

Book of Abstracts

The Fifth Conference of the International Association for Cognitive Semiotics (IACS-5)

THEME: CRISES OF MEANING

AUGUST 15-17, 2024 | LUND UNIVERSITY



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The Fifth Conference of the International Association
for Cognitive Semiotics (IACS-5)

Theme: *Crises of Meaning*

August 15-17, 2024, Lund University



LUND
UNIVERSITY

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Table of Contents

Welcome to IACS-5!	
Practical Information.....	6
Plenary lectures	8
Theme Session I: Linguistic Bodies in Interaction	17
Theme Session II: Reigning in Neuromania through Cognitive Semiotics	30
Theme Session III: Sonesson and phenomenological cognitive semiotics	39
General Session (in alphabetical order)	53
Poster Session (in alphabetical order)	132

Welcome to IACS-5!

Dear conference participant,

Some ten years ago, in September 2014, we gathered here in Lund for the first of these conferences, celebrating the proper birth of a new community, dedicated to the academic pursuit of meaning. The *International Association for Cognitive Semiotics* had been formally established the year before, and pre-figured in the work of numerous scholars at the border areas of semiotics, linguistics and cognitive science in the preceding decades, but now finally we had our own conference series.

Back then, while dark clouds were on the horizon, we were still optimistic that IACS could make a difference to our troubled world by bridging gaps between fields, by helping to steer away from the pitfalls of reductionism in the sciences and relativism in the humanities, between “human exceptionalism” on the one hand, and “post-humanism” on the other. As the cover art by Daniel Barrett of this book of abstracts indicates, we were apparently too optimistic. We have since then experienced one crisis after the other: academic, health, environmental, political, psychological... But to many of us it seems that underneath these there is a deep *crisis of meaning*, and that the best that cognitive semiotics could do is to provide a diagnosis, and perhaps even suggest a remedy. Hence, the theme of the conference, which we anticipate will be addressed, or at least touched by, in many of talks, as well as in the theme sessions on “Linguistic bodies”, “Neuromania” and “Göran Sonesson” – the latter dedicated to one of the founders of cognitive semiotics, who tragically left us in 2023.

One blatant expression of this crisis is the genocidal war (which actually started in 2014, with most of the world “not noticing”) of Russia and its dictator Putin against the people of Ukraine in 2022, an unforgivable crime that is being called “a special military operation” aiming to “liberate” Ukrainians from “Nazism”: in the best tradition of Orwellian *Newspeak*. To offer our small contribution, we declare this conference, and participating in it to be an act of protest against this war, and support for the brave people of Ukraine.

Slava Ukraini!

Jordan Zlatev

Lund, August 15, 2024

Practical Information

Lund and Lund University

Lund, situated in the centre of the attractive and expansive Öresund region in southern Sweden, is one of the oldest cities in Sweden with a history more than one thousand years old. Over the centuries it has earned a reputation for being a place where people meet, and, today, more than ever, Lund is a meeting place for ideas and creativity. Here, the university, science-park, multicultural atmosphere and historical surroundings make up a unique combination. This, along with its central situation, has turned Lund into an international city where ideas are born - ideas that build enterprises and achieve success both nationally and internationally. 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. Lund University has an excellent academic reputation with a large number of visiting professors and international students.

Språk- och litteraturcentrum (SOL) = Centre for Languages and Literature (CLL)

IACS-5 takes place at SOL, which was established on January 1, 2006, combining the staff and students of the separate former departments for different languages, linguistics and literature. Currently SOL has a staff of some 250 people and 3000 students, including 100 PhD candidates. Cognitive Semiotics is one of ca. 30 different divisions within SOL.

**The conference will take place in 4 rooms on the first floor of *Humanisthuset*:
The Auditorium (*Hörsal*) and rooms H135a, H135b and H140.**

Registration desk

The registration desk is in the main lobby of SOL and will be open from Wednesday August 14, 4 to 7pm for advance registration, and all day during the conference. On registration, you will receive a conference bag with material, and a badge. **Please carry your badges at all times** – they will be necessary for attending talks, and for coffee/tea breaks, lunches, and the Reception.

Oral presentations and posters

Oral presentations will last 20 minutes, followed by 5 minutes for questions (leaving 5 minutes for transitions between rooms). There will be computers and projectors in each room. **Speakers are asked to go to the room where their talk will be presented in advance, and make sure that the presentation is uploaded.** If you wish to use your own laptop, you should try it out in advance. Mac users should bring the necessary adaptors.

The poster session will be held during the second day in the lobby of SOL. **Posters should be set up from the morning, while the dedicated time for the poster session will be from 16:00-17:30.** The size of the poster should be A0 (or two A1's). We will provide boards to set them up. QR codes to supplementary materials and videos may be also included.

Coffee/tea breaks and lunches

Coffee/tea and refreshments will be served in the lobby of SOL during every break. **For lunch, we will go to the nearby restaurant *Valvet***, which we have booked completely for ourselves. The easiest thing is to follow the volunteers. Remember to carry your badges!

Reception

The reception will take place on **August 15, 18:30-21:00** in *Forum Medicum (Faculty of Medicine)*, **Sölvegatan 21**, some 200 meters “uphill” from SOL – just follow the volunteers again. The reception is included in your registration fee, and will include some light food and drinks. All participants are warmly welcome!

Conference dinner

The conference dinner will take place at *På Skissernas* restaurant (<https://paskissernas.se>), part of the museum that is located next door to SOL. It will take place the second day of the conference, August 6, 19:00-22:00. **You can register at the conference site (<https://lucpp.adm.lu.se/en/konferens-iacs-5.html>) by choosing the "conference dinner" option and paying online.** We have managed to keep the fees as low as possible: 600 SEK, including three course menu and two glasses of wine. **Note that we will not be able to accept payments in cash.**

Plenary lectures

Autonomy, participation, and sense-making as sites of crisis: studying the technopolitical situatedness of linguistic bodies

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Linguistic bodies have a dynamic and participatory ontology; our collective becoming is perpetually shaping and being shaped by tangled layers of situatedness and possibility (Di Paolo et al., 2018). Anyone reading this is a linguistic body; it is not an abstract concept, but seeks to ground language science in the material reality of working, hungry, vulnerable, and morally complicated existence. Linguistic bodies, as opposed to other embodied agents, exist in a way such that their bodily domains (organic, sensorimotor, intersubjective) are entangled not only with each other but also with and through languaging (McGann, 2024). Linguistic bodies are adaptive, habit-constituted, laboring bodies that incorporate and incarnate language and other technologies (Di Paolo et al, 2018).

Today, technology and capitalism jointly structure the milieu in which so much human interacting and languaging occurs. The potential for myriad crises lies here, via pressures of labor that exhausts, alienates, and underpays, and foregone submission to greed-driven technological advancement. What would constitute a crisis for people *qualinguistic* bodies? Here are three possibilities: (1) Significant reductions in the number of ways in which we engage, access, use, and maintain dimensions of our embodiment, for example shrinking ourselves, our attention, our movements, our thoughts, and our expectations down to the scale and affordances of smart phones, videoconferencing platforms, infinitely scrollable and schizophrenic social media channels, and ever-promotional soundbites. (2) Significant reductions to avenues for meaningful participation in our world, for example lack of autonomy and control over the kinds of tech that we buy and use (tech that by design limits participation to consumption and reaction) or the laws that regulate it. (3) Finding oneself/one's community in an environment of pernicious utterances which the community then incorporates or incarnates; this could also be seen in terms of significant reduction in exposure to critical discourses to challenge or liberate us from the pernicious utterances. For example, YouTube and other forms of algorithmic radicalization and rabbit holes (Ribeiro et al., 2021; Burton, 2023), as well as various state or corporate controlled systems of propaganda, may supplant the diversity of viewpoints in one's local, IRL community.

What are the effects of techno-political situatedness on the ranges of semiotic possibility, on sense-making? How can we study them? Cognitive semiotics as an interdisciplinary field offers a set of methods, tools, and products that can illuminate shifts in meaning-making practices at different scales. In addition to seeking

“underlying semiotic properties of the human mind and psyche as such, which are inseparable from the properties of basic human cognition,” Per Brandt included the goal of finding “the basic principles that allow us to us make sense (and even nonsense) of the world we live in” among “the challenging tasks that motivate what we call cognitive semiotics.” (Brandt, 2011).

In this spirit, I’ll offer two moves that may help us to approach languaging in its technopolitical material context. The first reorients us to language ontologically as something dissociable from political configurations and struggles, something that “interpellates and constructs subjective attitudes rather than simply being a vehicle for communicative intentions” (Di Paolo et al., 2018). The second reorients us to language methodologically, by employing phenomenologically-inspired, participatory research techniques to study interaction wholes, or systems of participatory sense-making.

Brandt, P. A. (2011). What is cognitive semiotics? A new paradigm in the study of meaning. *Signata. Annales des sémiotiques/Annals of Semiotics*, (2), 49-60.

Burton, J. (2023). Algorithmic extremism? The securitization of artificial intelligence (AI) and its impact on radicalism, polarization and political violence. *Technology in Society*, 75, 102262. <https://doi.org/10.1016/j.techsoc.2023.102262>.

Di Paolo, E. A., Cuffari, E. C., & De Jaegher, H. (2018). *Linguistic bodies: The continuity between life and language*. MIT press.

McGann, M. (2024). Facing life: the messy bodies of enactive cognitive science. *Phenomenology and the Cognitive Sciences*, 1-18.

Ribeiro, M. H., Ottoni, R., West, R., Almeida, V. A., & Meira Jr, W. (2020, January). Auditing radicalization pathways on YouTube. In *Proceedings of the 2020 conference on fairness, accountability, and transparency* (pp. 131-141).

The Crisis of Authenticity: Meaning under Conditions of “Proflicity”

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The “age of authenticity” (as proclaimed by the philosopher Charles Taylor) is coming to an end. A major indicator of its ending is the increasingly obvious paradoxicality, incongruity, and absurdity of claims to authenticity in media, politics, or academia. The meaning of “authenticity” and “originality” has been radically altered, this paper suggests, because such semantics now often serve the curation of post-authentic profiles. The switch from authenticity to “proflicity” (see Hans-Georg Moeller and Paul D’Ambrosio, *You and Your Profile: Identity after Authenticity*, Columbia University Press 2021), however, should not simply be

lamented as a fall back into inauthenticity. Instead, this switch may present an opportunity to find and develop meaning under conditions of prolificity.

Multimodality and aesthetic experience: How feeling guides the ways we make sense

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Making sense of ourselves and of our world is an intercorporeal process in the first place. Whether we engage in face-to-face interaction with friends and colleagues or with audiovisual images, all ‘exchange’ of information is grounded in the aesthetic (e.g., felt) experiences of a perceiving body. When we chat with a friend or engage in a political discussion, we hear what she says, see how she sits or stands, whether and how she gestures or not, in short, when taking the position of a perceiving subject, speaking is embedded body movement. Speaking is not abstracted from the body, it is the entire body in motion. Perceiving speaking then is perceiving a body in motion. We cannot, but feel the quality of its movement, whether it is calm and relaxed or tense and agitated. Whatever somebody will say, it is soaked with experiencing the qualities of movement.

Taking recourse to Merleau-Ponty’s account of pain, there is no pain hidden behind a body movement, or a scream of pain, the movement is the pain. It is felt and bodily perceived on the side of an interlocutor. This calls for rethinking speaking as inherently multimodal, as fundamentally intercorporeal and hence (from a phenomenological point of view) interaffective (Fuchs 2017) process. What moves us are the qualities of movement, whether in face-to-face encounters or in our engagements with audiovisual media. Much of the power of audiovisual representations of talking people in whatever circumstances they are shown, derives from the specific framing, staging and orchestration of the audiovisual images as movement images. Do we as spectators see somebody close by or in a wide angle shot with miniature gestures? Do we encounter long takes with no or slow camera movements, or a fast succession of shots in a rhythmic montage pattern? Do we see the spoken language in its original tempo or in increased speed and with bumpy cuts that result from cutting off pauses. Such orchestrations of audiovisual images not only impact the way the spectators perceive people and their speaking on the screen, they modulate the perceptive experience of the viewers by affecting them bodily, by creating a specific movement experience.

Following phenomenological film theorist Vivian Sobchack (1992), films are “an expression of experience by experience”. This means that the perception of audiovisual images is a movement experience in the first place. It is felt sensation. When we make sense of people talking, be it face-to-face or mediated by audiovisuals it is the feeling that guides our ways in the first place. Given that societies are permeated by such mediatised events, ranging from social media to television broadcast, from TikTok to YouTube, from X to Instagram, a call is up to systematically include ‘feeling’ into our linguistic, semiotic, cognitive attempts in understanding how crises of meaning, how collective processes of subjectified meaning-making come about. It calls for studying multimodal language from the point of view of aesthetic experience.

The birth of wild meaning: Facing crises of alienation and disenchantment

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Many have argued that the infamous subject/object split of Modernity and its litany of pernicious consequences (commodification, instrumentalism, fundamentalism, decontextualization, disembodiment, and the like) are responsible for driving Euro/western worldviews and their globalizing influence ever deeper into the meaningless miasma of alienation and disenchantment since the 17th century (Marx 1844, Heidegger 1927, Adorno 1973, Derrida 1976, Sheets-Johnstone 2011). Phenomenologists following Husserl have insisted that the reunification of this split, or recognition of its intertwining in lived bodily experience, is necessary for restoring “a power to signify, a birth of meaning, or a wild meaning” (Merleau-Ponty 1964: 155). Cognitive semiotics shares this mandate; but I argue that focusing on the subject-object split or its resolution accomplishes little – especially in terms of identifying practical, therapeutic effects capable of inducing the birth of wild meaning. Instead, we would do well to pursue later interpretive developments of phenomenology that focus on more organic, process-oriented modes of self-other intertwining and more robust distinctions between different ways of knowing (following, e.g., Maslow 1962, Berman 1981, Bateson 1972, McGilchrist 2019). To demonstrate this perspectival shift in action, I present a range of experiential mappings involving “inverse alteroception” – a newly defined mode of intersubjective phenomenology (Pelkey 2024, forthcoming) that informs the gamut of human understanding from the interpersonal and socially symbolic to the visuo-spatial and logically symbolic. Drawing on insights from both structuralist and

pragmatist semiotics, I illustrate ways in which the play of imagination and ideology alike are grounded in embodied dynamics that owe their origins to the evolution of habitual upright posture. The inherently personalizing nature of inverse alteroception is consonant with cross-linguistic evidence that poetry, music, and works of art are best approached as persons or living beings (McGilchrist 2019: 94–97). Approaching works of art as embodied persons (and people as works of art) can reorient us to the mystery and wonder of what we study in any domain. In this light, C. S. Peirce’s proposal that the universe is itself a poem or work of art (1903: 194) deserves further consideration. Far from defaulting to any particular belief system or mode of spirituality, I suggest that a simple open question suffices to guide this approach: “Who are you?” To illustrate, I close with a cascade of examples from a preliminary corpus of cross-cultural and multi-genre cases in which this question serves as a midwife for the birth of wild meaning.

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Break-downs and times of crisis

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Human beings are creatures of meaning. The world appears to us as having a meaningful structure. Each of us tells a story about herself that makes sense of her life and who she is. We project ourselves into a future that helps structure the meaning of the present. In a myriad ways, the meaningful connections between things gives us an implicit, but pervasive sense of reality: an implicit trust in the real. In a crisis of meaning, the fabric of the world starts to break down. As the study of the lived world, phenomenology provides the resources to understand such crises of meaning.

One thinker who has studied breakdowns in depth is Frantz Fanon. A psychiatrist, Fanon devoted his life to combatting colonialism, which for him is not just a physical system of oppression, but also an *ideology* – a set of ideas that help uphold oppression. One of the insights from his work is that colonialism brings about various breakdowns in the fabric of the lived world. Phenomenology is one of the disciplines he draws on to understand how this happens.

Fanon argues that colonial ideas are not just grasped intellectually, but become embedded in our bodies, imagination, and the structure of the perceived world. A central way this happens is through *the body schema*. We can understand this as the body's 'grasp' or 'sense' of itself. An important strand of thinking in phenomenology sees the body schema as underlying our fundamental embodied relations with other people. Colonial ideology deforms the body schema, and so brings about a breakdown in our fundamental relationships with each other. Colonialism also ruptures the world in more violent ways. Fanon's studies of Algerian society during the Revolution illuminate the role that our practices play in maintaining the structure of the world. A practice is a community's way of doing things. They can be thought of as social habits. Practices underlie the structure of society in various ways. They relate people who participate in it to an environment. They also help structure society through the role they play in organising social time, binding together the members of a community as a loosely cohesive whole by the rhythms of a shared social life. Practices also relate people to one another in various ways. In the Algerian Revolution, colonialism brought about a breakdown in the lived world through the violent disruption of Algerian social practices. These had profound impacts, not just on the physical aspects of Algerian society, but on the psyche of those living under the colonial system, so that they can be correctly

described as experiencing the sort of rupture in the fabric of the lived world that constitutes a crisis of meaning.

Fanon's work also offers a solution in the form of a blueprint for restoration of meaning. Fanon was first and foremost a psychiatrist. He was part of, and helped develop the radical movement in French psychiatry, 'institutional psychotherapy', and continued to work as a psychiatrist until he resigned his hospital position in Algeria on the grounds that he could not heal his patients in a society that was itself sick. Psychiatry (like other forms of healthcare) has a philosophical foundation, since it is necessarily premised on an understanding of what a human being *is*, which informs the psychiatrist's answers to questions such as what is normal functioning, what counts as ill health, what the goal of therapeutic treatment is, and which psychiatric practices are appropriate and justified. Fanon's psychiatric conception of human flourishing also informs his account of decolonisation and the restoration of meaning to the lived world after the breakdowns induced by colonialism. On his view, to be healthy is to live in authentic relations with others.

The crisis of mechanistic science seen through the lens of the nature crisis

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Edmund Husserl (1954) famously thematized science's forgetting of the lifeworld. In a somewhat similar way, Jakob von Uexküll (1956 [1940]) decried the 'meaning-blind' biology of his time. Drawing on the fact that the experience of animals is constrained by the sensory and behavioral repertoire of each organism and takes place within the context of species-specific configurations of time and space, the Umwelt theory he developed was programmatically framed as *subjective biology*. While he applied the Umwelt perspective to humans as well, particularly in von Uexküll 1956 [1934], unfortunately, human Umwelten remained undertheorized in his work. Hannah Arendt (1958), however, discussed the human condition and observed a crisis within the natural sciences play out as an inability to be relatable to normal speech and thought. Although she saw the significance of our evolving global perspective and power, which is today often conceptualized in terms of the *Anthropocene*, Arendt failed to acknowledge the decisive difference our anthropocentric bias makes in matters of ontology and epistemology alike.

From the perspective of Umwelt phenomenology, today's environmental crisis can be conceived of as an *ontological crisis* involving the extinction and marginalization of myriads of lifeworlds. As is well established, the environmental

crisis is characterized by extensive anthropogenic environmental change. This can be conceptualized in terms of *Umwelt transitions*. The ongoing nature crisis is most blatantly observable in rapidly escalating climate change, and the well-documented marginalization of wild terrestrial mammals, which now account for only 4% of terrestrial mammalian biomass. Arguably, the last decades' scientific neglect, theoretically and methodologically, of the agency, subjectivity, and worth of living beings has contributed to this intensifying and deepening nature crisis. With its objectivistic, mechanistic perspective on the natural world, the scientific enterprise has in practice facilitated and helped justify a real-life objectification, de-souling, exploitation, and commodification of living beings as mere means and resources. It is high time to replace this outdated and harmful outlook with a philosophically based scientific framework more fit for the 21st century. One way forward entails acknowledging the semiotic agency of all that lives (Sharov & Tønnessen 2021), and start planning for the socio-ecological and economic transformations that will be required to solve the environmental crisis in the next few decades (Tønnessen 2021). This will have to involve a serious rethinking of the human condition.

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Sharov, Alexei and Morten Tønnessen 2021: *Semiotic Agency: Science beyond Mechanism* (Biosemiotics 25). Springer Nature. <https://doi.org/10.1007/978-3-030-89484-9>

Tønnessen, Morten 2021. Anticipating the societal transformation required to solve the environmental crisis in the 21st century. *Sign Systems Studies* 49 (1/2): 12–62. <https://doi.org/10.12697/SSS.2021.49.1-2.02>

Uexküll, Jakob von 1956 [1934/1940]. *A Foray into the Worlds of Animals and Humans – with A Theory of Meaning* (Posthumanities 12). Transl. Joseph D. O'Neil. Minneapolis & London: University of Minnesota Press

Theme Session I: Linguistic Bodies in Interaction

Šárka Kadavá and Wim Pouw

In communication we use a myriad of time-varying signals – besides speaking or signing – to create and sustain mutual understanding. These dynamic signals include gestures, facial expressions, eye gaze, or any posture in motion that can be recruited for intentional communicative signaling. The language sciences have long overlooked the polysemiotic and intersubjective context of these signals, directly contributing to a crisis of meaning by hindering our understanding of the nature of communication. This crisis is rooted in two interrelated issues: (1) an overly individualistic approach, and (2) a monosemiotic, static language-centered perspective. Addressing these issues can help us acknowledge that communication is, in fact, fundamentally intersubjective and dynamic.

Firstly, to achieve a more holistic view of language and how we negotiate meaning, we need to shift our focus beyond ‘single-mindedness’ (Dingemans et al. 2023). Despite the methodological challenges this shift may pose, it is crucial to enrich isolated experimental settings with more ecological dyadic interactions that facilitate the full range of dynamic signals used in face-to-face communication. Secondly, the challenge of dynamicity should be overcome. For analytic purposes, one often needs to identify and capture complex phenomena with relational interdependencies as if decomposable in independent functional variables. As far as language is concerned, this means abstracting from time-varying materially constituted informational flow into static, second-order patterns (e.g., words, norms, etc.). However, those patterns are incomplete in capturing ‘moving matter’ and ‘movement that matters’ and reduce the complexity of the communicative act.

Recent research has increasingly recognized this missing link, advancing the field both methodologically and theoretically. Since the ‘multimodal turn’, researchers have started to appreciate the orchestral nature of body articulators and their neat temporal synchronization (e.g., Rochet-Capellan et al. 2008), and the physiological properties constraining communication (e.g., Pouw et al. 2020). Finally, more evidence is brought forward regarding the variety of communicative and/or pragmatic functions that motion – such as pointing (e.g., Raghavan et al. 2023), or

eyebrow movement (e.g., Nota et al. 2023) – can take on in the interaction, making use of different dynamic patterns of our bodies (e.g., acceleration, amplitude, etc.). Moreover, cognitive semiotics can valuably contribute to the discussion as it offers a transdisciplinary approach that instead of focusing on language per se highlights the polysemiotic nature of meaning making (e.g., Zlatev, 2015; Zlatev et al., 2023).

This theme session aims to bring together researchers who explore how dynamic signals serve as a means of relating to each other and enlighten the ways in which we overcome everyday crises of meaning. Speakers will approach this theme from a variety of perspectives – e.g., pedagogical, technological, and developmental – and cover topics such as co-singing gesture interaction, video mediation of linguistic bodies, or repair in novel communication. The session provides an opportunity to bring together researchers at different stages of their academic careers, working under different theoretical frameworks aligned with cognitive semiotics, focusing on various target groups, etc. This is relevant to prevent and/or resolve our scientific crisis of meaning and to re-think how meaning and meaningful signals unfold when we interact. Among other things, it is exactly those dynamic signals that can bridge the gap between individual minds and frame language and communication as ‘something we do together’ (Fusaroli et al. 2014).

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Regulating the body in communicative challenges. Experimental study under kinematic-acoustic analysis

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In face-to-face interaction, we employ various signals to ensure smooth understanding. Yet, our conversations frequently break down, yielding a sudden ‘crisis of meaning’. To accommodate the communicative situation and compensate for such misunderstandings, we engage in repair strategies such as increased communicative effort. This is true for speech (Schegloff et al., 1977; Lindblom et al., 1990), gestures (Rasenberg et al., 2022), as well as sign (Manrique, 2016).

In novel communication research, participants pretend an absence of a common language, forcing them to rely on non-conventional means that are less constrained by symbolic norms. In the current study, we recruited 60 Dutch dyads (i.e., 120 individuals) to participate in a gesture-vocal referential game (e.g., Fay et al., 2013; Zlatev et al., 2017; Macuch Silva et al., 2020). One person of the dyad acts as a performer, and one as a guesser. The performer’s role is to express meaning in one of the three conditions: using only voice, only gesture, or both. The guesser’s role is to guess the meaning. If the answer is not correct, the performer has two more chances to repair themselves. In total, each dyad performs 42 different concepts in three modality conditions while their movements and vocalizations are being recorded. Partners swap roles within each condition. The method is pre-registered via OSF.

Following the literature on multimodal repair (e.g., Holler & Wilkin, 2011; Rasenberg et al., 2022), we anticipate that kinematic and acoustic features are flexibly employed during the repaired performances to regain understanding. Concretely, we hypothesize that performers become more effortful in terms of articulation, specifically for sounds and limb movement. Features of interest involve amplitude, velocity, or forcefulness of articulators. Moreover, we assume that performers make use of the guesser's answer and modulate their behavior (i.e., gesturing and vocalizing) depending on the degree of misunderstanding. The idea is that misunderstandings can vary in severity, creating a stronger or weaker alignment gradient (Thibault, 2020) between partners that solicits more or less modulation of multimodal effort.

The talk will present first results on how humans adjust the communicative signals of their bodies to overcome disruptions and restore 'communicative equilibrium'. By forefronting continuous signals, we can appreciate how linguistic bodies regulate themselves when facing communicative challenges. Finally, this contribution opens up the potential that language is not a mere abstract product of cognition, but a material product of the body and its environment.

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How infants and caregivers construct strain sounds as meaningful

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Infants face a crisis of meaning upon birth, as they are born into a world where they are immediately immersed in specific, socialised practices of meaning-making (Linell 2009) by their caregivers. How infants become proficient with language is not only a question of learning appropriate linguistic structures but of grasping that behaviour and vocalisations are meaningful and can help them do things in the world. Much research on the beginnings of language has focused on finding the infant sound patterns that precede phonemes (e.g. Oller et al. 2013, 2019) and describing how sound-referent connections are made, that is, how infants acquire formal structures. In contrast, research into the naturalistic behaviour of infants and caregivers has recently been working towards answering what processes allow an infant to learn behaviour has meaning (Rączaszek-Leonardi et al. 2018, 2022). Caregivers and infants organise meaning together through their mundane interactions (from feeding to nappy changing: Nomikou & Rohlfing 2011; Wiggins & Keevallik 2021). Caregivers scaffold their infants' understanding of their own bodies (and voices) as meaningful (Nomikou et al. 2016, Nomikou, 2023), which supports a developmental trajectory towards the acquisition of language.

Building on this work, this paper examines how caregivers' intercorporeal understanding of their infants' bodies, specifically the everyday strains that their infants undertake like trying to roll or sit, or the caregiver efforts involved in dressing or lifting, allow them to organise their infants' vocalisations as meaningful. The study uses conversation analysis, a method that documents how sequences of action produce meaning, and which centres the dyadic, distributed, and inherently multimodal nature of meaning-making that is characteristic of natural human interactions (Sidnell & Stivers 2013). We analyse over 200 strain sounds produced by caregivers and very young infants which have previously been dismissed as solely physiological byproducts (Oller et al. 2013) in order to further our understanding of how physiological sounds are gradually reappropriated as communicative tokens (McCune et al. 1996, 2021). The data analysed are a corpus of video recordings of nappy changing (12 hours), recorded longitudinally with 15 dyads. The caregiver's role is crucial, as their sense-making of the infant's strain scaffolds understanding of the sounds as strain-related (Nomikou 2023). In other

words, this paper suggests that, regardless of physiological connection, infant vocalisations become meaningful through caregivers' responses and co-vocalisations. This creates an environment in which the infant participates in meaningful interaction and may promote an infant's understanding of displays as having perlocutionary effect.

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Studying gesture in video-mediated classrooms: mixed methods, messy data, and enactive interpretations

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Sense-making for language users is qualitatively enlanguaged; gestures, even when non-communicative, are part of languaging behavior (Di Paolo et al., 2018; Cuffari, 2012). They make sense in an enactive and participatory way. What happens to the hand gesturing of teachers and students who are engaged in video-mediated interactions? Do the demonstrated pedagogical benefits of gesture change when bodies are neither physically copresent nor fully visible to each other? Emphasizing mixed methodology, this talk will present findings from an original qualitative study of Zoom classroom recordings and a follow-up experimental study on partially visible gesturing. In the first study, we coded over 1400 gestures observed in recordings of various class meetings held over Zoom during the pandemic and found that the majority deemed semantically relevant to the lecture were partially invisible due to the speaker window frame. This is in tension with McArthur's (2022) grounded theory study in which instructors reported self-conscious efforts to get their gestures to appear on-screen. Furthermore, given the established pedagogical benefits of visible gesture found in controlled experiments that test presence and absence of scripted gesture (Rueckert et al., 2017; Nathan et al., 2017; Novack et al., 2014; see Dargue, et al., 2019 for review) we wondered what possible differences partial gestures make to comprehension and learning. We designed an eye-tracking experiment (partly informed by the work of Gullberg and Homqvist (2006)) to explore visual attention to spontaneous, partially visible gestures in a controlled setting as a starting point for exploring the effects of Zoom-modified gesturing. We found that participants paid significantly more visual attention to the partial gesture condition than to stimuli where the gesturing was fully visible, and they scored significantly higher on a comprehension test if they had seen lectures in the partial gesture condition as opposed to full or no gestures. Gaze fixation duration overall and on the face were both significantly higher in the partial visibility condition, suggesting that participants paid more focused attention in this condition, were not distracted by gesture partiality, and did not 'go looking for' the missing gesture. In interpreting these findings I draw on the enactive idea of linguistic bodies (Di Paolo et al., 2018), which I will also discuss in terms of implications for the questions of virtual co-presence (Osler and Zahavi, 2022) and the issue of breakdowns in the interaction couplings that constitute participatory sense-making (De Jaegher and Di Paolo, 2007).

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Iconicity in Co-singing Gesture: Dynamic Multimodal Semiosis in a Music Pedagogic Context

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While singing, performers often simultaneously gesture in ways that correspond to their musical vocalizations along iconic and/or deictic dimensions. This is the case even when the music has no lyrics and is sung using non-lexical vocables (Fatone et al., 2011). Such co-singing gesturing also occurs in pedagogic contexts, where it forms part of the dynamic interplay between teacher and student (Rahaim, 2008). In

this paper, I examine co-singing gesture in vocal lessons in the style known as Karnatak music, a form of art and devotional music performed in South India. Based on lesson videos recorded in South India, I present multimodal analyses of interactions between teachers and students, focusing in particular on the iconic dimension of their co-singing gestures. Gesture and utterance events were coded in ELAN (Lausberg and Sloetjes, 2009) and annotated with details of gestural action and any observed iconic or deictic relationship with the co-occurring vocalization. Through the analyses, I inquire into how multimodal semiosis involving gestural iconicity develops during interactions where the teacher attempts to correct a student's performance when it deviates too far from an ideal rendition. In Karnatak music lessons, such correction typically involves repetitions of the same phrase by both teacher and student, accompanied by co-singing gestures and facial expressivity, interspersed with non-singing utterances (Pearson, 2016). In these dynamically unfolding interactions, I examine how teacher and student use gesture spontaneously to create and communicate meaning, charting in detail their bodily adjustments as they work towards their shared goal: improving the student's grip over the vocalization.

As a theoretical contribution, I survey work in the fields of gesture studies (Cienki, 2008; Mittelberg, 2014; Müller, 2014), cognitive semiotics (Ahlner and Zlatev, 2010; Elleström, 2017) and music cognition (Clarke, 2001; Kohn and Eitan, 2016) to discuss the various ways that gestures in this context can be understood as iconic. I suggest that although these accounts are distinct, they are united by underlying body-environment connections involved in sound production and vocalization. Finally, based on interviews conducted with Karnatak vocalists, I develop an account of iconicity in this context, in which manual gestures are understood as iconic of the performer's own vocal production movements. Thus, through a combination of theoretical, ethnographic and analytical contributions, this paper engages with the challenges of interaction and dynamicity, exploring the dynamic qualities of gestural iconicity, forged in the moment through interactions between bodies, technologies (e.g., music) and intent.

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Physical objects recalled via words, images, and sound in mystery movies: The construction of co-referential chains in language and other semiotic systems

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In the realm of mystery movies, verbal, visual and auditory cues play an important role in solving complex mysteries not only because they may lead detectives towards the truth, but also because they engage viewers in the same process. In the past years many studies have been conducted on telecinematic discourse analysis by focusing on the interplay of verbal and visual elements (Tseng and Bateman 2012; Bateman and Wildfeuer 2017; Tseng, Laubrock and Bateman 2021). However, little attention has been paid to the semiotic cognitive processes underlying multimodal anaphora resolution of single references through the modes of speech, image and sound in and across scenes.

By considering that the interpretation of anaphoric expressions, which prototypically refer back to a linguistic item introduced earlier in the text, is determined by the interpretation of their verbal antecedent (Huang 2006), I hypothesize that the anaphoric relation between two or more references, known as co-reference (Crystal 1997:94), can be established not only verbally through speech but also non-verbally through images that depict the object-referents and sounds produced by the object-referents.

My research questions are two: how words mentioning and referring to objects are linked to images depicting the objects as well as sounds produced by the objects to constitute anaphoric expressions in co-referential chains with respect to the viewers' perception? How does associative anaphora function cross-modally?

This paper implements pragmatic frameworks (Chafe 1996a; Ariel 1996b; Cornish 1999), and cognitive linguistic frameworks (Fauconnier and Turner 2002; Dancygier and Swetser 2014), in combination with concepts related to telecinematic discourse (Eisenstein 1991; Bordwell 2011). The methodology of this paper involves the systematic examination of the co-construction of verbal, visual and auditory occurrences of physically small objects and their annotation by the use of the annotation tool ELAN 6. 2. The data relate to 29 objects found in David Fincher's *Seven* (1995) and represent the initial results of a more comprehensive project (PhD project) that encompasses data from six movies.

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Meaning-making in interspecies communication: A video-based study of cat-human interactions

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Humans have remarkable sense-making abilities which set them apart from other animals (e.g., Zlatev, 2001). Here, however, I ask a different question: how do humans co-construct meaning with other animals? I propose that by studying the structure and organization of embodied interactions between human and non-human animals, we can uncover new forms of interspecies sociality (Mondémé, 2022; Rasenberg et al., 2023).

In the study that I will present, I focus on the special bonds between humans and pets. In particular, I take a closer look at interactions between humans and cats. While domestic cats are considered a solitary species, recent work is providing increasing evidence for their complex socio-cognitive skills, such as the ability to use human gestural cues (such as eye gaze or pointing with a finger) as directional signals (Miklósi et al., 2005; Pongrácz et al., 2019). Besides evidence from laboratory studies, we can gain also gain insights into interspecies meaning-making by looking at naturalistic interactions in the home. For example, in Alger and Alger's (1997) ethnographic account of cat-human interactions, humans reported various intersubjective experiences with their cats: "They sense my moods. If I am sad or crying, Cabbage comes and rubs against me" (p. 76) and "Casey had realized that we would be able to help and communicated her need to us" (p. 74).

How do such interpretations come about? Rather than relying on post-hoc accounts, this study examines the moment-by-moment unfolding of interactions, and how human and feline participants display their understanding publicly in real-time. To this end, this study draws on video recordings of naturally-occurring interactions between cats and humans in their shared home environment. I will show that one way in which the co-creation of meaning becomes visible is through humans asking questions to cats, such as "what do you want?" or opening the door while asking "do you want to go outside?". A question "is an utterance that 'craves' a verbal or other semiotic response" (Bolinger, 1957, p. 4). By looking closely at the formatting of questions directed to cats and how cats' behaviours are treated as meaningful responses (or lack thereof), this study provides insights into meaning-making processes in interspecies communication.

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Theme Session II: Reigning in Neuromania through Cognitive Semiotics

Filomena Diodato and Alice Orrù

“Neuromania” is a term used for over-enthusiastic but simplistic appeals to neuroscience in the humanities and social sciences (Tallis, 2011; Legrenzi & Umiltà, 2009/2011). Widespread in the humanities, from semiotics to politics, current “neuromaniac imperialism” (Tallis, 2011: 73) both trivializes the undisputed cognitive role of the brain, and falls prey to naive neo-behaviorist and materialist confluences of body, brain, and mind. It risks both rehabilitating pseudosciences like phrenology and downplaying forms of consciousness that define human beings in their species-specificity.

Neuromania is also found in quarters of cognitive linguistics, a close ally of ideas such as the cognitive unconscious (Lakoff & Johnson, 1999). In a “cerebrocentric perspective” (Pennisi & Falzone, 2016), cultural artifacts like signs and situated and sedimented practices are ignored or traced back to mere outcomes of ancestral survival experiences, disregarding the equally formative role of history, culture, and communicative practices (Donald, 1991; Deacon, 1997; Logan, 2007). Neuroscience may indeed shed light on the mystery of the human mind, but it can arguably do so best when accompanied by a cognitive-semiotic approach, suited to the investigation of sense-making processes (Sonesson, 2018), directed at explaining how shared semantic fields emerge from an infinite variety of intersubjective semiotic games. This is, after all, the space of freedom in which human beings build, based on their bio-physical endowments, a Lifeworld not reducible to the physical realm of matter.

With the aim of understanding both the pitfalls of neuromania, and the potentials of neuroscience (e.g. Sinigaglia & Rizzolati, 2022) this theme session turns to phenomenologically grounded cognitive semiotics (Zlatev, 2012) and some non-reductionist enactivist approaches (Diodato, 2020). In the presentations, we aim to

show how cognitive semiotics can both “reign in” neuromania, and/or rehabilitate non-reductionist neuroscience.

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Neuromaniac vogues and CogSem rejoinders in the early nineteenth-century European phrenological debate

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This talk aims to highlight, through a predominantly historical path, the various past and present reasons that still fuel the debate on the issue of Neuromania. In particular, the aim is to show how, although in a different historical and disciplinary context than today, the nineteenth-century neuromaniac perspective (to be identified primarily in that of phrenology) was opposed, as an antidote, by an “embodied” perspective and one that could be defined as “cognitive-semiotic” before its time.

As recently noted by Tallis (2014), a contemporary neuromaniac perspective such as the modular theory of mind, based on the principle of localization of different brain functions, proves to be a new version of F.J. Gall’s phrenological approach. Later perfected by his pupil J.G. Spurzheim, Gall’s founding idea was that the brain is the organ of the mind with distinct and independent functions: it thus presupposes the close correlation “brain-mind(-body)” and emphasized the deterministic and comprehensive role of cerebral morphology in relation to moral sentiments and intellectual faculties (Gall & Spurzheim, 1810-1819). However, the fact that “we are our brain (and specifically, the cortex)” led to a dangerous fixed correlation of the scientific, legal, and social levels (e.g., studies on the brains of criminals or the supposed brain-race nexus) through perspectives that turned out to be nothing but purely ideological (Renneville, 2021; Pogliano, 2020).

In a multifaceted quarrel with mainly French and German opponents, a sharp criticism of Gall came from G.W.F. Hegel (2018): lashing out at materialist reductionism of the spirit in mere bones and meaningful protuberances, he rather proposed a sort of ‘embodied’ approach through the ‘active role’ of body in the path of the ‘enfranchisement’ of the spirit (Achella, 2021). Furthermore, within the Italian phrenological dispute, a democratic and forward-looking officiant such as C. Cattaneo did not shy away from noticing the emerging insidious ambivalence between medicine and ethics (Canziani & Cattaneo, 1839). Criticizing the material predetermination of individual morality, Cattaneo (2019) believed that a study of the “associated minds” was necessarily preliminary and complementary to anatomical and neuropsychological studies, since sensation in humans is a social fact. With corporeality, perceptiveness and intersubjectivity as foundational elements (cf. Sonesson, 2007; Zlatev, 2015), Cattaneo’s perspective can be defined as anticipatory of today’s cognitive semiotics which, now as then, appears to be the true radical antidote to Neuromania.

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The “otherness” of language: a cognitive semiotic lexical semantics as an antidote to Neuromania

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In recent decades, Cognitive Linguistics has turned the spotlight back on the symbolic function of language (cf. Deacon, 1997) and, in polemic with the autonomist assumptions of Generativism, also denounced the inconsistencies of traditional linguistic categories (cf. Langacker, 1991). However, an influential current of Cognitive Semantics, instead of striving for an integration between semiotics and cognitive research to unravel persistent epistemological and methodological aporias, has indulged in a “neuromaniac” drift, resulting in Lakoff’s approach of frames (Fillmore, 1982; Lehrer and Kittay, 1992) as neural structures,

which reduces the speaking subject to an automaton subjugated by a “cognitive unconscious” (Lakoff, 2008; cf. Diodato, 2023).

Neuromaniac imperialism (Tallis, 2011) distorts the very conception of communication and the understanding of the “game” of language. On the one hand, communication is anchored to an old (mostly behaviorist) code model, while language and words are reduced to their neural substrates, enclosing all semantic experience in the connections that take place in an impersonal brain.

As an antidote to “neuromania” and conceptual reductionism, this contribution aims to revisit the twentieth-century debate on the discursive/enunciative function (Jakobson, 1963; Benveniste, 1966; cf. Paolucci, 2020) hinged on the intuition of the “otherness” of language – that is, both being-with-the-other and being-for-the-other (Coseriu, 1967). This perspective could lead to the elaboration of a lexical semantics that, aware of its own aporias, relies on a conception of the word as a multifaceted enunciative instance (Brandt, 2020), whose meaning extends far beyond the boundaries of the system and presupposes in any case a sediment of “known values” relating to the *Lebenswelt* (Sonesson, 2015). In the wake of Frame Semantics, I will argue that a word contains not only the memory of its sense and denotation, but also morphosyntactic information, as well as instructions for its use in communicative practices and an ideological load which exhibits the speaker's “orientation” towards the world (Bakhtin, 1981). Such a conception could help bypass the dilemma of an upstream choice between Dictionary and Encyclopaedia (Eco, 1984), acknowledging the intrinsic dialogicity and intersubjectivity of language (Zlatev, 2009). Moreover, it could also avoid the caesura between semantics and pragmatics, averting the risks of both an omnipotent semantics and, conversely, of a conceptualization of pragmatics (Violi, 2015; Sonesson, 2018), up to the point of conceptual and/or “neuromaniac” reductionism.

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Body and Institution: Roots of phenomenological experience

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Contrary to prevalent belief, Merleau-Ponty is not merely the philosopher of corporeality. In spite of the primacy of the body, from the 1950s onwards, there is a turning point in his thought, denouncing the reductionism of the 1945 work (Merleau-Ponty: 1964, 2011, 2020). This turn is based on the encroachment (empiétement) of the cultural-historical dimension on the corporeal (Merleau-Ponty: 1995, 2003; Joseph: 2018), which leads to a broader conception of the entre-deux (Varela, Thompson & Rosch: 1991). A conception that not only overcomes the mind-body dualism (Gallagher: 1986; Varela, Thompson & Rosch: 1991; Johnson: 2007), but also the ontological and hierarchical dualism between nature and culture. Indeed, the binomial of reprise et institution (Merleau-Ponty: 2003) implies both (1) the reconfiguration of the Lebenswelt as an already structured blending of intersubjective fields (Zlatev: 2018) - e.g. natural and cultural,

perceptual and linguistic - working as a pre-individual social dimension that institutes the individuality of a body-subject historically rooted in its phenomenological experience; (2) a mutual interplay of encroachment between the perceptual and the linguistic in the process of sense making.

Recalling the philosophy of the late Merleau-Ponty, this contribution aims to integrate the phenomenology of the body with a phenomenology of the institution, to propose a non-dualistic path between perception and language, incorporating in the lived body the semiotic historical features absent in 1945's work. This will be presented as a possible suitable way for thinking, in cognitive semiotics, a non-dualistic relation between the natural and the historical sides of experience. A way that conceives the institutional side of the linguistic experience as a crucial and unavoidable part that integrates and substantiates the situated and embodied dimension. Indeed, in order to give a concrete foundation to the distinction between spoken word (*parole parlée*) and speaking word (*parole parlante*) (Merleau-Ponty: 1945, 1995, 2011, 2020), it would be useful to conceive language not only as a gesture bounded by a subjectivity reduced to a bodily schema. Even though the corporeal rooting is a necessary condition, language as a faculty finally finds its semantic productivity only if the bodily realm of subjectivity is instituted and individualized by the semiotic and intersubjective historicity (*langue*) which shapes the praxis of speech (*parole*) (Merleau-Ponty: 2011, 2020).

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From Neural Mirroring to Meaning: Shortcomings of the Mirror Neuron Hypothesis in Relation to Language

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In contemporary research, the explanation of linguistic comprehension is often supported by the empirical evidence of neural areas correlated with the observation of distinct motor actions (Gallese V., 2001, Shapiro, 2011, Rizzolatti & Sinigaglia, 2006). These neural areas – named “mirror” precisely in virtue of their ability to reflect observed actions with the same neural activity as if the observer were performing the action themselves – are considered to be involved in a range of cognitive abilities, including mindreading (Gallese & Goldman, 1998), learning through imitation (Rizzolatti et al., 2002), and even understanding language (Rizzolatti & Arbib, 1998). Such identification of neuronal areas gave great empirical support to previous hypotheses, such as those that emphasize the motor aspects of human cognition (Lieberman, 1985). My contribution aims at elucidating the implications in the growing use of the mirror neuron hypothesis to linguistic comprehension, viewing it as a paradigmatic illustration of a critical turning point in the understanding of meaning. Examining some criticisms of the reductionist and neurocentric outcomes, I will outline both the current limits as well as the key potentials for mirror neuron hypothesis. I will therefore show that the mirror system hypothesis, when applied to language, does not provide a satisfactory account of the complexity of linguistic comprehension phenomena as it neglects the historical level (Zlatev, 2011). Following the lead of a longer-term project, and believing that the reductionist narratives associated with the "cerebrocentric perspective" (Pennisi & Falzone, 2016) can only be counterbalanced by opening a dialogue between neuroscience, semiotics, and the humanities in a broad sense (Zlatev, 2012), I will attempt to compare what Rizzolatti in his latest publications proposes to identify as "understanding from the inside" (Rizzolatti, 2022) with non-reductionist approaches interested in fostering a profitable interdisciplinary dialogue (Diodato, 2020).

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Theme Session III: Sonesson and phenomenological cognitive semiotics

Jordan Zlatev and Alexandra Mouratidou

As it exists today, cognitive semiotics would have been impossible without the key contributions of Göran Sonesson, who sadly left us in 2023. Arguably his major achievement in this respect has been to help place cognitive semiotics on the firm basis of phenomenology, the philosophy (and psychology) of the lifeworld and the way it is given in human experience, inaugurated by Husserl in the beginning of the previous century. In Sonesson (2009) this is emphasized explicitly, but it is evident almost everywhere in his work, starting from the now classical *Pictorial Concepts* (Sonesson 1989).

Among the many key ideas of phenomenological cognitive semiotics emphasized by Sonesson have been the following. First, the foundation of human meaning making is to be found not in signs but in perception, which along with imagination should be understood not as based on “mental pictures” or any other kinds of representations - but on enactive processes, such as those proposed in *ecological psychology* (Gibson 1979). On this basis, Sonesson (e.g. 2007) argued for a narrower definition of the sign than customary in Peircean semiotics (but broader than in Saussurean semiotics), namely as a derivative form of intentionality based on reflective consciousness, necessary for both relating and differentiating between expressions (representamina) and intentional objects.

A special focus throughout Sonesson’s life has been the pictorial sign, where he built on Husserl’s analysis of pictorial consciousness, and the concepts of “picture thing”, “picture object” and “picture subject”, and developed the analysis by distinguishing the latter from the referent (Sonesson 2010).

Further, Sonesson contributed to developing the model known as the *Semiotic Hierarchy* (Zlatev & Konderak 2023), by arguing for a level of culture that does not presuppose sign use, and a level that does (Sonesson 2015) as well as the key methodological principle of *Phenomenological Triangulation*, by distinguishing the usual epistemological (vertical) axis of first-person, second-person and third-person

perspectives, from an ontological (lateral) axis concerning the nature of the phenomena themselves: self, others and the world (Sonesson 2022).

In this theme session we invite contributions that explicitly build upon these (or possibly related) aspects of phenomenological cognitive semiotics, in order to both honor Sonesson's memory, and to continue his work.

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Body and Meaning: Presentation and Development of G. Sonesson's Critique of the Image Schema Thesis

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One of the most notable features of Goran Sonesson's work was the constant critical dialogue he always sought to develop between his own ideas and those of others, whether within the domain of semiotics itself or in relation to other fields of research. In this presentation, I will focus on the critical relationship he established between his own ideas and some central ideas in cognitive science. The presentation will have two moments:

In the first moment, I highlight an argumentative and theoretical element that characterizes Sonesson's work: starting from the rigorous development of central concepts of semiotics such as sign and representation, to then review notions often

broad or poorly defined in cognitive science such as perception, embodiment, mind, or cognition. In this first moment, I will present his position on the notion of image schemas (Sonesson, 2007), emphasizing the distinction he makes between sign meaning and other meanings, and how from there it becomes legitimate to speak of the body as an experienced meaning.

In the second moment, I will develop phenomenologically Sonesson's proposal on the modal vectorial properties of the body (which would be his own version of image schemas). I will first characterize embodied experience and body schemas based on Husserlian notions of sedimentation, retention, and protention. Then, I will review Sonesson's distinction between topological properties and force schemas, to show that it is necessary to admit three nested levels of embodiment in relation to the structure of experience.

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Inverse Alteroception: Developing Sonesson's Cognitive Semiotics

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Göran Sonesson's enduring contributions to cognitive semiotics are wide-ranging and far-reaching. This paper selects four of his core themes for review, integration, and further development: the phenomenology of meaning (Sonesson 2007, 2011), the role of mimesis in the evolution of human cognition (Sonesson 2010, 2018), the semiotics of mirror images (Sonesson 2003, 2015), and the importance of developing a more stereoscopic semiotics by integrating insights from both Saussurean structuralism and Peircean pragmatism. These themes are all crucial for understanding the nature and implications of a newly defined mode of intersubjectivity known as "inverse alteroception" (Pelkey 2024, in press; see also Pelkey 2017). While alteroception is the virtual experience of another person's bodily movement centered in the perspective of the other person, inverse

alteroception occurs in face-to-face interactions with the tacit recognition that ‘your right is my left and your left is on my right’. Situating the emergence and development of this mode of intersubjectivity within the Mimesis Hierarchy (Zlatev 2008, 2013) is challenging since the effects of inverse alteroception can be identified at multiple levels of intersubjective sense-making, and its chiasmic (crisscrossing) dynamics must be carefully distinguished from mirror-image mimesis proper. I also argue that this unique aspect of human phenomenology deserves closer attention since it enables a broad palette of diagrammatic contrasts extending far beyond face-to-face interaction, with causes and consequences that are both socio-cultural and cognitive-evolutionary – both structural and pragmatic. But the cognitive and cultural affordances of this inverse reciprocal ability are largely untreated in the literature. Applying insights from Peircean and Greimasian semiotics, I argue that salient features of the human lifeworld originate from systematic mappings of inverse alteroception onto a variety of non-animate phenomena and abstract semiotic domains such as gesture space, the Proscenium stage, historic heraldry, contemporary visual design, the structures of Aristotle’s logical square of oppositions and beyond. To conclude the paper, I summarize ways in which these findings affirm, enhance, and develop Sonesson’s phenomenological approach to cognitive semiotics.

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The “relevance” of Relevance, from Structural Semiotics to Phenomenological Cognitive Semiotics

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In his latest works Göran Sonesson (2018, 2021) clarifies the methodological and theoretical framework of a phenomenological cognitive semiotics by rethinking the notion of “relevance”, which – named “pertinence” – has been one of the cornerstones of structural semiotics and semantics (Martinet 1965; Prieto 1975; De Mauro 1982). However, since structuralism has largely faded, in current studies “relevance” mainly evokes the turn of cognitive semantics towards cognitive pragmatics, i.e. Sperber and Wilson’s (1986) “Relevance Theory”, along the lines of Austin’s speech act theory and Grice’s conversation theory.

Even less well known is the notion of “relevance” that can be traced in the phenomenological tradition, where the term recalls the works of Schütz (1970) and less frequently of Gurwitsch (1957). It is this phenomenological line that Sonesson explores to explain the “making of meaning” between “code and contingency”. Thus, he understands relevance as the creation of meaning situated in a particular context, but also asserts that a system of relevance is deeply rooted in the typical structure of the world taken for granted. Rejecting the assumption that they are the result of the operations of an innate mental module, he argues that relevance systems imply a kind of distributed social cognition, insofar as they play a role both in presenting something new and creating of the Encyclopaedia (that is, the sedimented system), which is the fertile ground from which something new can sprout.

I believe that Sonesson’s reflections on “relevance” may be useful for a phenomenological rethinking of Lexical Field Theories (Geckeler, 1971, cf. Geeraerts 2010), mostly based on an (implicit) notion of “pertinence” elaborated by structural semiotics and semantics. In fact, I will argue that lexical fields encode, at the upper level (Zlatev’s level 4; Zlatev, 2009), relevant experience, that is, they formalize a system of relevance embedded in the (proto)typical structure of the taken-for-granted world, but they also regulate meaning-making practices. Lexical fields are the result of distributed social cognition and reinforce norms for word use/application. Being not only “in the head” but also “in the hands” of speaking subjects (De Mauro, 1965), it is their dynamic “formative” function that generates

the possibility of breaking conventional norms, which is also the condition for lexical change (cf. Blomberg & Zlatev, 2021).

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Psychologism and cognitive semiotics

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The very notion of "semiotic development" raises questions about possible inherent scientific theoretical clashes. Depending on one's approach to semiotics, such a notion can evoke issues approaching what has been called the fallacy of psychologism in logic, or failing to apply to Husserl's stance on anti-psychologism in phenomenology.

In its broad sense, Psychologism deals with the relations between logic and psychology but has often been used more narrowly labeling a fallacy confusing non-psychological (i.e. logical) laws from actual psychological entities (Kusch 2024). This is also the target of anti-psychologism from Husserl's point of view in phenomenology. Warning against psychologism in semiotic studies, especially those focusing on cognitive processes, Stjernfelt (2013) acknowledges the importance of psychological studies in phenomenological investigations of consciousness. Nevertheless, he asserts that anti-psychologism is fundamental to semiotics. Stjernfelt also criticizes cognitive approaches to understanding development, pointing out their lack of a theory of the sign process.

In his defense of Piaget's (1972) proposal for genetic epistemology Kitchener (1980, p.276) perceives psychologism both ways in the relationship between logic and psychology "the fallacy of reducing logic to psychology, or inferring the truth of something normative (or logical) from something empirical, or permitting psychology to answer questions of logic". Kitchener argues that to explain development, which is basically understood as taking steps towards logic, Piaget needed psychological concepts - and hence is a candidate for psychologism.

A significant legacy of Sonesson in taking semiotic research further was to integrate Husserl's phenomenological investigations which are essential in semiotic studies in meaning-making. Furthermore, it was primarily through exploring phenomenology that Sonesson later defined his understanding of cognitive semiotics (e.g. Sonesson 2010,2014, 2022). In this presentation, I will discuss Sonesson's sign concept as a possible way to deal with anti-psychologism in cognitive semiotics.

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The Inauguration of Unconscious to Conscious Enactments: Comparison between Sonesson and Peirce

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This account argues that Sonesson's and Peirce's assertions regarding the initial state of cognition bear striking similarities. The argument is grounded in the primacy of Peirce's instinctual abduction in which insights do not emanate from control, compared with Sonesson's focus upon enactive processes. Peirce's emphasis upon cultivating sudden, embryonic abductions represents a cognitive stronghold, more so than does his commitment to other more deliberative, planned reasoning (see West 2015). Peirce's emphasis upon flashes of insight from instinctual abductions (1903: EP2: 227) represents the most effective logical paradigm: "It is true that the different elements of the hypothesis were in our minds before; but it is the idea of putting together what we had never before dreamed of putting together, which flashes the new suggestion before our contemplation" (1903: 5.181). This unconscious logical assemblage constitutes a precursor to cognitive handling; it emanates from effect-based intuitions. It does not embrace single, present objects alone, but insists upon the potency of relations among contributing entities, differentiating objects' properties and purposes within episode-based enactive contexts (see West 2014 and West 2018). Accordingly, instinctual abductions require the exercise of awareness to context, because by nature, they intrude upon interpreters' consciousness, steering their logical focus. The beckoning effect of object relations in context surfaces from an underlying intentionality to "put together what we had never before dreamed of putting together" (1903: 5.181) illustrates Peirce's design that humans operate from a psychological drive to resolve internal episodic paradigms. The intensity of these experiences toward resolution of novel enactments inscribed upon the consciousness, illustrates interpreters' selection/sustained focus of certain object relations over others in the attentional stream.

Dependence upon context and objects for underlying meaning is reminiscent of Sonesson's concept of meaning-making, centered upon reflective consciousness, rather than upon actual doing. Sonesson's model relies not upon mental images/pictures (signs -- Sonesson 1989), but upon enactive processes derivative of underlying awarenesses (which may not rise to consciousness) attributed to perceptual forces. According to Sonesson (2007), these forces lean heavily upon a kind of intentionality which orients the will (prior to being directed by conscious devices) to master enactive processes prior to and during presentment. This competence is distinguishable from Peirce's call to entertain instinctual abductions.

Peirce's ultimate notion that conjectures surface from mental objects demonstrates a more broad meaning of the sign than Sonesson advances.

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Pictorial Lifeworld Meets the Current Discourse Space: Scalisi Palminteri's San Benedetto il Moro in Palermo's Street Art

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This paper delves into Igor Scalisi Palminteri's street art masterpiece, "San Benedetto il Moro," in Palermo, Sicily. Grounded in Langacker's (2008) Current Discourse Space (CDS) framework, our linguistic polysemiotic analysis unravels the meanings embedded in this artwork as told by the artist during an in situ ethnographic field research interview, providing access to Scalisi Palminteri's verbal and gestural commentary on his work and Palermo's street art scene, in an area touched by African migration in the Mediterranean.

Inspired by the 16th-century saint, Benedict the Moor, the mural strategically painted on an abandoned church wall serves as a canvas for unfolding linguistic and spatial elaboration as Scalisi Palminteri connects polysemiotic discourse layers within the artwork and his artistic and social engagement in the public square beyond. Historical and contemporary actors are enacted, prompting the interplay between sedimented painting and embodied and situated discourses on religion and migration politics.

This contribution expands the discourse on functioning subjectivity with implicit reference to Husserlian perspectives in Langacker's CDS framework. A phenomenologically inspired semiotics about Scalisi Palminteri's visual street art in a public setting, connects polysemiotic discourse about space with the timeline of unfolding narrative discourse frames and the represented temporality of historical moments (Fransberg et al., 2022). As such our analysis complements analyses of street art done by interacting analysts providing interpretations of (metaphorical) meanings in visual street art (Stampoulidis and Bolognesi, 2023). Our ethnographic approach occasionally emphasizes embodied spirituality and unveils transcendental life within the local community.

Paying tribute to Göran Sonesson (2022), the paper reflects, we hope, his vision of Husserlian Lifeworld within the broader second- and third-person heterophenomenological linguistic and gestural reference to the material context and ecology of pictorial representations in public spaces, as this talk considers the embodied iconic or deictic relations between visual channels and resources (Stampoulidis, Bolognesi & Zlatev, 2019; Zlatev & Möttonen, 2022) in the act or praxis of spoken discourse, a decade after the inception of the cognitive semiotic field.

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Biotech ads before and after the global financial crisis: Revisiting Göran Sonesson’s double acts of communication

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The paper aims to understand and reconstruct mass communication models as translation models (following the groundbreaking proposals in Göran Sonesson’s communication models -Sonesson 2014a, 2014b) based on a notion of coded

imagetext information and the hermeneutic flexibility of this encoding in the processing of informational loss. Our case in point are shifts in biotechnology “influencer marketing”, branding and advertisement techniques over the last 15 years.

Comparing corpora of publicity material produced by the biotechnology industry, a paradigmatic field of technoscientific growth rhetoric, before and after the global financial crisis, we will explore the changing relationship between the word/image informational load (presence and degree of metaphors and their content in seed, pesticide and gene patent promotion) and the actual politics of the industry. The insights to be gained by cognitive semiotics lie in the relationship between cultural/communication semiotics on the one hand, notions of life, reproduction and generation in science and mass culture on the other, as well as and broader cognitive models linking both.

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Extending the lifeworld beyond anthropocentrism

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Phenomenology is often mistakenly claimed to be “subjectivist” and incapable of providing objective knowledge, for example by Daniel Dennett and his followers. While clearly misguided, such critiques point toward the need to show more clearly that the lifeworld that is our ultimate reality is not inherently anthropocentric nor incompatible with science. In fact, some formulations on the nature of the lifeworld by Sonesson (2007) lend themselves to an anthropocentric interpretation: “The peculiarity of the Lifeworld, in this context, is that it offers access to the other worlds, and is accessible to all of them. In this sense, the human *Lebenswelt* is different from the Umwelt of other animals.”

We propose a wider understanding of the *lifeworld* and attempt to demonstrate this by following a proposal made by Sonesson (2022) to extend the key methodological principle of cognitive semiotics, phenomenological triangulation, along two planes. The first is ontological and concerns the dimensions of Self, Others and Things. The second is epistemological, and deals with the way phenomena are accessed: from a First-person (transcendental), Second-person (empirical in a qualitative sense) and Third-person (scientific in a quantitative sense) perspective.

In particular, we argue that (1) the lifeworld is co-constituted by a plurality of subjects in intersubjectivity; (2) the encounter with Others is not only ontological and ethical, but also allows an epistemological distance via the Second-person perspective and (3) the scientific detached “world view” is still a view “from somewhere”, presupposing dependence on the previous two perspectives. With each of the three epistemological perspectives, the lifeworld becomes correspondingly extended, and is thus neither static nor confining. Nor is it anthropocentric, since on each of the three levels, the Other does not necessarily need to be a human being, as we illustrate with relevant examples (e.g. Segerdahl et al., 2005).

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Lost (and Found) in Translation: Evaluating English translations of *Mulan Shi*

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The classical Chinese poem *Mulan Shi* has been translated many times into different languages, as well as adapted to many different genres, including the internationally successful Disney 1998 animated film, and the recent 2020 version. Drawing upon Sonesson’s influential explication of translation as “an act of double communication” (e.g. Sonesson 2014), and combining it with concepts from classical translation theory (e.g. Nida 1959), we formulate a nuanced framework comprising three levels of *translation resemblance*, rather than what is usually called “equivalence”: (a) resemblance between the structure and content of the source and target texts, (b) stylistic resemblance, and, most importantly, (c) pragmatic resemblance —wherein the impact on the target text audience should resemble that of the source text on the original audience. Using this framework, we compared five English translations of the poem, selecting the one by Arthur Waley, included in *The Temple and Other Poems* from 1923 for more detailed scrutiny. Using a cognitive-semiotic framework, we triangulated between first-person methods (1PM), leveraging our intuitive grasp of languages and cultural nuances, negotiations between us as an aspect of second-person methods (2PM), and detached, third-person methods (3PM), involving the quantitative assessment of different aspects in the source and target texts. To be able to compare the effects of the source and target texts on (modern) audiences, we also devised a survey and distributed it to 20 (near) native speakers of Mandarin Chinese and English, asking for interpretations and evaluations of potentially ambiguous parts as well as general impressions. We report the findings of the study, and how they allowed us to evaluate the degree of translation resemblance between the source and target texts.

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General Session

(in alphabetical order)

Crises of judgment: Linguistic relativity in a legal context

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One of the basic tenets of the linguistic relativity principle (Whorf, 1956) is that language affects behaviour, in predictable ways. The current paper is situated within the framework ‘Whorf in the Wild’, which calls for the investigation of linguistic relativity phenomena in ecologically valid contexts (Athanasopoulos & Bylund, 2020). Here, we assess the effect of grammatical gender in real-life situations within a legal context. In Greek, coronavirus is masculine and the resulting illness COVID-19 feminine, conforming to the grammatical gender of the terms ‘virus’ and ‘illness’ respectively. However, in natural usage the term COVID-19 occurs within both masculine and feminine grammatical contexts. The aim of this paper is to investigate whether the application of grammatical gender on noun phrases containing ‘COVID-19’ affects how legal experts and lay people apply punitive measures on breaches of laws aimed at ameliorating the spread. Three groups of Greek-speaking participants (controls, law trainees, legal experts) were asked to complete a survey presenting hypothetical breaches of real laws about pandemic related measures, divided into three types: administrative (carrying a fine), misdemeanour (carrying a short prison sentence) and felony (carrying a long prison sentence). In a masculine grammatical gender context, the instructions and the questions contained masculine gendered noun phrases with the words ‘coronavirus’ and ‘COVID-19’, and in a feminine grammatical gender context they contained the words ‘illness’ and ‘COVID-19’ in the feminine form. Punitive measures varied in the severity of application on a 7-point Likert scale from least to most severe, and participants were asked to choose the appropriate fine/prison sentence for the respective breach. Results showed that participants applied harsher punishments in masculine grammatical gender contexts than in feminine grammatical gender contexts, but this bias was modulated by type of breach (felonies presented with the strongest bias) and legal expertise (trainees presented with the least amount of bias). We discuss these findings in terms of the cognitive demands associated with the specific legal scenarios under investigation and individual experiential variables, which speak to the broader question of the mechanisms by which our language can creep into our judgments.

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The coarseness of emotional granularity

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Lisa Feldman Barrett's theory of constructed emotion (2017) entails the claim that emotional granularity, the usage of refined emotion vocabulary, is associated with positive effects on coping and health. According to Barrett, "greater emotional granularity (especially discriminating among negative emotions) [is] associated with larger repertoires of emotion-regulation strategies." (Barrett et al. 2001)

Barrett's denial of basic emotions like fear or anger and her rejection of ethological perspectives put her theory out of synch with other recent approaches such as Panksepp's affective neuroscience (e.g. Panksepp 2004, Adolphs 2018).

Examining emotional granularity from a cognitive semiotic perspective exposes the theoretical gaps that are symptomatic of siloed research agendas in psychology and neuroscience dealing with aspects of language and cognition while bypassing relevant concepts in semiotics and linguistics. While the idea of constructed emotion seemingly resonates with constructivist points of view and affirms the connection between language and health, this paper challenges Barrett's assumption that coping strategies depend on specific lexemes to construct and refer to distinct emotional states.

Barrett's psychologicistic research methods (e.g. multiple-choice vocabulary tasks) and a simplistic nomenclatural/referential view of meaning and the lexicon provide convenient experiments, quantification of results, and replace creativity with conformity.

More importantly, her linguistic conjectures evoke problematic deficit theories that have long been discredited by linguists (e.g. Labov 1970). Her recommendations for emotional granularity perpetuate misguided assumptions about social background and vocabulary that extend 1960s deficit theories about education to assumptions about class and mental health. The idea that a person's mental health is quantifiable by their vocabulary exemplifies precisely the scientific crisis to which Husserl responded with a phenomenology of subjects embedded in their own

Lebenswelt (Husserl 1935) that can be traced back to Uexküll's Umwelt (Uexküll 1909, 1920; Jaspers 1913) and the Funktionskreis model that is foundational for integrated medicine (Uexküll 1986).

This paper shows what a *theory of constructed emotion* could glean from semiotics (phenomenology and pragmatism) and linguistics (especially discourse analysis) for a more refined descriptive approach to language and emotion.

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Non-visual iconicity in information and communication technologies for enhanced agency of blind and low-vision individuals

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Mendoza Collazos and Zlatev (2022) propose an agency hierarchy, with enhanced agency (interactions mediated by artifacts, signs, and language/symbolic media)

distinguished from original agency (agency without such prostheses, such as dancing in a group, jumping over barriers or non-conscious skilled movements). Reliance on information and communication technologies (ICTs), especially during the COVID-19 pandemic, requires access to and proficiency in using ICTs to maximize individuals' enhanced agency. Unfortunately, blind and low-vision individuals (BLVIs) experience substantial barriers when accessing ICT resources.

For example, Web Content Accessibility Guidelines (WCAG, 2023) require developers to provide text descriptions of visual graphics for screen reader technology (e.g. JAWS, NVDA, VoiceOver), which are BLVIs' means to access described interpretations of visual graphics. However, visual graphics afford iconicity (resemblance of digital user interface elements or media to their referents) that cannot be fully translated into text descriptions for screen reader accessibility (Coppin, Li and Carnevale, 2016). Thus, enhanced agency is undermined through overreliance on text descriptions, given that BLVIs must rely on interpretations of iconicity rather than access to iconicity itself.

However, iconicity is not limited to visual phenomena: consider the use of a spatial audio map in Biggs, Coughlan, and Coppin (2021), the 3D audio-tactile globe by Ghodke, Yusim, Somanath and Coppin (2019), which conveys iconic properties through auditory and haptic-tactile feedback. Therefore, this study delves into the potential of non-visual iconicity in the context of ICTs through two objectives: 1) Uncovering accessibility problems encountered by BLVIs when accessing conventional ICTs that undermine enhanced agency relative to sighted individuals via retrospective narrative inquiries (semi-structured interviews that probed lived experiences; e.g. Clandinin and Connelly, 2004) and collaboratively designing alternatives through longitudinal participatory design workshops (e.g. Spinuzzi, 2005; discussed ICT accessibility problems and prototyped low-fidelity alternatives to develop new insights on enhanced agency support); 2) Developing design recommendations based on the aforementioned insights gained that will produce new guidelines akin to WCAG (2023) for developers of future ICTs on technical approaches to providing information in forms that support enhanced agency for this audience.

The study produced four new recommended ICT interface paradigms, building on the existing graphical user interface (GUI) paradigm to de-fixate practitioners from its limitations. Reoccurring affordances included: providing sensory and representational redundancy (Doore, Dimmel, Kaplan, Guenther, and Giudice, 2023), intuitive customization options for perceptual feedback, awareness of system status and possible actions, and curation of system contents for relevance to the user's goals and intentions.

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Intensifying experiential blending: “Design for terror” in different oral/orally-based traditions

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The paper explores the body-and-mind experiential basis (in Pelkey’s terms, 2023) of the direct relation between visual zooming-in/close-ups and strong emotional responses in oral/orally-based traditions. It builds on a point made in “Point of view and design for terror in *Beowulf*” (1962), an article by Alain Renoir, son of filmmaker Jean Renoir and grandson of painter Pierre-Auguste Renoir. Alain Renoir (1962: 164-165) advances that during the description of Grendel’s approach to Heorot (*Beowulf* 702b-721a) the verb “com”, “[he] came” at 710 and at 720 implies the adoption of the point of view of Heorot’s inhabitants, prospective victims, and it therefore prompts terror in them as well as in the audience aligned with them.

By doing this, Renoir a) points out the creation of a blended joint attention effect (Turner, 2017) through the blending of the victims’ and the audience’s perspectives; and b) he connects the terror response to the physical approaching of a terrifying item (which is a common strategy in cinematography, often in combination with

special sound track; see e.g. Krysanova, 2023) in an orally-designed medieval poem, which in Renoir's terms (1958: 7) means by the sole mind's eye of the poet.

The paper explores parallels in other oral/orally-based traditions, which are known to employ rich visualization techniques often compared to cinematographic and theatrical techniques (see e.g. Bonifazi and Elmer, 2016 and Fiebach, 2002). Examples are taken from the Serbocroatian tradition, the Homeric epic, Grimm's folktales, and Georgian folktales. They include moments in which terrifying characters approach prospective or potential victims (e.g. Osman approaching Mujo in *Halil Hrnjičić and Miloš the Highwayman*; the view of Achilles getting near from Priam's perspective in *Iliad 22*; the appearance of a *devi* to terrified men ploughing the ground in *Asphurtzela*) as well as moments in which terror is implicitly or explicitly evoked by the zooming-in on visual details (such as the body parts of the wolf/grandma zoomed-in in *Little Red Riding Hood*).

The paper then recaps minimal criteria for the design for terror in oral traditions to be tested in future research, and it offers theoretical suggestions about 1. linguistic strategies prompting viewpoint blending (not necessarily in connection with terror) in relation to Fillmore's discussion of the deixis of "to come", 1973, and to Nikiforidou's discussion of "come" and "go" in modern Greek folktales, 2016; and 2. the body-and-mind experiential basis of the direct relation between visual zooming-in/close-ups and strong emotional responses.

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Between positivism and relativism: A Critical Realist approach to the analysis of multimodal texts

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Roy Bhaskar centred his Critical Realism philosophy around a crucial philosophical conundrum, that is “reconciling the relativity of scientific knowledge as a social process with realism about its objects” (Hartwig, 2008, p. ix). The aim of this paper is to explore how such an epistemology can be applied to the analysis of multimodal texts, whilst also considering the potential cognitive effects on an audience.

The paper will begin with a summary of the main theoretical tenets of Critical Realism and will sketch a methodological and analytical framework derived from it, which sees our world as organised across and interpreted through three interconnected planes, the real, the basic social reality and the constructed discursive reality. An overview will also be offered of approaches within Critical Discourse Studies that have attempted to integrate Critical Realism (e.g. Fairclough 2010) by showing how the process of semiosis aligns with the ontology of this philosophy (Fairclough, Jessop and Sayer, 2002).

The second part of the paper will put the methodological and analytical framework introduced in the previous part to the test. For this purpose, examples from an ongoing research project on the representation of Ukrainian Displaced People on British television will be used. The multimodal analysis relies on constructs borrowed from social semiotics (e.g. Kress and van Leeuwen, 1996, 2001; van Leeuwen, 1999; Machin and Mayr, 2012) and recently applied to the genre of travel and cultural documentaries (Castaldi, 2021, forthcoming). The purpose will be to show how the semiotic, multimodal representations can be analysed across the three planes of reality.

The paper will end with a discussion around the applicability of the methodological approach introduced and of what the cognitive effects could be for the audiences of the television programmes analysed.

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Shared Intentionality Black Holes in HyFlex Interactions

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Have you held an online meeting or class that made you feel unsettled because you were met with silence from meeting participants or students? Did a lack of visual feedback because their camera feeds were switched off worsen that unsettled feeling? If so, you have experienced a Shared Intentionality (SI) Black Hole.

Tomasello (2005, p.675) defines Shared Intentionality (SI) as “the ability to participate with others in collaborative activities with shared goals and intentions” where “participation...requires...powerful forms of intention reading.” In our prior work focused on remote workers who were blind or low-vision (Lee, Sukhai and Coppin, 2022), we found that the degree to which SI in digitally-mediated interactions (such as an online meeting) can be fostered depends on the iconicity (digital interface elements or media, such as imagery, that resemble their referents, referred to by Lee et al. as spatial-topological synchrony) and symbolicity (aspects that are associated with referents via convention, loosely akin to what Lee et al. refer to as mutual knowledge, adapting Tomasello’s (2005) definition). Building on this,

a SI Black Hole is formed when one has little or no access to these elements that enable intention reading.

We report on our participatory longitudinal study with diverse students and instructors, focusing on SI in HyFlex (Beatty, 2006) formats. HyFlex provides the flexibility to choose between synchronous, asynchronous, remote or co-located interactions and became more commonplace during the transition from the lockdowns of the COVID-19 pandemic. However, HyFlex introduces additional factors that affect SI, such as multiple asynchronous interactions and multiple virtual and physical environments for each individual. We discuss how SI can deteriorate in certain HyFlex formats because of these multiple and often competing environments with their own perceptual cues and degrees of iconicity and symbolicity.

Our conceptualization of SI Black Holes provides a means to better understand how lapses in engagement, the ineffectiveness of education delivery, or work collaboration difficulties within HyFlex formats have more to do with how interactions are conveyed (e.g. iconically or symbolically), rather than the HyFlex format itself. This improved understanding can inform the design of HyFlex interactions to minimize SI Black Holes. Drawing from our longitudinal study, we present examples (codesigned with participants) that minimize SI Black Holes in Hyflex interactions.

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Storefront signs and fictive deixis

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Storefront signs are a well-established form of communication which regulates the interaction between the business and its potential customers. It is a form of multimodal communication which relies on many forms: “open/closed” signs, posters, sandwich boards, custom signs, etc. Additionally, during the COVID pandemic, storefront communication has become more complex, to regulate access

while maintaining the viability of the business. This paper considers linguistic and visual forms of storefront communication, focusing on deictic forms, direct discourse, the use of image schemas, and a range of constructions. Overall, it shows how storefront discourse creates a fictive deictic ground (cf. Dancygier, 2021) as the base on which communicative forms develop (see also Pascual, 2014).

The paper discusses two sets of examples. First, pre-COVID signs will be analyzed from the perspective of their standard forms (e.g. Come in, we are open or Sorry we are closed signs, Back in 30 minutes notices), but also custom signs performing more complex speech acts (such as, Thank you, Kitsilano! Or Relax Vancouver, it's still us Fig. 1), and relying in more complex ways on the assumed 'here' and 'now', and on the construal of the speaker and hearer participants (e.g., a store 'speaking' to a passer-by, a customer, or a neighbourhood). The second part of the paper discusses the change in storefront communication brought about by the COVID pandemic and the resulting store closures (based on the study of over 200 artifacts collected in the summer of 2020, see Dancygier et al to appear). The return to business involved explicit negotiation of the conditions of entry, established with reference to the Barrier schema, the frames of Safety and Harm, the (metaphorical) concept of Distance (Stand together by standing apart, Fig 2.). The examples gathered re-defined ordinary storefront interaction by, on the one hand, imposing restrictions (Stop – do not enter if you are sick) and, on the other, using expressions of welcoming and warmth (We're happy you're here, also Fig.3).

To account for the data, the paper proposes the concept of fictive deixis, while clarifying the role of Direct Discourse constructions and of figuration in storefront discourse.



Fig 1



Fig 2

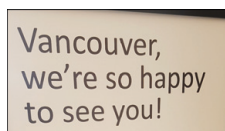


Fig 3

Dancygier, B. (2021) Fictive Deixis, Direct Discourse, and Viewpoint Networks. *Front. Commun.* 6:624334. doi: 10.3389/fcomm.2021.624334

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“The song of love... you can’t learn it from books”: Metaphors in love correspondence

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Recent studies on discourse dynamics have emphasized the need to refocus on metaphor as a matter of language use in various communicative contexts (e.g. Cameron, 2010). In line with this approach, but with a somewhat different theoretical perspective we describe a study of the creative power of metaphor in everyday discourse, using insights from both the Integral Theory of Metaphor, grounded in E. Coseriu’s Integral Linguistics (e.g. Coseriu, 1952; Faur, 2021), and the Motivation & Sedimentation Model (MSM), developed within cognitive semiotics (e.g. Zlatev & Moskaluk, 2022; Moskaluk, Zlatev & van de Weijer, 2022; Zlatev, 2023).

The analysis is based on the metaphors from a corpus of 20 love letters from the father’s personal collection of one of the authors, written between 1972-1973. Even if correspondence is a special textual genre, which seems different from everyday conversation, in the theoretical perspective assumed here textual genres are rather seen as “‘pre-textual’ building blocks”, “taken up as such, in the quality of raw material, for the construction of a new text” (Tămăianu-Morita, *in press*). The choice for a personal collection was not arbitrary either and it proved to be (phenomenologically) relevant in the metaphor identification. The results support the following main propositions: (1) the naïve speaker is able to identify metaphor in discourse based on his/her intuitive linguistic knowledge as a speaker; (2) particularly when the metaphor involves verbs or adverbs, the topic of metaphor is not easily spotted, and new criteria or procedures for the identification of metaphoric topic are in need to be developed; (3) the innovative metaphors found in the corpus are often extended, “elaborated” and “specified” (Müller, 2008), in the sense that they shed light on certain details related to the vehicle (or source) (by means of lexical development and evocation of other signs from the same semantic field or from semantic fields in relation to each other).

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MSM and Linguistic Relativity

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With its three levels (situated, sedimented, and embodied), the Motivation and Sedimentation Model (MSM) is non-reductionist, rejecting ‘monostratal’ models like those who suffer from ‘Neuromania’, i.e. the wish to reduce the complete Lifeworld to neurological phenomena.

In harmony with its own dynamic philosophy, the MSM model is not ‘cut in stone’, it is ‘under development’, as can be seen, for example, in the small changes between the model as represented in Fig.1 in Blomberg & Zlatev (2021, in short B&Z) and Oakley & Zlatev (2024, in short O&Z). A stable ingredient of the model seems to be, however, that the basic, embodied level, is universal, pan-human, not influenced by the situated or sedimented levels. It is only a motivating level (B&Z: 43).

In this paper, I discuss the question how universal this stable basis of embodied experience really is. This question becomes relevant in the perspective of Linguistic Relativity (LR in short), a perspective recently discussed by B&Z (2021) themselves, and by others, like Diodato (2019) and Kemmerer (2023). LR, in a stronger or weaker version, claims that sedimented and situated processes and structures in language and other semiotic systems have some impact on thinking, perception, experience, etc.

A closer look at MSM shows a rather rich inventory of ingredients belonging to the embodied level. In the 2024 version (O&Z), we find, for example ingredients like empathic perception, sensory knowledge, but also body adornment/modification. A split up of the embodied level could be considered. My proposal would be, then, to assume two levels: A hard pan-human basis, not accessible for influences of a

relativity type, with a pure motivating function in the model as a whole, at the same time leaving room for a second, less hard level, one higher up, which is accessible for sedimentation influences from higher levels in the model, leading to ‘enlanguaged experience’ (Dreon, 2024) and which is variable across languages and cultures.

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The creation of student's cognitive fields through meaning making processes via multiple semiotic systems in education: Scientific Meaning through Multiple Representations

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This doctoral research¹ studies the mental mechanisms formed by students to understand scientific concepts and whether multiple semiotic systems facilitate the representation of scientific concepts. Specifically, this research focuses on how a student constructs cognitive schemas through semiotic resources (Konderak, 2021, 2018), organizes them in a broader mental framework (Olteanu et. al. 2020, 2019),

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and constructs cognitive fields. The research attempts to study which combination of semiotic systems is more effective than others and in what order can the students use them in order to understand scientific concepts. The present research proposed a theoretical model that can be applied to any subject area. At this way, different semiotic systems are combined and students' knowledge construction processes are recorded. The results of the research show that firstly the verbal system of representation remains dominant and necessary for the understanding of scientific concepts. However, students seem to have difficulty on understanding all elements of verbal representations at the conscious and symbolic level, so verbal representations help in understanding concepts but not in the interpretation of the scientific notions and meaning making processes. Secondly, the visual representations help the student to formalize the scientific concepts and act at an abstract level. They enhance the cognitive skills of coding, but they do not build new knowledge by themselves. Thirdly, students seem to have difficulty on identifying the processes they follow to understand scientific concepts, and therefore visual representations are more helpful for teachers in teaching specific concepts and for students in identifying the cognitive processes they follow. Moreover, students seem to prefer visual semiotic systems first and then their verbal explanations as verbal texts, as visual semiotic resources are more abstract forms but allow students to think more deeply as they activate higher cognitive processes.

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New Tools for Music Analysis: Cognitive Semiotics and Triangulation

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Throughout the centuries, the long tradition of music analysis branched out into several directions – from formal/mathematical approaches to psychological ones. Nonetheless, although subjective introspection has often been implied as central to the analysis of meaning in music, few scholars have approached music analysis through a phenomenological lens. Among those few, phenomenology is typically intended as “second phenomenology” (Christensen, 2012; Ihde, 2007), from a Heideggerian hermeneutic tradition.

In this presentation, I shall highlight the potential benefits of including cognitive semiotics (and “first” or Husserlian phenomenology) in the analysis of musical meaning. I will propose a cognitive-semiotic analysis of Arvo Pärt’s *Spiegel im Spiegel* (1978), grounded in a 1st-person introspective description of the experience of listening to the piece. This will unravel layers of meaning-making that are typically ignored in music analysis – such as the multi-layered experience of musical time, and the affective responses to all such layers (as opposed to specific emotions related to singled musical components; see Stern, 2010). This analysis reinforces the Semiotic Hierarchy obtained in a previous analysis of musical meaning-making (Giacosa, 2023). It also allows for a comparison with previous second-phenomenological analyses of music (Ferrara, 1984) and the different amount of “front-loading” involved in cognitive semiotics. In order to apply a bit of phenomenological triangulation (Pielli & Zlatev, 2020), I wish to involve the audience in a few minutes of listening to the analysed piece. This should also allow for an open reflection on what should be the goal of (music, or any) analysis and the specific relevance of 3rd-person perspective investigations in such analyses.

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The Trickster's way in times of crises

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Crises are a natural and recurring event in all kinds of systems and a consequence of the system's deterioration or inadequacy to adapt to new circumstances. To manage a crisis, we usually resort to logic and science. Semiotics, particularly under the Peircean Tradition, try to provide clear and logically precise concepts supporting a system of knowledge based on stable rules for creating, manipulating and interpreting signs. However, Peirce as a pragmatist is also concerned with the way things work in real social contexts (Boyd & Heney 2017) and, as human beings, we don't behave like the fictional Mr. Spock in a perfectly rational way; we let our emotions and intuitions guide our decisions. "reason, for all the frills it customarily wears, in vital crises, comes down upon its marrow-bones to beg the succor of instinct" (Peirce 1992). In his commitment to evolutionary theory, Peirce articulates reason and instinct, in a similar way that the archetypal Trickster figure does, generating a mental flexibility necessary to adapt to new circumstances quickly and come up with creative solutions during this vital crises.

Here, I develop the concept of a Trickster's mind based on the description by Lewis Hyde (1998) from an agentic and cognitive perspective where this archetype works as a representation of the spontaneous cognitive dynamics that, at an individual level, defines along with the sedimentation process, "the core of consciousness" (Merleau-Ponty 1962) and, at a larger scale, can be considered necessary for the transitions between the levels of the Semiotic Hierarchy (Zlatev 2018). This concept is closely related to the idea of subversiveness, understood as the capacity to undermine sedimented structures, something usually considered dangerous and unlawful in social systems, but necessary in times of crisis when the failing structures need to be renewed.

Although the Trickster's subversive ways are usually considered chaotic and impulsive, they tend to follow a particular logic, that originates from the same body schema that by the phenomenon of habit allows us to establish appropriate relations with the world without needing any prior reasoning, as explained by Merleau-Ponty (1962). This paper aims to give a first approach to the ways these tricksterish dynamics work from a cognitive and phenomenological viewpoint, and how they could be used at a social and cultural level to respond to the crises humanity faces nowadays.

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Exploring the Interplay of Universal and Culture-Specific Elements in Moroccan Culture and Beyond

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Cognitive semiotics delves into the study of meaning-making, combining insights from cognitive science and semiotics. This paper aims to explore how certain symbols or meanings are universally understood versus those that are specific to Moroccan culture, examining the complexities and intersections between them. The study commences by defining universal signs, symbols, or meanings understood by people around the globe. Like the sun or colors with a profound meaning, these parts could be symbols everyone understands. For example, gestures, rituals, or words deeply rooted in Moroccan culture are examples of particular semiotics. Through case studies, the paper presents universal semiotic elements that have transcended the cultural confines like hand gestures or certain universally recognized symbols. On the other hand, some Morocco specific examples show how different semiotic systems are by showing how traditional clothes, language, and cultural events can symbolize meanings. A fascinating part of the study is how culturally specific elements can become universal symbols or vice versa. This shows the flexibility of semiotic systems. This exploration emphasizes the challenges and richness of interpretation within these dual facets. The study reveals some similarities and differences between Moroccan culture and other diverse cultures encompassing hand gestures, traditional clothes, festivals, idioms, and creative symbols. We can see that cultural semiotics is essential for communication, social interactions, and building identities in Moroccan culture and beyond by looking at

it through a comparative lens. The paper has utilized diverse methodological approaches such as case studies, textual analysis, and potentially interviews to comprehensively compare semiotic elements. The findings showcase a mix of similarities, differences, and changing meanings, appreciating the understanding of diverse semiotic systems. Ultimately, this exploration champions the acknowledgment and valuation of these systems to foster cultural understanding and unity.

The semiotic properties of music. A view from functional-cognitive semantics

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This paper proposes an addition to the rich literature on language and music, based on functional-cognitive linguistics in the Danish variety.

One generally recognized difference between language and music is the absence of categorial/denotational meaning in music. There is less agreement about what remains. In the musical tradition there is recurrent tension between an ‘absolutist’ position (expressed stridently by Stravinsky) claiming that music has no meaning beyond itself, and the practice of analysing music with a vocabulary fraught with human experience. The paper offers an analytic framework that combines key aspects of both positions. This framework is based on two assumptions derived from functional-cognitive linguistics:

- (1) Meaning must be analysed in two stages: meaning in the input (in classical tonal music consisting primarily in the musical choices codified in the score) and the output (in the form of the musical experience of the audience).
- (2) Although Saussure’s claim that meaning must be understood solely in terms of *valeurs* defined purely by relations between elements in the system (rather than in terms a wider cognitive universe) is no longer credible for language, the idea of meaning derived from structure makes a crucial point about meaning in music. This is because musical signifiers have a core of natural meaning – enabling music to build up a universe of significance by combining natural meanings in significant ways.

The paper introduces the concept of *identisigns* (with a symbolic homage to Peircean terminology!), for aspects of musical experience due to the sounds

themselves and goes on to discuss the ways in which music can invoke (other) aspects of human experience, including iconic and metaphorical features.

With respect to metaphor, it suggests that musical signs can draw directly on ‘metaphors we live by’, (Lakoff & Johnson, 1980): e.g., moving ‘up’ and ‘down’ in music transfers intuitively to other domains in human life. This property can be elucidated by reference to the ‘semiotic hierarchy of meaning’ (Zlatev, 2018; Giacosa, 2023). The paper argues that on that basis it is possible to be reasonably precise about the meaning-carrying potential of ‘music in itself’ at the input end – and also to extend the analysis to the output end, the full musical experience which is the essence of music, just as meaning in context is the essence of the ability to convey linguistic meaning.

Giacosa, G. (2023). Musical Meaning and the Semiotic Hierarchy: Towards a Cognitive Semiotics of Music. *Public Journal of Semiotics* 10 (2), 16-39.

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A Cognitive History of Diagrams: The Role of Oversimplified and Overcomplex Spatial Models in Times of Crisis

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Diagrams are analogies or metaphors which utilizes space as a source domain for an abstract target domain. Most diagrams are constructed in order to facilitate learning or the transmission of knowledge and information. In order to do so efficiently, they generally take the limitations of human cognition into account. For example, they adhere to what cognitive anthropologists call “folk taxonomies”, hierarchical systems of knowledge, generally limited to five levels where each node is not divided into more than approximately five new branches. Diagrams that are much simpler than this are generally not necessary to construct, since the principles they intend to convey are easily understandable anyway. Significantly more complex diagrams are also rare, since they, by exceeding the cognitive load that humans can handle, became too difficult to understand. However, although quite useless for promoting understanding, both oversimplified and overcomplex diagrams can be used as conscious propaganda tools through their emotional effects.

Simple diagrams of borderlines can contribute in creating political polarization, and have been utilized by revolutionary movements such as Soviet communism as well as within the feminist and queer movements. Sometimes they are inspired by military charts of frontlines, and sometimes by medieval maps with a strong center-periphery dichotomy. The human propensity to think in terms of dichotomies and borderlines is strengthened under stress, and revolutionary movements are utilizing this in order to effectuate desired change. Overcomplex network diagrams undermine trust in the social system by creating a feeling that something is not quite right. Examples are, for example, the network diagrams by artists such as Mark Lombardi and Dylan Louis Monroe. The latter visualizes conspiracy theories in the US QAnon-movement, which has had a central role in the political polarization in the US in the last decade. Such “labyrinthic chartjunk” has more in common with labyrinths than ordinary diagrams. In the semiotics of Charles Sanders Peirce, they should be classified as metaphors rather than diagrams, since by overwhelming human cognition they no longer function as diagrams but as metaphors for the complexity of the universe.

Simulating semantic processes in language change

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Languages change over time, due to various processes that likely have been operative since the dawn of language. But our understanding of the relative importance of different processes in the distant past remains limited. Simulating language change in software can help, testing processes and producing simulated language data as input for reconstruction tests. In simulation, the processes are known and controllable, and the true diversification path is known. Tuning process strength in simulation until the results resemble real language diversity may inform theories of semantic dynamics.

But simulated data will only be helpful if the simulation reproduces relevant aspects of reality closely enough. Several items in List (2019) *Open problems in computational linguistics* concern simulation issues. Extant simulations are mainly of two types:

- Detailed short-term simulations of within-language dynamics, often agent-based (e.g. Nolfi & Mirolli, 2010).
- Macro-scale long-term simulations, but with linguistic and/or geographical details abstracted away (e.g. Wichmann, 2017; Kapur & Rogers, 2020; Gergel et al., 2021).

Neither type covers the middle ground where within-language and between-language dynamics meet. This work aims to fill that gap, with a simulation that has sufficient linguistic, semantic and geographic detail to produce realistic data, and sufficient scope to cover macro-scale dynamics over millennia.

The basic simulation unit is a speech community with typically 100-1000 speakers, speaking a common language. Their language has an explicit vocabulary with word-forms and meanings. Seed languages are taken from CLICS3 (Rzyski et al., 2019), which then evolve through both phonological and semantic processes, language contact, and areal effects. All processes are adjustable and can be disabled.

Semantic processes simulated include word gain/loss, broadening/narrowing of meaning, word borrowing, and concept borrowing. Borrowing rate is affected by proximity, power relations, and areal effects. Colexification data (Rzyski et al., 2019) are used extensively. Exploring the parameter space of semantic processes may inform theories of semantic change.

Geographical data from De Ferranti (2015), Kelso (2016) and NASA (2016) are used. Each speech community lives in a 50x50 km grid square, which may be shared with other communities up to a carrying capacity. Population may increase or decrease depending on food availability, and surplus population may migrate, forming a new community whose language then evolves independently.

Simulation results are available as Swadesh matrices, or in formats suitable for automated reconstruction such as CLDF or NEXUS. True trees and true cognate sets are saved separately.

Software and sample output available at

<https://github.com/Lsjbot/LangChangeSimulator/tree/master>

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The sound of hand: Cross-modal associations between sound, gesture and meaning

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From the point when we began to live our lives standing on our feet, both in the evolutionary history of our species and in our infancy, our hands have gone from being primarily used for movement to performing a vast range of other tasks. By extension, our freed-up hands have become our main vehicle for gesturing and signing sign languages. Manual gesturing occurs almost constantly alongside spoken language which demonstrates the intrinsic cross-modal nature of human language. Similarly, iconicity, the resemblance-based mapping between form and meaning (Winter & Perlman, 2021) or between different meanings, can aid our communication by concatenating both sensory and semiotic modalities. Cross-linguistically, many bird names are iconic, such as cuckoo, mimicking the call of the bird it refers to, but iconicity is also common in words that refer to shapes. Basic shape concepts such as ‘round’ and ‘pointy’ have been linked to words with distinctive sound contrasts (Styles & Gawne, 2017), e.g. /buba/ and /kiki/.

It is known that iconicity affects word formation (Sidhu et al., 2021), but since language is in a perpetual state of change, it is difficult to know exactly how iconic sounds find their way into iconic meanings. This study investigates iconicity in the intersection between spoken language, gesture and culture by studying associations between handshapes, speech sounds and people’s judgment of these speech sounds. This is achieved by analyzing a) handshape words from languages representing 159 language families and quantifying the prevalence iconic speech sounds, b) handshape words throughout the Indo-European language family to examine the diachronic development of iconic speech sounds, and c) data collected through cross-modal experiments exploring whether visually presented handshapes can evoke iconic and/or affective associations to specific speech sounds.

The results showed associations between rounded vowels and words for 'fist', low vowels and words for 'palm', and high back vowels and words for 'finger', further supported by similar patterns found in our cross-linguistic sample of names representing the rock-paper-scissors game. These findings contribute to our understanding of how vocal iconicity is used for creating labels for communicative signs (Permiss & Vigliocco, 2014) but they also help bridging several fields studying the human communicative system, e.g. associations between sound and gesture, and between sound and facial expressions. By aggregating lexical, cultural-historical, and cross-modal perspectives, this study will help explain how cognitive constraints impact communication between languages and cultures, both geographically and diachronically.

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Beyond the third-person perspective: Phenomenological approaches to gestural meaning-making

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Spontaneous gesturing (McNeill 1992, Müller 2018) is an embodied activity, where a gesturing subject is engaged in the world, and thus action-oriented. This is why spontaneous gesturing seems to be a particularly interesting example of meaning-making activity in the context of a non-cognitivist approach to cognitive science. Such an approach shares certain assumptions with experientially focused, embodied and situated perspective of cognitive semiotics. In this context, the insights of phenomenological philosophy, especially Merleau-Ponty's philosophy of embodiment are significant.

Accepting the claim that we - as gesturers - are, primarily, body-subjects, I draw on Gallagher's distinction between body schema and body image in terms of gestural

meaning-making. Appreciating impressive achievements of third-person methods within gesture studies, I argue that studies on gesturing require also an established, systematic, qualitative approach, aiming at understanding the first- and second-person perspective.

There is a number of phenomenologically oriented qualitative approaches to meaning-making activities. I present one of them: IPA, Interpretive Phenomenological Analysis (Larkin et al. 2011, Smith & Nizza 2022) as a possible approach to studies (documenting and understanding) on people's lived experience. IPA is based on the three theoretical foundations: phenomenology, hermeneutics, and ideography. First, it focuses on first-person account of embodied experiences, second it involves second-person approach, namely interpretation on the part of both: participant and researcher. Finally, IPA consists of the ideographic, case-by-case process to show convergence and differentiation in participants experience (Smith et al. 2022). My pilot study on spontaneous gesturing is – on the one hand - an opportunity to present actual application of IPA method, including: a design of an IPA study, data collecting process as well as data analysis; on the other – an attempt to identify phenomenologically significant dimensions of spontaneous gesturing.

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Cracking the Code: Emoji Perception, Irony, and Digital Communication in Autism Spectrum Disorder Children

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The prevalence of digital communication brings benefits such as remote connectivity and fast access to information, but it also brings complexities in the form of emoticons and graphics. Typically developing children value emoticons for text comprehension (Garcia et al., 2022), while it is still unclear how children with autism spectrum disorder (ASD) interpret and evaluate the emotional content of sentences with emoticons. Digital communication has benefits for adolescents with ASD in terms of reducing stress when face-to-face talk (Burke et al., 2010), but at the same time brings difficulties in understanding text meaning (Benford and Standen, 2009).

This paper offers a comprehensive exploration of the different aspects of digital communication in two groups. The first group are children diagnosed with ASD (predominantly high-functioning autism and Asperger's syndrome) and the second group are their neurotypical peers. A group of 44 children diagnosed with ASD between the age of 10 and 18 participated in the study, along with 82 peers without this diagnosis. The main aim was to find out how children with ASD use and interpret emoticons in messages. An inventory compiled by the authors was used for the research. It contained screenshots of ten different conversations in which emoticons and irony were (or were not) used. Participants were tasked with deciding either the writer's feelings or the appropriate response. In addition, the inventory contained 4 questions assessing participants' digital behaviour, one of which was open-ended and allowed for self-reflection on the use of emoticons or writing with friends. The results of the study shed light on interesting patterns. Contrary to expectations, children with ASD generally do not perceive emoticons as a significant advantage in understanding the intended meaning of a message. Moreover, these children do not significantly incorporate emoticons into their own message composition.

The investigation goes beyond emoticons to include the use of irony as a response in digital communication. A remarkable finding is the differential relationship between irony recognition and the presence of emoticons. Although children with ASD show the ability to recognize irony, this ability does not appear to be

significantly affected by the inclusion of emoticons. In fact, the study suggests that some emoticons may introduce confusion, which challenges the assumption that they universally improve communication. In addition, the study reveals the preference for digital communication among children with autism spectrum disorder, offering valuable insights into their communication preferences and habits.

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Understanding the limits of experiments in language evolution inferences from closed- vs open-ended semantic space paradigms

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How far can we go when making inferences from language evolution experiments? By definition, controlled experiments do not represent reality in all its complexity, and thus it is important to be cautious when drawing conclusions. As one example, some recent studies have made fairly strong claims based on their experimental

work that humans can understand some novel or interspecies forms of communication (e.g. Graham and Hobaiter, 2023; Cwiek et al., 2021). On the basis of the experiments presented in these papers, their authors postulate that humans can “understand” great ape gestures (Graham and Hobaiter, 2023) and novel vocalizations cross-culturally (Cwiek et al., 2021). Both studies are well-constructed, controlled guessing games, but their inferences seem too strong when examining the experimental design in more detail.

Indeed, if we look closely at the design of the experiments described in these articles, we will notice that a multiple-choice paradigm was proposed to participants, which means that they had to choose the correct meaning out of several possibilities. Such a design raises questions of ecological validity and the appropriateness of using terms like understand to account for the results of these experiments. Indeed, the multiple-choice paradigm is very different from natural communication, where, even if helped and restrained by the context, we have to interpret the signal in a basically open-referential environment. We suggest that if we change the design of the experiments in question by replacing the closed semantic space with an open one, this leads to different results and thus different conclusions about human capacities to understand ape gestures or novel vocalizations. This would entail that our conclusions about human capacities depend largely on the experimental design that favours or not guessing the right answer.

To test our hypothesis, we replicate the experiments described above, but we modify the procedure by replacing the multiple-choice questions with open-ended questions. We then compare the results and discuss what kind of conclusions can be drawn from narrow and simplified experiments and how they can be mapped onto a larger picture of language evolution.

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Gestural homonymy leads to a polysemous multimodal construction: An account based on the Motivation & Sedimentation Model (MSM)

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Employing the Motivation & Sedimentation Model (MSM; Zlatev & Blomberg, 2019), this qualitative study presents an account of how different motivations for a single manifest form may lead to the conventionalization of a polysemous multimodal construction. Empirically, this study relies on the findings of Kuryu (2023), where two candidate multimodal constructions are identified: ‘again and again’ + the cyclic gesture (Figure 1; Ladewig, 2011) and ‘back and forth’ + the two-handed alternate gesture (2HAG; Figure 2). However, a post-hoc analysis uncovered that while the motivations for the former were uniform across instances, those for the latter were not. I will exemplify this below, where the gesture strokes are marked by underlined elements.

- (1) We’ve seen again and again how creative technology can be.
- (2) When we started working together, we were sending images back and forth.
- (3) This war’s gone back and forth and it’s been pretty neck and neck.

Regarding (1), the metonymic expression of endless ‘again’ is associated with the cycle image schema (Johnson, 1987), which is “exbodied” (Mittelberg, 2013) into the cyclic gesture. Moreover, the so-called primary metaphor time-is-motion-through-space (Ladewig, 2011), which is a basic correlation in experience in MSM, motivates these verbal and gestural expressions to co-occur. As long as the cyclic gesture (spatial repetition) accompanies ‘again and again’ (temporal repetition), these motivations are uniform across instances.

In both (2) and (3), the 2HAG is synchronized with ‘back and forth’, but the motivations are different between them. In (2), the 2HAG is motivated by the embodied action schema exchange (cf. mimetic schemas, Zlatev, 2005). By contrast, there is no such action schema involved in (3). Rather, it is a more image-schematic structure of bidirection that motivates this metaphorical multimodal pattern. Plausibly, this identical kinetic form with different semiotic bases would correspond to what is called “gestural homonymy” (Müller, 2017, p. 294).

With regard to the first potential multimodal construction, given the three different but interlinked levels of meaning making in MSM, the consistent cognitive patterns (cycle & time-is-motion-through-space) at the embodied level recurrently motivate situated uses of ‘again and again’ with the cyclic gesture (i.e. multimodal constructs), which will be eventually sedimented into a monosemous multimodal

construction. Conversely, the multimodal constructs of ‘back and forth’ + the 2HAG are non-uniformly motivated by two different cognitive patterns (exchange vs. bidirection), thus leading to the sedimentation of a polysemous multimodal construction that has two distinct but related senses.



Figure 1. The cyclic gesture



Figure 2. The 2HAG

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Intersemiotic Translation of Expressives: Unveiling Cross-Cultural Emotional Expressions

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This study aimed to explore the variability of emotional expressions across different cultures in an interconnected world and the complicated relationship between linguistic form, meaning, and perception. It examined expressives (Akita & Pardeshi, 2019; Dingemanse 2019), linguistic phenomena in which sounds mimic the objects or actions they represent.

Employing the intersemiotic translation framework (Jakobson, 1959), the study transcended conventional linguistic boundaries by analyzing emotional expressions in manga, a medium that epitomizes the fusion of visual and verbal semiotics and on which there has been little research into its linguistic symbols. This approach offers a novel perspective on the universality and diversity of emotional expression across languages.

The study consisted of a survey encompassing 678 participants, of whom 229 were Japanese-speakers and 223 English-speakers, other languages being represented by smaller groups. Participants were asked to fill in words suitable for each manga scene portraying particular emotions based on Paul Ekman's theory of universal emotions. Feedback from third parties resulted in the removal and addition of emotions that deviated from Ekman's original reference.

The research employed quantitative techniques to identify patterns and variations in how emotions are expressed phonetically in various linguistic and cultural situations. The Levenshtein distance (Levenshtein, 1965) was calculated for all responses. The obtained numbers were subsequently employed for hierarchical clustering (Ward, 1963). Computer-assisted analysis was conducted, and the replies were categorized into groups, based on their similar character strings.

The findings indicate that there is a common phonetic basis in the way emotions such as fear and sadness are expressed, suggesting that emotional expressiveness may be universal. For instance, the phonemes /w/, /a/, /b/, and elongated "e" were frequently associated with sadness in various languages, whereas derived forms of "brrr" were identified for expressing fear in languages that utilize the Latin alphabet. Curiously, "buruburu" was commonly used in Japanese, despite being linguistically distinct, containing the sounds "b" and "r." In contrast, particular phonetic variances in other emotional expressions were identified. For instance, the character strings "hy" and "gy" could be regarded as specific to Japanese, being absent in other languages.

This investigation explored the wider implications of expressives in promoting cross-cultural understanding and the cognitive semiotics of emotional expression, emphasizing the importance of multimodal cues and the iconicity inherent in expressives. It argued that intersemiotic translation within the realm of expressives is crucial for promoting a more profound comprehension of universally shared human emotions and promoting cross-cultural understanding.

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Anthropomorphism: The Iconicity of Artificial Intelligence in the Perspective of Cognitive Semiotics

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Anthropomorphism of artificial intelligence (AI) involves AI demonstrating human-like appearance, behavior, thoughts, etc. Recently, there has been a notable rise in the application of highly anthropomorphic AI. This study shows that AI achieves a high degree of anthropomorphism across the iconicity in three dimensions: image, diagram, and metaphor (Peirce, 2014). The imaginal iconicity signifies AI avatars resembling humans in appearance and behavior. The diagrammatic iconicity signifies code programming resembles human thought processes. The metaphorical iconicity signifies the relationship between AI and Alters which is represented as human-computer interaction is similar to the relationship between humans and Alters.

Under the influence of individual cognition, AI gradually moves from a real icon to a cultural icon, which blurs the boundaries between humans and AI.

No matter how similar, AI cannot become a complete icon to humans, because its meaning can never completely overlap with humans' meaning. But humans may treat AI as if it were human and assign the same interpretive meaning to both so that AI has opportunities to fabricate lies and harm the interests of humans. Therefore, it is necessary for humans to make a distinction. When individuals cannot identify the real identity of the object, they need to spend more time recognizing the object and are always doubtful. Even after the judgment, the doubts still do not disappear but will be suspended for the time being. When the object does something different from what individuals presuppose, doubts may arise again. The ever-present doubts will affect the basic trust between people, and even reshape interpersonal relationships in the long run. Fatigue from doubts will cause humans to give up making a distinction. Then, the boundary between human-computer relations and interpersonal relationships will be broken. If things go on like this, human subjectivity will face the threat of being dissolved or even lost.

At this stage, an AI that wants to interact with humans cannot succeed in hiding its identity without media. Although technologies such as virtual reality and augmented reality are intended to break through the boundaries between virtuality and reality, media still has limitations and can obscure individual cognition only through text, audio, video, etc. Therefore, individuals can reduce the possibility of cognitive confusion and discern the identity of objects by returning to embodied practice and experiencing the world in a multi-sensory format.

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Digital Reality through Metaphors in Public Service Announcements: An Interdisciplinary Approach

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The paper discusses the conceptualization of digital reality through metaphors in public service announcements (PSAs), employing an interdisciplinary approach. PSA is viewed as the complex sign in the space of culture generated by social institutions to be shared with the general public and to raise awareness about important issues of society.

The discussion is based on three basic claims: firstly, as digital reality increasingly spreads throughout modern life, digital technology shapes how we understand and

experience the world and profoundly alters meanings and cognitive structures; secondly, the creation and reconfiguration of meanings and cognitive structures caused by digital artifacts occurs through metaphorization processes resulting in the creation of digital metaphors; thirdly, digital metaphors are the driving force behind creation and a way of producing original PSAs and display commitment to innovation reflected in the selection of signs.

The paper proposes a theoretical framework that integrates the concepts of ‘digital metaphor’ and ‘representation’ in Peircean view thus creating a semiotic perspective of interpreting the “discoverability” i.e. public perception and comprehension of PSAs.

Special attention is paid to the multimodal nature of the complex cultural signs under study and the representative characters of different representamens. The analysis of a number PSAs containing digital metaphors is provided to substantiate the potential of the suggested theoretical framework. The paper draws inspiration from works by Eco (2014), Indrek and Torop (2015), Chown and Nascimento (2023), and others.

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Maintaining the Critical Component of Semiotics in the Study of Autism and Atypical Cognitive Development

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This presentation² broadly considers the status of autism and neurodivergence within the contemporary research literature on children’s “semiotic development” (Zlatev & Andr n, 2009). It is found that cognitive semiotic studies on the role of gesture and bodily mimesis in language acquisition (Zlatev, 2014; Zlatev et al., 2013) hold great significance for advancing our understanding of speech-language delays in autistic children. Despite this, however, engagements with the topics of autism and neurodiversity remain somewhat marginal to the core discussion of these studies and it is not entirely clear how cognitive semiotic frameworks for psychological development (Sonesson & Lenninger, 2015) and hierarchies of meaning-making (Zlatev, 2009) account for atypical cognitive development. Other approaches within the cognitive semiotic research paradigm tend to recapitulate bio-medical deficit perspectives on autism and neuronormative developmental schemas through a semiotic lens (Hoxha, 2015; Paolucci, 2019). On the basis of this critical review, the argument is put forth that cognitive semiotic approaches to childhood development which do not triangulate empirical and deductive analysis with phenomenological and socio-discursive analyses — thereby fulfilling the conditions of pheno-methodological triangulation set out by Jordan Zlatev (2009, 2018) — run the risk of reducing perceived atypical behaviour to neurodevelopmental pathologies. According to Chapman (2020), the neglect to attend to the role of first-person experience and social, cultural, and historical contexts in the formation of medical-scientific knowledge surrounding autism has resulted in a “crisis in the meaning of autism from a medical perspective” (p. 800). Insofar as the cognitive semiotic paradigm emerged as a response to the postmodern fragmentation of meaning across the humanities and empirical sciences (Zlatev, 2009), I see an opportunity for cognitive semiotics to act as a corrective to the bio-genetic and neuro-reductive tendencies that oft-beset clinical autism research. In order to do so, however, it will be necessary for cognitive semiotic research to incorporate phenomenologically-informed methodologies, such as the Motivation and Sedimentation Model of metaphorical meaning-making espoused by Moskaluk et al. (2022) and socio-semiotic methodologies for the critical analysis of autism discourse, as exemplified in Spiel et al. (2019) and Roderick (2023). To conclude, I

² The research to be presented here is based on a literature review chapter from an as-yet unpublished Master’s thesis for the Communication & Culture program at York University in Toronto, ON, Canada.

outline how such an approach would bring cognitive semiotics into closer alignment with the project of critical neurodiversity studies (Chapman, 2020), which seeks to challenge the pathologization and stigmatization of neurodivergence without entirely repudiating empirical explanations for atypical cognitive development.

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Cooperation, Cognition and the Sound of Silence: The Role of Inter-Turn Speech Pauses in Assessing Cooperativeness

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Language and cooperation are closely related, with language being important for assessing the cognitive states of potential cooperation partners (Fox Tree, 2002; Brennan & Williams, 1995). In our study, we investigated the role of pauses between turns in conversations as a crucial element of meaning-making in this assessment process.

We hypothesized that, in general, speakers making long pauses would be regarded as less knowledgeable, confident and willing to grant requests – all of which are highly relevant when evaluating others' cooperative potential – (Roberts & Francis, 2013) but that listeners would be more tolerant towards long pauses in non-native speakers. This is because in non-native speakers, long pauses may result from prolonged cognitive processing when answering in a non-native language (Cenoz, 2000; Guyer et al., 2019) rather than from a lack of knowledge or willingness. Crucially, since evaluating others' cooperativeness is important across cultures, and pause production and perception are similar cross-linguistically (Matzinger & Fitch, 2021), we predicted similar effects across languages.

In our experiment, 100 native Polish-speaking raters listened to staged conversations, during which speakers, either native Polish or native Chinese-speaking non-native Polish speakers, responded to questions or requests with either short (200 ms) or long (1200 ms) pauses before their answers (Roberts & Francis, 2013; Dingemans & Liesenfeld, 2022). After listening, the raters judged each respondent on their knowledge, confidence and willingness. We replicated the experiment with Chinese raters and the two languages reversed.

Results suggest cross-linguistic similarities: as predicted, Polish and Chinese raters perceived native speakers making long pauses as less knowledgeable, confident and willing. Also, for both groups, linear mixed effects models revealed a mediating effect of non-native accent on perceived willingness (interaction: pause duration * accent: $p < 0.001$ each), but not on knowledge and confidence. This suggests that requests may be more socially engaging and more directly relevant for interpersonal cooperative interactions than knowledge that reflects on partners' competence but not cooperativeness. Raters may therefore have evaluated willingness more carefully.

To further emphasize the role of pauses in assessing cooperativeness, we will also show results from a follow-up study testing whether similar relationships hold when participants don't know the language spoken. We predict that short pauses, being honest and hard-to-fake signals, will be more reliable indicators of others' cooperativeness than the easily manipulable semantic content of utterances (Waciewicz & Żywicznyński, 2012). Thus, overall, we will show that pauses play a significant role for meaning-making in cooperative encounters.

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Situated Affectivity in the Age of AI: a semiotic perspective

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We address emotionalized artificial intelligence (EAI) in a semiotic interrogation, as a reflection on how emerging types of human-computer interaction are changing human cognition, behavior and environments (Clowes 2019). The lack of theoretical models to understand AI extensions is a source of crisis, leading both to construing computing machines as independent minds and overlooking their transformative power. Rather, the mental agency of electronic computers resides in their contingency with organic minds (Esposito 2017; Magnani 2022), which renders it semiotic. Hence, we also address the crisis of academic semiotics: apart from some exceptional examples (Souza 2005; Hartley, Herrmann-Pillath 2018), semiotic theories fail to engage with technology, let alone AI. This is surprising, as technological changes imply changes of meaning and prominent approaches in STS draw on semiotic concepts (Jasanoff et al. 1995). Cognitive semiotics is in a good position to tackle EAI, as debates within the phenomenology of emotions reconcile in the 4E concept of situated affectivity.

Affective states do not merely reside in a body but are extended, embodied, embedded, and enacted by way of extra-psycho/corporeal processes and (im)material artifacts. Fine art, film, music, books, drugs, computers and photographs can enable emotional-cognitive responses in an agent. Proponents of situated affectivity contend that some artifacts can be experienced as an integral part of the self to the point where their presence or loss can profoundly reshape subjectivity (Piredda 2020). As people age, they surround themselves with a web of sentiment-laden objects, which they use to navigate their affective life. Although the advent of generative AI has catapulted intelligent machines to the forefront of public attention, this fastest-growing subfield of EAI remains little-explored. Involving computer vision, deep learning algorithms, big data, natural word processing, voice tone analytics, biometric sensors and actuators, EAI can adapt its behavior and tailor responses to suit the emotional context of human interaction. Still in its nascent stage, affect-recognition algorithms can be found in healthcare robotics and medical chatbots, wellness apps and personal assistants, advertising billboards and digital menus, smart cars, automated HR systems, classrooms and remote learning platforms, security and crime prevention surveillance, music apps, videogames, and toys. We ask what happens when affective artifacts transform into intelligent machines capable of inferring, simulating and regulating a person's

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Semiotics, Phenomenology & The "Crisis of Meaning" in Foundational Physics

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Modern physics has repeatedly been seen in crisis since the “energetism” of Mach, Duhem and Ostwald, over the discovery of discrete quantum phenomena by Planck, Einstein and Bohr and to the foundation of Quantum Mechanics (QM) by Heisenberg and Schrödinger in 1925-1927. In *The Crisis of European Sciences and Transcendental Phenomenology* (1936) Husserl questioned “Galileian science” and its mathematisation of nature, and announced a “crisis of meaning for life” following the detachment of physics from subjective experience (Husserl 1970), but this was unrelated to the perceived crisis in physics. The critical issue of mathematisation and phenomenology has, however, been revived in the articulation of quantum states as relative to observers (Berghofer 2020, French 2023) in the context of the “Copenhagen interpretation”. However, no such coherent theory exist (Camillieri 2009). The confusion introduced by Bohr was to claim that the act of measurement itself was causing a “collapse of the wave function” determining the outcome of quantum states in experiments, but human observers are not the kind of

things that physics should be about (Maudlin 2019, 2023), and the collapse is still debated (Cabaret 2022).

The current crisis of physics is actually caused by specific mathematizations as in the denial of any separation between mathematics and reality (Tegmark 2014) or in the impossibility of testing speculative theories such as the “many-world theory”, where experiments will split up reality in parallel worlds each containing an experimental outcome. This hardly make sense as physics, because any physicist can only access the actual world of a specific outcome and not “other worlds”. Mathematics seems to have taken over foundational work in physics, and the conceptual content is sometimes unclear (Hossenfelder, 2018).

A phenomenology supported by Peircian semiotics and relational realism seems to be possible. Here all physical facts about the world are relative, but not only to human observers, since any object interacting with other objects can be understood as “observers” constituting relations revealing selected properties of these other objects. This Relational Quantum Mechanics (Rovelli 1996, 2021, Di Biagio & Rovelli 2022) combines relational realism with scientific perspectivism (Giere 2006). Perspectivism should be understood as a form of implicit semiotics, and by making it explicit, we can perhaps understand how these observers (without 1-person perspectives) can be causally linked in relations, and give rise to meaningful measurements for human observers. Linking causal physics and sign relations was theorised in Peirce’s late classification of signs.

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Bühler's Imaginative Deixis and Children's Dynamic Event Words (DEW)

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For Bühler (1934, 2011) language includes the distinct fields of pointing (deixis), and the symbolic field (naming) which continually interact in language behavior. The origin of the deictic field is the “here, now, I” situation, anchoring an utterance and designating potential spatial and temporal change from this origin. Relatedly, Piaget (1954) includes the child's recognition of the self in relation to spatial and temporal change as diagnostic of mental representation.

Based on this recognition children mark space/time relationships with words, not all considered typically deictic, in particular, marking potential changes from the present situation to past and future, with what Bühler would term “imaginative deixis”. Given the dynamic absence quality of such reference to a changing situation, these words implicate both deixis and symbolic meaning. For example, the single word *up*, used as a request, signals a child's simultaneous consciousness of his or her current spatial position and the potential for future vertical movement into a parent's arms. The single word *allgone*, spoken when an item is no longer present, signals the child's consciousness that, in a prior moment, an object was present, but now it is no longer perceptually available (perhaps a ball has rolled under the sofa). A child's ability to say *more* to request another cookie after consuming one demonstrates “imaginative deixis”: simultaneous awareness (consciousness) of three time points and their relationship:

1. The past moment: cookie present;
2. The present moment: cookie absent;
3. A potential future moment: another cookie becomes available.

These *Dynamic Event Words* (DEW) demonstrate children's sense of motion events and prefigured children's initial verbs in sentences (McCune & Herr-Israel, 2019; Talmy, 2000). Bühler's comprehensive approach to deixis provides a direct linguistic rationale for this grouping of words and makes comprehensible the finding

that the earliest verbs are traditionally deictic (e.g., come, get, give, go, have, hold, need, take, want).

In critiquing the European case system, Bühler comments: “Furthermore it would be possible to imagine a class or classes of decidedly predicative words whose syntactic behavior is substantially different from our verbs but still symbolizes events similarly to verbs and have to be contrasted to nouns” (Bühler, 2011: 433), perhaps presaging the recognition of single DEW. Word and sentence are defined as complementary indivisible elements. Child single productions, which Bühler terms “empractical” rather than “synsemantic”, yield to “genuine sentences with words” (Bühler, (81). The presentation discusses these issues and includes DEW and verb data.

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Art of Silence: Spotlighting the Strategic Power of Pauses in Communication

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The concept of meaning emerges as a multifaceted journey of expression where the language employed plays a significant role, therefore our verbal expression in addition to the impressions we create via our speech style cannot be overstated. The absence of words appears in communication as a silent pause. Its potency resides in the capacity to exert a profound influence. Psychologists initiated research on pause in turn-taking before linguists indicated an interest. Recently, studies conducted in negotiation settings have become popular. However, contemporary research fails to address practical implications for everyday life and the strategic power of the pause for effective communication. All speakers and listeners benefit from becoming aware of the duration of silence and what impact it has on communication. This

meta-study draws on research from psychology, linguistics, and communication from integrative and crisis negotiation contexts where participants are in the position of decision-makers on how to use silence proactively. Furthermore, this paper provides insights into the multifaceted role of the pause as an effective communication tool. This study serves as a comparative analysis of research outcomes across three core domains: exploring turn-taking dynamics to define the concept of the pause, examining its implications on power dynamics, and uncovering its interplay with active listening techniques. As we delve into research outcomes regarding pauses, we cultivate a greater sense of ease and acceptance toward silence. The results indicate that even though the duration of silence is context-dependent, the “tolerance threshold” or “standard maximum” silence is approximately 1 second, and it may further range between 2-3 seconds, with a 5-second cap, to allow the other participant to reflect and focus on our message and acknowledge its importance. The conclusions indicate that silence plays a strategic role in power dynamics: to assert control over the conversation, to shape the narrative, and to establish power hierarchies by influencing the perception of dominance. Additionally, the deployment of pauses can create moments of reflection and enhance persuasive tactics. By acknowledging and employing pauses intentionally, we can benefit from an understanding of the underlying mechanisms and implications silence entails in shaping effective human interactions. It is essential to be intentional with our use or non-use of words. When we incorporate pause, we can reach the mutual agreement that takes place in our communicative interactions which serve as an environment for negotiation of how we understand the world.

Choosing Letters: Exploring Influence in Reading Tanka Poems

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Tanka is a short Japanese lyric poem of 31 syllables. In recent years, this traditional form of poetry has become popular, especially among young people. Modern tanka poets are very conscious of their choice of letters. Since the Japanese writing system uses 3 types of letters, 2 phonographs and 1 ideograph, writers have the freedom to choose how to write the same sentence. Tanka poets often say that they think today's tanka is primarily visual, whereas the traditional tanka, which can be translated as "short song," was orally read and mainly listened to.

But it is not only contemporary poets who are aware of the choice of letters. For example, Hiraga's (2004) analysis of Matsuo Basho's *Oku no hosomichi* (1702), the famous collection of haiku - another type of Japanese short poem - shows that textual revision most often takes place in terms of notation. In Japanese, notation interferes with reading and influences the understanding of texts. Kamiya-Harada's (1988) eye-tracking study, based on LaBerge-Samuels' (1974) reading model, reported that kanji (ideograph) comprehension plays an important role in Japanese reading and that kanji are used as visual markers and carriers of meaning as reading strategies.

While Japanese kanji are strongly associated with meaning and weakly associated with sound, kana (phonographs) are weakly associated with meaning and strongly associated with sound. Taking these characteristics into account, writers of Japanese poetic texts choose letters. The interest of this paper is to show how the effect of letter choice, as subjectively perceived by poets, can be shown as empirical data.

This is a pilot study to investigate the methodology of measuring the influence of visual appearance in the reading of tanka poems through qualitative and quantitative research. The study has three parts. Part 1: Questionnaire to investigate whether the choice of letters changes the evaluation of each poem. Part 2: Contrastive study to test whether the evaluation changes with or without the reading sound of the text. Part 3: Analysis of the participants' eye movements while reading tanka poems to investigate whether there is a correlation between the reading pattern and the evaluation of the text.

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The body says it all: Non-verbal indicators of choice awareness

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Recent work in cognitive science argues for the illusory nature of conscious will and considers occasional “blindness” to manipulations as indicative of our lack of awareness in choice making (e.g., Dennett, 1996; Johansson et al., 2013; Wegner, 2018). This claim is based upon the tendency of experimental participants not to detect such manipulations, and the similarity between verbal justifications to choices participants had and had not made. Using a cognitive-semiotic framework, and relying on previous research, we argue that such conclusions are problematic, as they underestimate the embodied and intersubjective character of human meaning making. We support this through a novel approach to the investigation of choice awareness and manipulation detection by going beyond language into other bodily sign and signal systems that involve different degrees of awareness from both the producer’s and the interpreter’ side.

We report on a study where 41 participants were first asked to choose from pairs of photographs of human faces the one they found most attractive and then to justify their choices, without knowing that for some of the trials they were asked to justify a choice that they had not made. Participants’ *verbal* responses were categorized according to the type of trial and detection into (i) non-manipulated, (ii) detected-manipulated, and (iii) non-detected manipulated trials. Further, participants’ *bodily* expressions for each of the trials were assessed on the basis of a tentative cline from signals to signs including five different Categories of Bodily Expression (CBE): Adaptors, Torso, Head, Face and Hand expressions. We found notable differences in participants’ responses to different trials, in at least three aspects: (a) duration, (b) rates of occurrence of the five CBEs and (c) variety of how those were used. Thus, despite whether the detection of the manipulation was verbally expressed, it was manifested in participants’ longer time of assessing the assumed choices, increased rates of bodily expressions, and engagement of more parts of their bodies during the non-detected than actual choice trials.

Our findings speak against one of the tenets of claims against our reliability as conscious agents: the homogeneity between participants' verbal reports justifying choices they made and choices they did not, with assumptions of "confabulation" even when choice manipulation is not involved (e.g., Johansson 2006). In contrast, we argue for a degree of awareness of the manipulations, even in verbally "non-detected" manipulations, and even if this awareness is not focal, but a matter of pre-reflective, marginal consciousness manifested in the use of participants' bodily expressions, such as adaptors.

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Twins studies on synaesthesia - associations with altered perception and mental health

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Synaesthesia is a perceptual phenomenon where specific stimuli automatically and consistently trigger additional sensations (often colours and/or shapes), with individual combinations for every synaesthete (Ward, 2013). Synaesthesia can be seen as assigning sensory (embodied) meaning to triggers that are typically conceptual in nature (for instance, words, letters, or digits – referred to as sequence- or grapheme-colour synaesthesia).

Synaesthesia co-occurs with autism spectrum conditions (ASC). Synaesthesia and ASC are also independently similar in certain aspects of general perception, which includes both sensory hyper-sensitivity and enhanced attention to detail (Van Leeuwen et al., 2020). Besides ASC, Synaesthesia might be associated with other psychiatric conditions as well, such as anxiety (Carmichael et al., 2019).

In our lab, we use cognitive tests, brain imaging and eye tracking to study sequence-colour synaesthesia and its perceptual and neural mechanisms. In this sense, our work investigates the integration and interaction of sensory information and symbolic meaning.

We are also investigating the links between synaesthesia and mental health conditions, and cognitive benefits. Using a twin design allows us to estimate the relative contribution of environmental and genetic factors.

In a large twin cohort, we found that ~45% of variation in self-reported synaesthesia was due to variation in genetics. The relation to autistic traits was influenced by genetics to a large extent (>70%) (Taylor et al., 2023). From the same cohort, preliminary results indicate that synaesthesia correlates with other mental-health related traits as well, especially those related to obsessive-compulsive disorder.

In a smaller twin sample, our preliminary findings indicate that enhanced detail focus in synaesthesia is task dependent, and likely partially separable from autism. For instance, we found that grapheme-colour synaesthetes were less prone to certain visual illusions compared to both their co-twins and neurotypicals ($p < 0.001$). On the other hand, superior detail detection in natural visual scenes was associated with the degree of autistic traits, but not grapheme-colour synaesthesia. We will discuss these and other findings and how they might inform the understanding of how sensory information and conceptual meaning interact.

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Origins of Money: A Motivation & Sedimentation Model (MSM) Analysis

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Few other social technologies and institutions are more consequential to human societies than money. Yet money remains a deeply perplexing phenomenon: both a pan-human system of valuation and deeply conventional and variable in its uses; not instantiating a fully-fledged sign system, but with many signifying capacities. In this respect, it offers a conspicuous test case for cognitive semiotics in general, and for the Motivation & Sedimentation Model (MSM) of meaning in particular. Using MSM (Zlatev 2018; Zlatev & Blomberg 2016, 2019; Zlatev, Jacobsson, & Paju 2021), with roots in the phenomenology of Husserl ([1937] 1970) and Merleau-Ponty (1962, 1964) we analyze two origin accounts of money: the commodity money account evidenced in archaic and classical Greek coinage, and the credit money account exemplified by early findings in Mesopotamia. Both accounts focus on the interactions between the pre-signitive Embodied, the cultural Sedimented, and the interactional Situated levels of meaning postulated in MSM, and propose different series of “loops,” based on semiotic processes operating according to motivated, and hence non-arbitrary, conventions developing within institutional formations that ultimately influence present day concepts of money.

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No Reason, no crisis: A cognitive semiotic criticism of glottocentrism

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I argue that academic glottocentric culture (language-centrism, see Sebeok 2001, Petrilli 2014) is a main source for contemporary crises because it endorses anthropocentric sociotechnical imaginaries (Jasanoff, Kim 2015). Such imaginaries ushered the human industries and societies that unbalanced the Holocene into the Anthropocene. By following Peirce in construing the mind's work as semiosis, instead of Reason, cognitive semiotics can take a major step in liberating contemporary societies from imaginaries that foster unsustainability. Current trends in philosophy of mind and technology confirm the salience of this conceptualization, but did not pursue it.

I follow Stables' (2012) view that education should be driven by learners' discovery of interpretative capacities, instead of the delivering of a supposedly fixed set of skills, deemed literacy, from teachers to learners. This shift in educational philosophy should catalyze the production of new media futures. Stemming from the Enlightenment, philosophy of education and pedagogy inculcated a construal of learning as linguistic. Through its notion of Reason and educational infrastructures fostered by printing press media, modernity equated learning with language acquisition and, consequently, literacy with language competences (Hartley 2012). Literacy is a notion borne out of print capitalism, the same conditions that enabled imagining nations (Anderson 2006). It construes critical thinking as the capacity to represent the world through (alphanumeric) symbols. This is what Lakoff (1987) and Johnson (1987) criticized as objectivism. Hence, imaginaries of democratically governable communities as ethnolinguistically homogenous and literacy-driven academia perpetuate each other.

Designed in this lens, education does not consider the variety of media through which learning unfolds. Rather, it aims to conserve the ideological language of the nation state. The current technological revolution is casting a spotlight on this, as teaching epistemologies and methods are proved obsolete in the context of emerging technological media. To think critically in contemporary societies requires inferring multimodally, not only in language and the symbols of print.

The recent focus of cultural studies on media technologies may incorrectly suggest that multimodal social representations are a historical novelty. As cognition is embodied, humans always modelled environments multimodally and polysemiotically. The cultural interrogation of media technologies must be accompanied by cognitive considerations. These new directions in scholarship point to the interrogation of the relation between cognition and meaning, which are confused in the notion of Reason. By understanding the relation between cognitive and semiotic processes, cognitive semiotics (Paolucci 2021) can enable criticisms of glottocentric imaginaries.

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Investigating language effects on cognition using three-gendered languages: The case of Ukrainian simultaneous bilinguals

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This study explores the linguistic relativity principle (Samuel et al., 2019; Whorf, 1956): how do languages affect one's cognitive processes? We address this question in the domain of grammatical gender, focusing on simultaneous bilinguals of Ukrainian and Russian with contrasting three-gendered systems. Incorporating three-gendered languages with neuter gender addresses a significant critique in the field of linguistic relativity. This critique argues that speakers of three-gendered languages are less influenced by gender compared to speakers of two-gendered languages, because the binary nature of the latter makes grammatical gender more salient (Sera et al., 2002). Adopting a similarity-judgement paradigm (Phillips & Boroditsky, 2003), we designed two experiments: one with neuter gender and one without, conducted separately.

We recruited 63 Ukrainian-Russian bilinguals for Experiment 1 and 70 for Experiment 2, and an English monolingual control group (37 and 40 participants for Experiments 1 and 2). Participants rated the similarity of pairs of conceptually neutral object images, each presented with a male or female character image (e.g., notebook and a ballerina), on a 9-point Likert scale. The nouns varied in their grammatical gender alignment in Ukrainian and Russian, including nouns with opposite grammatical genders in both languages and those with matching genders. Two key predictions were tested using linear mixed. First, we predicted that bilinguals would demonstrate stronger language effects than English controls, for nouns with matching grammatical genders in Ukrainian and Russian. Specifically,

we expected higher ratings for pairs where the biological sex of the character and object's grammatical gender were congruent in both languages. Second, for nouns with mismatching genders, we predicted that the ratings would be influenced by the bilinguals' most proficient language.

Experiment 1 showed no significant effects, supporting the notion that the presence of neuter grammatical gender yields weaker or no effects in speakers of three-gendered languages. Conversely, Experiment 2 revealed a significant language effect, with bilinguals rating pairs as more similar when Ukrainian and Russian grammatical genders were congruent with the biological sex, compared to monolinguals. Similarly, significant results were found with mismatching grammatical genders. Our findings show that the exclusion of neuter gender likely caused the difference in results, demonstrating grammatical gender effects in three-gendered languages regardless of whether grammatical gender in those language matches or not. The latter exhibits how the presence of neuter gender impacts categorisation.

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“Good-natured ridicule” in climate change cartoons

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Addressing the conference themes of “epistemology and truth” and “metaphor and metonymy across media and semiotic systems” from a cognitive linguistic

perspective, we analyze the verbal (metaphoric and metonymic) and visual (iconic and indexical) tools employed by cartoonists, limiting our data to single-panel editorial climate change cartoons.

Editorial cartoons are a rhetorical genre of text and image in political discourse within an argumentative perspective functioning to shape attitudes. As such, they contribute to political discourse regarding climate change in that they “represent an important visual addition to the cultural repertoire that shapes how climate change is and can be represented” (Nielsen & Ravn, 2020: 146). Those who resist confronting the scientific evidence of a global warming threat rely on various strategies, among them, contradiction, downplaying the danger, declaring unforeseen benefits, blaming/discrediting the messenger, making false equivalences, and so on, all of which can be represented pictorially and appear in climate change cartoons.

To overcome this resistance, cartoonists, in their own words, attest to (i) using humor, irony, satire, absurdity, and pictures as tools, (ii) select metaphors attuned to their readerships, and (iii) seek to engage the opposition to expose the folly of arguments against the scientific facts – and existential threat – of global warming (Toles and Kallaugher in *Politics and Prose*, 2016).

The present investigation applies the methods of cognitive linguistics to identify the pictorial and verbal representations of the attitudes and ways of thinking of so-called “climate deniers” in order to better understand not only why and how people engage in irrational thinking, but also how cartoonists represent and counter argumentative positions in the climate debate. To this end, we model the iconicity and indexicality in the imagery and texts in terms of vehicles, i.e. conceptually speaking, source domains and target domains, metaphorical (iconic) mappings and metonymic (indexical) associations, pragmatic inferencing, various cultural models and scenarios, including folk models of animals, action (vs. talk), and speech acts.

The genre of the often humorous pictorial and verbally brief editorial cartoon repeatedly expressing satirical “good-natured ridicule” (Toles, 2016) makes it a potent tool for political persuasion, the inner workings of which cognitive linguists can shed some light on.

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Viewpoint and metacognition: Cognitive-semiotic foundations of how they shape multimodal articulations and improvised musical performances

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This paper presents an account of possible interactions of two phenomena central to embodied cognition and meaning-making: Viewpoint and metacognition. We explore how viewpoint phenomena may be involved in metacognition during dynamic, intertwined processes of thinking, speaking, and gesturing. Viewpoint is a highly versatile phenomenon related to the perspective assumed on a given situation – regardless of whether the situation is experienced first-hand, mediated through a narrative, or imagined for the first time. Perspective-taking may involve a certain positioning in actual physical or conceptual spaces (e.g., Hautamäki 2015; Mittelberg 2017), inside or outside narrative contexts, or any scene or process a speaker/writer is describing with, e.g., speech, eye-gaze, and gestures (e.g., Sweetser 2013). Importantly for the present work, speakers use different bodily articulators to signal shifting or simultaneous viewpoints on a given scene, typically adopting character, observer and/or experiential viewpoint, depending on their involvement or distance vis-a-vis the narrated or imagined context (e.g., Parrill 2010).

In this paper, we argue that shifting viewpoints are a metacognitive strategy to explore contextual possibilities through semiosis, embodied in gestures and other body movements. While there is no single definition of ‘metacognition’, it is usually considered as cognition about cognition (first and second-order cognitive process), e.g. as a metarepresentation – ‘knowing what one knows’; or more generally as the control and monitoring of one’s own cognitive activity (Arango-Muñoz 2019; Proust 2019). Seeing viewpoint as a metacognitive strategy, as we suggest here, allows for comparison and exploration of different cognitive-semiotic avenues. Through changing viewpoints on a situation, including one’s own mental activities, the situation can be experienced in different ways and put under scrutiny, possibly

allowing for new perspectives and ideas which act as a frame to guide the thought process and its translation into various sign systems. Here, we treat metacognition as semiosis (Perissinotto & Queiroz 2023) – the communication of a habit from an Object (first-order cognitive process) to an Interpretant (second-order cognitive process) through a Sign (sign systems), so as to both drive and constrain the interpreter’s behavior.

The present theoretical considerations build the groundwork for ensuing empirical studies investigating how metacognition and viewpoint jointly drive musical improvisation and shape musicians’ multimodal discourses about their performance practices. Here we will present some first examples of the musicians’ improvising and meta-discourse analyzed through the lens of Peirce’s mature semiotics (e.g., Atã & Queiroz 2016; Mittelberg 2019).

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A narrative turn in rock art: How iconic, indexical and conventional aspects differ between the earliest and later depicting petroglyphs in the Northern Scandinavian Stone Age

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The first depictions in Scandinavian rock carving traditions appear around 9000 BCE in the form of large images, sometimes life-sized, of game animals such as elk or reindeer. Pictures of humans are exceedingly rare. A distinguishing feature of the animal pictures is an apparent striving for realism, or high degree of *iconicity* (e.g. Sonesson, 2016), not only with respect to the animals' sizes, but also their outline shapes and details, making them immediately identifiable on a species level. Further categorization is often possible, of e.g. sex and behaviours. The animals were represented as singular motifs, usually without any interaction with other figures. However, an interaction with the surrounding natural landscape seems to have affected the placement of the images and may have contributed to their meaning considerably (Gjerde, 2010). While the full appreciation of these pictures arguably was dependent on socio-cultural *conventions*, their positioning in the landscape could also have added *indexical* meaning. They thus capture all three ways to convey pictorial meaning: through iconicity, indexicality and conventionality. If the pictures had any narrative functions, these stories must have taken place in interaction with the environment, or with an oral culture. Later, around 5000 BCE, a pictorial "narrative turn" seems to have occurred in North Scandinavian petroglyphs (Skoglund et al, 2023). These new pictorial traditions still had game animals as the dominant motif, sometimes together with images of humans. Importantly, the images were now small. Miniaturization makes spatial organization of images more efficient and manipulation of their indexical relationships possible,

which affords interpretation of relations and interactions between figures. This would also provide the grounds for more elaborate pictorial narratives (as opposed to dependent on external landscape connections). Hunting scenes or other human-animal relations can now be inferred on the rock-art panels. Objects are depicted in the hands of humans, further distinguishing their activities. While miniature images are often still iconic, they tend to be more schematized, and there seems to be considerably less strive for a high degree of realism. To show how a narrative turn could have taken place, in our presentation we will compare the early and later pictorial traditions with respect to how they differ in the dynamics between iconicity, indexicality, and conventionality, as an effect of miniaturization, and its consequences for content choices and pictorial narratives.

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Affect as discursive practice and beyond

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The paper presents a comparative analysis of non-discursive and discursive perspectives on affect, drawing on Peirce's modalities of experience (Firstness, Secondness, Thirdness). Focusing on the work of Brian Massumi and Margaret Wetherell, the paper demonstrates that these scholars' conceptualizations of affect are fundamentally different. Massumi's perspective resembles Peirce's concept of Firstness in the sense that it focuses on the immediacy and unmediated quality of affect. However, also for Massumi, affect is never “raw”: all experience is in-formed by prior “takings-form”. Wetherell's discursive approach centres practice and negotiation and situates affect within the realm of mediation.

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Social Media Conspiracy Narratives in the Process of Radicalization into Extremism: an anti-vaccine case study

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Disinformation (intended to harm) and misinformation (inadvertently harmful) are not a novel problem confined to social media (Wardle & Derakshan, 2017). However, the accelerated evolution of digital communication technology has undoubtedly altered the way information is produced, distributed, and interpreted. Algorithms written on the basis of confirmation bias promote narratives that reflect certain ideological perspectives already held by users, reinforcing pre-given views, generating the so-called echochambers and social media bubbles. With this, the lines between fiction and non-fiction are blurred, as disinformation and conspiracy narratives undermine traditional sources of knowledge (Önnerfors & Steiner, 2018). In this context, it is possible to argue that there is a structural tendency for political extremists to uphold conspiracy theories, which is reflected in their dichotomic thinking style aimed at making sense of societal events by providing oversimplified

explanations (van Prooijen et al., 2015), following the notion that any other ways of interpretation are always wrong ('us-vs.-them' logic). Generally, both conspiracy theories and radicalization are fundamentally related to meaning-making processes that provide cognitive closure (self-regulatory clarity, accuracy, and meaning) by introducing an explanatory narrative from which one may derive purpose and, thus, organize a cohesive and meaningful way to interpret this very complex and conflicting reality. Therefore, as core components of the process of radicalization into extremism, the spread of disinformation and conspiracy theories presents a relevant issue for research. As such, the present paper aims to study meaning-making at different political and societal levels regarding how anti-vaccine conspiracy theories on social media, making use of mis/disinformation, contribute to radicalization. More specifically, this work consists in the semiotic analysis of social media texts retrieved from the Subreddit 'r/vaxxhappened' – a digital space dedicated to the archival and criticism of anti-vaccine material found online. For analysis, only the archived anti-vax material is considered (not the dialog it generates with the Subreddit community itself). A qualitative approach supplied by philosophy of communication (textual analysis) is here combined with a quantitative approach based on Natural Language Processing to study the digital propagation of mis/disinformation related to anti-vaccine conspiracy theories on social media. This ongoing study seeks to identify language patterns (signs, texts, and/or codes) that can potentially assist in the codification of cultural meanings and in the formation of ideological clusters of conspiracy theorists online, pointing to how these patterns fit inside the wider process of radicalization, here understood as a communicative practice.

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Metaphor, Meaning Extension and Meaning-Making in Interaction: An Experimental-Semiotic Approach

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Where does the unlimited expressive potential of human language come from? One important factor in the range of expressible meanings is the process of meaning extension, by which lexical items become polysemous (Vicente & Falkum 2017). The emergence of polysemy has been documented in historical linguistics, which has shown that metaphorical extension is a key factor in licensing semantic change (e.g. Anderson 2017).

Here, we follow a novel methodology to investigate the processes involved in metaphorical meaning extension: The paradigm of experimental semiotics (e.g. Galantucci et al. 2012; Nölle & Galantucci 2023). In this paradigm, communicators have to create a shared communication system in the absence of a shared language. Given the task to communicate with each other in an interactive scenario, participants quickly negotiate meaningful symbols to communicate about referents.

In this talk, we will present the results of an experimental-semiotic study in which participants first have to find ways to jointly refer to items by converging on a shared novel lexicon of meaningful symbols. In a second step, once an initial shared lexicon has been developed, participants will then be presented with a new meaning space for which they can only use the symbols for which they have created shared meanings in the first round of the experiment. Importantly, novel items will offer affordances for metaphorical association, thereby offering prompts to spontaneously develop a polysemous shared communication system. That is, it will be possible to link novel referents from the second round to acquired meanings from the first round via metaphorical extension. We predict that participants will make use of the metaphorical extension potential inherent in the meaning space presented to them. For instance, in the first round one referent is the sun, for which participants must converge on a shared symbol. In the second round, a novel referent is an image of a happy person. If, as we predict, participants are sensitive to the conceptual metaphorical foundations of abstract symbols (Lakoff & Johnson 1980), they will

quickly converge on their symbol for sun to also refer to a happy person, based on the conceptual metaphorical mapping HAPPINESS IS LIGHT.

Our results will shed light on the cognitive factors in metaphorical meaning extension. In addition, they will demonstrate that metaphorical extension has the potential to explain the polysemous extension of meaning in the evolutionary and cultural emergence of language.

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A special case of adaptive rhetoric. Irony and the narrativity hypothesis

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The origin and the aim of language has interested semiotic studies since their birth, nonetheless the problem, at this point, is still unsolved. Among the many theories, the «Narrative Practice Hypothesis» (NPH) (Fisher, 1985; Hutto, 2008) assumes that the principal purpose of communication (both animal and human) is to persuade others and influence their thoughts, beliefs and behaviour rather than to transmit information. Thus, in condition that persuasive modes are an adaptive strategy, nature has encouraged the evolution of rhetorical communication in order to reduce the necessity of physical conflicts, which require a great effort from both aggressors and victims (Kennedy, 1998; Parrish, 2014). From this perspective, the faculty of creating stories turns out to be the specific feature of human language (Gottschall,

2012; Storr, 2019), while stories constitute a strongly effective persuasive device in order to overcome the «epistemic vigilance» (Sperber & all., 2010) of the listener. The persuasive power of stories is largely due to their ability to alter mental and emotional states (both behaviourally and cerebrally) (Ferretti, 2022b). In this direction some scholars introduced the notion of «narrative brain» (Ferretti, 2022a), assuming that narrative thought precedes storytelling as a communication tool and proto-narratives are the basic structure of human representation of reality as well as an evolutionary precondition of storytelling in social group narrative practices.

Building on these ideas, my proposal aims to suggest a further development and to indagate, with a theoretical analysis, the extent to which irony can be explained by this hypothesis and how the latter fits with some theories about irony developed in other fields. In fact, irony proves to be a peculiar type of indirect speech whose persuasive power is based on “anti-performativity”. Over the past 50 years this topic has interested specifically cognitive science. Debunking the traditional rhetorical conception whereby irony would be an antiphrastic mechanism involving 'saying the opposite of what is meant', the several modern theories account to its pragmatic nature in relation to thought and mind as well. The «Pretense Theory» (Clark & Gerrig, 1984), in particular, states that verbal irony is fundamentally a pretence meant to be discovered by the audience. From this point of view, my hypothesis is that irony can be considered a peculiar narrative mode, even though it is apparently anti-economical and theoretically unfit for persuasion. In my opinion, an integration between NPH and the «Pretense Theory» can be attempted in order to identify more clearly on which elements the functioning and effectiveness of irony is based.

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Autism as a Parallel (not Deviant) Universe of Discourse: Criticisms of Limiting Narratives Found in Cognitive Semiotics

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Despite several decades of research, autistic minds continue to be poorly understood (Kirjakovski, 2023, p. 1). Regardless, autism is readily used as a foil and deficit model for contrast with so-called neurotypical cognition. The possibly disastrous errors in understanding that can result from a deficit model of autism and autistic meaning creation are now being broadcast from the field of Neurodiversity Studies and are beginning to echo in other fields, recently including the Cognitive Sciences (Manalili et al., 2023). Accordingly, this paper aims to challenge the limiting and narrow narratives used in Cognitive Semiotics to frame autism. In the process, I work to promote a better understanding of meaning-making by incorporating the vantage points of diverse minds as different from what is ‘common,’ not deviant from what is ‘normal.’ To accomplish this, I address issues in theory and research in Cognitive Semiotics and related fields that adopt deficit models of autism (Gallagher & Varga, 2015; McGilchrist, 2009/2019; Paolucci, 2019, 2021). By utilizing Zlatev’s Semiotic Hierarchy (2009, 2018; Zlatev & Konderak, 2022) as an illustrative example, this paper looks at the development of so-called neurotypical meaning-making and autistic meaning-making by paralleling their development of meaning through the levels of the Semiotic Hierarchy, resulting in different ‘universes of discourse’ (Zlatev, 2009, p. 185) in the final level of the hierarchy. Levels one (*umwelt*) and two (natural *lebenswelt*) show how neurotypicals and autistics can create differing meanings that may conflict in later layers. Drawing on Damian Milton’s (2012) double empathy problem and recent autism research that shows how autistics communicate quite well with each other, just like neurotypicals do, I support the view that neurotypical versus autistics’ understanding is a matter

of differing universes and not a deficit on the part of autistics. When it comes to cross-neurotype communication, however, both parties have difficulties. That is, autistics have difficulties understanding neurotypicals AND neurotypicals have difficulties understanding autistics (Crompton et al., 2020; Heasman & Gillespie, 2019; Morrison et al., 2020). In light of these findings, this paper calls for a rethinking, an adjustment, and a course correction in how autism and autistic meaning-making are addressed and approached in Cognitive Semiotics. In short, this paper proposes alternative ways of viewing and engaging with autistic universes of discourse as parallel to – not deviant from – ‘the’ common universe of discourse and the potential for this view to reveal new universes of meaning, ready for discovery and understanding.

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The Cultural Conceptualization of the HAND in Old English: Embodiment and Culture in Early Medieval England

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The hand is of significant cultural, social, and spiritual significance in Early Medieval English. It is associated with one of the five sensory modes in the Early Medieval cultural model of the senses (O'Brien O'Keefe, 2016), with the sense of *hrepung oððe grapung* 'touch or feeling' being accessed through *eallum limum ac þeah gewunelicost on þam handum* 'all the limbs but most typically in the hands'. (*ÆLS* (Christmas) 198, Skeat, 1881–1890). Metonymically, the hand conceptualizes power, work, and agency. Its cultural significance can be seen in the rich metaphorical conceptualisations for which it serves as a source domain. For example, we see in the *Dictionary of Old English* (Cameron et al, 2018) an instance of the extension of the HAND to the MIND in the idea of embracing wisdom *mid geglofedum handum* 'with gloved hands', in which the importance of direct contact is transferred from the physical domain to the mental. Physical contact through the sense of touch is also significant in religious discourse, including the works of Ælfric, as a mode through which healing miracles may occur. The HAND to MIND metaphor is also reflected in the notion of *modes handa aþwean* 'washing the hands of one's mind' (*DOE* s.v. *hand*), which intersects with other cultural schemas related to cleanliness.

This study examines the conceptualization of the hand in Old English from a Cultural Linguistic perspective, based on concordance data from the *Dictionary of Old English Web Corpus* (Healey et al, 2009) and senses provided in the *Dictionary of Old English* for the word *hand* as well as verbs for the sense of touch including *hrepian* ‘touch’ and *grapian* ‘grasp’. The study presents an account that models those aspects of conceptualization that follow from near-universal tendencies for embodiment in language as well as those that follow from the cultural and religious context of the writings.

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What does it mean “to understand” a narrative? A critical review of operationalisations of “narrative comprehension”

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“Narrative” has become a popular term in the last four decades, not only in the Humanities, but also in economics, cognitive sciences, or psychology (see e.g., Genette, 1980; Herman, 2007; Roos & Reccius, 2023). Many empirical – and, especially, experimental – studies test if a population understands a narrative in a given medium or on a given topic (see e.g., Mar 2011; Stephens & Breheny, 2012; Adornetti et al., 2023). Their understanding of “understanding a narrative” has limitations, though.

We conducted a critical literature review of over 100 papers from cognitive studies, developmental studies, and psychology that involve a specific interpretation or

operationalisation of “narrative comprehension” (NC), including measures based on ratings, biofeedback (e.g., eye tracking), or reading time. We identified two challenges to validity common in the available operationalisations of NC: (1) problems with construct validity and (2) problems with ecological validity. As far as (1) goes, operationalisations of NC are often not backed up with proper definitional work. As a result, they are based on the assumption that the main role of narrative is to transfer information; and that this information is organised based on causality. Thus, “to understand a narrative” means to understand the causal relations between events in a narrative. However, narratives do not necessarily need to involve information transfer (cf. e.g., communication for manipulation in Dawkins & Krebs, 1978; Ferretti, 2022), and causality is but one of their aspects. As far as (2) goes, the typical tasks used to check NC involve “retelling”, where the participants are asked to recall a narrative and reproduce it. The process is often guided by control or probe questions (see Burris & Brown, 2014). There are at least two problems with retelling tasks: (I) they require subsequent rating, which is frequently based on intuition and not supported with rigorous procedures (e.g., there is no recommended number of raters that can ensure inter-rater reliability); (II) although in theory, retelling tasks reflect real-life situations (e.g., conversational narratives), in practice they tend to involve questions that prime the participants to recall only selected elements of a narrative.

Based on the results of our critical literature review, we discuss the above limitations of studies investigating NC, but also offer suggestions on how these limitations can be overcome in study designs. We take it to be an important step towards standardisation of measures of NC that would be less challenged in terms of validity across different disciplines (cf. Burris & Brown, 2014).

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Applied Cognitive Semiotics in a Cultural Heritage Management Context: The DiGroKult Project

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DiGroKult is a research collaboration between Bohusläns Museum (Uddevalla, Sweden), the disability rights organization Utopia (Gothenburg, Sweden), and the Division for Cognitive Semiotics, Lund University. The project utilizes concepts from cognitive semiotics to examine how adults with disabilities make sense of educational films about cultural heritage sites, compared with how they make sense of those actual sites during guided visits. The research seeks to identify strategies for making educational films more accessible, regardless of disability, while also conveying engaging and meaningful information that encourages more people to visit physically accessible cultural heritage sites, again, regardless of disability. An overarching consideration is to evaluate whether a universal-design solution for educational films is feasible.

With the focus on short-form (5-7 minute) pedagogical films, we have shown films about two different heritage sites in the Bohuslän region of western Sweden to each of three groups: adults with visual impairments (n=4), adults with ADHD and/or autism diagnoses (n=4) and adults who self-identify as “normatively functional” (n=5). For each film, the respective groups were interviewed about knowledge gained and how they experienced the film. Then, they followed on a guided tour of the depicted heritage sites, led by the same archaeologists who were in the film. An on-site interview was carried out to compare knowledge-retention and experience “in real life” with the film depiction. Additional contrasts were included in the study design, with the different films shown to each group varying in accessibility features, including the presence versus absence of Audio Description. In the case of the group with visual impairments, the two films differed in the respective audio descriptors’ experience level.

Thematic analyses of the interviews, standardized mapping of the films' polysemiotic content, and the researchers' own reflections as participant observers provide the basis for *phenomenological triangulation* (e.g., Mendoza-Collazos et al. 2021). Whereas the interviews provided a second-person perspective on the phenomenological experience of film depictions and actual heritage sites, a polysemiotic analysis of the films' constitutive semiotic systems provided a standardized third-person account. Together with the coders' and analysts' first-person reflections of participating in the film-showings and guided tours, the second and third-person qualitative data provided the basis for identifying design recommendations, in order to make pedagogical films more accessible and engaging for adults with neuropsychiatric disabilities or visual impairments.

This presentation discusses some of the results of this pilot study. Heterogenous disabilities limit the universal-design effectiveness of intersemiotic translation—for example, image to language, in translating video image to audio description. Audio description makes a film accessible to a person with blindness, but it causes insurmountable distraction for viewers with autism or ADHD. However, all groups found that the journey from film-depiction to guided site-visit offered a rich and positive subjective experience. While only a pilot study, this approach—informed by cognitive semiotics and phenomenology—is promising for studying how cultural heritage education can be more inclusive.

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Conceptual generalizations of multimodal metaphor expressions

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The central research question posed here is whether, and under what circumstances, the metaphorical conceptualizations we derive from linguistic expressions and vice versa apply to cases of multimodal metaphors in the process of meaning making. Specifically, in cognitive linguistics, the phenomenon of conceptual mapping between metaphorical domains, which leads to a number of associated linguistic realizations, has been thoroughly explained and confirmed theoretically and through corpus research so far. However, researchers' attention has recently been drawn more to the phenomenon of multimodality in communication, metaphors included,

particularly with the advancement of digital technologies. As a result, the groundbreaking work of Charles Forceville (1996) was largely responsible for the first recognition of visual metaphor in a variety of genres, and later interest was expanded to include its multimodal expressions. Unfortunately, not much corpus research has been done in this area, but the available material can be used to identify inconsistencies in the identification process as well as in the associated taxonomies. It appears that such research is mostly kept at the expression level, so multimodal metaphors are frequently recognized and annotated superficially, while the question of their conceptual generalizations, which have been well described through language examples, largely escapes the authors' attention. To resolve this issue, or at the very least to suggest potential solutions, two currently dominant models of identifying multimodal metaphors will be used as a theoretical template: the previously mentioned Forceville's linguistic model and the marketing approach developed by Phillips and McQuarrie (2004), combined with the VisMet online database of visual and multimodal metaphors for the analysis. The already recognized inconsistencies in the current annotations regarding the level of metaphorical expression will be highlighted (Sušac, 2022), as well as the possibilities of their conceptualizations that could generate different multimodal realizations, similar to the process already recognized in language samples. The assumption is that such an approach can have a high application value, primarily in the field of advertising, i.e. for different displays of the same product or for different products with equal or similar conceptual mappings.

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(Re)cognition of Agency as Semiotic Hybridization: Peirce Contra Latour

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This paper shows that Latour’s methodological displacement of the theory of sign into the realm of the general semiological narrative itself (Latour and Akrich 1992; Hostaker 2005) truncates his own theory of sign from its essential part, which is a tradition derived from the work of C. S. Peirce. This reduction of the general theory of sign is not just a matter of the given theoretical and methodological jargon or arbitrarily chosen expressions; it also has binding ontological suppositions and consequences. A debate on the semiotic-ontological aspects of Actor-Network Theory (ANT) can be conducted beyond Latour’s general division into “the semiotics of discourse” and the “semiotics of things/material semiotics” (Law 2009), where the “semiotics of things” should be counter-positional, or at least complementary to, the discourse-centric concept of agency (Latour 1996a; 1996b).

This perspective (simply put: discourse vs. things) can be viewed in the context of the discussion in cognitive semiotics (cf. Latour 1986) of the realist and nominalist nature of a sign as a specific relation (Deely 2009; cf. Latour 2014a; 2014b), which begs the question: By sign do we mean a phenomenon that is constructed solely by the power of the human mind, or do we mean an ontologically unique relation not reducible to human language (cf. Kohn 2013; Stjernfelt 2014)? The crucial concept, which is at the very core of this discussion is the concept of the object (Deely 2010). The predominant influence of structuralism, social constructivism, and remnants of post-Deweyan pragmatism in social sciences has led to a notable schism. Following the proverbial "murder of the referent," as proclaimed by Roland Barthes and the early Umberto Eco in the 1960s, any sign theory that sought to understand the object as anything other than a purely discursive, cultural, or quasi-linguistic entity was

often dismissed outright either as a form of naive positivism or as an expression of logocentric metaphysics of presence.

Conversely, we have seen efforts, exemplified directly by Latour's work, to reintroduce the irreducible agency of objects into the discourse of social sciences. Here, Peirce's anti-Cartesian semeiotic, which is "cognitive" from its inception, becomes relevant. This prism offers social sciences a "symmetrical" framework, as Latour would say, to interconnect the natural and the cultural by understanding the sign as both a formally inferential and a "naturally" acting entity (cf. Paolucci 2020). In conclusion, any social epistemology that aims to be cognitive has to adopt Framework of Peirce's semeiotic (Stjernfelt 2014).

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Polysemioses: How Indexical Signs Elevate Iconic Meanings to Promote Acts of Synesthesia

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The competence of picturing in the mind new objects within different sensory modalities to which the same qualities can pertain gives rise to the creation of new icons in different spaces and times whose meanings contain unconventional, but analogous properties, appearing within contexts (spatially, temporally) never perceived. Examples of this phenomena include near-meaning transfers across sensory modalities (contrasted with Sonesson's "restricted sign" concept).

One transfer entails measuring distance between reference points in the visual rather than the kinesthetic modality, altering the underlying meaning. Such materializes as stative or action from point A to point B. The upshot is that amplitude (when expressed kinesthetically) measures movement over time, while visual amplitude (primary according to Lakoff and Johnson (1980/2003) is required to convert stative continuity to action by way of motion. Poly-semiosis operates when relational meaning across two reference points (during kinesthetic frames of ambulation) diminishes the highlighted endpoints. In other cases, transferring meaning across modalities may actually augment meanings rather than depleting them, as when a shadow is deployed to represent an echo. Here the shadow (in the visual modality) stabilizes the temporal redundancy characteristic of an echo. Representing filled but fading spaces in vision and audition is a challenging affair, consequent to the differing staying powers of lamination and volume to maintain perceptual acuity. The capacity for index to cross-modally measure distance in either/both space and time is the sign most responsible for extensions to other modalities. Changing iconic properties results in subtle interpretant modifications (West, In Press). In other words, the re-representations (redesignations) from derivative to transfer modalities produce meaning overlaps. Consequently, meaning transfers between visual and auditory representational canvases retain more meaning attributes than does transfer between visual and tactual/kinesthetic representations. This is the case because the basis of the former sign transfer carries with it a spatial congregate, while transfer between the latter modalities depends more heavily upon temporal agency/motion.

Indexical signs possess the power to produce more plausible propositional meanings (1904: EP2: 307) of icons by transporting them to places and times where meanings

can be augmented, hence, redefining the nature of inferential rationality. In short, attributing properties/qualities to objects in uncharacteristic sensory modalities (synesthesia) is one way in which index drives polysemiosis. In short, index imports similar semantic and logical meanings onto icons without forcing them to associate with identical meanings.

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Memetic creativity: language, image, and art

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Recent work on internet memes is uncovering the importance of memetic form, not only as a guide to meaning, but as a self-sustained yet flexible constructional formula (Dancygier & Vandelanotte, 2017). It is becoming clearer how Meme Makers tacitly rely on understanding memetic form and meaning as two components of the meme and how they consequently use a meme as a constructional artifact. We look more closely at how the form and the meaning have both become subject to creative restructuring. To explore these aspects of creative uses of memes we will consider re-designed examples of memes such as Distracted Boyfriend, Exit 12, Drake, Loss, and Erwin. These memes represent major memetic constructional forms, such as labelling, use of image macros, four-cell grids, and direct discourse patterns.

The main point these analyses illustrate is how Meme Makers are aware of the distinction between memetic form and memetic meaning, and how the resulting constructions can be manipulated to create more meanings. We will focus on four re-construal processes. 1. Memetic blends, which uncover the stability and transferability of memetic meaning across different forms; 2. Recursion (known as meme-ception), where memes can replicate the same stable form (such as an image macro) for special effect (Fig.1); 3. Anti-memes, or examples of using the form for its literal (rather than specifically constructional) meaning; these memes playfully show the Meme Makers' awareness of the standard constructional behaviour of memes, wherein form and meaning yield independent memetic meaning.

Our final set of examples shows how some types of memes have become, essentially, artistic. Examples in group 4 remain constructional, while relying entirely on the aesthetic exploitation of form – yielding a form of expression which we would (perhaps hesitantly) call ‘memetic art’ (cf. Wiggins, 2019: Ch. 8). The techniques applied are quite varied: reducing full photo-image-macros to a minimalist form, using colour to signal elements of the macro, superimposing one memetic form over another (we consider these cases different from meme-blends, because form, not meaning is the target), replacing images with descriptions, etc. (Fig.2). The list is quite varied, but we will focus here on several instances of the so-called Loss-meme (arguably a meme whose only meaning is playful replication of a highly schematic visual pattern).

Memes are becoming more and more surprising in their aesthetic ingenuity and constructional agility. We argue, though, that the visual creativity is both controlled and inspired by constructional patterns.

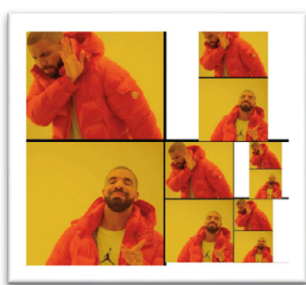


Fig. 1

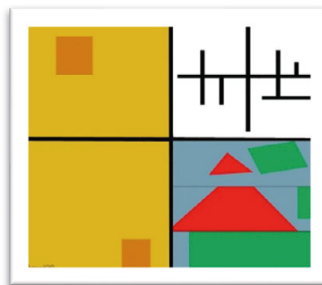


Fig. 2

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Resonating Transgressions: A Deleuzoguattarian Analysis of Irony in Metal Music

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This academic paper examines the role of transgression as the defining rule of metal music, focusing on the way how transgression shapes the genre's identity and constructs its meaning. The concept of transgression is explored not just as a boundary-pushing element but as a foundational principle that grants coherence and significance within the metal music territory.

This paper uses a Deleuzoguattarian framework to analyze how irony, employed by bands like Infant Annihilator, acts as a nuanced form of transgression. Irony serves to challenge and reinterpret the established norms of transgression, leading to a dynamic process of meaning-making. This process exemplifies the constant evolution and redefinition of the genre, reflecting the shifting landscapes of meaning within the broader cultural context.

In this exploration, particular attention is given to the role of percepts and affects, as defined by Deleuze and Guattari, in shaping the audience's experience and understanding of metal music. By analyzing how percepts (sensory experiences) and affects (emotional responses) are manipulated through irony and transgressive elements, the paper delves deeper into the complex interplay between artist, artwork, and audience.

The analysis of sonic, textual, and visual elements in metal music, with an emphasis on the ironic and hyperbolic approach of Infant Annihilator, demonstrates how irony can alter the perceived boundaries and expectations of the genre. This exploration sheds light on the transformative power of irony in redefining the territory and rules of transgression, contributing to a deeper understanding of the ongoing shifts in meaning-making processes in the metal music.

Kinesthetic empathy and spectators' experiences of watching dance: A second look

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Despite the challenge posed by people's fast-changing state of mind in everyday interactions, most of us understand others' emotions directly, facilitated by a combination of *vitality affects* (Stern 2018 [1985]) and *kinesthetic empathy* (Gallagher and Zahavi 2020; Warburton 2011). Previous studies have been dominated by third-person methods, which do not permit us to know how kinesthetic empathy manifests itself from the perspective of an experiencer. In our talk we return to earlier work (Chikhladze, Zlatev & Van de Weijer, 2021) to provide a rethinking of the model of kinesthetic empathy, stemming from an additional analysis of the findings as well as from revisions in the model of the Semiotic Hierarchy (Zlatev & Konderak, 2023).

Considering that dance has been described as a "magnification of movement" (Sheets-Johnstone 2015: xv) in an attempt to evoke emotions and to communicate (Brownlow et al. 1997), we explored the nature of kinesthetic empathy in connection with how spectators experience movement in dance. The study combined first-, second- and third-person methods to account for 20 spectators' feelings and attitudes in response to two dance performances, one in classical ballet and the other in contemporary dance. Half of the spectators were familiar with dance, the other half were not. The two dances predominantly differed in terms of *qualities of movement* (Sheets-Johnstone 2015).

The analysis, based in phenomenological triangulation (Mendoza-Collazos & Zlatev, 2022), showed that unexpected dance movements had a strong effect on the unfamiliar spectators, and that this effect had a negative valence. Based on the revised analysis of these findings, we suggest that the strong negative effect may have in fact helped the unfamiliar spectators to tap into their *marginally conscious* emotional arousal and verbalize the emotions they experienced. On the other hand, familiar spectators seemed to have an ability to re-enact the emotions that are only

marginally conscious and thus make them *focally conscious*, irrespective of dance style or qualities of movement. The results suggest that familiar and unfamiliar spectators differed in how well they could re-enact their marginally conscious experiences. Based on this revised understanding, we propose an articulated model of kinesthetic empathy and use the new understanding of kinesthetic empathy to arrive at further insights regarding the interrelations between the five layers of signification and intentionality in the Semiotic Hierarchy. We propose, namely, that lower levels of operative and perceptual intentionalities can *shape* linguistic intentionality.

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Poster Session

(in alphabetical order)

Deixis and justification of choices based on preference: can deixis tell us something more than what it shows?

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In a previous cognitive semiotic experimental study (Mouratidou et al., under review), participants were asked to make a choice between a pair of pictures showing human faces and subsequently to justify their preference for the one they found more attractive. For some trials, however, their choices were manipulated, presenting participants with the non-preferred alternative as if that had been their choice. Sometimes this manipulation was detected, sometimes not, and the study demonstrated that even when the detection of the manipulation was not verbally expressed, it was often manifest in participants' bodily expressions. Another finding was that participants used predominately deictic hand gestures.

In this presentation we have gone beyond the analysis in the previous study, to look closer at participants' deictic and pointing gestures towards preferred and non-preferred alternatives, in two conditions: when they are presented with their preferred alternative (*non-manipulated choice* trials), and when they are presented with the non-preferred one as their choice (*detected and non-detected manipulation* trials). The aim was to explore whether there are correspondences between experiential preference (what participants initially preferred) and deixis (the way they indicate it when they are asked to justify it) in different communicative interactions (non-manipulated and manipulated choice trials). To test this, we categorised the verbal responses of 29 Greek participants based on the type of trial and detection into (a) non-manipulated, (b) detected manipulated, and (c) non-detected manipulated trials. Participants' deictic and pointing gestures were coded in terms of the indicated Object (e.g., preferred or non-preferred picture card), Form (e.g., palm, finger), Hand (right, left or both), Distance (close or far from the picture), and Tactility (e.g., touch, tap). Further, the utterance that participants synchronically produced was coded, along with whether it had a positive, neutral or negative Valence.

Preliminary results show differences in deictic and pointing gestures across non-manipulated and manipulated choice trials in: frequency of occurrence, Hand, Distance, and Tactility. Further, differences are observed between preferred and

non-preferred choice alternatives within each condition in the categories: Form, Tactility, and Valence. Differences in, at least, some of the categories indicate alignment between participants' experiential preference and deixis (e.g., when participants are presented with their initially preferred card, they most often *touch* it, while in non-manipulated choice trials when they are presented with the non-preferred alternative as their choice, they most often *adjust* it by moving it around). Such differences could further suggest a degree of awareness of participants' choice, even if this is not mentioned explicitly in speech: a matter of pre-reflective marginal consciousness (Gurwitsch 1978; Zlatev 2008).

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Fundamental Matrix of the Sign: Three Must Play the Game

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The paper focuses on the role of the semiotic lens in the constitution of a general theory of meaning. It presents another attempt of a semiotician to pay a visit to the territory of semantics and to show the origin of some controversies arising from different solutions to basic problems. As the constitutive center of any semiotic enterprise is the interrogation of the matrix of the sign, the discussion is centered on three basic claims: firstly, *a* general semiotics is nothing else but *a* philosophy of language and the 'good' philosophies of language are concerned with the semiotic questions (Eco, 1984: 4); secondly, contemporary semiotics faces the same challenges as the theory of language and the challenge is to gain intellectual mastery of different facets of the phenomenon of meaning; thirdly, reflection on the models of signs can provide an explicit evaluation of the way that scholarship in semiotics affects semantics.

The first claim is substantiated by showing how from the time of the inferential theory of the Stoics to the present-day theories of semiosis, the semiotic enterprise has always been aimed at finding scientific abstraction in posing the sign and in so doing allowing the constitution of science (including linguistics) as systematization and formalization. The second claim emphasizes the absence of a neutral conceptual

framework within which to conduct the comparison of the semantic theories. Our choice of which theories to compare is justified by focusing on those where ends-oriented modeling of representation (Anderson, Merrell, 1991: 10) results in the ability to explain the relation of three basic components of all phenomena of signification including language. The third claim consists in discussing the impact of the Peircean triadic model on a theoretical framework for creating a ‘semiosic theory’ of meaning proceeding from the *code*, *informational*, and *cultural* dimensions of semiosis (Andreichuk, 2021) and taking into consideration the ideas emanating from cognitive semantics and cognitive semiotics, in particular, in the description of the informational dimension of semiosis. The latter is viewed as indispensable for cognitive–semiotic synthesis (Zlatev, 2015) in elaborating the semiosic theory of meaning.

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Sign function – what is it, who gets it, and how does it emerge?

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Sonesson (2012) argues that signs are very particular vehicles of meaning. The sign function refers to the ability to understand that a particular expression – speech, gesture, or drawing – represents a certain kind of object (Lenninger, 2016). This ability is key to the emergence of toddlers’ social skills (Piaget, 1962), as it helps them communicate with others about the world, and provides them with the insight about how to use knowledge they have acquired (Zlatev, 2009). Given that only in the third year of life children appear to be capable of using the sign function of pictures (Zlatev et al., 2013), it is possible that the symbolic system of language serves as a platform for the emergence of this ability. On the other hand, it is possible that understanding of the sign function emerges first through gesture, and later becomes extended to language, and then to other semiotic systems.

Research in gesture is particularly informative about the cognitive skills of toddlers. Many studies address the problem of interaction between speech and gesture in language production (Iverson & Goldin-Meadow, 2005; Özçalışkan & Dimitrova, 2013) and show how children jointly use information from different semiotic systems (Tolar et al., 2008; Broaders & Goldin-Meadow, 2010). Producing gestures alongside speech in interaction helps children learn new vocabulary items (Novack & Goldin-Meadow, 2015), follow verbal information (Dargue et al., 2019), or orchestrate attention mechanisms (Tomasello et al., 2007). Speech–gesture combinations facilitate problem solving (Broaders et al., 2007) and understanding abstract concepts (Goldin-Meadow et al., 2001).

When working with infants, researchers have been mostly interested in their use of pointing in prelinguistic communication and around the age of one (Liszkowski et al., 2012), as well as speech–gesture combinations in the one-word stage (Özçalışkan & Goldin-Meadow, 2009). Research suggests that toddlers produce pronounced iconic gestures only around their third year of life (Namy et al., 2004). Others argue that at least some iconic gestures appear much earlier, along with the sign function (Zlatev, 2014).

Using theoretical and empirical literature on the topic, I define the notion of sign and sign function (sensu Zlatev et al. 2020), sketch a timeline of sign function development in children and discuss sign function emergence in various semiotic systems, focusing on speech and gesture.

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For a fully linguistic framework in language processing models

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The language processing models in the present corpora, generally developed based on structural models can generate grammaticality and complex structures almost automatically. However, the most successful models today have recognition and prediction based on probabilistic algorithms, rather than on the linguistic

framework. In view of the complexity, the language system may be assessed from the angle of Ashby's Law of Requisite Variety (LRV) (Logan 2007), that “a model system or controller can only model or control something to the extent that it has sufficient internal variety to represent it (Heylighen and Joslyn 2001).” In this regard, the present annotation models are rather ‘flat’, aiming simply at identifying & attaching grammatical labels (tagging).

In the face of the dominant structure-based models, this presentation will offer a schema-based one, developed on *constructions*. The standard constructivist concept in Goldberg (1995, 2006), Croft & Cruse (2004), Booij (2010), Hoffmann (2022) defines constructions as form-meaning pairings. The model proposed here develops the annotation design by defining, recognizing and developing the relevant linguistic schemas on the basis of the licensed/validated constructions. Categories like number, gender, definiteness, case, tense etc., traditionally viewed as grammatical features, are developed as feature structures, which is a core concept regarding the representation of linguistic knowledge, also found in FCG, a CG-based computational framework (Steels 2011), in Parallel Architecture (PA) (see Jackendoff & Audring 2019). All morphological schemas that are evidenced with a form-content pairing are defined constructions, while a large number of the latter are not so in FCG, Construction Morphology (CM) - Booij 2010. In addition to schema and sub-schemas participating in language processing (CM), this model also employs processing along the track of markedness, countering Haspelmath's skepticism, in cases that, as Haspelmath (2006) argues, evidence comes up.

The phonological part of the form remains so. As for the grammatical feature structure, it participates in and shapes the semantic content, intertwining with the latter in outputting the final meaning, providing a lexical ‘vesting’ of the semantic content. The feature structure and semantic content are the two dimensions that determine and lead to unification, a key operation of merging two feature structures applied in FCG, PA.

The proposed model proposes a shift in the trend of corpus design, with regard to the design of linguistic content. It claims a different pattern of packaging the linguistic information. If the information packaging is explored and fulfilled within the linguistic pathways and framework, the model can be self-sufficient, and does not require the probabilistic algorithms to step in.

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Synaesthesia: A window into the interactions between language, semantics and perception

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Perception and language are two intricate capacities that enable us humans to explore the world. These capacities massively influence one another but relatively little is known how their coordinating mechanisms work together. E.g. if your language has individual words for shades of green (as in Himba; Roberson et al., 2004), you can tell the difference between these greens faster than speakers of other languages (e.g., Winawer et al., 2007), or if it has meaningfully nuanced tones, you will likely develop absolute pitch (Deutsch et al., 2009). Languages distinctly modify perception of space and time, number sense, colour discrimination, etc. (e.g., Lupyan et al., 2020). Hence, an ideally testable merger of language and perception is congenital synaesthesia. People who have it involuntarily experience additional sensations specific to each of its types. They may see colours or taste flavours when they see letters, perceive words or human speech. Therefore, synaesthesia makes perception atypically active, and the atypical influence in most types comes from language (cf. Rich et al., 2005; Simner, 2007; Root et al., 2021). Synaesthesia is believed to start manifesting when babies begin understanding their native language (e.g., Maurer et al., 2020). The elusive influence of language has been found in the symbolic meaning of synaesthesia's triggers and sensory properties of its experiences (Ramachandran & Hubbard, 2001; Dixon et al., 2006; Chiou & Rich, 2014). Vowels can be more luminous and translucent, the first letters of alphabets are brighter (e.g., Rouw & Root, 2019), and hieroglyphs visually split into differently coloured components (Asano & Yokosawa, 2011; Hung et al., 2014; Kang et al., 2017). Research into these underexplored characteristics of synaesthesia is significant because more precise knowledge of how different languages reflect in perceptual differences will reveal other more common phenomena of human cognition and will help figure out how profound and detailed their impact can be in shaping perception. Through understanding our diversity better, we will better

understand what exact mechanisms explain how our more typical minds perceive and describe reality.

The overall aim of this research is to reveal the influence of the conceptual and instrumental aspects of language in modifying perceptual qualities of synaesthesia. I will talk about the effects of the distinct characteristics of each language (English, Russian) on the way synaesthesia unfolds in different linguistic settings.

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Crisi and *kryzys* in Italian and Polish dictionaries and on-line corpora: a cultural comparative analysis

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According to many researchers (Bauman 2007; Nussbaum 2011; Iacobucci 2021), we are living in times of crisis: economic crisis, crisis referred to the war in Ukraine, environmental crisis, crisis in the humanities, crisis of values. However, perceptions of the same phenomena vary from culture to culture and society to society (Wierzbicka 1997). The purpose of our study is to examine the lexical co-occurrences adjective-noun of the word *crisi* in Italian and Polish online corpora (PAISÀ and Narodowy Korpus Języka Polskiego) and to evaluate the amount and type of Italian *crisi* and Polish *kryzys* co-occurrences which provides reliable information regarding the cultural associations of a given lexem: its rootedness in a given culture and differences in the perception of the crisis phenomenon - what is referred to by this term in the Polish corpus and what in the Italian one, what do Italians consider a crisis, and what do Poles call it. An essential element of this work is the acquired textual material that reveals often very unusual and innovative

expressions used in speaking about crisis, its shades, intensity and important elements in a given culture and society (Italian co-occurrences: crisi idrica [water crisis], crisi alimentare [food crisis], crisi petrolifera [oil crisis], crisi istituzionale [institutional crisis]; vs. co-occurrences in Polish, such as kryzys religijny [religious crisis], kryzys klimatyczny [climate crisis], kryzys nerwowy [nervous breakdown], kryzys psychiczny [mental health crisis]).

The poster is divided into theoretical and analytical parts: the first one discusses the broad topic of crisis, its lexicographical definitions, linguistic relativism, categorization and semantic fields, whereas the analytical part consists of a list of co-occurrences of the lexems crisi and kryzys from eight selected Italian and Polish dictionaries compared to the second list of those found in Italian corpus PAISÀ and Polish corpus NKJP.

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Persuasion in the context of Cognitive Sciences. Selected Issues

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The main goal of the presentation is an attempt to demonstrate that persuasive speeches based on figurative language can provide affordances/possibilities to the audience. Persuasion (Karwat, 2014), as a means of convincing individuals to adopt certain behaviors or beliefs without resorting to force, plays a crucial role in the communication process. It involves directing the recipient's attention to the message, engaging them with the topic, and actively communicating from the sender's end. The sender presents a selected perspective in the communication, usually providing a favorable view for themselves, thereby delivering or arousing specific affordances/possibilities in the recipient regarding the content of the message.

According to Gibson (Gibson, 1986), affordances are environmental features significant for organisms, enabling action and directing attention to aspects worth approaching or avoiding. Subjects are connected to their environment through their own interests and perception of possibilities for their realization, which also influences their sense of life purpose and existential goals. Future experiences and activities are present in the current stream of consciousness. Ratcliffe (Ratcliffe, 2015) argues that the sense of life purpose is shaped by goals embedded in a network of pragmatically determined meanings associated with the space of possibilities. In contrast to Gibson's concept of affordances, which mainly focuses on potential uses of objects in the immediate environment, Ratcliffe's conception of possibilities encompasses existential projects, emotions, thoughts, and actions.

The aforementioned issues will be related to the semiotic hierarchy of cognitive semiotics (Konderak, 2018) and the theory of conceptual metaphors from cognitive linguistics. Within the framework of the semiotic hierarchy, possible phenomena at each level will be discussed. Affordances will be juxtaposed with the Umwelt level, and possibilities with the Lebenswelt level. At the semiotic and linguistic levels, affordances/possibilities will be analyzed from the perspective of conceptual metaphors, where one concept is presented in terms of another, providing alternative ways of thinking and acting. Affordances/possibilities of the source domain will be mapped onto the target domain.

As an example of such a phenomenon, one can cite a situation where someone in their communication describes a particular group as pests. Through the linguistic/semiotic level, possibilities are provided at the Lebenswelt level; members of the group in question do not have to be physically present for negative

thoughts about them or blame for negative events to occur. At the Umwelt level, affordances are provided concerning the direct treatment of members of this group when they are physically present.

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Patterns of Mind and Patterns of Culture: Narrative Deconstruction through Transmediality

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The present paper explores the role of cultural memory in shaping human behaviour and understanding the world. It argues that cultural memory acts as a "translational mechanism," filtering past experiences and generating new meanings for a constantly evolving culture (Lotman, 1990). This process is not limited to language but operates across various symbolic systems, creating a shared set of beliefs, values and reactions which are viewed as culturally acceptable. The paper highlights the role of characters in transmitting these cultural patterns. Cognitively and emotionally, we interact with fictional characters largely in the same way we would with real people, being able to identify with them or absorb their values, patterns of behaviour, etc (Shedlosky-Shoemaker et al., 2014; Brokerhof et al., 2018; Mathies, 2020). Essentially, many of their storylines go beyond the source narrative and start functioning as metaphors for certain human qualities or scenarios marked by the key values embedded in the story. Their recurrent interpretation in the space of culture turns them into Lotmanian symbols, incarnating a range of relatively stable associations which derive from the initial narrative as well as all the subsequent embodiments (Lotman, 2019).

However, each new representation does not come into dissonance with the established mental image. Translational processes are taking place within well-defined boundaries without affecting the core of the character's identity. The rise of transmedia storytelling transmediality is disrupting meaning-making processes, making them more explosive in nature (Lotman, 2013; Ojamaa, 2015). As our culture undergoes significant change at multiple levels, traditional symbolic characters require reinterpretation. Transmedia narratives provide a platform for these characters to find new manifestations and adapt to a new cultural context. Most vividly this tendency is expressed in characters who have accompanied humanity for centuries, especially those who come from religious narratives which are basic for our system of values.

The TV show "Lucifer" represents a vivid example of the way religious narratives are evolving. The God wishing to retire, Cain feeling himself from his curse, Mazikeen becoming a bounty hunter and eventually marrying Eve. Lucifer himself not only joins the police of Los Angeles to fight crime but also becomes a personal psychologist of souls stuck in Hell aiming to help them find their way to Heaven. The ubiquitous change penetrating some of the most sacred narratives contributes to accepting the continuous state of becoming we are living in.

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