic content: Path, Manner or Both.

The overall proportion of iconic gestures increases with age. Comparison to a control situation where manner was not backgrounded shows more iconic gestures in the experimental situation (backgrounded manner). Most importantly, the use of iconic gestures increases the number of

options provided by the language itself so that gesturing speakers used three different strategies: (1) path alone in speech + path alone in gesture, (2) path combined with semantically less appropriate manner in speech + path alone in gesture, (3) path combined with semantically less appropriate manner in speech + path in gesture combined with an effort to display semantically appropriate manner; however, speakers never expressed semantically less appropriate manner in gesture. In line with our expectations, these findings suggest that iconic gesture has an important role when it comes to express ideas that would be otherwise difficult to fully encode into words only.

Our quantitative results, qualitative analyses as well as some raised questions will be discussed in light of general hypotheses on interplay between gesture and speech that rely on two different semiotic systems but work together (McNeill 2005), multimodality in mental representations (e.g. Paivio 1986), and ability of iconic gesture to decrease cognitive load of speaking because of its image-like quality (Goldin-Meadow et al. 2001).

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Echoes of the Past: Old English Onomatopoeia

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Old English texts preserve a number of iconic words, which give an intriguing insight into the sphere of sound-denotation of that extinct language. The study of Anglo-Saxon texts, however, reveals that many onomatopoeic words used there are non-existent in Modern English. In this paper I argue that more than 50% of those iconic lexemes have become extinct or have been replaced in the course of the 1000-year history of the English language. This study has been conducted both on the material of poetic texts and etymological dictionaries.

Materials for this study include a list of onomatopoeic and mimetic words obtained from *Altenglishes Etymologishes Wörterbuch* by method of continuous sampling and the full, unabridged texts of the Old English poems *Beowulf* (17 779 words), *The Seafarer* (765 words), *The Fight at Finnsburh* (274 words), *The Battle of Brunanburh* (365 words), and *The Battle of Maldon* (2082 words), as well as their translations into Modern English.

Methods for establishing iconic origin of the lexemes include etymological and comparative analysis. The selected words are marked 'onomatopoeic', 'imitative' etc. either in Holthausen (1974), Kroonen (2013) or other relevant etymological dictionaries of Germanic languages (Levitsky 2000; Onions 2002; Skeat 2006). The method of phonosemantic analysis is also applied (see Voronin 2006).

Results show that out of the 300 iconic lexemes selected by continuous sampling from the *Altenglishes Etymologishes Wörterbuch* (Holthausen 1974), only 106 (or 45%) have been preserved in today's language.

Moreover, the study of contextual use of onomatopoeic words in Anglo-Saxon 'battle' poems reveals that the most frequently used Old English lexemes are either lost in Modern English, having been replaced by their recently coined or borrowed equivalents, or they have undergone considerable semantic shift, which is evident from their patterns of translation into the contemporary language. For example, the most frequently used imitative words in 'Beowulf' are the extinct *galan* 'to sing, enchant, call', *hlem* 'a sound, noise, crash', *swēg*

'unregulated, confused sound, noise, din, crash', *wōp* 'a cry of grief, wailing, lamentation', while such frequent words as *dynian* 'to make a noise, din, resound', *murnan* 'to mourn, be sad, be anxious, *care about, regard*', and *singan* 'to sing, to compose verse, narrate' have considerably narrowed their meaning and sphere of usage.

The choice of genre ('battle' poems) was based on the hypothesis that these texts would be more saturated with onomatopoeic words due to their expressivity in comparison, for example, with the texts of the chronicles, legal documents, or medical recipes.

On the whole, this paper highlights main differences between the two iconic lexicons, Old English and Modern English, as well as suggesting reasons why these differences arose. The fates of Old English onomatopoeic words, their de-iconization (Flaksman 2017), loss, replacement, and phonetic and semantic development are also discussed.

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Vowel length in Dutch verbs

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Recent iconicity research (cf. Dingemanse et al. 2015, Blasi et al. 2016, Lockwood 2017) has shown that non-arbitrary signs play a stronger role in natural languages than 20th century structuralist and generative theories suggested. As iconicity research contributes insights to how language is grounded in sensory experience, every full-fledged cognitive-functional theory of language is well advised to take non-arbitrariness on board.

One of the best-known findings in iconicity research is the bouba-kiki effect. Besides the role of consonants, the different *quality* of vowels (/u/ vs. /i/) plays a role. Vowel *quantity* (length) has been less studied. Bross (2018) is one of the few studies focusing on length. He found an association between vowel length and object length for German nouns.

The question is whether similar effects regarding vowel quality and quantity can be found for other parts of speech. Cuskley (2013) is one of the few papers who studied such effects in verbs, focusing on vowel quality (/u/ vs. /i/). She found a correlation between lower vowels and slower speed.

Combining the work of Bross (2018) and Cuskley (2013), the present paper analyzes vowel quantity (length) in Dutch verbs. A random sample of 120 verbs was put together, all with one full syllable (optionally a second one with a schwa vowel), divided into 4 groups:

1. Verbs with short vowels: *stoppen* 'to stop'*, vallen* to fall',

2. Verbs with long vowels: *slaan* 'to hit'*, lezen* 'to read'

3. Verbs with diphthongs: ei/ij, ou/au, ui, phonetically [ɛi, ɑu, œy], as in: *kijken* 'to look'*, kauwen* 'to chew'*, huilen* 'to weep',

4. Verbs with a combination of 2 succeeding vowels: aai, ooi, oei, eeu [ai, oi, ui, eu], as in: *zaaien* 'to sow'*, gooien* 'to throw'*, sproeien* 'to spray'*, and *geeuwen* 'to yawn'*.

The semantics of the four groups was analyzed with regard to the features 'length of the process' and 'internal dynamics of the process'. It was found that the verbs with short vowels

typically refer to short processes and/or processes with a sudden end phase. Verbs with long vowels or diphthongs refer to longer processes (no systematic difference was found between these two groups). The verbs in the last group also refer to longer processes, but in the temporal development of the process, the movement of the subject or object does not follow a straight line. Instead, there is a curve involved. For example, when one sprays water, the water typically makes a curved movement. The movements involved in the semantics of the verbs in group 4 will be analyzed in more detail.

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Iconicity and cross-modality in music and speech:

A comparative study with Swedish and Chinese speakers

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Musical meaning is multifaceted. It is highly sensory and yet often abstract, able to cross cultural boundaries and yet embedded in specific traditions. For the most part music as a semiotic system is characterized by non-referential meaning (Monelle, 1991). Nevertheless, in so-called programmatic music, musical themes are intended to refer to worldly objects and events on the basis of iconic (and indexical) grounds. Such non-arbitrariness has been extensively documented in the case of speech as well, though discussions continue on whether the iconicity in question is primary, secondary or "in between", and also concerning the degree to which it may cross different sensory modalities (Ahlner and Zlatev, 2010; Sonesson 2013; Imai and Kita, 2014).

In an experimental study, we investigated how referential iconicity in speech operates in comparison to music, taking into account the factors (a) kinds of iconicity, (b) sensory modality and (c) linguistic/cultural background. In the experiment 21 Swedish and 21 Chinese native speakers had to match musical fragments from Prokofief's *Peter and the Wolf* and spoken word-forms to objects, represented by schematic pictures. In one condition, there were two sound-stimuli and two referents (*more contrastive*). In the other, a single sound-stimulus was to be matched to one of four alternative referents (*less contrastive*), resting more on primary iconicity for successful matching than in the first condition. Some of the stimuli were chosen so that the iconic ground would involve the same modality, while another required cross-modality.

The results showed that there was no significant difference between the overall results for music and linguistic tasks, indicating that the cognitive-semiotic processes involved are not limited to a single cognitive domain or semiotic system. Further, cross-modal iconicity was not more problematic than unimodal. Finally, both Swedish and Chinese participants performed significantly better in the more contrastive than in the less-contrastive condition, showing that

speech/music iconicity is not as transparent as in e.g. realistic depiction. However, both groups performed significantly above chance in both conditions, which serves as a clear indicator that interpreting referential music in music and speech sounds is not purely a case of secondary iconicity.

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Chiastic iconicity

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> *We form in the imagination some sort of diagrammatic, that is, iconic, representation of the facts, as skeletonized as possible.*
> —Charles Sanders Peirce (CP 2.778)

Rhetorical schemes are form / meaning pairs (Turner 1990, Fahnestock 1999). I will argue that, in the case of antimetabole at least, the linkage between form and meaning is diagrammatic, in Peirce's sense of the term.

Antimetabole is the chiastic figure of reverse lexical repetition, illustrated in the following famous example:

1. All for one, one for all.
   [T]ous pour un, un pour tous. (Dumas 1849:129, et passim)

This figure, frequently formalized as ABBA, has its own peculiar iconicity, an iconicity of balance. Chiastic form leverages the principles of quantity, sequential order, and proximity (Givón 1984: 970-971): quantity, because the repetition of words increases their importance (two As, two Bs); sequential order because there are two salient sequences, each the reverse of the other (A<B, B<A); proximity because these reverse-repetitions are mutually relevant because of their proximity to one another (ABˆBA). But the combination of these three principles is not merely additive. It has a unique emergent iconicity that arises from the confluence of these three principles.

The antimetabole conveys a "particular kind of symmetry" (Fahnestock 1999:134), perhaps best illustrated in Peirce's favoured idiom, algebra. "[A]n algebraic formula is an icon," he says, "rendered such by the rules of commutation, association, and distribution of the symbols" (CP 2.279). If we take the most common mnemonic formula of the principle of commutation, we find an antimetabole.

2. $a + b = b + a$

3. This formula expresses the essence of balance: *a + b* equals, weighs the same as, *b + a*. This iconicity is 'skeletonized' as the image schema that Mark Johnson (1987:85-86) calls *twin-pan balance* (Figure 1), a balance of 'weights.' The antimetabolic meaning expressed in 2 is *irrelevance of order*. But Fahnestock shows how antimetabole also "epitomizes arguments concerning reciprocal causality" (1999:134). Her paradigm case is Newton's expression of his third law of motion:

Figure 1: Twin pan balance
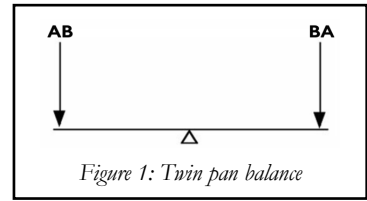
4. If you press a stone with your finger, the finger is also pressed by the stone. Siquis lapidem digito premit, premitur & hujus digitus a lapide. (Newton, 1803 [1687]: 1.15; 1687: 13)

Our Dumas example, for its part (1), expresses reciprocal obligation. In both 1 and 4, the meaning expressed is 'skeletonized' as point balance, a balance of 'forces' (Figure 2; Johnson 1987:86)—the commissive force of obligation (1) or the physical force of 'pressing' (4).

Figure 2: Point balance
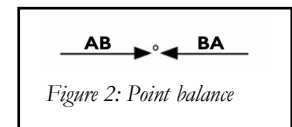
The difference between the chiastic iconicities skeletonized in Figures 1 and 2, as I will argue, depends on the interaction of antimetabole with other figures (chiefly, mesodiplosis, medial repetition, and parison, syntactic parallelism) and with non-figurative linguistic features (for instance, the lexical class of the word that pivots between the As and Bs—e.g., a transitive verb for 1, a concatenator for 2, a preposition for 1).

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Re-vision: Are there ideophones in signed languages?

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> *Re-vision – the act of looking back, of*
>
> *seeing with fresh eyes, of entering an*
>
> *old text from a new critical direction*
>
> *-Adrienne Rich*

One question that has persisted in research on iconicity in languages of the world is the degree to which what have been identified as ideophones in spoken languages can or cannot be identified in signed languages (see, for example, Bergman and Dahl 1994). One of the problems that has contributed to this dilemma is the lack of a clear and all-encompassing (i.e., one that can be applied to all spoken and all signed languages) definition of ideophones. Another problem is that since so many of the signs of signed languages are iconic in origin, a definition based solely on iconicity becomes almost meaningless. Recently, however, Dingemanse (to appear) has formulated a definition of ideophones that can provide the tools necessary for identifying ideophone-like lexical items in signed languages. A simplified expression of Dingemanse's five-point definition of ideophone is: ideophones are members of an (1) open (2) lexical class of (3) marked (4) words that (5) depict sensory imagery.

In the present paper, examples from Japanese Sign Language (JSL) are used to illustrate how an open lexical class of marked signs (marked because they include handshapes originating in the manual syllabary of JSL) that are listed and defined in dictionaries and depict sensory images, should, according to Dingemanse's definition, be considered to be ideophones. In signed languages, handshapes and their location, orientation and movement are the main sublexical components for forming signs, and for the signs considered in this paper, three groups of 'ideophone' signs are identified: 1) signs for which manual syllabary handshapes are merely phonetic clues, uninvolved in the movement, location and orientation of the sign, as is the case for the JSL sign for PERSONAL COMPUTER, and the new sign for HERPES; 2) signs for which manual syllabary handshapes are integrated into already existing signs (with related meanings)

54

and therefore form minimal pairs with the preexisting signs, like the signs for ANTICIPATE (derived from the sign for WAIT) and RAMEN (derived from EAT); 3) more independent signs (i.e., not derived from other signs), like the signs for MOSQUITO and STRESS, where the handshapes are more integral to the meaning of the signs. The handshapes in all of these signs are diagrammatic representations of a shape that triggers an association with a syllable of sound that in turn triggers an association with a spoken language word (all of this being somewhat like what have been called iconicity chains in Herlofsky 2017 and Napoli 2017) that has a meaning similar to what is depicted in the movement, location and orientation of the signs. And since there are semantic (ideo-) components of movement, orientation and location that are combined with the sound-related component (-phone) in the manual syllabary handshape, the term ideophone should not be a problem as a technical term even when applied to signed languages.

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The verbal-kinesic enactment of contrast in North American English

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Given the range of cognitive, communicative, and interactive functions that gestures realize, the discussion of iconicity in gesture has recently broadened from a focus on concrete objects and actions to include pragmatic and discourse gestures (Mittelberg 2017, Wehling 2017), in addition to those associated with more abstract conceptual constructs such as verbal aspect (Hinnell 2018). However, the matter of what exactly constitutes iconicity in gesture is far from resolved (Mittelberg 2014). Iconicity also requires further consideration given the increased focus on the role of articulators beyond the hands – such as the head, shoulders, and gaze – in meaning-making (e.g. Schoonjans 2014, Debras 2017, Jehoul et al 2017). In this paper, I explore the kinesic expressions of contrast – the pitting of one position, object, or idea, against another. The conceptual binariness inherent in contrast is paralleled by a binariness in the body itself and, thus, in the movement that co-speech bodily articulators can take: shoulders moving up/down, hands moving in/out, and head tilting or gaze shifting from side-to-side. Using multimodal data from the Red Hen multimedia archive (Steen & Turner 2013), this study examines, from both a qualitative and quantitative perspective, the verbal and embodied means of expressing contrast in unscripted conversations in North American English.

The archetype utterance for the embodied expression of contrast in English is the bipartite construction *on the one hand...on the other hand*, in which manual gestures are often performed sequentially along the sagittal axis (first on one side and then on the other side of the body) to depict the two options. However, English speakers have a variety of other linguistic means available to them for expressing contrast which do not explicitly reference the hands: the logical operators *not* and *or,* phrasal units such as *vice versa* and *whether (or not)*, semi-fixed idiomatic expressions such as *a David and Goliath situation*, lexical pairs (e.g. *offense/defense),* and positive/negative conjuncts (*should I or shouldn't I*?). In addition, contrast in the discursive domain is marked through concessive devices such as *anyways, however,* and *at any rate*, cases in which a speaker distances herself from the content of the previous

sequence. Concession is frequently aligned with movements of the upper body such as head tilts, shrugs, and shifts in eye gaze. The aims of this paper are thus twofold: firstly, to illustrate a wide range of linguistic constructions that do the work of contrast and to demonstrate how these are performed in the body; and secondly, to propose an account of the co-speech embodiment of contrast grounded in cognitive linguistic principles.

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Bridging phonology, meaning, and written form across time: introducing a database of Chinese literary ideophones

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Ideophones have been receiving renewed interest in the last three decades (see e.g. Voeltz & Kilian-Hatz 2001; the Iconicity in Language and Linguistics series). However, linguistic studies have been synchronic in nature for the most part (Dingemanse 2018). We address this diachronic research gap by constructing a database for literary Chinese ideophones (following Mok 2001; Van Hoey 2018) that explores the variables such as: (1) the phonology across different stages of Chinese; (2) the morphology of ideophones (different types of partial and full reduplication); (3) sensory domain mappings based on a cross-linguistic implicational hierarchy (Dingemanse 2012); (4) Chinese characters and their radical support (Van Hoey 2018).

The database (consultable at https://osf.io/kpwgf/) is conceived as a resource for future analyses. As a case study, we investigate the two different modalities of phonological form and written form, an analysis licensed by the Chinese model of meaning//phonology / writing (xíng-yīn-yì 形-音-義 'shape – sound – meaning', cf. Baxter & Sagart 1998, as opposed to the mere meaning-form pair of most Construction Grammar approaches). We show how and to what extent the meanings of Chinese ideophones are motivated by the phonological form, or the written form, or both at the same time for partially reduplicated items. The preliminary results indicate that 51% of these items are redundantly marked (written and phonology), 39% only for phonology, 5% only for the written form, and 4% did not have any marking along these parameters. These tendencies suggest that both written form and phonological form are important, but that the latter contributes more to the markedness of "the Chinese ideophone".

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Metaphorizing political candidates: The dynamics of metaphorical meaning in campaign commercials

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Metaphor is considered a fundamental tool for making sense of the world, not only in everyday language but also in the realm of political discourse (e.g., Carver & Pikalo 2008; Musolff 2016). The paper aims to address a research object hitherto largely underexplored in the study of metaphors in political discourse: their role in audiovisual political advertising, more precisely in campaign commercials. In particular, it focuses on the question of how metaphorical meaning emerges from the dynamic intertwining of cinematic movement-images and speech, and thus enables viewers to literally make sense of political candidates.

The paper draws on the transdisciplinary cognitive-linguistic and film-analytical framework of Cinematic Metaphor (Müller & Kappelhoff 2018). With experience, affectivity and temporality as core characteristics, cinematic metaphor addresses an embodied thinking in images – a semiotic process modeled by the aesthetic organisation of perception. It accounts for the intertwinings of dynamic imagery by which audiovisual images communicate with their spectators as an aesthetic experience in the first place. Thus, audiovisual images are considered as concrete communicative contexts. From such a perspective, the construction of metaphors is at issue, not the instantiation of pre-hoc existing concepts.

This is illustrated by means of a campaign commercial of the Polish Law and Justice party (PiS) promoting Jarosław Kaczyński in the 2011 parliamentary elections. Through a transdisciplinary method (Müller & Kappelhoff 2018; Horst 2018), it will be described how the perception of viewers is shaped by the aesthetic composition of audiovisual articulatory modalities and how on that basis and through audiovisual representation, metaphorical imagery can become vitally experienced as embodied and dynamic conceptualization (Müller 2008). In this light, metaphorical meaning turns out to be no passive deciphering of underlying intentions of producers. Instead, it is the viewers' 'doing' of figurative meaning from their embodied experiences in the process of viewing that enables them to make sense, and get an idea of the candidate promoted in the campaign commercial. Such an understanding that sets the

inseparable intertwining of sensing and understanding center stage, provides insight into the dynamic nature and embodied affective grounds of metaphor in general. In this light, the paper is in line with Cameron's (2018) notion of 'metaphorizing' in preference to metaphor, as it reveals dynamics as an inherent theoretical facet of metaphor across discourse types.

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Iconicity in word order variation: The case of preposition placement

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In English prepositional relative clauses (RCs), the preposition is either fronted (e.g., *the world in which we live*) or stranded (e.g., *the world which we live in*). Corpus research suggests that this word order variation depends on a range of factors (Hoffmann, 2011), including the meaning of the RC filler. More specifically, while stranding is associated with participant fillers (e.g., *the topic* in *the topic which I talk about* specifies a participant of the *talk* event), fronting is associated with adverbial fillers (e.g., *the way* in *the way in which you talk about it* specifies the manner of the *talk* event). Researchers from different backgrounds have related this to the degree of thematicity, importance, and the grammatical role of the filler. This paper adopts a cognitive grammar perspective (Langacker, 2015) and argues that the correlation results from iconicity.

A sample of prepositional RCs was extracted from native and nonnative English corpora. The data were subjected to a binary mixed-effects regression analysis with preposition placement as a dependent variable and a wide range of predictor variables. For the description of filler meanings, a frame semantic approach was adopted (Fillmore & Baker, 2010): the meaning of a RC consists of the verbal event frame, its core nominal participants, and noncore facets or background circumstances provided by adverbials. The filler is integrated into the RC either as core/participant or noncore/adverbial element of the verbal frame, depending on whether its meaning is implied by the frame. As expected, the model indicated, among other things, that preposition placement correlated with filler meaning such that prepositions tended to strand with core/participant fillers but preferred fronting with noncore/adverbial fillers.

This confirms that the place of the preposition is used to indicate the role of the filler in the RC. This paper argues that the linear proximity of the preposition to the frame-evoking verb mirrors the conceptual proximity or coreness of the filler to the frame. In general, there is a tendency in language for words which belong together semantically (at the conceptual or meaning level) to be placed more contiguously (at the form level) (Givón, 1984, 64). Since the filler nominal is

immobile, the mobile preposition "takes over the job." Stranding places the preposition close to the verb. This indicates high conceptual proximity of the filler to the verb frame and results in a construal as core element or participant of the verbal event. In contrast, fronting increases the linear distance between preposition and verb, which indicates low conceptual proximity of the filler to the verb frame and triggers a noncore construal as background circumstances. Contrary to expectations, when the filler was embedded in a noun phrase within the RC (e.g., *the topic the intricacies of which I explore*), prepositions tended to front, despite the close conceptual relation of filler and receiving frame. This suggests that fronting construes the filler as out of focus at the clause level.

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The experiential affordances of metaphoricity in audio-visual campaign videos

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Within the social semiotic literature on multimodality there is a strong focus on the cultural and social resources for making meaning, that is the need to look at the co-occurrence and interplay of different means of making meaning often labelled as modes or modalities. However, the prominence given to socio-cultural factors also means that modes are kept apart from the type of meaning making motivated by our sensory system (Jewitt 2014). A similar aspiration, in relation to the study of metaphor, can be found in Zlatev (in press) proposing to distinguish between polysemiotic metaphor (involving different semiotic systems such as language, gesture, depiction etc.) and multimodal metaphor (involving different senses); only here modalities are reserved to the senses, not kept apart from them. Yet another option would be to view the emergence of metaphor, or metaphoricity, in socio-cultural artifacts involving both text, sound, music and moving images as motivated by experiential affordances (Jensen and Cuffari 2014) cutting across semiotic resources and different modalities. Such an ecological perspective entails a focus on the way that different sensory inputs, provided by semiotic resources, come with distinct possibilities and constraints for meaning making that in different ways contribute to a metaphoric experience of doubleness in meaning. In my presentation, I will lay out this perspective and apply it to an analysis of a campaign video from DR (Danish National Television) which was broadcasted in the fall of 2017 as part of a larger campaign to get people to vote for the municipal elections (Jensen and Greve in press). In the analysis, I will disentangle the web of metaphoricity embedded in the trajectory, style and message of the video. To understand how the video works it is mandatory not to look upon the sensory inputs in isolation, but to treat them as a functional whole. Taken together they enact a metaphoricity involving a condensation in meaning (El Refaie2003) and a potential for affective transformation that is crucial in order to carry the message of the video. The analysis will also illustrate the point made by Müller and Schmitt (2015) that the workings of metaphoricity in audio-visual products, such as the campaign video, have a different ontological character

involving sensation, affect, and temporality to a much larger degree than metaphor in written texts or verbal interaction.

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The underlying dimensions of sound-color correspondences reveal typologically and evolutionary grounded linguistic primitives

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Color plays a crucial role in language as it signals anything from danger and emotions to political affiliations, and most people have strong, sometimes synesthetic associations between colors and sounds. Sound-colors mappings have therefore been extensively investigated (Spence 2011; Hamilton-Fletcher et al. 2017). However, previous studies on color symbolism and perceptual studies mostly investigated focal colors and phonemes from a few languages rather than the underlying visual and acoustic parameters. Thus, we conducted two studies, looking for the perceptual dimensions that drive sound-color correspondences and for linguistic evidence of sound-color symbolism.

In study I, we tested cross-modal correspondences between visual (luminance, hue, saturation) and acoustic (loudness, pitch, spectrum, amplitude modulation) dimensions through 22 Implicit Associations Task experiments. Colors were sampled from the perceptually accurate *CIE-Lab* space, and the sounds were created with a formant synthesizer. Measured accuracy and reaction time showed that loudness and pitch correlated with luminance and saturation. While any upward shift of spectral energy was associated with higher luminance and saturation, changing formant frequencies of synthetic vowels failed to evoke any associations, as long as the spectral centroid remained constant. We also failed to discover robust associations between the hue of isoluminant colors and any acoustic characteristic.

In study II, we investigated eleven color terms and related concepts (red-green, yellow-blue, black-white, gray, night-day, dark-light). The data was gathered from 245 areally spread language families and transcribed into The International Phonetic Alphabet (IPA). Each phoneme was described acoustically using high-quality IPA recordings (Lawson et al. 2015). As predicted from the results of Study I, vowels with high brightness, sonority and F_1 were overrepresented in names of colors with high luminance. In addition, color saturation was associated with the brightness of vowels and sonority of consonants.

Our findings strongly indicate that quantitative dimensions (luminance, saturation, loudness, frequency) dominate over qualitative ones (hue, vowel quality) in terms of saliency. The results are further corroborated by reports that toddlers (Mondloch & Maurer 2004) and chimpanzees (Ludwig et al. 2011) prefer to map high luminance to high pitch and that white and black, followed by red, are the most typologically fundamental lexicalized color terms (Kay & Maffi 1999). The associations between sonorous consonants and saturation could likewise be connected with the arguably most saturated focal color, red (Witzel & Franklin 2014). Thus, these findings can help us understand how humans categorize concepts and tell us something about the evolution of language.

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Lexical Phonosemantics: A Featural Analysis

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Blasi et al. (2016) showed that, in thousands of languages, certain phonemes are abnormally more frequent or less so in the words for certain meanings. Beyond their phoneme-based analysis, however, it would be also interesting to conduct a feature-based analysis of the phonosemantic biases within the basic vocabulary, in line with previous smaller-scale studies which showed that, for example, words for 'nose' tend to have nasal sounds (Urban 2011). This study aims to reveal the phonosemantic biases within the Leipzig-Jakarta Lists (Tadmor 2009) of 66 genealogically unrelated languages, adopting a featural analysis, i. e. investigating whether certain features are statistically more frequent or less so in the phonemes of the morphemes for certain meanings. The results (Figure 1) show statistically significant (FDR = 0.1) correlations (blue = positive, red = negative) between certain meanings and certain phonological features, the features based on the classification by Mortensen et al. (2016). Among the correlations, we find not only those motivated by iconicity (such as the correlation between round body parts and [+round]) but also those by indexicality (such as the correlation between 'not' and [+nasal], presumably motivated by the nasal vocal gesture expressing affirmation or negation). This study again falsifies the long-held belief of the total arbitrariness of the sign by demonstrating that phonosemantic bias is not limited to a specific set of vocabulary (such as ideophones and onomatopoeia) but observable in the most basic list of morphemes as well.
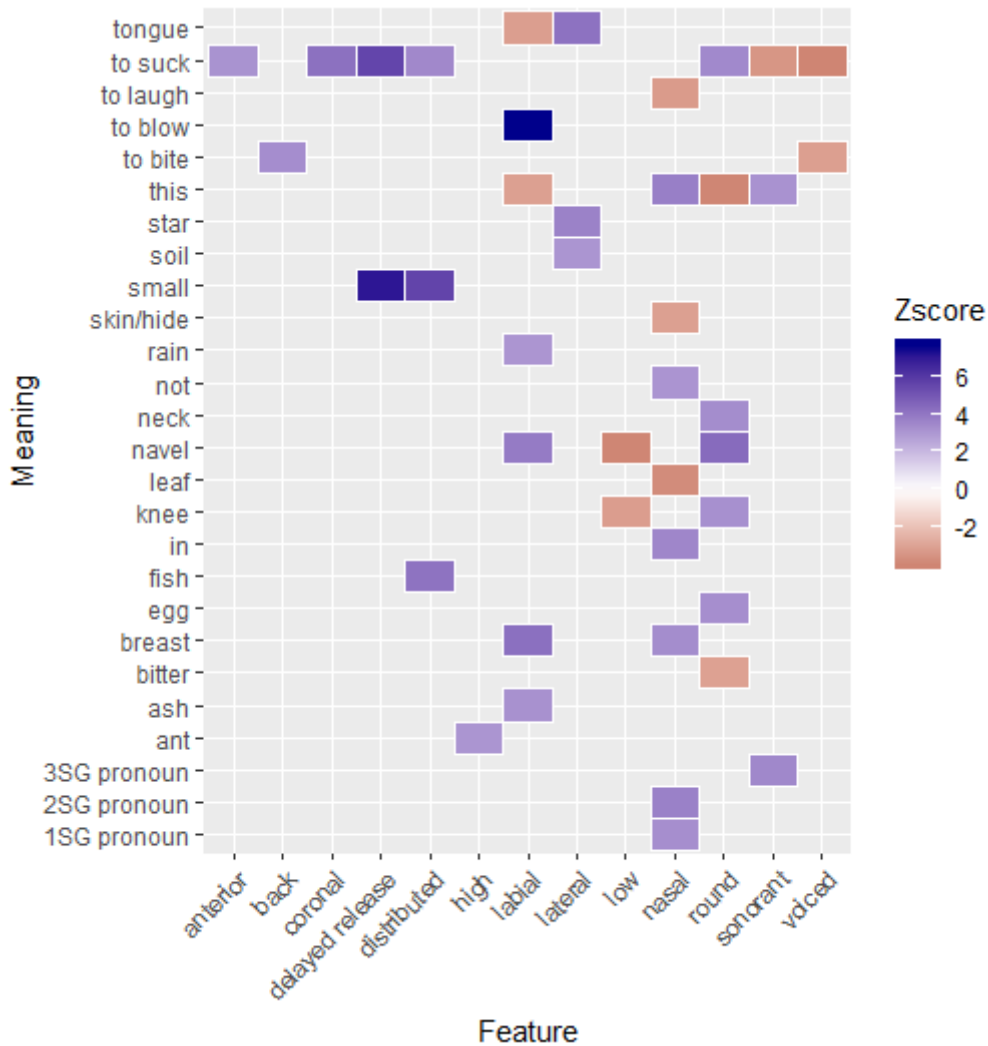
Figure 1. Phonosemantic biases between features and meanings.

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Motion metaphors in music criticism: How metaphorical are they?

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Music is commonly and conventionally described in terms of motion: melodies *fall* and *rise*, and motives may *follow* a harmonic *path*. Cognitive linguistic approaches to the phenomenon of musical motion assume that it is based on conceptual metaphors (Johnson & Larson 2003) in which more concrete domains are used to reason about more abstract domains (Lakoff & Johnson 1980, 1999). According to Johnson and Larson (2003), musical motion is based on the conceptual metaphors TIME IS MOTION and the Event Structure Metaphor.

Other scholars argue that musical motion expressions are not metaphorical because they are highly conventionalised in the language of music criticism (Guck 1991). Furthermore, the concept of musical motion might be conceptually closer to literal motion because people often literally move when they make music or when they listen to music (Cox 2016).

Given this discussion, the present study aims to investigate whether musical motion is perceived as less metaphorical compared to more prototypical cases of metaphorical motion. In doing so, the study aims to contribute to the current debate of viewing metaphor as a gradable phenomenon (Hanks 2006). According to Hanks (2006), the metaphoricity of an expression is low 1) if frequency of the expression is high, or 2) if its source and target domain are conceptually close.

For the present study, 83 English-speaking participants rated 52 sentences according to their degree of metaphoricity as well as association to actual motion on a five-point Likert scale in an online rating task. Each sentence expressed a different motion condition, which was either literal, fictive, musical, or metaphorical. Participants also had to indicate their level of knowledge about (classical) music. Musical motion was expected to be perceived as less metaphorical because it might be conceptually closer to literal or fictive motion. Moreover, participants with a musical background were expected to perceive musical motion as less metaphorical given that they are more familiar with it.

The results show that there is an interactive effect between knowledge of (classical) music and motion condition: The higher the level of musical knowledge, the more likely musical motion was rated as less metaphorical. The findings support an acculturation view of metaphor (Caballero & Ibarretxe-Antuñano 2013) emphasising that the perception of the metaphoricity of an expression depends on the knowledge and experience of the individual language user. It may thus be argued that the original iconic motivation for viewing music as motion has faded for participants with a higher degree of musical knowledge, and that for them, musical motion expressions have become conventionalised and "worn down to mere symbols" (Fisher & Nänny 1999: xix).

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Iconicity as a cognitive phenomenon – a case of problem-solving activities

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1. Iconicity

In my presentation I depart from the reading of iconicity as pictoriality (cf. discussion in e.g. Sonesson 1998) in favor of more general reading of this phenomenon – perhaps best covered by Peircean notions of diagrams and metaphors. In line with Sonesson's statement that "iconicity per se may well be independent of the sign function," I treat iconicity as a phenomenon, which has not only semiotic, but also cognitive significance. In other words, I argue that iconicity may turn out to be important factor in some cases of cognitive activities.

2. Cognition as problem solving

As Clark (2008) suggests, human cognition can be nontrivially characterized in terms of various problem-solving activities. The very notion of problem-solving, however, differs in dependence on an accepted view on cognition. Traditional, cognitivist approaches (Newell&Simon 1972), extended view (Clark), enactive-embodied approaches to cognition – all these approaches characterize problem-solving in their own ways. I will shortly sketch differences between these views on problem-solving activities.

3. Iconicity in problem-solving

The main argument of my presentation is that ability to recognize/see iconicity lies at the heart of problem-solving activity - either conceived in the terms of cognitivist psychology, extended view on or in terms of ecological/enactive/embodied approaches to cognition.

As some psychologists argue (cf. e.g. Brophy 1998; Nęcka et al. 2006), many of our problem-solving activities crucially rely or depend on our past experiences with certain classes of problems - the crucial factor influencing problem-solving activity is expertise. This expertise consists in (among others) ability to discover either surface or deep structures of problems as

well as ability to recognize "resemblance mappings" between these structures of problems. I will argue that such mappings can be treated as iconicity.

In this context, it seems that Sonesson's distinction between primary and secondary iconicity reflects specific characteristics of problem-solving activities. On the one hand - as psychologists argue - attempts to solve a new problem are often based on a perceived resemblance between a structure of a new problem and structures of old ones ("primary iconicity"). On the other hand, problem-solving cognitive subjects may be told that there is some mapping between structures of a new and old problems – the issue is to discover such a mapping ("secondary iconicity").

I also argue that the capacity to recognize iconicity cannot be reduced to set of procedures: as problem-solving examples show, the ability to see affinities between structures of various problems often require a kind of non-algorithmic insight which cannot be precisely specified, but can be related to past experiences, current context, actual biases of a subject etc.

The arguments presented above will be illustrated with relevant examples of problem-solving activities.

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What Choreographs the Dancer:
Iconicity of Perceived Emotional Fluidity in Dance

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In my presentation, I synthesize connotations of emotional fluidity iconically represented in dance through the prism of my research on verbal (poetry) and visual (painting and cinema) arts of the Russian Symbolist period. For this purpose, I focus on the famous ballerina solo of *The Dying Swan* performed by ballerina Vera Karalli as part of her role in Evgenii Bauer 1916 film of the same name. The solo is based on *Le cygne* ("The Swan"), the 13th movement of *The Carnival of the Animals* (1886) by French composer Camille Saint-Saëns (1835-1921), and was first choreographed by Mikhail Fokine for Anna Pavlova. Within the context of Symbolism, the dance mimicking movements of a dying bird goes far beyond mimesis: it comes to signify the lived emotional experience of "dying of love" through the pliancy of the dancing body. We can clearly identify iconicity of emotional transcendence and the underlying metaphor of fluidity in *The Swan Dance*, as the context in which it appears matches to the account of this metaphor and its iconic effects in synesthetic verbal and visual arts of Symbolism. The biomorphic bodily design of the solo—from hand-gesture to full body-gesture—embodies the psyche in flux, just like a combination of sounds, rhyme, and meter do in poetry; the balance between shades of paint, lines and shapes in painting creates a similar effect. Hence, dance blends sensations belonging to different sensory modes and iconically evokes multisensory imagery codified in poetry and visual arts.

I claim that iconicity of emotional liquescence in dance is achieved because of the inherent fluidity of the medium which cognitively blends various mental frames. As movement keeps us in touch with our world in the most intimate and profound way, our experience of movement in dance allows us to realize our inseparability from world. Liquescence of dance reveals itself as blending in one's body both subject and object of its performance, the mover and the moved across time and space simultaneously; it is in the experience of blending between the self and one's body—a tactile, kinesthetic, conscious experience of the body as one's own; it is also in

the experience of one's own fluidity as self-continuity in the midst of change. Rhythm in dance is the rhythm of the body's movement. A perceived liquescence of dance, blends the consciousness of the body with a bodily consciousness of time. These aspects of dance foreground the body as the repository of memory, which is inseparable from emotionality. Thus, the double reality of the dancing body as a physical thing and as a subjective sensuous experience fuses the physical and the emotional within one moving body, which, in the context of Symbolism, can be understood as spiritual transcendence by way of physical sensations.

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Iconicity in the light of luminosity

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The present study deals with iconicity of the semantic group of English words the underlying notion of which is luminosity. The experimental material was obtained from Roget's Thesaurus with the further detailed etymological analysis that limited the corpus to 77 lexemes. The analysis technique of the experimental material significantly differs from the previous studies (Drellishak 2006; Otis & Sagi 2008; Abramova, Fernández & Sangati 2013) by the method employed to carry out the study. The corpus was processed by means of an experimental data statistical method (Hudson 1970) that allows obtaining reliable estimates of distribution of a discrete random variable, the final sample size being relatively large (n≥30). This method of analysis proved to be rather effective in similar studies of sound symbolism of such lexical groups as, for example, the designation of 'roundness' designation of 'roundness'; of 'smoothness, lubricity and slipperiness'; of 'chumping and munching' and of 'noisy and greedy devourment of food' (Besedina & Noland 2014; Besedina 2016).

The structural phonetic analysis of the studied corpus and the random sample of English words (n=700 words, or 4652 phonemes), created by the use of a Random Number Generator and supposed to represent the English language as a whole, revealed with the 95% confidence interval that the studied group exhibits that occurrences of such phonemes as /g/, /b/, /l/ and /f/ exceeds their mathematical expectations (the probability-weighted average of all possible values) in the English language in 6, 0 4, 5; 3. 4; 1. 2 times, accordingly. It should be specially noted that the most important role in rendering the notion of luminosity should be assigned to the following initial phonesthemes /bl/ (blare, blay, blaze, blick, blink, blip, etc.), /fl/ (flame, flare, flash, flicker, flimmer, etc.) and /gl/ (glade, glare, glance, glaze, gleam, gleed, glimmer, glimble, glimpse, glint, glish, glitter, glow, etc.), their probability of occurrence exceeding expectations in 23, 10 and 54 times.

The iconicity of English words conveying the notion of luminosity makes them fairly productive to denote associated qualities of the objects in some specialist areas and jargons. In American

slang, for example, luminosity phonosthemes are common to form words describing such qualities as fame and popularity (the glitteraty), cheap and too bright things (flashy), etc. (Kuzmich 1993).

The analysis of the findings proved the efficiency of the method used and allows to suppose that statistical analysis of iconic vocabulary might be an additional criterion of the phonosemantic analysis developed by S. V. Voronin (Voronin 1982).

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Unconventional Iconicity can be Conventional: Evidence from demonstrations following quotatives in American English

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Some languages have more forms of conventional iconicity than others. Japanese, for example, has more ideophones than English. So how do English speakers depict percepts when ideophones are lacking? One possibility is demonstrations: unconventional, yet depictive, discourse. Demonstrations follow quotatives (e.g., I was like ___) and perform referents as opposed to describing them. In English, speakers may enact/create demonstrations using their hands, voice, and body. This paper examines which visual and spoken components are vital to comprehending demonstrations with features from Güldemann's (2008) observations: enacted verbal behavior, non-linguistic sound imitation, ideophones, and representational gesture. 28 videos containing demonstrations of 11 celebrities engaging in impromptu storytelling on USA talk shows were our critical stimuli. 145 native speakers completed forced multiple-choice judgement tasks to qualify each demonstration. To see which forms of visual and spoken communication contributed to comprehension, videos were presented in visual (muted), audio (pixelated and darkened), and audio-visual (left as is) conditions. Our results show that if arbitrary speech (e.g., I was like *I can't go over the ocean!*) was in a demonstration, then it was vital to comprehension. The visual condition rendered these demonstrations uninterpretable. If sound imitations (e.g., I was like *prfff!*) or ideophones coupled with hand gesture (e.g., I was like *yay!* + hands opening and closing in unison) were in a demonstration, then the interpretability of that demonstration across our experimental conditions depended on whether its components (gesture, sound imitation) can unambiguously express meaning in isolation. Our findings are in line with studies on enactments in deaf signed languages whereby the more unconventional a form of iconic depiction is, the more it requires conventional framing to be interpretable (Cormier et al. 2013; Ferrara & Johnston 2014; Hodge & Ferrara 2014). These findings allow us to make several conjectures about the well-formedness of demonstrations.

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Dumas and Hamong as New Translators:

Intersemiotic Iconicity in Their Names

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This research examines the Peircean notion of translation from a Petrillian perspective (Petrilli 2003) in investigating Alexandre Dumas's *Le Comte de Monte Cristo* and Sanghyup Lee's (a.k.a. Hamong's) *Haewangseong* in terms of iconicity and translatoriality (Lim 2018). Taking into account Peirce's (1931-1958) triadic model of the sign (which highlights the mechanism of a sign [process] as interpretive processes as translation), it seeks to test the applicability of a new hypothesis: that all sign interpreters (in the creation/production/comprehension/manipulation of signs) are fundamentally translators. As various kinds of iconicity prevail in language as a modeling system/device/capacity, it is expected that not only a literary "creation" (i.e., a serialized novel in *Journal des Débats*) but also an abridged and localized "adaptation" (i.e., that in *Maeil Shinbo*) should be concretized in such a way that icon(icity) functions as a central device in/via various kinds of translation (Petrilli 2003: 19). Taking names as main Target Texts (Lim 2018), this research attempts to implement a metasemiotic and metatranslative investigation into the naming strategies and mechanisms of Dumas and Hamong because anthroponyms and toponyms are crucial indexicality-high representamens that can evoke various interpretants for/toward their (semiotic) objects and the interpreters' cognitive semiotics. A context-rich interdisciplinary investigation discovers that, unlike the dualist form-meaning-based assumption that creative inventions and adaptations in art must depend on arbitrary manipulation, even superficially arbitrary signs (in the oral, visual, lexical, discursive, textual, and cultural dimensions) are, in effect, iconicity-based or iconicity-centered multicomplex representamens as sophisticated translations.

On the other hand, however, seemingly iconic representamens often turn out to be iconicity-based or iconicity-oriented arbitrary/symbolic representamens. In other words, intersemiotic iconicity in/for naming is found to be utilized (or even manipulated) not only interlingually but also intralingually (and in intralinguistic/interlinguistic dimensions) to the extent that a name can linguistically represent each translator's goals/purposes well. Here, it becomes clear that

even seemingly trivial and irrelevant names can be systematically interpreted/translated as unique representamens that function as significant Target Texts for the writers and, at the same time, as crucial Source Texts for new Target Readers in new Target Cultures.

This research, therefore, concludes that examples of icon(icity) and their (meta-) translative dynamics can be better examined and more adequately explicated when one applies the Peircean/Petrillian paradigm of sign and translation. And, irrespective of literary or political criticism of their works, it can be argued that Dumas and Hamong have succeeded as skillful translators with iconicity-sensitive metatranslative literacy and metatranslational competence. Such a utilitarian view, nonetheless, leaves much room for debate in semioethics (Petrilli 2014).

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Why Do They Flip in Korea?: From Hunminjeongeum to Yaminjeongeum

Via Selective Iconicity

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This research examines the Yaminjeongeum system, an orthographically, semantically, semiotically, and culturally unique phenomenon-slash-strategy created and disseminated by *yagu* ('baseball') aficionados on Korean social media. Named after Hunminjeongeum (the script invented by Sejong the Great), Yaminjeongeum is a newly-coined term that refers to the eccentric verbalization trend of creating flipping-based/flicking-induced orthographic puns (e.g., 문 from 곰; 띵곡 from 명곡; ㅇ도뜨 from 비냉). Despite the criticism against prolific Yaminjeongeum users' ignorant misuse (and even destruction) of the standard orthography and vocabulary (i.e., for their 'arbitrary' nonsensical distortions), this study argues that it is Yaminjeongeum's metasemiotic principle and metatranslative strategy that deserve and need a deeper investigation in terms of the paradigm of the sign and translation (Petrilli 2003; Lim 2014a; Lim 2014b). For an analysis of diverse ungrammatical examples, it then proposes a metatranslative application of the Peircean/Petrillian perspective on the sign, meaning, translation, and language (Peirce 1931-1958; Petrilli 2014; cf. Jakobson 1959). In essence, it is the (selective) iconicity that plays a key role simply because the inventors of Yaminjeongeum have utilized iconicity selectively for the production of new Target Texts with visual/graphic transemes (but with no distinct sememes/morphemes). The selective manipulation of iconicity is a highly metasemiotic and metatranslative operation designed for indexicality-high metapragmatic purposes and effects. The construability of new Korean-specific iconicity depends on the authentic compositional mechanism of its semiotic foundation (i.e., Hunminjeongeum) in the semiogenesis and, simultaneously, on the analysts'/users' metasemiotic/metatranslative literacy and metalinguistic/metalingual knowledge. This metatranslative phenomenon suggests the evolutionary development of young Koreans' semiotic/translational metaknowledge of language, meaning, semiotic media, and pragmatic functions. While this iconicity-specific argumentation seems to oppose the popular claim of

arbitrary "deconstruction" (cf. Kang 2018), this alternative approach simply implies that the triadic model of the sign can provide more descriptive and explanatory adequacy.

In conclusion, a metatranslative analysis discovers that the primary basis of such unique semiogenesis is Hangeul's ability to assemble graphemes/transemes modularly in written Korean. On that condition, the visual icon(icity)'s salience outpowers the oral/phonetic signs' ties and functions in relation to lexical meanings. Subsequently, the transmuted signs' iconicity on the visual orthographic level plays a key role in the (meta-) cognitive operation (cf. no mere mirroring), particularly, for higher indexicality of semiotic objects/referents in the users' embodied cognition. Such creativity via selective iconicity proves that the Yaminjeongeum users represent new evidence for (1) the Peircean/Petrillian notion of translatoriality, (2) the qualitative plurality of language, and (3) new intersemiotic translations from visual graphemes into new transemes and, then, into spoken neologisms. In addition, as more people flip now, this research proposes that semioethics should be taken more seriously (Petrilli 2014).

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Iconicity in Taiwan Sign Language: The Relationship between Concrete Nouns and the Difficulty of Handshapes.

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The purpose of this study is to test whether iconicity interacts with articulatory difficulty in Taiwan Sign Language (TSL). Ann (2006) found that articulatorily difficult signs are less common in TSL than those with easier handshapes. Previous research has also shown that formal constraints can override iconicity in sign languages (starting with Frishberg 1975). However, it is not clear if this is also true for articulatory difficulty. To find out, we started from the assumption that iconicity can only be direct for concrete concepts; abstract concepts can also be represented iconically, but only indirectly via metaphor (Taub 2001). We hypothesized that concrete signs may therefore require more difficult handshapes in order to imitate the physical forms of their referents more closely, whereas abstract signs might be permitted to use less difficult handshapes due to articulatory constraints. Based on the TSL Online Dictionary (Tsay *et al.* 2015), we collected 120 signs and ran two statistical analyses. The first analysis contrasted 60 concrete signs and 60 abstract signs, with the concrete signs including animals, plants and artificial objects, and the abstract signs having referents that are not real physical objects. The second analysis used another set of 120 randomly selected signs, using concreteness ratings from the MRC Psycholinguistic Database (Coltheart 1981), with concrete and abstract signs divided at the median concreteness rating. Both analyses found that the distribution of difficult handshapes and easy handshapes do not significantly differ across the concrete and abstract signs. The results suggest that both types of signs are subject to the same articulatory constraints. However, this does not mean that iconicity can never influence lexical structure. When imitating referents, the form of iconic signs may rely not just handshapes, but also on movement and location, and sign languages may also differ in their iconic strategies.

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Depiction vs. rehearsal: Comparing how professional musicians use depictive playing and rehearsal playing

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In this paper, we examine how musicians switch between iconic demonstrations and rehearsals of passages of music. Using two data corpora of professional musicians rehearsing, we will investigate what practices the musicians use to distinguish playing-as-depiction and playing-as-rehearsing. Clark defined depictions (iconic instances) as the act of creating one physical scene to represent another, displaced in time and space (2016: 324). However, in rehearsals, the displacement of both time and space are small, and depictions are vulnerable to being seen, not as iconic demonstrations of playing, but as actual instances of rehearsing. How do participants distinguish the iconic from the actual?

Prior interactional literature examining musical rehearsal has focused on formal instruction environments such as (master)classes (Szczepek-Reed et al. 2013; Tolins 2013). In contrast, our study provides interaction between colleagues who are developing and rehearsing pieces, rather than instructing musical skills. As a result, participants do not 'relinquish' (Reed 2015) the rehearsal space when completing depictions of how to play, because they are part of the next iteration of music – they start again as a group. Given that players need to know when to start playing, how do they distinguish between the playing-as-depictive, for demonstration's sake, and playing as restarting rehearsal?

The data come from two corpora of naturally occurring video recordings in Swedish: a professional rock band rehearsal (2 hours) and a series of rehearsals in professional opera company (15 hours). The data are analyzed with conversation analysis. Conversation analysis grounds the study in the musicians' understandings as displayed to each other, in situ (Schegloff, 2007), which prioritizes an emic understanding of the use of iconicity.

Depiction and rehearsal have different trajectories. Depictive sections are shorter, and demonstrative of what should be done while playing next. Playing-as-rehearsing invites the other musicians to play, and has the potential to build into a full production of a song. Musicians

begin with lexical, indexical suggestions (1, below), and move into depiction where necessary, first verbally (2), then by playing (3). For example, below the bassist suggests an alternate drum playing, and re-designs his suggestion until intersubjectivity is achieved:

1) `så de e som att du spelar fy- en fyra mot våran trea`

   so it's like you play fou- a four against our three

2) `=asså så om du spelar du du ka du du du$ du ka…`

   like so if you play du du ka du du du du ka…

3) `a-a-asså om du spelar…`

   so if you play ((begins to play drums))

Doing actual playing as demonstration can *risk* starting the full production of a song, which is harder to stop and start. Musicians hear playing as depiction, not the opening of playing-as-rehearsal, until proven otherwise. In summary, we investigate a set of practices for distinguishing musical playing as iconic (playing-as-depiction) vs. starting a song (playing-as-rehearsal).

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Translating from unisemiotic to polysemiotic narratives: A study of Finnish speech and gestures

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Human communication is both *polysemiotic* and *multimodal*: it combines ensembles of representations from different *semiotic systems,* such as language, gestures and pictures, by use of different *sensory modalities*, for example, vision, hearing and touch (Green, 2014; Zlatev, 2019). Each semiotic system has its unique storytelling potentials, which makes intersemiotic translation challenging (Jakobson 1959; Sonesson, 2014). We investigated the influence of the source semiotic system on the way a story is transferred either from unisemiotic narratives in speech (using only the auditory modality) or from a sequence of pictures (using only the visual modality) to polysemiotic narratives consisting of speech and co-speech gestures.

Two groups of 19 Finnish native speakers each were presented with the story *Frog, where are you?* (Mayer, 1969). The participants in one of the two groups heard the story, while those in the other group looked at the sequence of pictures from the book. Then each participant retold the story to an addressee. The narratives were video-recorded and analysed for both speech and gestures. Speech was segmented in clauses and analysed for story structure (Berman & Slobin, 1994) and connectives. All gestures were categorized as iconic (enactments and non-enactments), deictic, emblematic or pragmatic. Due to the high degree of iconicity present in the semiotic system of pictures, we expected more iconic gestures (especially enactments performed from a first-person perspective) in the narratives transferred from pictures than in those transferred from speech. Conversely, we expected greater narrative coherence (i.e., a more diverse use of connective devices and higher number of plot elements) in the narratives transferred from speech than in those from pictures.

The results showed that more iconic gestures were produced in the narratives translated from speech, but these were primarily not from the enactment subtype. As expected, iconic enactments were more frequent in the narratives translated from the story presented in pictures. The narratives produced by participants who had only heard the story did not have a

greater variety of connective devices, but the type of devices differed slightly between the groups. Together with some additional differences between the groups that had not been anticipated, the results indicate that a story presented in different semiotic systems will influence the translated polysemiotic narratives.

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Signers often (but not always) modify their signs to enhance iconicity

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In order to understand the resemblance between form and meaning – iconicity – one has to compare the structural correspondences between features of form and meaning [1]. We notice these mappings as we opportunistically enhance iconicity in spoken and signed languages by modifying the phonological form. For example, Japanese speakers can iconically modify conventional, lexical words by reduplicating a root morpheme [2]. In signed languages, signers often modify lexical signs by enlarging, lengthening, or repeating a phonological parameter such as movement [3]. In American Sign Language, the lexical sign WALK iconically represents two feet moving back and forth. To highlight the action of a person walking very quickly or slowly, a signer could take advantage of the sign's iconic features by speeding up or slowing down the movement of the sign to depict the speed of walking.

Do signers always modify their signs to enhance iconicity, or are there constraints on when and how a sign can be iconically modified? Ten native signers of ASL were asked to describe an action or object that (1) matched, (2) partially matched, or (3) mismatched features of the citation form of the lexical sign that describes the action. The findings thus far show that signers do not always modify their lexical signs—even when the modification would have improved the iconic mapping between form and meaning. For example, signers did not modify the citation form WALK to describe a girl walking backwards (a type 3 event), but instead added a depicting construction to the citation form.

Signers were more likely to modify lexical signs in which the hands trace the shape of objects (e.g., HOUSE or BOTTLE), as long as the object had a prototypical shape (e.g., signers often modified the sign BOTTLE to depict a long bottle that has a typical shape —82% but not for a curvy bottle—11%). In addition, there were also phonological constraints: signers were less likely to modify lexical signs in which the hand represents the object, regardless of prototypicality (e.g., TREE or TIE; 7%), presumably because doing so would cause the listener

90

to misinterpret the iconic modification (e.g., twisting the wrist for TREE could be interpreted as a tree moving in the wind, not a larger tree). Form-meaning mappings are not always as iconic as they could be—the mapping is often constrained by phonological and articulatory pressures [4].

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The diachronic stability of Japanese ideophones and the iconicity-systematicity relationship

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This study examines the relationship between iconicity (a motivated form-meaning mapping) and systematicity (statistical regularities between form and meaning or function) (Dingemanse, Blasi, Lupyan, Christiansen, & Monaghan, 2015). This is done through the lens of diachronic sound change in Japanese ideophones, an open class of marked iconic words. The apparent resistance of ideophones to regular processes of sound change has been noted and frequently attributed to their iconicity (e.g. Diffloth, 1979). Taking standard Japanese as a baseline, I adopt a double-pronged approach to quantify sound change in ideophones and comparable arbitrary words from two varieties of Ryukyuan (Japonic), Ishigaki and Miyako. First, for words with a verifiable standard Japanese cognate, I use string edit distances between cognates to measure the degree to which sound change has occured in the cognate set. Second, for all words, I use a `phonotactic divergence score' which is a measure of how different a word is to standard Japanese words in general, based on the number of deviations it makes from Japanese phonotactics.

Both measures confirm that ideophones in Ishigaki and Miyako have undergone significantly less regular sound change than comparable words from the non-iconic lexicon. However, onomatopoeics—the subclass of ideophones representing sounds directly, e.g. *biibii* `tweet-tweet', *kokekokko*: `cock-a-doodle-doo'—incorporated more phonological innovations and were less resistant to sound change than ideophones representing non-audible phenomena, e.g. *taratara* `trickling', via more indirect mappings. I argue that this can be explained in terms of the iconicity-systematicity relationship in onomatopoeics as opposed to other ideophones.

For ideophones whose iconicity is more indirect, it is systematicity that facilitates the establishment and interpretation of phonosemantic mappings. However, for onomatopoeics, which employ more direct and transparent mappings, there is less of a need for systematicity. For example, Japanese onomatopoeics frequently employ less systematic or even completely unproductive morphophonological templates (Akita, 2013), and similarly while the majority of

Korean ideophones display systematic vowel harmony, onomatopoeics are more likely to contain disharmonic forms (Kwon, 2018). When new sounds or sound configurations enter the regular phonology these new sounds and sound patterns can be used in onomatopoeics with a transparent interpretation, whereas the establishment of indirectly iconic phonosemantic mappings is more reliant on the existence of large sets of similar systematic correspondences, and thus takes longer. This explains the Miyako and Ishigaki onomatopoeics greater incorporation of new sounds when compared to other ideophones. I also argue that systematicity is better able to account for certain grammatical constraints regarding the usage of Japanese ideophones which have previously been analysed as iconicity-based constraints (Akita, 2013). My aim is to highlight that the behaviour of ideophones cannot be understood in terms of iconicity alone, but rather that it is the interplay of iconicity with systematicity which shapes ideophone behaviour.

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Iconicity as a Function of Analogy

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I propose to define analogy as a cognitive process of identification that requires a relation of similarity (binary or proportional) between two (or more) entities, a relation that is established consciously or not, by a singular individual in a singular context. If we consider that analogy is a fundamental cognitive process and that this process therefore plays an important role in the structuring of languages, in linguistic practices and in language acquisition, it is necessary to undertake a systematic description of the set of relations of similarity that are conceivable and likely to generate analogies. However, a "functional" approach must complete this purely descriptive approach. The general psychological function of analogy, which consists in experiencing a target by means of an already known source similar to the target (Gentner 1983, Gentner & Smith 2012), includes a number of more specific linguistic functions: categorizing, regularizing, argumentative, paraphrastic, figurative and iconic. In this framework, iconicity is therefore defined as one of the functions of analogy.

The *categorizing function* of linguistic analogy is a specification of the general psychological function of categorization. Categorization, whether categorizing a phonological, morphological, syntactic, semantic, textual, or referential structure, is nothing but an analogical process. Categorizing is to make an analogy with the purpose of categorizing: it is in this sense that categorization is one of the functions of analogy, but a function that is fundamental because it very often underlies the other functions of analogy.

The *regularizing function* informs the regularities of linguistic structures, mainly morphological, both synchronically and diachronically. It partly covers the Saussurian "relative motivation" and the morphological use of diagrammatic iconicity.

The *paraphrastic function* informs the paraphrastic processes, both intralinguistic (paraphrase in the usual sense) and interlinguistic (translation, see Ladmiral 2016, Hofstadter 2001). A good translation of a text is a good analogy of this text.

The *figurative function* makes it possible to produce the image effects at work in certain linguistic utterances (for example in the case of metaphors). This function implies the concept of imageability.

The *argumentative function* of analogy consists in the discursive exploitation of lexical, textual or situational similarities. For instance, the use of analogy in didactic discourses is part of this "argumentative function" of analogy.

Finally, the *iconic function* concerns the analogies based on similarities between forms and contents or between signifieds (or concepts) and signifiers. This function makes it possible to specially thematize the question of phonetic symbolism, which is today the subject of numerous lines of research.

In my talk, I will present a series of arguments in favor of this approach of iconicity.

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Ceci ne'st pas une pipe. The subliminal iconicity of an unraveled calligram

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In the famous painting by Magritte *La trahison des images* (1929) there are two images: the image of a pipe and the image of a written sentence (*ceci ne'st pas une pipe*). As Magritte himself noted, the image of a pipe is not a real pipe that could be smoked, so the sentence makes sense. But the tricky part of the painting concerns the image of the written sentence, since *ceci n'est pas un pipe* is actually not a piece of writing, but a piece of painting. This means that it cannot be read, in the same way as the image of the pipe cannot be smoked. What we are actually reading is the written sentence of which the painted sentence is an image and this is precisely the treachery of the images referred to in the title of the painting. Thus, if it cannot be read, how can we relate, from a strictly pictorial point of view, the unreadable image of the written sentence to the image of a pipe in order to get the point of the painting? A way out from this unexpected paradox can be obtained from a proposal by M. Foucault in his essay on this painting. He maintains that actually *la trahison des images* is an unraveled calligram. In this poster, I propose that Foucault's idea of an unraveled calligram can be extended even to the analysis of the visual aspects of the painted sentence. The shape of the painted letters can be shown to be iconically interpretable as a reflection not only of the shape and the parts of the painted object (the pipe) but also of the unraveling operation itself. It is shown that this is an outstanding example of sub-liminal letter iconicity (Nänny 1999: 176-178).

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The role of lexical iconicity in situated and displaced word learning

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A key concern for research on language development is how children learn to map novel words onto their referents. Children face a large number of possible referents in their visual field, and this picture is further complicated with the understanding that referents may not be perceptually accessible at all. Previous research has shown that children are able to learn novel referents in situated contexts, where label and referent co-occur, and in displaced contexts where label and referent are temporally or spatially displaced (Tomasello & Barton, 1994; Tomasello, Strosberg, & Akhtar, 1996). However, the mechanisms by which children make these inferences are not clear.

We propose that iconicity may help children to link labels to referents, both in situated and displaced contexts. Iconicity is prevalent in children's early vocabulary (Laing, 2014; Perry, Perlman, & Lupyan, 2015; Vinson et al., 2008), and young children show sensitivity to iconic mappings (Maurer, Pathman, & Mondloch, 2006). Furthermore, previous experimental research has shown that children learn sound symbolic mappings better than arbitrary ones, and that iconicity can help children generalise verbs to novel events (Imai, Haryu, & Okada, 2005; Kantartzis, Imai, & Kita, 2011). However, earlier work on iconicity in word learning has focussed solely on situated contexts; the role that iconicity might play in displaced contexts is as yet unexplored.

We present a study that examines the effect that iconicity has on verb learning in both situated and displaced contexts. Children aged 24-36 months took part in a word learning task where they were first trained on novel labels for video events, and then tested in a forced choice task to find the referent for a given label. Labels for events could either be iconic with respect to the sound of the event, or neutral, such that there was an arbitrary relationship between label and referent. Furthermore, children were taught labels in two conditions. In the situated condition,

97

label and event co-occurred – the video played whilst the label was uttered by the experimenter. In the displaced condition, the label was given after the video had finished playing. Following training, children were presented with two video events, and asked to select the one that corresponded to the label given by the experimenter.

Our results demonstrate that children show better performance for iconic than neutral labels. However, we find no difference in learning across situated and displaced contexts; iconicity facilitates word learning in both cases. This study presents the first work on iconicity across situational contexts in word learning, and aims to shed light on how children manage the ostensibly difficult task of linking word and referent.

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Sami's culture through the paintings of Pierre Åhréns Konst

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Sami culture renaissance has been reborn for a few decades. It is considered as one of the oldest cultures has reappeared reflecting the Sámi people through their unique clothing, art, crafts and gastronomy. Thus, structuring and meaning making for a piece of art can report and show such culture. From this point, how could the significance represent culture?

The arrangement of signs, a system of signs (i.e. signs and symbols). It has characterized by the construction and use of personal and internal symbols shared or by conventional and social signs, and that plays a vital role in the development of thinking. It is called semiogenesis.

The semiogenesis transforms society and the artwork which is distinguished by the subject, the colours and the forms that compose it. As a result, every piece of art tells a story like a short story. It is not only read by language but also meaning, knowledge, a skill and point of view of the social and intercultural, as it is multidisciplinary—i.e. concerning some disciplines, specialties and fields of study.

This research focuses on the works of the painter Pierre Åhrén, which I came across during my stay in Jokkmokk. Generally, any artist builds up a style of work or follows a specific common movement. However, Pierre Åhrén's work of art is not classifiable because of his way of using forms, colours, shadows and painted diagram, especially the material he uses in his painting. Every piece is distinguished by the style that combines figurative and abstract art. His paintings are inspired by the combination for ancient and modern Sámi civilization.

The aim of this presentation is to analyse semantically a couple of works to identify how they form and represent the history, the inheritance of a culture and the reality through the painting by Pierre Åhrén as he shows the value of this culture.

Cultural, social and religious aspects are identified in three steps: 1) presentation of artworks including semiotic logical analysis of each, 2) description and interpretation by decomposition into details and constituents, and 3) unravel the invariance to understand the function of

99

diverse objects analysed and considered as each form an autonomous whole to extricate the cultural and historical system.

The signs challenge us daily and all times, they touch us deeply; our mind and our sense are a social fact. Indeed, we can consider the art works of Pierre Åhrén as an endless source in the way that they are varied and multidisciplinary that will make it possible to apprehend the history and the Sami culture.

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Iconicity for an Iconoclast: Susan Howe's anxious mappings

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My paper involves a close reading of how iconicity is operating at the start of Susan Howe's 1978 volume of poetry – 'Secret History of the Dividing Line'. The volume opens with a reproduction of a two-part image taken from Jean Dean Dubreuil's 1765 volume – 'The Practice of Perspective'. The image, which shows lines of trees arranged in two different ways, functions, for Howe, as a symbolic illustration of conflicting ways in which male colonisers and early American women viewed and experienced the American wilderness. My paper explores Howe's use of iconicity to 'map' some of the formal properties of Dubreuil's image (in particular, an arrangement that demonstrates 'classic' perspectival vision) within a visual arrangement of text on the following page. I argue that the vanishing point, which in Dubreuil's image, can be read as being symbolic of the disappearance of women (and Native Americans) within the visual field of male colonizers, now becomes the blank space that separates two rectangles of text in Howe's verbal design. It is not just perspectival vision that 'empties' the wilderness; the lines of spaced-out words in her rectangular grids are also iconic diagrams of the destructive movement across the American wilderness of Gunter's chain – a piece of equipment used by early American surveyors. In this way, Howe's iconic arrangement maps both an uninterrupted 'vision' of a pure virgin forest and the destruction of the same trees. Howe uses iconicity to map two related referents to expose a contradiction at heart of the colonizers' perception of wilderness.

In the same textual space, Howe tries to launch a strategy of counter-violence by investing the blank space with a presence that promises to rupture the form that this historical violence has taken. However, this strategy is complicated by the fact that the form that iconoclasm takes is difficult to distinguish from the image that she wishes to shatter. My paper will explore some of the difficulties that emerge and which culminate in an anxiety about the very nature of writing itself.

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Where frozen signs reclaim iconic ground – iconic modification in German Sign Language (DGS)

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In sign languages iconicity plays a crucial role in the productive morphology of sign formation, especially in the creation of *productive signs* (Brennan 1990), also known as ad-hoc signs (Mandel 1977), depicting verbs or classifier constructions (cf. Schembri 2003). Such iconic forms are used in discourse to fulfil the communicative function of showing. On the opposite there are established signs (lexemes) with stable form-meaning relationships that are primarily used to fulfil the communicative function of telling (Cuxac & Sallandre 2007). Many of these lexemes are iconically motivated. However, most of their conventionalised meanings cannot be inferred systematically from their iconic make-up. They have undergone a process of de-iconisation and their meanings are idiomatic. Such signs have been described as frozen signs (Brennan 1990).

When used in context, some of these sign lexemes appear as modified forms that can be best explained in terms of re-activation of their underlying image. We call these re-iconised forms of frozen signs iconic modifications. Their iconic motivation determines the decoding of their meaning in context.

Example:

	SPEEDOMETER	SPEEDOMETER_mod: pointer gradually moving leftward
Function:	Telling	Showing
Translation:	I reduced the speed.	

Iconic modifications of this kind are located in the borderline area between fully frozen and completely productive signs. In this presentation we discuss whether to consider such iconic

modifications as productive signs or whether they should be regarded as part of the range of sign forms belonging to an established lexeme. They are in some ways comparable to forms modified for plural or aspect, which are usually treated as grammatical forms of a sign. We understand iconic modifications as a phenomenon in its own right belonging to the lexeme and discuss where we would draw the line between iconic modifications and productive sign uses. This approach has implications not only for lemmatisation of sign language corpora but also for lexicographic description. For a dictionary user it would be helpful to find some information on how to interpret such modifications and to get some general hints on their production in the entry of a lemma.

The aim of the presentation is to review the range of iconic modifications as found in the DGS-Korpus and to categorise different kinds. For this, we take into account the functions hands can take on in the creation of the underlying image, called image producing techniques (König et al. 2008). We searched for candidates for iconic modifications by looking at sequences of lexemes followed by productive signs sharing the same handshape as well as by looking at combinations of a lexeme followed by the same lexeme but marked for some kind of modification. The results of these searches were reviewed for interesting cases. Based on this empirical evidence the use and range of re-iconised forms of lexical signs are described.

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Image superimposition in sign language discourse and in motion pictures – an intermedial comparison

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In sign language discourse *highly iconic structures* (Cuxac & Sallandre 2007) are frequently used, which are forms of role-play and productive signs depicting mainly scenes, actions and shapes in different scales (Mandel 1977). Their similarities to film have been mentioned by several authors. Bauman (2003) for example proposed that sign language texts may be analysed and described using cinematographic terms for a basic description of form and content. Müller (2018) tested Bauman's claim and explored the possibilities and limits of a cinematographic analysis, providing a systematic application based on the analogy between the addressee of a signed depiction and the viewer of a film projection.

Highly iconic structures often occur in dense constructions with several information units simultaneously given (see Vermeerbergen 2001). This becomes apparent in the notion of *body partitioning* (Dudis 2004), where the signer embodies one character with their body and head, while the hands also represent entities or characters. Some typical cases may be described as multiple projections or *superimpositions* of images. The first type is a double representation of one character, for example through role-play and a simultaneous manual depiction (where the hand acts as a model). The second is a kind of complementary representation of two different spaces or perspectives without the doubling of one element. For a comparison of sign language and film, the term superimposition shall be defined as an intended or obvious simultaneous view on two or more spaces or as giving at least two different representations of one space (for example a close-up combined with a distant shot and their respective analogues in sign, or the combination of different angles). This includes the filmic device of split screen or picture-in-picture presentations.

The aim of this paper is to compare forms, uses, and structures of superimposition in sign language and in motion pictures. Signed examples are drawn from spontaneously signed narrative and some non-narrative texts in German Sign Language and are contrasted with examples from motion pictures dating from early cinema up to contemporary film. While in

signed languages structures of image superimposition appear quite frequently, these are much less frequently found in motion pictures and seem to be an issue of style. Differences between types of superimpositions of the two semiotic systems prevail, but there are some functional similarities as for example to use them as a means to make gaze relations explicit (cf. Branigan 1984) and to organize spatio-temporal relations for meaning construction. With this contrastive approach the paper elucidates specific properties of sign language as well as of film and may offer some insights into cognitive principles which underly our understanding of simultaneously shown images. The evocation of intentional, spatial and temporal relations between elements of distinct simultaneous images seems to be an iconic feature shared by filmic as well as signed expressions of superimposition.

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Iconicity and indexicality in child-directed language: Insights from naturalistic and semi-naturalistic data

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Much of the work that explores how children learn language has been underpinned by two fundamental assumptions: *i)* that the label available in the input is only arbitrarily linked to its meaning; *ii)* that learning mainly takes place in situated contexts, i.e. when label and referent spatially and temporally co-occur. We propose that language should be considered not only as an arbitrary system, but also as a multimodal vehicle of communication that exploits iconic and indexical cues: at the lexical level in the form of onomatopoeia, as well as at the phonetic and prosodic levels, and through non-vocal elements such as co-speech gestures (McNeill, 1992; Perniss, Thompson, & Vigliocco 2010) and points (Iverson et al. 1999; Özçalıskan & Goldin-Meadow 2005).

Starting from this framework, we suggest that these non-arbitrary cues may offer a less ambiguous link to the referent, and iconicity in particular, can be useful in displaced learning contexts thanks to its ability to *exhibit* its object and make it available even in its absence (Peirce 2.282, 1893; Perniss et al., 2017). Modulation of iconic forms in displaced contexts has already been demonstrated in BSL child-directed language (Perniss et al., 2017), and iconicity is reported to be prevalent in the lexical input children receive (Yoshida, 2012; Perry et al., 2017).

We present two studies that further investigate to what extent iconicity is present in the parental input, as well as which factors modulate its use. Study 1 presents data from the "Toy Task", a semi-naturalistic study analysing caregivers' input to 2-3-year-old children. Parent-child dyads were given four sets of familiar and new toys and asked to engage in conversation about them when the objects were both present in and absent from the visual scene. Data were coded to note indexicality and iconicity in multiple channels: onomatopoeia, pointing, iconic

gestures and hand manipulations of the toys. Our findings demonstrate that caregivers frequently exploit iconicity in both vocal and visual modalities. Crucially, we find modulation of these cues, dependent on 1) the referent being present or displaced, with parents using more gestures and onomatopoeia when toys are absent from the scene, and points and hand actions when present; 2) the label being known or new to the child, with parents using more iconic cues when the label is unknown. This research has been extended with a second study using the *Language Development Project* corpus of naturalistic caregiver-child interactions collected in Chicago (Goldin- Meadow et al., 2014), with children at time points of 18, 26 and 34 months. Using a similar coding scheme, Study 2 offers a first glance on parental production of iconic and indexical cues with respect of two distinct semantic categories (objects and events) across both situated and displaced contexts. Naturalistic observations confirm caregivers' use of all cue types in child-directed speech; they also show a slightly more complex picture where different cues are used differently across conditions for different topics, helping us to have a better understanding of the role that non-arbitrary, multimodal cues play in early language learning.

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Universal vs. Language Specific: Iconicity across Languages

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This paper addresses one of the widely discussed problems of language universals: iconicity seems to be an inherent quality of any human language (for countless examples of onomatopoeic, sound symbolic words, and ideophones – see Hinton et al (1994), Voeltz et al. (2001), Voronin (2006), Wescott (1980)), etc. However, iconic words do not show 100% similarity across languages which creates reasonable doubt about the universality of sound symbolic and onomatopoeic words. We assert that existing differences observed in certain imitative roots do not undermine the basic principles of iconic coinage.

To support the idea of iconicity as a language universal and to collect enough data for typological comparison, we created a new online tool – *Iconicity Atlas* – an interactive multi-lingual comparative dictionary of iconic words, comprised of the existing lexicographic material and the field-work material gathered by the authors. Its purpose is to collect a substantial corpus of onomatopoeic, sound symbolic, echoic etc. words from different languages sufficient to form a well-founded comparison (Flaksman, Noland (2016)). *Iconicity Atlas* is an ongoing project with the ultimate ambition of covering as many world languages as possible.

The data arrangement within the *Atlas* was inspired by the *Swadesh List* which is widely used for historical linguistic reconstructions. Currently, our list contains 100 of the most frequently used concepts of sound denotation (e.g. humming, roaring, buzzing etc.). The selection of these concepts is based on Stanislav Voronin's (2006) classification of iconic words and includes words from all 5 classes of onomatopes, covering 36 types of intrakinesemisms. In addition, we have included 15 animal sounds, which are highly likely to be iconic. The informants - native speakers are asked to fill out a questionnaire and to provide a voice recording. Upon completion, their answers are verified through dictionaries, especially etymological ones if possible; the very rare non-iconic answers are either excluded or included but labeled accordingly. The start page of the *Atlas* is 'Iconic Concepts', presenting the user with 100

buttons, each indicating one concept and giving access to the entry. Each entry contains the heading, results obtained from the informants in different languages, the IPA transcription, and pronunciation recorded from a native-speaker as well as an extensive commentary with dictionary references.

The first results have shown that, across languages, iconic words manifest a great deal of similarity although differences are prominent as well. We have found out that the three major factors contributing to the seeming dissimilarity of imitative words are: the difference in phonemic inventories and phonotactic rules of the languages, the multiple-choice motivation and nomination laws, and different stages of de-iconization of iconic words.

Taken into full account, these factors allow us to see the universal nature of iconicity, and they are the focus of this paper.

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"tsak", "swoosh", "plup": Maternal onomatopoeic vocalisations scaffold early joint actions

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Research on early caregiver-child interaction has revealed a rich pattern of linguistic practices that regulate the interaction and scaffold language development. Caregivers use a broad repertoire of prosodic (higher pitch), grammatical (shorter sentences), lexical (special baby words), phonological (reduplication), and discourse (greater proportion of questions) strategies. Their function is to gain and hold the infants' attention, establish an affective bond between infant and caregiver and, allow the earliest communication between them to take place (Ferguson, 2004).

Within these interactions onomatopoeic vocalisations are abundant. Papoušek (1994) reports that, mothers and fathers use non-lexical vocalisations in 60% of their utterances. In existing work these vocalisations have often been characterised as "nonsense" (Toda et al., 1990, p. 287), "paralinguistic information" (Henning et al., 2005, p. 524), or "funny noises" (Kaye, 1980, p. 493). It has been suggested that they serve as attention-eliciting, soothing stimuli, or are expressions of an emotion (e.g. Morikawa et al., 1998). Yet these studies lump all these utterances into one category which is contrasted to the lexical utterances and, thus, do not give us any insights into: (a) whether there is a systematicity in their use and, (b) if so, how these vocalisations structure and regulate early interactions.

The paper draws from a longitudinal video corpus of 17 German mother-infant dyads, filmed during diaper changing between three and eight months of infants' age. From this corpus a collection of more than 200 non-lexical vocalisations of the mothers has been compiled. These include interjections, imitative sounds, clicks, loud inbreathes, grunts, and onomatopoeic vocalisations. The qualitative micro-analysis used Conversation Analysis to focus on the sequential positioning of onomatopoeic vocalisations and their temporal coordination with non-verbal resources.

First analyses show that onomatopoeic vocalisations were used while performing actions on

the infant's body, such as pulling an arm through the sleeve or lifting the infant from the changing table. They were often absolutely synchronous to the action and they were stretched to match the entire duration of the action, or mark a specific part of a movement trajectory. This punctuates the individual steps of actions allowing the infant to sense when an action is completed and the next action starts, potentially, supporting the recognisability of on-going actions and enabling the coordination of mother and infant in smoothly navigating this routine activity.

Furthermore, these vocalisations were also used in response to infants' own actions, such as stretching their legs or rubbing their eyes. It seems as if early language is coupled to the infant's own bodily sensations. This study complements existing research on the role of iconicity in supporting the development of referentiality for language acquisition (Perniss & Vigliocco, 2014). It proposes that the positioning of onomatopoeic vocalisations in interaction sequences might potentially facilitate the infant in discovering that language is indexical, distributed, and collaboratively constructed.

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Digitalization, the iconic turn and environmental awareness

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I argue that the shift from print to digital media (digitalization) opens up the opportunity for an ecological turn. This opportunity is inferred on account of the resemblance between human natural environments and digital environments. Due to the prevalence of iconic signification in digital media, the expansion of human societies onto the virtual entrenches the iconic turn (Boehm, Mitchell 2009), initially generated by scholarship in the visual arts (e.g., Moxey 2008) and some areas of linguistics and semiotics (e.g., Elleström, Fischer, Ljungberg, Stjernfelt 2007). This is highlighted by a semiotic turn in translation studies, as mainstream linguistic theories proved insufficient for endorsing translation (or transduction) practices for multimodal texts, on account of a conservative anti-iconism in such scholarship. Modern philosophy, framed by its corresponding print medium, has not equipped society with a literacy for interpretative contexts where multitude of sensory channels, meaning modalities and media overlap (e.g., Bezemer and Kress 2008). Also, the broadcasting media corresponding to late modernity (or some versions of postmodernism) implies a passive participation only, not engaging interlocutors actively in public debates. Because they are *par excellence* multimodal and, also, participative, digital media resemble the human natural environment more than other technological media that shaped previous stages of history. At the dawn of media theory, Marshall McLuhan (e.g., 1962) anticipated this similarity, which is now being confirmed by current research in social semiotics and digital humanities (e.g., Ciula and Eide 2016). However, so far these schools did not draw on natural sciences to study digital modelling in relation to human's modelling of the natural environment. The multimodal modelling of environments of social species, such as humans, has been discussed in biosemiotics and zoosemiotics (e.g., Martinelli 2010). I draw on these theoretical branches of semiotics to discuss semiotic resources and competences in a unified approach, comprehensive of both bio- and socio-semiotics. In light of this discussion, I argue that environmental and digital literacies partly overlap or, at least, present transferable skills. To conclude, I argue that ecosemiotics (semiotic

theory of ecology, see Nöth 1998) is a suitable framework for cultural analysis in digital societies. The main argument lies in the premise of ecosemiotics that representation impacts on the represented (Maran and Kull 2014). This results in advocating for a comprehensive yet icon-based modelling theory, which underpins an ecological philosophy (ecosophy) of digitalization and aims to complement the scope of media ecology.

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Convergent Iconic Representations in Dance and Linguistics

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Contact Improvisation (CI) is a dance style based on physical contact and the sharing of weight between partners. During the art form's nearly five decades of development, a set of more than twenty graphical symbols has become key in a relatively long and open format practice called the Underscore. According to its creator, Nancy Stark Smith, each of these figures represents a phase, relationship or dynamic that could naturally emerge within or among dancers; some happen in sequence, others can take place at many points (Stark Smith & Koteen, 2008). Thus, these symbols underpin a sort of vocabulary that CI practitioners use to conceptualize and talk about their practice.

The Underscore's symbols bear a strong resemblance with the repertoire of diagrammatic representations that cognitive linguists have built in order to understand how the body and its interaction with the environment influence language.

The purpose of this poster is twofold. First it seeks to introduce CI, the Underscore, and its symbols to an academic audience that could potentially find them interesting and valuable. Secondly, it analyzes the convergence of iconic features in these two representational systems which, despite their disparate backgrounds and purposes, reflect a concern for the role of the moving body in shaping meaning and expression. Concretely, it will present the Underscore's most relevant symbols and draw from some of its most salient similarities with Lakoff and Johnson's (1980) representations of image schemas and Talmy's (1988) force-dynamic diagrams. The discussion highlights the role of multimodal iconicity and diagrams as a common thread that binds together current issues in the phenomenology, ontology and semiotics of embodied experience (cf. Sonesson (2007), Stjernfelt (2007) and Zlatev (2010)).

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The phonesthemes in Korean monosyllabic ideophone *ttak*

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This paper clarifies the semantic features and functions of the Korean monosyllabic ideophone *ttak*. The Korean language has about 5,500 ideophones (Park 2015). Among them, *ttak* has the highest frequency in spoken language (Jung 2014). *Ttak* is used as an adverb that represents a sound or a manner of beating or breaking a hard object (e.g., *Namwuskaci-ka* <u>*ttak*</u> *pwulecy-ess-ta*. "The branches are broken with a *ttak* sound."), and it can also express metaphorical meanings, such as momentariness, accuracy, adjacency, and perfectness. Moreover, *ttak* is used as an emphatic marker in discourse (Rhee 2018).

Some previous studies have mentioned that the sound symbolic meanings of *ttak* affect the formation of meanings (Lim 2013). However, they have overlooked the final consonant [k] and a morphological factor. Indeed, it remains unclear how *ttak* is used in actual discourse. Therefore, this paper takes a comprehensive approach to how each phonetics' iconic meaning and morphological factors affect the meanings and functions of spoken corpora data.

The results revealed the following: (1) *ttak* functions as an emphatic and an evidential marker: it emphasizes the speaker's confidence in a particular event and (2) *ttak* is typically located immediately before a word or phrase that is emphasized. In this case, *ttak* and the word or phrase show a tight morphosyntactic relationship such that other words cannot be inserted between them. Moreover, the symbolic sound meanings of each phoneme: an initial consonant [tt], a vowel [a], a final consonant [k], and the iconic meanings of the monosyllabic root are based on the meanings and functions of *ttak*.

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Metaphorical aspects of modelling and theorizing in humanities

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Metaphor is a peculiar instance of iconicity that is ubiquitous in all forms of discourse. The role of metaphors in sciences and scientific modelling or theorizing has been frequent topic of discussion since at least 1960s, but their respective role in humanities has not received similar attention. On the one hand, this is due to the exclusion of humanities from the domain of sciences, thereby also from the sphere of interest of philosophy of science – the main locus of the discussions on the connections between metaphors, analogies, models and scientific practice. And this context has also had particular impact on the views on the nature and role of metaphors in scientific discourse as well. On the other hand, as these discussions have been mostly bound to philosophy of science and philosophy of language, the contributions from semiotics have been few and rather fragmented. However, metaphors and metaphorical mode of thinking are not only frequent in humanities but also have distinct role and utility that becomes evident when one takes into account the semiotic aspects of the domain of studies of humanities and regards metaphor as specific form of semiosis.

I will concentrate on the issue of metaphor as specific form of semiosis informed by Juri Lotman's theory of different forms of modelling activity, more specifically the twofold nature of play-type modelling that requires simultaneous awareness of the conditional and practical nature of the activity. I will also discuss the relevance of the notion of diagrammatic thinking for re-elaboration of the relationship between metaphors and modelling that grounds the conception of metaphorical modelling. Thereafter I will discuss the pertinence of the metaphorical modelling in humanities, as well as for understanding certain processes or perspectives within humanities.

Iconicity in multimodal texts of print advertisements

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If the principle of both language and visual iconicity is used in the discourse of advertising, an advertisement has a higher potential to influence the consumer's cognitive states by encouraging him or her to invest more time and energy in decoding the extra meaning found on both textual and visual levels. The search for this intended meaning enables the consumer to become a more active participant in this one-way public type of communication, and thus to enhance both the persuasive effect as well as the aesthetic impression when 'reading' an ad. Print advertisements are nowadays understood as multimodal texts in which both verbal and non-verbal codes are employed for a successful message delivery. The visualization of the verbal code enables the words to function as graphic signs in which the visual iconicity of the typeface and typography objectifies the semantic dimension of the words used (Pelclová 2018). Following the principle of a diagrammatic iconicity found in language, Kress and van Leeuwen's (1996, 2001) visual grammar, and Henderson, Giese and Cote's (2004) typeface design, the poster examines print advertisements on food and medical products in which visual and language iconicity participate in meaning construction. The objective is to study how the language diagrammatic iconicity and the visual iconicity together with the typographic iconicity cooperate in order to iconicize product-related and/or consumer-related traits the advertiser considers be the most salient and thus worth accentuating in the message being advertised. To be more specific, the study analyses the traits of 1) the production creation, 2) the ingredients used, 3) the variety of products or ingredients, and 4) product experience. The poster introduces which means of visual and language iconicity are used for which of the four traits mentioned above, and how the means of iconicity are distributed among the iconicized traits.

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Using sound symbolism to trigger multisensory associations in advertising: The case of softer soju

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In a crowded market, companies are in continuous need of exploring creative ways to reach consumers and create lasting brand identities. Moreover, the global nature of our markets forces companies to explore new avenues to overcome linguistic and cultural barriers. A relatively underused framework to overcome these goals is "sensory marketing" (see Lindstrom 2010; Hultén 2015). Most broadly construed, sensory marketing refers to the area of marketing that directly "engages the consumers' senses" (Krishna 2012: 332). The connection between sensory marketing and sound symbolism stems from the fact that linguists and cognitive scientists have found that in natural languages, sound symbolism is primarily used for communicating sensory meanings (Lockwood and Dingemanse 2015; Sidhu and Pexman 2017). Here, we test two purported advantages of sound symbolism for advertising and branding applications. First, the idea that one and the same sound pattern can trigger multiple consistent sensory and non-sensory inferences (e.g., Ahlner and Zlatev 2010, Walker 2016). Second, the idea that sound symbolism offers the potential to be understood by consumers from multiple cultural backgrounds (Bremner et al. 2013). Harkness's (2013) in-depth anthropological analysis of Korean soju advertising provides the inspiration for our study. We want to know whether two sounds that are used by Korean speakers after downing a shot of soju, khya and khu, have multisensory associations consistent with the "voice marketing" campaign of the Jinro company, and whether these associations are accessible to non-Korean speakers. This strategy is frequently used in research to demonstrate that there is genuine sound symbolism inherent in a particular vocal pattern (Patel and Iverson 2003; Dingemanse et al. 2016). Moreover, our experiments connect sound symbolic associations to the framework of sensory marketing by showcasing the multisensory potential of the khya/khu contrast. To do so, we hold the experimental stimulus constant (audio recordings of khya/khu) but manipulate the meaning

dimensions tested, asking native speakers which one of the two sounds is "softer" (Experiment 1), "smoother" (Experiment 2), "female" (Experiment 3) or lower in alcohol content (Experiment 4). This paradigm allows for the assessment of the latent sensory potential of these sounds, ultimately providing evidence for the view that sound symbolism can tap into multi-layered sensory meanings and can be embedded within sensory marketing strategies.

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Iconicity, Space and Conceptual Representation in ASL-English Bilinguals

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In sign languages, many signs derive their phonological form from the meaning of the referent. One domain with robust iconicity of this kind is spatial language. Spatial signs depict salient features of the spatial relation: the phonological form of the American Sign Language (ASL) sign ON represents a hand *on* another hand. For non-topological spatial relationships, like *left/right* and *front/back,* which entail a viewpoint, this iconicity interacts in interesting ways with the demands of a frame of reference system and the constraints of the body coordinates that serve as a source domain for spatial reference. In ASL, a sentence describing the spatial relationship between a ball and racket that you can see lying some distance away on the grass could include the sign FRONT, in which the hand moves up-and-down in front of the face. This sign is body-anchored and is derived from the sign for "front of body" that maps iconically to the intrinsic features and coordinates of the human body. Alternatively, a description of this relationship could include the ASL sign BEHIND, which instead maps the two objects onto the two hands and projects the relationship iconically onto the space in front of the body: the dominant hand moves "behind" the non-dominant hand. As with all languages that make use of a relative frame of reference, the choice of term – is the ball "in front of" or "behind" the racket? – depends on the type of strategy used. If the racket is between you (describing the relationship from your viewpoint on the objects) and the ball, you would say the ball is *behind* the racket if your language uses a reflection (or mirrored) strategy, like English; but the ball would be *in front of* the racket if your language uses a translation (or aligned) strategy, like Hausa (Hill 1982; Levinson 1996).

In this paper, we investigate the frame of reference choices in the interpretation of the signs FRONT and BEHIND in ASL. We suggest that the iconic form of the sign is strongly tied to conceptual representation and that the iconic mappings shape frame of reference choice. We show that the iconic form of FRONT and BEHIND invites a different frame of reference

interpretation than is offered by the English words *front* and *back.* In particular, we show that Deaf native ASL signers interpret FRONT as English speakers interpret *back.* Further, we show that the iconic form-meaning mappings have cross-language semantic effects for bilinguals: native ASL-English bilinguals reliably interpret the English words *front* and *back* with respect to their ASL meanings. Our findings provide insights into the effects of iconicity on encoding of spatial relations and into the interplay of spatial semantics and conceptual representation.

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Indexicality and Iconization in Mock(ing) Spanish: Language Ideology through Metapragmatics

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The aim of this work is to explore the ideological semiotic features and processes that underlie the linguistic phenomenon of *Mock Spanish*. The works by Ochs (1990) and by Hill (1998, 2005) on the indexical meanings of Mock Spanish are integrated with the notion of "iconization" by Irvine and Gal (2000) in the debate on language ideology. Mocking Spanish *directly indexes* "a positive colloquial persona" (Hill 2005, 114) through an *indirect indexical* reference to a naturalized set of understandings of Spanish population as "lazy, dirty, unintelligent, sexually loose, and politically corrupted" (ibid.) people. Nevertheless, the negative stereotype of Spanish speakers is not just an external indirect index, but it is directly entailed through a process of iconization between the language and its speakers.

A differentiation between Spanish as a language structure and Mock/Mocking Spanish as a metapragmatics (Silverstein 2003) is necessary to understand how the ideological iconic link between Mock Spanish and its speaker is naturalized. Iconization, far from signifying as a "firstness" (Peirce 1955) of Spanish as language structure, acquires a specific connotative value according to the speaker of Mock Spanish as an ideological discursive practice. Therefore, the category of "order vs. disorder" (Urciuoli 1996, Hill 1998) is not only associated to the single natural language (English vs. Spanish), but in a fractal recursivity mechanism (Irvine and Gal 2000), it is projected to the speaker of (Mock)Spanish (English-white vs. Latino).

Mocking Spanish is a form of "transformist hegemony" (Williams 1977), necessary to restore the white order by performing and marking the disorder of the other. This way, the white hegemony is further reinforced as the other side of the Spanish negative iconic stereotype. Therefore, by integrating the indexical perspective with the process of iconization of language, we will see how Mock(ing) Spanish, as a metapragmatics, thickens the borders of linguistic differentiation and strengthen the ideological power of language.

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Iconicity in early language learning

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The phenomenon that Jousse (1974/2008) calls *mimism* is central to human cognition. Before being able to talk about the world, the child captures and mimes its kinesthetic features: "He becomes everything while playing: he is a cat catching a mouse, a locomotive pulling wagons, a plane flying through the sky" (*Ibid.*: 53). Kinesthetic mimism is usually accompanied by sound mimism: children easily create onomatopoeia and invent words (or modify the existing ones) in order to relate their verbal expression to their perceptuo-motor experience. Sound-symbolic mapping characterizes children's communication (Jousse, 1974/2008) and facilitates word learning (Imai *et al.,* 2008).

Although the lexicon of Indo-European spoken languages is rather arbitrary than iconic, iconicity which involves phoneme-meaning correspondences is considered as a vestige of protolanguage (Imai, Kita, 2014). In fictional literature in general, and in poetry in particular, iconicity is the means by which the author creates "the semblance of felt life" (Freeman, 2007: 423). It can be based on isomorphism (creation of metaphors that establish analogical relations among objects, ideas, images: *Ibid.*) and on the use of rhythm, rhymes, alliterations, that highlight some hidden or subjectively perceived elements of words' sound-symbolism.

Within the approach to teaching languages in primary and pre-primary school that I have been developing since 2010, I build my pedagogical projects on authentic children's literature texts adapted to beginners and taught/learned through *mimic schemas* (combinations of gestures that represent, as vividly as possible, the places described in a narrative, the characters and their actions while revealing iconic aspects of the used phonological forms. For example, the "sea" is mimed by performing a long linear manual gesture illustrating the sea's immensity (kinesthetic iconicity) that is vocalized by the long vowel [i:] (sound-symbolic iconicity); the "whale" swimming in the ocean waves is represented by a manual wave-like gesture supported vocally by the diphthong [eɪ] that is perceived by native French speakers as an undulation between two connected vowels. During the lessons, children are invited to perform the *mimic*

127

schemas with their whole bodies, their hands as well as through drawing while listening to, then reproducing texts. This allows them to embody the linguistic input by means of a phenomenological experience (Merleau-Ponty, 1945/2013).

 In my paper, I will show:

- how texts from children's literature (mainly those of oral origin, whose formulaic structure enhances gestural semantic iconicity and stresses the phonological specificities of the language) are adapted to beginners and "translated" into *mimic schemas* ;

- how 5-7-year-old French children use mimic schema in order to understand texts, memorize new linguistic elements and master specific English sounds and prosody.

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The Autosemiographic Method: Iconicity and Self-Experimentation in the Science of Facial Expression

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"I looked at myself in a glass; and since then I have noticed the same movements in the faces of others," wrote Charles Darwin in 1872 with *The Expression of the Emotions in Man and Animals*.

Self-experimentation is when the experimenter performs an experiment on their own self and are they themselves the subject for a research. It has long been practiced both in the natural and human sciences (e.g. autobiography, autoethnography, autoportrait, etc.). Here, I introduce a method that I term "autosemiography". And I probe how this specific kind of self-experimentation not only is processually normative but also phenomenologically necessitated in the science of facial expression and its histories.

Doing autosemiography, an experimenter seeks through personal experience (auto) knowledge the signs that relate to their own self (semio) by making representations of these very signs (graphy). This close gaze, being immediate to experience, can meet possible critique for fallacious objectivity, perceptual bias and statistical invalidness. Even so, such first-person subjectivity, if critically reflexive, can also potentially harbinger the alternative concepts and transgressive discoveries that motivate change to knowledge paradigms about the face.

My privileged case study is the Facial Action Coding System. First innovated in the 1970s by American psychologist Paul Ekman, FACS today has become the world-leading technique for comprehensive sign-based analysis of facial morphology and movement, whether by manual human annotation or automated machine recognition. Applications include: cognitive marketing, deception detection, emotional intelligence, game animation, healthcare systems, law enforcement, media art, and more. Based on theoretical research as well as my own practical experience with the FACS Manual, FACS Training Workshop at UC Berkeley, and in the field as a FACS coder, I map an intellectual history for the autosemiographic method, its perspectives, products and practices.

129

I present the ways in which Ekman based his specific kind of self-experimentation on a concept of iconicity, one continued from Jurgen Ruesch and Charles Morris, that changed between Ekman's early and later writings from a focus on classifying signs to sign-function generation, and which I compare and contrast with CS Peirce and Aristotle. I probe how to do the autosemiographic method — "the way it works" — across an iconic continuum from iconic, through indexical, to symbolic relationships between the sign-vehicle and its object, as well as from the self-firing or volitional activation of the facial muscles, through their representation in still photographs and moving video, to a linear notation of alphanumeric code. I problematize the adaptive and ecological motivations behind doing autosemiography, as well as the extent to which the tacit learning of this method through haptic perception may challenge an epistemic bias privileging distant vision. And I propose that FACS and its affordances begin with "making faces" using one's own face, and a face consciousness not about "it", secondness or objectivity — as the science of facial perception is so frequently characterized — but more between "I" and "thou", firstness and thirdness, subjectivity and intersubjectivity.

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Iconic Lexis and its Cognitive Potential (an experimental study)

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The sound form of iconic language signs (unlike indices or symbols (Peirce 1994)) represents at least some, though definitely not all, components of their meaning. As their functioning is based on universal cognitive principles and psychological and physioneurological foundations (such as synesthesia and synesthemia) they may be supposed to have a cognitive potential and to provoke correct perception and understanding of foreign words.

The experimental approach to research into cross-linguistic iconicity has a long-established tradition, starting with works dating back to more than half a century ago and reaching into the present day (Brackbill, Little 1957; Шамина 2018). It is applied in this study to determine how successfully speakers of a particular language can choose a word of a language they do not know to fit the context.

To ensure that the subjects deal with *linguistic* instances in their *sound* form, and not just any acoustic phenomena, they were exposed to some utterances in their native tongue that they could see in writing and asked to fill in the gaps in those by picking one out of the two foreign words presented to them in the audio form, e.g., A. *Leaves began to…(1. свистеть / 2. шелестеть)…and a door …(1. звенеть / 2. грохать)… shut*; or B. *Все девушки обсуждали, как закадрить самых …(1. gump / 2. zing)… мальчиков на курсе.* The respondents in the experiment were speakers of Russian and English, of both sexes and of various social and age groups, 82 and 103 people respectively.The Russian and English sentences were practically identical semantically and contained iconic words that were either sound imitative (example A) or sound symbolic with expressive pejorative or meliorative connotation (example B). More than 4300 responses were analysed and the data statistically evaluated.

The high percentage of correct choices made by the subjects in the experiment definitely points to a cognitive potential of iconic lexis or, in other words, to its euristic function. Correct

identification of the foreign language units under consideration varies from 70% for Russian sound imitations to 77% for English emotive slang words, peaking to 96% for certain items. It is worthy of notice that simple chance similarity between the sound forms of English and Russian has no explanatory value. The results in most cases can be accounted for by the iconic tendencies in language sounds representing non-linguistic acoustic phenomena (cf. trills imitating vibrations) and non-acoustic notions (cf. back rounded vowels standing for "bad" things, or labials and velars being "sound gestures" of dislike) that are supposed to be universal.

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Iconicity in Branding: the cognitive process of creating a new brand in Japanese craftsmanship through iconic representations

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This study identifies how the cognitive strategy of iconicity is used to create a brand in logos and product designs in the field of Japanese craftsmanship. The general definition of the term 'branding' in a business dictionary is "the process involved in creating a unique name and image for a product in the consumers' mind, mainly through advertising campaigns with a consistent theme" although the process differs according to industries. Jun Nakagawa, a consultant in craft industry as well as the president of a company of '*Nara sarashi* (bleached linen made in Nara prefecture, which has 1,300 years of history) proposed three phases for creating a brand in this field: establishing, structuring and finishing (Nakagawa 2016, my translation). Interestingly, these phases regularly use cognitive processes of visualization and verbalization because of the fact that a brand is a gestalt that is "a pattern in the mind of a customer" (Adcock 2000: 206), an attractive compound with various attributes solidified in customers' minds. This strongly proves that branding needs cognition in order "to establish a significant and differentiated presence in the market that attracts and retains loyal customers" (BusinessDictionary.com).

After clarifying the framework of branding by means of cognition mentioned above, I will demonstrate how it actually works to revitalise an industry in struggle: Japanese porcelain called *Hasami-yaki*. In spite of over 400 years of history, *Hasami-yaki* was not so famous compared with the worldwide famous *Arita* porcelain in the same region. Since a company called '*Maruhiro*' launched a brand '*Hasami*' (which has double meanings: the name of the region, 波佐見, and a homonym meaning 'scissors (鋏)') with a logo of scissors and the name 'HASAMI' in the Roman alphabet in 2010, sales and visibility of the porcelain itself drastically increased. The city has also changed to a fashionable and touristic area with various shops and cafes. This is a successful example of regional and industry revitalization that one brand has established the brand of the region and its industry. This study will analyse how the brand was

cognitively established and how it is semiotically represented in logos, product designs, and the landscape of the city by applying the notion of iconicity (Hiraga 2005: 35).

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Sound Symbolism of evilness

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It has been established in the study of sound symbolism that voiced obstruents, compared to voiceless obstruents, tend to be associated with largeness and hardness [1, 2, 3]. In addition to these perceptual properties, voiced obstruents tend to evoke negative and unpleasant images like dirtiness [4]. Corpus studies have also revealed that voiced obstruents tend to appear more frequently in villain's names than in non-villain's names [5]. Thus, it may seem that voiced obstruents are linked with "evilness" in sound symbolic associations. However, as pointed out in evolutionary ethics studies, humans have subtler perception of evilness: those who may act against society include not only violent and strong tyrant-type or monster-type ones, but also sly, clever betrayers (some types of free-riders on others' altruism) [6]. Hence, sound symbolism of evilness may not be explained by a simple associative pattern between voiced obstruents and evil characteristics, but rather may vary according to the kind of evilness being imagined. We tentatively hypothesize that although voiced obstruents may be associated with the image of tyrant- or villain-type of strong evil characters, the other type of evil ones, i.e., those who are not so violent but non-altruistic betrayers, may be more likely to be associated with voiceless obstruents.

In our questionnaire, twenty-four Japanese-speaking university students majoring in computer science were asked to imagine people on an extraterrestrial planet, and to judge each of forty-eight meaningless names on the four-point Likert scale (4: very likely an evil person's name, 1: very unlikely an evil person' name). The names consisted of three open syllables (CVCVCV). The first consonant was controlled for voicing (/p, t, k/ vs. /b, d, g/). The first vowel and other two syllables were thoroughly counterbalanced. Participants judged each name based on the impression of evilness in personality, rather than how violent the person might be.

The result confirmed our hypothesis: voiceless obstruents were judged as more likely to indicate evil personality than voiced obstruents, and this overall tendency held for each place of articulation: labial, alveolar, and velar (ps<0.001, by t-test).

In sum, the present study provides one example of ethics-related sound symbolism. The important point is that the sound symbolism of evilness is not explained by a simple pattern of association between one property like evilness and one phonological/phonetic category like voicing. What we add to previous studies is the finding that the evilness inside a person tends to be associated with voiceless obstruents rather than voiced obstruents. In a broader context, our study implies that investigation of sound symbolism can be linked with evolutionary ethics study.

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Cross-modal iconicity in dance: Detecting iconic mappings in non-lexical vocalizations, gestures, and touch

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Non-lexical vocalizations, gestures, and touch are re-occurring phenomena in dance rehearsal sessions and an integral part of the dance learning and teaching processes (Keevallik, 2015). Take for example the following excerpt from a choreographer's instruction to a dancer:

1: Choreographer's speech:	"We need to see passé, so you go here"
2: Choreographer's vocalization:	↑tsm::::
3: Choreographer's touch:	»touch«
4: Choreographer's gesture:	[hand gesture]

There is a grammatically correct verbal instruction (line 1) containing an embedded co-gestured vocalization (line 2 & 3) and a temporally overlapping touch (line 4). Up to date, the interplay of verbal, non-verbal and tactile iconicity in the instruction-giving process of a creative work has remained an unaddressed topic of empirical research. It is unclear how co-gestured vocalizations and touch regulate situated actions in artistic settings, and how they motivate these collaborative processes.

Cross-linguistic research on vocalizations (i.e. sound symbols, onomatopoeia, and ideophones) have mainly been concerned with iconicity in spoken languages, with supplementary information about the real or metaphoric objects or events in the discourse (about shape and size, manner of motion, and spatio-temporal aspects of actions; Parise & Pavani; 2011; Imai & Kita, 2014; Shintel et al., 2006) being encoded during speech production. Iconicity in vocalizations also exhibits qualities closely matching with those of iconic manual co-speech gestures (Perlman, Clark, & Johansson Falck, 2015), which can depict aspects of the size, shape, or activity pattern (i.e. path, manner) of what speakers refer to in their speech (Kita & Özyürek, 2007). Tactile iconicity has not been empirically explored but only briefly acknowledged in conversations between blind, deaf, and blind-deaf people while fingerspelling, on-body signing, and hand-over-hand signing (Griffith, Robinson, & Panagos, 1983).

The qualitative-quantitative analysis focuses on choreographer-dancer encounters audio-video recorded during seven individual dance rehearsal sessions. The quantitative analysis provides an overview of the form and function of vocalizations and touch. The cross-modal iconic relationships between choreographer's vocalizations with affiliated gestures (including full body demonstrations) and visual-spatial qualities of the dancer's performances were studied quantitatively and will be discussed applying Conversation Analysis.

Preliminary results suggest non-lexical vocalizations and touch motivate the development of choreographer-dancer embodied actions and contribute actively to the meaning-making processes in the creation of the contemporary ballet piece. Formally, non-lexical vocalizations occur more often as monosyllabic sound symbols in consonant-vowel constellations. Functionally, syntactically embedded vocalizations are more likely to exhibit iconic content than standalone vocalizations, which serve the choreographer to coordinate the rhythm and time of a dancer's performance. The dance data indicates that touch is a powerful communicative tool in transmitting specific knowledge about body movement qualities. Although a rather marginal occurance of iconic co-tactiled vocalization, they encode inoformation about body movement qualiteis.

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The role of iconicity and simultaneity for efficient information encoding in signed languages: A case of Italian Sign Language (LIS)

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Language is fast and fleeting in both, acoustic and visual modalities. The pressure of producing and processing information rapidly has far-reaching implications on how languages are organized in order to promote efficient communication. In spoken languages it is achieved by reducing dependency distances by clustering syntactically and semantically related words closer together so that the representation of the meaning can be formed faster (Hawkins, 2004). In signed languages, signers can take advantage of multiple articulators to encode different meanings simultaneously (Jo Napoli & Sutton-Spence, 2010; Vermeerbergen, Leeson, & Crasborn, 2007) and by means of iconicity (imagistic and diagrammatic; Perniss, 2007) they can relate these meanings to each other (Emmorey, 2014; Perniss & Vigliocco, 2014, Perniss, Thompson, & Vigliocco, 2010). Interestingly, there is no research exploring what is the role of simultaneous encoding of information in sign languages in regard to efficient communication. Moreover, research on simultaneous encoding is only available from qualitative data studied solely in narratives.

In the present study, we systematically explored whether capacity to encode information simultaneously is used by deaf signers when constructing informatively dense messages. We hypothesized that as the information that has to be encoded increases, so will use of simultaneity increase. Importantly, we also hypothesized that flexibility of iconicity will be exploited when constructing more informative messages to link different meanings to each other.

The material for the experiment consisted of 6 sets of 5 images (2 pictures for levels 1 and 2 and 3 GIFs for levels 3, 4, and 5) in each set in which each image represents an information level from low information (2 information units required to be encoded, i.e., two referents) to very dense information (5 information units required to be encoded, e.g., two referents and

three actions of these referents). The task of the participants (n=23, deaf adult signers of LIS) was to describe each image to another deaf adult in a game of director-matcher. Production of the participants was videotaped and analyzed in ELAN.

Results revealed that as the information that had to be encoded increased, so did the simultaneous use of articulators to express different meanings. We also found that use of highly iconic linguistic strategy (i.e., constructed action) alone or in combination with other linguistic strategy was used more in denser messages.

Signers employ iconicity to represent the information present in the events as it is available in the real word – simultaneously – and as such they are more truthful to the meanings they are referring to. As a result, dependency distances are reduced to the minimum and representation can be formed faster. We conclude that iconicity in signed languages (in our case in LIS) should be seen as advantage of language, as it allows to communicate efficiently in regard to how much information it can contain and how intertwined it is with human experience.

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Iconicity and the origins of symbolism and grammar

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Among the world's communication systems, human language is unique in its usage of symbols and grammar. The emergence of symbols and the inception of grammar are commonly conceptualised as two distinct explananda in evolutionary linguistics (Tomasello, 2003), and a symbolic protolanguage without grammatical structures is often proposed as an intermediate stage. We claim, however, that both symbols and grammar emerge from the same process of repeated communicative interaction. Our account is built on ostensive-inferential communication (Scott-Phillips, 2015) and the memorisation of shared communicative experience (Langacker, 1987). These rely on cognitive capacities supporting both the recognition of common ground and communicative relevance. Iconicity is a key step on this journey towards expressive linguistic complexity.

Icons are communicative tools whose forms are motivated so that an observer can infer their intended meaning without prior specialist knowledge (Keller, 1998). Behaviours can be iconic in many ways, from the onomatopoeic and gestural mimicking, to representations of abstract semantic properties. Iconic associations are created from ostensive-inferential communication through behavioural cues which allow the inference of their intended meaning. Success requires merely that their behaviour be sufficiently conspicuous to be unmistakably intended as a deliberate communicative act, and sufficiently similar to a salient property of the meaning.

Memorisation of successful interactions establishes form-meaning associations as common ground, and repeated use leads to their entrenchment (Langacker, 1987), and eventual conventionalisation (Barlow & Kemmer, 2000). Repeated communicative interaction gradually transforms icons into symbols, either through form simplification (Fay et al., 2010) or metaphorical meaning extension (Smith & Hoefler, 2017). This repeated cycle of innovation and conventionalisation is an example of the ratchet effect of cumulative cultural evolution, whereby complex cultural artefacts arise through the accumulation of innovations maintained through faithful social transmission (Tomasello, 1999).

The same mechanisms, moreover, underpin the emergence of grammaticalised constructions from ad-hoc discourse strategies (Givón, 1979). Lexical and grammatical items differ qualitatively rather than essentially, and grammatical material emerges through the gradual development of increasingly schematic forms and increasingly functional meanings. Schematic forms are created through the interpretation of discourse-related effects as intentionally communicative cues to meaning (Hurford, 2012), while functional meanings emerge from innovative invited inferences (Traugott & Dasher, 2005). In both cases, memorisation and repeated usage leads to entrenchment and conventionalisation of the linguistic innovations, and to the gradual accumulation of increasingly grammatical material in interlocutors' construction inventories.

We thus claim that the widespread assumption of different origins for symbolism and grammar is unwarranted: both are best accounted for as emergent from the same processes of repeated acts of ostensive-inferential communication and cumulative cultural evolution, in which iconicity plays a pivotal role.

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Facing metaphors as the most complex iconic signs: Toward a synthetic analysis of figuration in Greek street art

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Cognitive linguistic and semiotic accounts of metaphors have often discussed the complex phenomenon of metaphor in various ways, often addressing factors such as universality and conventionality, context-sensitivity, cross-cultural variation and creativity, deliberateness and "multimodality". However, in most cases, such factors are investigated in isolation (e.g. Gibbs 2017). Therefore, we propose a cognitive semiotic approach that can help us to seek convergences instead of divergences among such long-standing debated issues by using a coherent and consistent terminology, informed by cognitive semiotics.

Cognitive linguistic approaches to metaphor propose an understanding of metaphor as an instrument of thought, rejecting the traditional notion of metaphor as a figurative device (e.g. Grady 1997; Lakoff and Johnson 1980). Conceptual Metaphor Theory (CMT) emphasizes that metaphors are more or less fixed (and static) conceptual mappings based on bodily and cultural experiences. What we argue instead is that such cognitive correspondences are not metaphors per se, but rather diagrams, serving as motivations for the use of contextually situated and culturally embedded metaphors.

Taking the overall theme of the conference, iconicity, we highlight that similarity-based analogies (diagrams) between source and target are the dominant motivating factors for metaphor creation and interpretation. At the same time, the semiotic grounds of indexicality and symbolicity (based on sociohistorical awareness, background knowledge and context) are closely interacting with iconicity. This conforms with the view that metaphors are the most complex iconic signs (Peirce 1974 [1931]) especially when understood as creative, emergent, and dynamic processes, which are socio-culturally derived and contextually influenced (Kövecses 2015; Müller 2008; Sonesson 2015).

Our presentation argues for a synthetic cognitive semiotic investigation of metaphors in Greek street art by bringing together complementary perspectives from semiotics and cognitive linguistics.

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Iconicity of Quantity and Reduplication in Chinese Language

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This paper illustrates iconicity of quantity in Mandarin Chinese. This form of iconicity is treated by Haspelmath (2008) as a separate category from iconicity of repetition. However, it is arguable that iconicity of repetition is simply a subtype of iconicity of quantity. Thus, after determining the two types of diagrammatic iconicity and redefining iconicity of quantity, which falls under the principle "the more the form, the more the meaning," we may conclude that morphological reduplication is related to widely understood semantic intensification, for example, plurality and repetition. Subsequently, this paper presents the way the principle of iconicity of quantity applies in the Chinese language with examples of reduplicable parts of speech: nouns, classifiers, adjectives, and verbs.

The analysis shows that, in the case of nouns, of which reduplicated forms do carry semantic intensification, most forms are lexicalized. On another group of nouns, reduplication has a diminutive and, thus, anti-iconic effect. Classifiers reduplicate in different combinations with other words, but their reduplicated form also illustrates the iconic principle. Conversely, the Chinese reduplicated forms of adjectives and verbs are not "bigger in quantity" in terms of meaning in contrast to their original, non-reduplicated forms. Thus, the principle of iconicity of quantity (repetition) does not apply to all reduplicable parts of speech in the Chinese language. If that is the case, by the definition of iconicity—indicating a natural relationship between the signifier and the signified—the application of iconicity of quantity in Chinese reduplication exemplifies the problem of distinguishing the natural and the arbitrary aspects of language.

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Iconicity and zero-marking of spatial relations: place names vs common nouns

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In the extant literature on word-classes, place names are often classified as a sub-type of nouns, more specifically of proper nouns. This relatively common practice tacitly assumes that place names behave largely similar to other kinds of nouns morphosyntactically. However, the pair of Maltese sentences in (1) raises the question whether this assumption can be defended empirically (Stolz/Levkovych/Urdze 2017).

(1)   Maltese

(1.1)   GOAL = common noun

     *Jiena   mmur   fil-**kċina**.*

     I   1SG.IMPERF:go   in:DEF-**kitchen**

     'I go into the **kitchen**.'

(1.2)   GOAL = place name

     *Jiena   mmur   **Malta**.*

     I   1SG.IMPERF:go   **Malta**

     'I go to **Malta**.'

In (1.1), the common noun requires the preposition *fi* 'in' to yield a grammatically acceptable sentence whereas in (1.2) the place name Malta blocks the use of the preposition although the nuclear predicate of the clause is the same motion verb as in (1.1). Besides Maltese there are many more languages world-wide which provide evidence of the (either optional or compulsory) special behavior of place names in contrast to other classes of nouns (Stolz/Lestrade/Stolz 2014). In this context zero-marking of spatial relations is a prominent characteristic of place names – albeit not the only one.

In our talk we discuss the hypothesis that zero-marking of spatial relations with place names is iconic because the place names are inherently spatial whereas common nouns (as well as person names) require overt marking of spatial relations because the spatial function of

common nouns (and person names) is secondary and thus must be explicitly established. The tenability of this hypothesis is put to the test with reference to Haspelmath's (2008) approach to iconicity and differential place marking. Empirical data from two dozens of languages of different genetic affiliation are presented in support of the above hypothesis.

Abbreviations

DEF = definite, IMPERF = imperfective, SG = singular

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Episodic Embodied Narratives as Iconic Representations of Engagement in the World: A Case Study from Ravensbrück

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Bodily affective transformations constitute episodic embodied narratives (EENs). By this, we mean that the *biosemiotic representation* of affective shifts—e.g., from habit-mediated, neutral engagement with one's surroundings, feelings, and thoughts to sudden selective attention on a surprisingly painful practical mistake or stumble, associated with episodically strong, negative emotions—are better understood as distributed neuro-physiological bundles, rather than as simplified higher-order central-nervous-system states. We briefly review arguments and evidence favoring the distributed cognition account of affective transformations, emphasizing that—despite the biological intricacy of an EEN's bodily components—it is the short-term temporality of shifting attention, feeling and self-awareness that drives self-organization of narrative experience of self-in-the-world.

As iterations of alternative bodily states occurring over variable, unpredictable time frames, EENs are simultaneously the subject and representation of an extremely simple narrative form, involving event concatenation: *A* happened, and then B happened (Lamarque, 2004). Yet, EENs are grounded in a dynamic perceptual environment that permeates the body's surface, encompassing thought and fantasy, feeling, and the self's wider material surroundings (Colombetti and Krueger, 2015). We suggest that EENs iconically map change in the body's perceptual connection—or openness—to itself and its surroundings. As stripped-down representations of bodily engagement in the world, EENs can thus anchor and mediate complex episodic memory formation. Moreover, learned associations between self's EEN experiences and others' episodic transformations in facial expression, body posture and limb movements can facilitate social openness and the potential for social judgment. Iconic embodied representation of affective transformation is thus central to learning, bodily competence, agency, and even cultural "mind-reading" (Bourdieu, 1977; Gell, 1998; Heyes and Frith, 2014).

EENs are recursively embedded in rich perceptual, kinesthetic, and emotional associations, supporting evolutionarily unique human behaviors: endurance bouts of selective attention in technological production, social interaction, travelling, play, and ritual performance.

In this presentation, which focuses on the Ravensbrück collection of illicitly produced and traded artefacts within the prison camp (Fig. 1), we propose a joint biocultural and material culture perspective. We argue that embodied narratives unfold and are modulated, remembered, and reshaped through interaction with the material environment over longer periods. We illustrate some of the ways in which many Ravensbrück prisoners made, used, exchanged and hid small artifacts, as they intentionally generated embodied narratives that afforded an experience of resilience in a politically totalitarian, violent setting. This analysis is based on Kulturen and the Lund University Library's collection of interviews recorded and objects saved by Zygmunt Lackocinski, a Polish art historian who met many of the nearly 7000 Ravensbrück survivors who had been handed over to the Danish and Swedish Red Cross in 1945 (Greayer and Sjöstrand, 2000). We discuss how material affordances prompt and mediate affective transformations, subsequent affective engagement, and memory formation over our lifetimes. As such, EENs are actually central for structuring agency in complex political dynamics of domination and resistance.

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The Correlation Between Meaning and Verb Formation in Japanese Sound-Symbolic Words

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Japanese sound-symbolic words are traditionally divided into three categories: phonomimes, phenomimes, and psychomimes. Among these traditional categories, phonomimes are the least likely to behave as verbs. In contrast, psychomimes are the most likely to behave as verbs. Phenomimes fall somewhere in between. In addition, it is widely recognized that phonomimes are more iconic than the other two categories.

Based on these factors, studies since the 1980s have assumed that less-iconic words tend to be used as verbs (see Kakehi 1982, Tamori 1991, Akita 2009, etc.). This assumption is now pervasive. It is, however, logically inadequate, as it is difficult even for native Japanese speakers to explain why phenomimes are more iconic than psychomimes. In addition, there is no quantitatively objective evidence to prove the assumption (Tamori and Schourup 1999 say that "it is physically impossible to measure iconicity quantitatively" [ibid, 188]).

This study conducts a quantitative analysis to clarify the correlation between meaning and verb formation in Japanese sound-symbolic words. My concrete method is, first, to classify two- mora non-reduplicative and reduplicative sound-symbolic words (in Kakehi et al. 1996) according to their semantically related sensory modalities and, second, to survey the proportion of verb formation in each group of words.

The result of this closer quantitative analysis is as follows:

Figure 1: Verb Formation in Japanese Sound-Symbolic Words According to Sensory Modalities
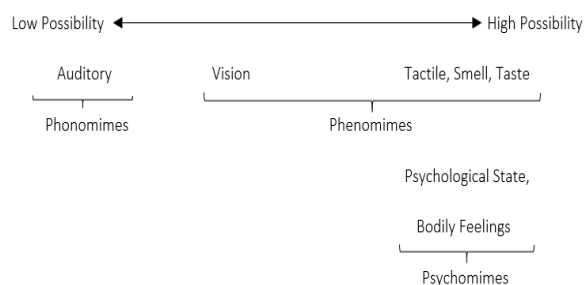
As seen in Figure 1, auditory-related words (i.e. phonomimes) are rarely used as verbs, whereas words describing psychological states or bodily feelings (i.e. psychomimes) are easily used as verbs. This accords with previous studies. In contrast, although tactile- (, smell- and taste-) and vision-related words are both traditionally considered to be phenomimes, that is, they are assumed to have the same degree of iconicity, the former can be used as verbs more easily than the latter. Furthermore, the ease regarding the verb formation of tactile- (, smell- and taste-) related words is almost the same as the ease regarding the formation of psychomimes.

These findings show that verb formation in Japanese sound-symbolic words may not fit into traditional categories involving degrees of iconicity, but are better categorized by the words' sensory-modality differences. Moreover, verb formation can be associated with information shared among a speaker and other people (i.e. inverse proportion). A sound and an appearance of something can be simultaneously perceived by both the speaker and the listener(s) while its texture etc., the speaker's psychological state or bodily feeling cannot.

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Władysław Strzemiński's theory of vision and Ronald Langacker's theory of language: iconic dimensions of visual perception and grammar

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In a recent survey of his cognitive theory of language Ronald W. Langacker states that cognitive grammar "does not claim that all meanings are based on space or visual perception" (Langacker 2008: 55; emphasis in the original). Yet, many cognitive linguists seem to take the analogy for granted, using the term viewing for both; others point to limitations that this assumption imposes upon the description of languages and the explanation of their cognitive basis (viz. the rejection of sound symbolism). In agreement with the former stance, I will argue that the role of visual perception in concept formation and, in consequence, in the development of language and creation of verbal expressions, is fundamental to our understanding of the nature and function of language. I will also claim that the relation between vision and language is based upon principles of iconicity and that an analysis of visual perception may lead to relevant insights into the processes of language creation and development.

I will point out some significant parallels between Langacker's theory of grammar, with its emphasis on the role of imagery in language creation and use, and the theory of visual perception as proposed by a prominent Polish art historian and philosopher Władysław Strzemiński in his 1958 book Teoria widzenia ("A Theory of Vision" (2016/1958). In his theory, Strzemiński developed the notion of visual content ("zawartość wzrokowa"), which is the sum total of factors conditioning visual perception and enabling an artist to adequately express images created as products of individual cognition. He defines five types of visual perception (contour vision, silhouette vision, cubic vision, chiaroscuro vision and overall empirical vision) and argues that they correspond to consecutive stages in the evolutionary development of human ability to view the world. I will argue that Strzemiński's landmarks find their counterparts in what in Langacker's model of grammar is defined, respectively, as bounding (contour and silhouette vision), perspective (cubic vision) figure/ground arrangement (chiaroscuro vision) and subjectification (overall empirical vision).

Strzemiński claims that paintings as objects of visual art are iconic representations of the world as an object of different types of visual perception. Parallels between types of vision and some fundamental properties of language as defined within the cognitivist framework suggest that linguistic meanings are indeed largely based on visual perception and that the relation between visual and verbal representations is inherently iconic.

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Contextual iconic relations between prosodic form and textual meaning in poetic declamation

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Poetic declamation, studied through the performances of renowned French actors, is composed of a textual layer and a prosodic layer. Forms motivated by meanings can be found in each layer. Considering the text, it is at the core of the poetic genre. As for prosody, several uses of voice function with an expression mirroring the content (for instance when the strength of the prosodic parameters is indexed to the strength of the emotion [Fónagy 1983 : 18]). These two layers are also able to express similar meanings in speech: for example, a sigh is similar to saying, "I am relieved"; an accent of insistence is synonymous to an adverb of intensity like "very". Thus, if a prosodic expression can mirror a prosodic content, and if a prosodic content can be equivalent to a textual content, it is then not surprising that a prosodic expression can show similarity to a textual content. Actors, specialists in imitation, help reveal these analogies.

In a referential representation ('mental image') of an interpreted text, a prosodic feature is sometimes reminiscent of a local lexical feature (a 'seme'). The particular semantic feature is thus conveyed to the prosodic expression by an iconic relation. For example, the phrase "cette recrue continuelle du genre humain" (meaning "this continual recruit of the human race") is pronounced with a very legato ('connected') voice. This prosodic expression offers a figurative imitation of the 'absence of interruption' contained in the referential representation of the phrase, insofar as the prosodic meaning has been contextually activated by the lexical content "continuelle". In this study, several iconic qualities are considered, both in correlation to the various prosodic parameters (tempo, pitch, intensity, voice quality), and to the types of semantic features of a word ('inherent' or contextual ('afferent') features; Rastier 1987).

Prosody can also extend the range of phonosymbolism. For instance, in an occurrence of the word "aveugle" (meaning "blind"), the phoneme /œ/ is contextually retracted, by the actor, to a central [ɐ] sound. The backward movement of the phonetic variant of the segment ('allophone') triggers the well-known iconic relation between the phonological feature /back/ and the semantic feature 'dark' ('dark' being a feature of "aveugle"). The important point is that

/œ/ is a front vowel: thus only the contextual, dynamic, effect of prosody can establish the iconic relation.

In discourse, lexical features of proximate words interact to form isotopies (Greimas 1966): some potential qualities of a word are promoted by the interpreter, and others demoted, in order to form coherent semantic chains. Iconic prosodic features can participate in these isotopies, and can also modify the semantic structure of a word in context, in order to allow its content to join the ongoing isotopy.

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Prosody as iconicity: isocolon's semantic and rhetorical homogeneity effects

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Building most directly on research by Brinton (1988), Johansen (1996), and Müller (2000) into the iconicity of rhetorical schemes, and on cognitive science results such as those by Perniss et al. (2010), Perlman et al. (2015), and Perlman & Lupyan (2018), revealing the pervasive iconicity of prosody, I look at the way isocolon, a scheme of prosodic parallelism, effects semantic and rhetorical homogeneity through endophoric iconicity.

Rhetorical repetitions leverage what has been called endophoric (or intralinguistic or second-order) iconicity, the resemblance not of signans and signatum, but of two or more signantia. This sort of resemblance—"form miming form" (Nöth 2000:22)—has semantic and rhetorical effects. A resemblance between forms implies a resemblance of the evoked meanings. This claim is uncontroversial for full lexical repetitions. Special cases (like punning) aside, two instances of the same lexical signantia evoke two instances of the same lexical signata. But homogenization effects are both sub- and supra-lexical as well. The best illustration of such effects is perhaps the so-called Rhyme as Reason effect, where people routinely judge rhyming statements to be more accurate, more trustworthy, and truer than non-rhyming paraphrases (e.g., McGlone & Tofighbakhsh 2000). The phonological sameness of words with identical final syllables increases (semantic) judgements of truth and (rhetorical) judgements of credibility; that is, rhyming signatia brings a kind of homogeneity to the associated signata (Haiman 1980:517).

In this paper, I extend these insights to a rhetorical figure of supra-lexical iconicity, isocolon, a figure of prosodic parallelism. Parallelism binds parallel units to each other conceptually, connects them above and beyond their mere proximity or their thematic overlaps. There is a clear neurocognitive rationale for this binding. As Jeanne Fahnestock argues, parallelism creates for phrases and sentences "more redundancy, and presumably efficiency, in their consecutive construal or processing in the brain." Because the same stimulus patterns activate the same neural firing patterns, "similarity in at least one dimension...can impose a

connectedness on consecutive [phrases or] sentences, even when their content is different" (Fahnestock 2005: 169). For isocolon, this effectively comes down to prosodic homogeneity effects semantic and rhetorical homogeneity.

I argue that isocolon is used in both prose and poetry not only because of its textual cohesion (Brinton), or its aesthetic force (Johansen), or its affective and logical inducements (Müller), but also because of its endophoric activation of semantic and rhetorical homogeneity.

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Diagrams and the Crossroads Between Aesthetics and Epistemology

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The philosophical branches of aesthetics and epistemology, although sharing several problems in common, do not seem to have been in active dialogue, particularly in what regards the systematic investigation of the mechanisms through which artifacts usually regarded as sources of aesthetic experience (such as artworks) might be able to derive knowledge. In this paper, it is going to be presented one possible way to start approaching such investigation: I believe it is possible to study the epistemic potential of artworks by approaching artworks as diagrams in the Peircean sense. According to Peirce, diagrams are a specific class of iconic signs: they represent, by their own means, the interrelated parts that construct the internal structure of their objects, in order to aid and create potential reasoning.

It is going to be explored here how (i) diagrams cannot have the experiences they produce reduced to a fixed and final response, how (ii) diagrams are constantly shaped by experimental interactions with an agent and its environment, how (iii) diagrams and the experiences they produce are part of the same process, and how (iv) diagrams are in a continuum of science and everyday life, by means of modifying and sharpening perception on general. In order to investigate and illustrate each of these features of diagrams, the artwork "Brillo Boxes" of Andy Warhol is going to be analyzed regarding its diagrammatic properties. It will be concluded that, by explicitly assuming this diagrammatic role of artworks we can proceed to investigate how art can be used to derive knowledge. Only by doing such, we can then advance to develop a more refined and detailed account of the diagrammatic reasoning process that allows an agent to process the possible knowledge that might be derived of an artwork as diagram.

Deconstructing Constructed Action: Temporal Iconicity in American Sign Language

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We argue that the pattern of use of constructed action in American Sign Language, a perspective-marking device, is sensitive to iconicity in the lexicon. A component of constructed action, facial enactment, can only occur with verbs in ASL that display temporal iconicity. This work adds to a literature on the role of iconicity in the grammatical structure of sign language (Meir, 2010).

In constructed action across sign languages, the signer explicitly marks that their body stands in for someone else's (Quer, 2005). Constructed action has three overt markers, noted in the literature: 1) physical shift of the torso towards spatial locus associated with the referent, 2) (re)enactment of the referent's facial expressions and movements, and 3) shift in eye gaze. We examine the distribution of these three markers over different classes of ASL verbs: plain mono-morphemic verbs and classifier constructions (event, tracing, location). Classifier constructions combine a handshape that denotes the referent type with an iconic movement/location. Event classifiers show the movement of an object during an event, tracing classifiers 'trace' the shape of the object, and locative classifiers show where the object is located in space.

Based on data from 12 ASL signers, the use of facial enactment patterns differently from shifts in torso and eye gaze across verb types. Torso and eye gaze shift can occur with any kind of classifier construction and some plain verbs. Facial enactment only appears with event classifiers and some plain verbs, not trace/location classifiers. We argue that facial enactment pays attention to a specific iconic mapping that the other markers do not pay attention to — an iconic mapping of time.

Event classifiers are compatible with facial enactment because they both contain temporal iconicity: each temporal segment or subinterval of the classifier and the enactment correspond to a part of the actual event itself. Tracing and location classifiers do not share this quality -- for example, the path of the tracing classifier does not refer to a change in time, but rather to the

shape of an object. Because these classifiers lack a temporal mapping, they block the use of facial enactment, which is permissible with event classifiers.

Finally, some plain verbs also are also temporally iconic, while others are not (Wilbur, 2008). Our hypothesis predicts that only the iconic verbs can appear under facial enactment (echoing Dudis, 2011).

This study demonstrates how a specific type of iconicity may constrain which kinds of linguistic material appears with constructed action, an example of how iconicity becomes relevant to sign language structure.

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Resemblance, Contiguity, and Identity of the Self in David Hume's Treatise on Human Nature

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The subject matter of this paper will constitute an evaluation of the pioneering merit of David Hume (1711–1776) for the development of the contemporary cognitive psychology of learning and phenomenology of cognitive semiotics, on the basis of his books, first published anonymously (1739). As such, it will also aim at contributing to the "Semiotics of Resemblance" initiated by an interdisciplinary seminar *Resemblances in Nature and Culture: Theoretical and Semiotic Perspectives* at Tartu University in 2008 being subsequently crowned by a publication of selected papers in a special issue of *Sign Systems Study* (vol. 38), in 2010. With reference to the afore mentioned Tartu publication, the author of this paper shares the opinion that "resemblance" is a good umbrella term uniting various paradigms from evolutionary biology, esthetics, art and literary studies, using the concepts of iconicity related to mimesis, mimicry, pictoriality, similarity, metaphoricity, and the like (cf. Sonesson, 2010).. Especially, when bearing in mind that the hitherto leading notion of iconicity, despite its productive applicability during the last two decades, did not exist in earlier times.

As objects of investigation, these four constituents of the paper's title, resemblance, contiguity, identity and self, have been extracted from Hume's three volume materials (reworked afterwards under the author's name in 1748 and 1751). Thus, the focus of critical discussion will be placed on the concepts of the self and its identity, against the background of Hume's predecessors, contemporaries and followers. Moreover, the author of this paper will confront some contributions to the multidimensionality of communicative identity of private and public selves which finds manifestations in their interpersonal encounters and inter-subjective understandings. Hence, s/he will consider a number of its dimensions, in which the self is experiencing: (1) the singularity and individuality of its own body in space and time, (2) itself in relation to others and through the eyes of others, (3) its own drives and needs as well as feelings and emotions, (4) its own thoughts and reflections in internally conducted monologs referring to its individual life, (5) the dynamics of its own action, performed with stable patterns,

although determined by the specificity and changeability of environmental situations, (6) its own public self—being the result of self-presentation and the opposite of the private self as not known to others, (7) the sense of durability and stability of its own corporeal and spiritual existence over time, closely related to its memory, volitional and cognitive experiences, (8) its continuity in past and present, and (9) its tensions and conflicts between present and future ego states.

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Degrees of metaphoricity: a large-scale, quantitative analysis of iconic gestures in the TV News Archive

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One mode in which iconicity manifests itself in multimodal communication is gesture. Metaphoric gestures iconically depict a source domain that is used to metaphorically represent a target domain (e.g., McNeill, 2005). For instance, a speaker might gesture vertically upwards when stating that they feel 'on a high', iconically depicting the source domain UPPER SPACE to represent the target domain HAPPINESS. The foregrounding of linguistic metaphors such as 'on a high' through metaphoric gestures is often interpreted as evidence that the source domain of these metaphors is activated for the speaker (e.g., Cienki & Müller, 2008; Müller, 2008; Müller & Tag, 2013). In line with Hostetter and Alibali's (2008) Gestures as Simulated Action (GSA) framework, we additionally assume that it is this source domain activation that spreads to the speaker's motor cortex and causes them to produce metaphoric gestures. We furthermore posit that the likelihood of a speaker gesturing increases proportionally with the strength of this activation.

Based on this, we propose three criteria for investigating the degree to which the source domain of a linguistic metaphor is active:

1. Gesture co-occurrence: whether or not speakers gesture at all when using the linguistic metaphor

2. Gestural fit: whether or not speakers produce gestures that are iconic, i.e., that align with the meaning of the linguistic metaphor (e.g., gesturing upwards when saying 'on a high')

3. Gestural effort: how effortful speakers' iconic gestures are (e.g., gesturing with two hands tends to involve more effort than gesturing with one hand)

Across 377 videos and 257 speakers, we use these three criteria to investigate iconic gestures accompanying linguistic metaphors that describe EMOTIONAL VALENCE (good/bad) in terms of VERTICAL SPACE (high/low): 'low standards', 'high standards', 'lower the standards' and 'raise the standards'. We do this using a corpus assembled from the TV News Archive, an online, open-

access database of over 1.7 million news broadcasts and growing. The primary advantage of this database is that it facilitates the collection and analysis of large amounts of data, allowing us to make inferences across many different speakers and contexts.

The purpose of this paper is twofold. First, we use existing theory and research to inform criteria that can be used to quantitatively investigate the activation of metaphors in verbo-gestural contexts. Second, we explore how these criteria can be used in a research project and explicate their usefulness to researchers interested in iconicity. In doing so, we also show how the TV News Archive can be useful to gesture researchers more generally and suggest ways of optimising research conducted using the Archive.

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Iconicity and forgetfulness

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We can tell a series of events in the order they occurred, but a narrative discourse does not necessarily unfold in the temporal order. The violation of temporal iconicity [1](Jakobson 1965, Bolinger 1977, Greenberg 1976, Haiman 1985, J.Tai 1985, Givon 1990) is due, on the one hand, to the different stylistic and argumentative needs of the text and, on the other hand, to the peculiarities of the language of the text.

A verb like 'forget' poses, by definition, the problem of temporality.

In an utterance such as the following, in a flexional-fusional language like French, the compound tenses, here the pluperfect, in a retrospective perspective, play an essential role in the anti-iconic narration:

(1)   *Elle descend, traverse la rue, se dirige vers la voiture, revient sur ses pas, elle avait oublié   d'emporter   la   clé.*
        'She went down, crossed the street, approached the car, retraced her steps, she had forgotten to bring the key.'

Ontologically, 'forget' is necessarily afterwards. From the point of view of linguistic linearity, 'to forget' is necessarily marked with a temporal shift: French marks the anti-iconicity of narration by the use of the pluperfect and by the obligatory resumption of subject 'she' to introduce the afterwards event 'she had forgotten to bring the key'.

In an isolating language that has little means of morphological differentiation such as Chinese, we must introduce the mention of the event 'forget to bring the key' in a objective clause governed by a verb of the type 'to discover' or 'to perceive' to express the taking into account of the fact of having forgotten in the present narrative time and indicate, at the same time, that the action of 'discovering' occupies a portion of time (Lyons 1977):

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[1] Temporal iconicity or iconicity of sequence means that linear sequence of the constituents mimes temporal sequence of the events in the referential world.

(2)   妈妈选好了要买的菜，正要付钱时，发现忘带钱出来了

mā mā   xuǎn   -hǎo   -le   yào   mǎi   -de   cài,
mom   choose Result.well Pft. Aux.want to   buy   Mod. vegetable,

zhèng   yào   fù   -qián   shí,
Adv.just   Aux.want to   pay -money moment,

fā-xiàn   wàng   dài   qián   chū   -lái   le
discover   forget bring money   go out-Dir.come   En°

« Mom picked up the vegetables she wanted to buy, and when she was about to pay, she found she had forgotten to bring money with her. »   (https://wenku.baidu.com)

So, what is 'forget'? There is in 'forgetfulness' two worlds (or, rather, two universes) in contrast: the world (or universe) of reference and the world (or universe) where 'we would not have forgotten…'.

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妈妈选好了要买的菜，正要付钱时，发现忘带钱出来了