"MIND IN CONTEXT – CONTEXT IN MIND"

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BOOK OF ABSTRACTS

PLENARY LECTURES

Thinking on reality: Metzger and the rejection of the "Eleatic postulate".

Riccardo Luccio
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In 1940 Wolfgang Metzger began a profound reflection on the meaning of the phenomenological approach to Gestalt psychology, which had its starting point in the rejection of what he called the "Eleatic " or "Eleatic-rationalist Postulate ", i.e. the notion that, in his opinion, had dominated Western scientific and philosophical thought of the last centuries, on the basis of which any assertion about the state of things that could lead to self-contradictory conclusions had to be considered unfounded. On the basis of this rejection, and with exclusive reference to access to experiential data, Metzger proposed to distinguish five meanings of reality: 1. the physical or experiential world, 2. the intuitive or experienced world, 3. the experienced world (met, Angetroffen) as opposed to the represented world, 4. the something or fullness as opposed to emptiness or nothingness, 5. the real as opposed to the apparent. For Metzger (1950), this conception, although primarily related to perception, has far-reaching implications for our conception of others and of society. Here we question the validity of Metzger's concept, its explanatory significance, and its relation to other phenomenological conceptions, such as that of Merleau-Ponty.

Phenomenology: An Ethics for Psychiatry

Giovanni Stanghellini
University of Chieti and Pescara

The motto of phenomenology has been since its beginning "To things themselves!". Husserl – the founder of phenomenology in the field of philosophy – exhorted to go back to the things themselves, that is, to render self-evident in fully-fledged intuitions that what is usually given in preformed abstractions like “concepts”, “judgments”, “truths”, etc. Clinical phenomenology has taken up Husserl’s motto and added another: "To understand is to cure". Put together, the result is: "To cure is to understand the things themselves". But what does exactly mean "To the things themselves"? And what does it mean “to understand"? What is the use of understanding in the clinical setting? And, ultimately, what does the “cure” consist of?

The Failure of Sensory-Cognitive Dualism in Perceptual Theory

Alan Gilchrist
Rutgers University

Since at least the time of Helmholtz, visual perception has been thought to consist of two stages: an initial sensory stage in which the observer’s experience corresponds to the local stimulation of the sensory surface. This is quickly followed by a cognitive stage in which the raw sensations are interpreted in the light of past experience and logical inference. Typically, theories are divided into high-level and low-level accounts. But every low-level theory seems to include a high-level component, while high-level theories take low-level processes for granted. Empirically, it has proven difficult or impossible to observe raw sensations and the evidence for cognitive impact on perception is shaky. Recent decades have seen the emergence of so-called mid-level theories. In fact, gestalt theory is the original mid-level theory. The gestalt theorists rejected both raw sensations and their cognitive interpretation, attributing vision to a unitary process in which we experience the product of an extended array of stimulation as it makes contact with organized neural tissue.

On perceiving absences

Achille C Varzi
Columbia University

Can we really perceive absences, i.e. missing things, things that aren't there? Sartre tells us that when he arrived late for his appointment at the café, he saw the absence of his friend Pierre. Is that really what he saw? Where was it, exactly? Why didn't Sartre see the absence of Napoleon? Why did I not see the absence of Pierre when I visited that café last year? Would I have seen it had I entered the café at the same time as Sartre? The perception of absences gives rise to a host of conundrums and is constantly on the verge of conceptual confusion. Here I will focus on the need to be clear about two sorts of distinctions: the distinction between putatively seeing an absence vs. the absence of a seeing, and that between putatively seeing the absence of something vs. seeing that something is absent. After examining a number of cases and surveying a few proposals, I will argue that the key to a proper account of these phenomena lies in the appreciation of the central role played by the logic and phenomenology of expectations.

On form and function: notes on the underlying biology

Stefano Piccolo
University of Padua and IFOM

A living body is the product of complex series of interactions between a vast number of molecular components. Yet, understanding each of these components, no matter how in detail, cannot explain life or the functioning of living entities, for example the properties of the human brain. Indeed new, unpredictable and extraordinary properties emerge only when these components are combined into large functioning units, such as tissues, organs or a whole body. What is the nature of these mystical properties? For the last 40 years, biologists focused on the very fundamental components of life, and in particular on DNA and the working of the genetic material. Although this step is essential, defining each puzzle piece will not provide the instructions for their assembly, nor reveal the rules of engagements of their ensemble. In my seminar, I will highlight the role of mechanical forces as integral elements of life across all scales, from the microscopic forces by which cells touch each other to "know" where they are, to forces that build embryos. I will underline how cell mechanics is a key ingredient in the "social" behavior of a cell in respect to its neighbors in real tissues, and discuss on how a "mechanical degeneration" of living tissues underlines many diseases and ageing itself. In pondering on these facts, it comes to mind what the 20th-century zoologist D'Arcy W. Thompson wrote in its famous book "On growth and form" (in turn quoting Galileo and Aristotle): the Book of Nature is truly embedded in shapes, architecture and material properties.

XXX KANIZSA LECTURE

On Crossmodal and Multisensory Gestalts: Evidence & Application

Charles Spence
University of Oxford

I) Perceptual Grouping Across the Senses

While, on occasion, Kanizsa studied perception beyond the visual modality, he, like so many other Gestalt psychologists, tended to study the senses in isolation. As such, it has long remained an open question as to whether the principles of perceptual organization that were first articulated by Kanizsa and other early experimental psychologists cross the senses. In the first part of this talk, I would to make the case that crossmodal correspondences may allow for crossmodal perceptual grouping (Spence, 2015). While it has sometimes been suggested that the crossmodal correspondences are based on perceptual similarity, I will argue that that is mostly not the case. Focusing, in particular, on the higher spatial senses of vision, audition, and to a lesser extent touch, I will summarize the various kinds of perceptual outcomes (of both a crossmodal

and multisensory nature) that may be expected when the senses are grouped, including emergence, harmony, unification, and modulation.

II) Edible Gestalt: Crossmodal Connections in an Arts/Entertainment Context

Having established the fundamentals of crossmodal perceptual grouping, in the second part of this lecture, I will take a look at the various ways in which crossmodal correspondences and other Gestalt grouping principles have been introduced in an arts/entertainment context. I will start by taking a look at the literature on sonic seasoning at the pitch of harmony. I will describe a number of our attempts (together with chef Jozef Youssef) to make edible Gestalts as in The Picasso Dish, and Jastrow's Bistable Bite (e.g., Youssef et al., 2018). I will then take a more general look at the explosive recent growth of interest in multisensory experience design in an arts/entertainment context (what some refer to as Sensploration), tracing its roots to the Italian Futurists (Marinetti, 1932/2014). I will demonstrate the key role that the crossmodal correspondences have played in everything from the Tate Sensorium exhibition (in London in 2015) through to the much earlier interest in Colour Music (Spence & Di Stefano, submitted). Although often confused with synaesthesia, I will argue that people's feeling that certain complex stimuli presented in the different senses (such as painting and music) somehow 'belong together' is perhaps best understood in terms of affective (i.e., rather than perceptual) crossmodal Gestalt, or what have been described as emotionally- (or hedonically-) mediated crossmodal correspondences instead (Spence, 2020).

THEMATIC WORKSHOPS

Psychology and Music
(Moderator: Walter Coppola)

The acoustic depth

Carlo Serra
Università della Calabria

This is an essential, yet fleeting indicator, because it touches the world of emergence, or perceptual focus, in a peculiar way: the terrain in which these forms of recognition move in fact links media theory to the theory of perception, and aesthetics. We are accustomed to recognizing the fact that acoustic space can be formalized through two sides, the right and the left, while we get into difficulty, when asked how deep one sound is, compared to another, or how the near - far dialectic works, with respect to sound perception: essential factors in spatial orientation processes, but structurally opaque. This is not a measurement problem but is all internal to the modes of perception, and it happens when a sound is focused with respect to the acoustic environment around it: we know how to scan the approaching movement of an ambulance from its announcement as a remote form, to the intolerably occlusive dimension, which prompts us to cover earcups, to attenuate its presence effect. The change in volume involves not only an increase in terms of decibels, but a sharpening of presence, the accentuation of the thickness of the sound mass on the timbral plane, the development of a tactile sense of oppression, often the sucking of the subject into the acoustic scene: the chain of phenomena sets in motion rather complex associative networks. The factors of increasing and decreasing thickness are expressed in a metaphorical language, where the practical-tactile components build a lexicon of experience, which allows to describe the acoustic stimulations and measurements through an imaginative interweaving between spatial elements and sound processualities. Expressions like acoustic scene, depth or sharpness of sound, when speaking of the receptive forms of various microphone models, are just a few instances in which imaginative synthesis translates the meaning of phenomenon.

Spatial concepts of sounds

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In addition to temporal conceptions of music, psychologists and musicologists have also conceived musical sound in spatial terms. I my presentation, I will first provide a brief overview of some of the key musicological and philosophical sources that contributed to create spatial concepts of music/sound. I

investigate the reasons that might have lain behind the metaphorical use of spatial concepts for music, focusing on the concept of movement in music and examining relevant studies in the field of audiovisual correspondences which show that listeners consistently match certain acoustic features to spatial features. Then, I present the notion of harmonic space, conceived of as a nonphysical and perceptual space where sounds that we listen to are placed and move about. In the harmonic space, each combination of frequencies is assigned a value of perceived stability based on neural pitch salience (NPS), a measure of harmonicity/fusion that has been conceived of as the neural analogue of the primary behavioural correlate of consonance and dissonance. I will discuss harmonic space, by relating it to Schaeffer's notion of morphology and Larson's concept of musical forces. Focusing on the aspect of the 3D representation, I will also deepen the similarities between the harmonic space and advanced techniques used in nonlinear data analysis, namely recurrence plots, that have been previously applied to the field of music. I suggest that recurrence might detect a group of signals perceived as stable, and I hypothesize that the link between those two features, namely, recurrence and perceptual stability, might be mediated by the notion of similarity. Finally, I show how the concept of harmonic space might shed light on the phenomenology of sound perception, by providing a different interpretation of expectations in music perception.

Psychology, Phenomenology, Ethnomusicology. The legacy of the Berlin School

Riccardo Martinelli
Università di Trieste

Recent historiography has recognized that the Berlin school played a pioneering role in the development of the scientific field of ethnomusicology. Remarkably, the school's mentor Carl Stumpf investigated a number of case studies, started dedicated journals and founded the Phonographic Archive in 1900. His legacy was taken up by Erich von Hornbostel and other noteworthy scholars. But why in the first place did a philosopher like Stumpf – a pupil of Brentano and Lotze, the supervisor of Edmund Husserl's doctoral thesis – take interest in that subject matter? Why did he spend his time investigating the sophisticated musical system of the Siam (Thai), or the hypnotic chants of the Bella-Koola (Nuxalk) American natives? Why did he discuss the legitimacy of using the phonograph to record chants and instruments from different people and places? Simply unthinkable for most other phenomenologists, Stumpf's active commitment is consistently underpinned by his epistemology. Strongly endorsing cooperation between philosophy and the sciences, Stumpf assigns to psychology a linking function between them. But psychology needs to widen its horizon and consider evidence form a broader range of languages and human practices. Under such premises Stumpf stood aloof from both musical naturalism and (at least in principle) eurocentrism of his time. He regarded music of all latitudes as a form of culture and strove for its preservation under strict avoidance of any classificatory or normative attempts.

Music in mind, sounds in "primitive" context. Franz Boas's contribution to the vergleichende Musikwissenschaft through the correspondence with Carl Stumpf and Erich Moritz von Hornbostel

Irene Candelieri
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During his prolific career, the German Jewish scientist Franz Boas (Minden, 1858 - New York, 1942) – recognized as the founding father of American Cultural Anthropology – maintained assiduous contacts with the European scientific community, in a privileged way with that of the German area. The contribution addresses the Boasian correspondence with the two directors of the *Berliner Phonogramm-Archiv*, the philosopher and psychologist Carl Stumpf, and the ethnomusicologist Erich Moritz von Hornbostel. All three were united by a common scientific experimental training and a solid musical education, typical of their *Bildungsbürgertum*. With them, Boas consistently shared his fieldwork findings regarding music, sound, and language among the Indians of British Columbia: indeed, their epistolary exchanges intertwine epistemological reflections centered on the study of «*exotische Musik*» in context with technical problems, derived from the use of phonographic recordings and the relative shipments of wax cylinders by Boas to the Phonographic Archive. So far, the critical literature has not paid particular attention to their correspondence,

that offer instead a privileged look in observing the birth of Ethnomusicology, at the time still defined as comparative Musicology (*vergleichende Musikwissenschaft*). Starting from a biographical contextualization and following the micro-history of the scientific and personal relationship of these scientists, the contribution aims to explore the hypothesis that the emerging Ethnomusicology significantly contributed to the definition of Cultural Anthropology as a discipline. In his painstaking research devoted to the Native Indian sounds and languages, Boas observed indeed what happens if a mind is exposed to a new sound, musical or linguistic context; he had therefore to rigorously deal with the phenomena of mishearing, sound-blindness and biasing filter related to the perception of «new sounds». Thanks to his fieldwork, Boas would endorse a relativistic and "in context" approach to perception and mental representations of sounds, fostering his eventual lifelong, hectic concern about a broaden antiracist theory of human mental functions.

Critical Realist Foundations for Berlin Comparative Musicology (vergleichende Kunstwissenschaft)

Ian Verstegen
University of Pennsylvania

A perennial problem of cross-cultural and ethnological research is the status of the critical categories used to investigate a tradition foreign from those that produced those very categories. This paper holds up the Berlin school of comparative musicology (vergleichende Kunstwissenschaft) as a model of proper modes of investigation. In particular, the paper argues that the foundational epistemology of its researchers, in particular Erich Moritz von Hornbostel, in critical realism allowed for a method that neither favored physicalist nor culturalist modes of explanation. In a sense, researchers like Hornbostel extended the critical realist idea that we are only partially in touch with the external world, and its Gestalt development that balanced the eventual material basis of consciousness with the immediate epistemic priority of experience, to the realm of world music. He was well acquainted with the techniques of psychophysics but his teacher Stumpf had already pointed out its inadequacies. Hornbostel combined his knowledge of samples of world music with a phenomenological mandate that each tradition had musical forms of coherent sensibility that it was the researcher's task to discover. Using two case studies – the classification of musical instruments proposed by Hornbostel and Curt Sachs and the transcription of melodies by Otto Abraham and Hornbostel – the paper argues that a very sound method is contained in these classic writings. Their importance for contemporary cultural history and explanation is timely, given the unsatisfactory models available to researchers today to reconcile method with studied culture.

Musical Affordances and the Gestalt Legacy: enriching musical behavior

Sebastian Klotz
Humboldt-Universität zu Berlin

This presentation argues against one-dimensional adoptions of Gestalt terms in some branches of music cognition research. The impact of Gestalt theory on music psychology has primarily focused on the laws of Gestalt. And indeed, their application to music perception is appealing. Yet the wider phenomenological orientation pursued by the philosopher Carl Stumpf and his group reaches far beyond causal and mechanistic descriptions toward the knowledge processes underlying the appearance of Gestalts in consciousness. Furthermore, their theory building around Gestalt in the sense of "generative metaphors" (Mitchell Ash, 1998) points (1) towards self-organizing processes and (2) to a Gestalt-based understanding of action, not only perception, and thus of the individual-environment relationship in general. Against this background, Wolfgang Köhler´s studies of the behavior of primates have lent the Gestalt project coherence. This presentation will seek to unfold this overlooked impulse in the legacy of Gestalt theory. It was mediated by Kurt Koffka to James J. Gibson who in turn developed the theory of affordance in the 1970s. This theory has become an important corner-stone for the present-day ecological music psychology. Ecological theories complement the stimulus-driven, perceptual perspective of classical music psychology with a constructivist perspective of active subject positioning in the environment which seems to be a vital dimension of our music engagement.

Psychotherapy according to Gestalt Theoretical premises: Gestalt Theoretical Psychotherapy (Moderator: Angelika Böhm)

Essentials of Gestalt Theoretical Psychotherapy

Bernadette Lindorfer & Katharina Sternek
AAGTP/GTA

The Essentials of Gestalt Theoretical Psychotherapy offer for the first time in English an insight into the guiding ideas of this integrative psychotherapy method, which is consistently anchored in Gestalt psychology (and in this respect also differs substantially from most streams of Gestalt therapy, with which it should not be confused.) The anthology includes ten contributions by authors from Austria, Italy, Germany and the USA. These deal with fundamental questions and concepts of any psychotherapy: The role and meaning of consistency in practical life and in psychotherapy; the question of human epistemic possibilities and an epistemology appropriate for psychotherapy; the personality theory of Gestalt theoretical psychotherapy; the basic principles of therapeutic relationship and practice; the role of feeling experience in the example of phenomenal causality of feelings; the task of diagnostics in Gestalt theoretical psychotherapy; a clinical example related to anorexia; Gestalt psychological viewpoints for therapy progress; the role of relational determination in intrapsychic and interpersonal experience.

Working together, working against each other, and working past each other in therapy

Thomas Fuchs
AAGTP/GTA

Crises in therapist-patient relationship can become a challenge in psychotherapy. However, success and failure in establishing and maintaining constructive relationships in therapy is not only subject to a lucky fit of personal characteristics (therapist A gets along well/badly with client B; supervisee A gets along well/badly with supervisor C). Rather, we can identify determining field conditions in the overall therapeutic situation for this outcome. We do not only focus on the persons involved, but also on their environment, the task to be accomplished together, further framework conditions and the power relations resulting from their mutual influence. We want to examine the structure and dynamics of these relationships from a genuine Gestalt psychological perspective. What contributes to a cooperative atmosphere? When do goals get out of sight? What can make the atmosphere hostile? How do such developments become accessible in therapy?

The construct of Aesthetic Relational Knowledge: a scale to measure a perceptive capacity of psychotherapists

Margherita Spagnuolo Lobb
Istituto di Gestalt HCC Italy

This lecture will present the construct of Aesthetic Relational Knowledge (ARK), as the intuitive experience of the therapist that emerges from the phenomenological field created in a meeting between therapist and client. The concept of isomorphism will be considered as an epistemological turning point and a possible bridge connecting Gestalt therapy, Gestalt theory and Neurosciences. Examples of the clinical consequences of this change of perspective will be given. A Scale to measure the ARK has been built and validated. The results have shown that the ARK is described by three factors: empathy, resonance and bodily awareness. They show the best saturation values and the best comparison with the theoretical reference model. The ARK can be defined as a three-dimensional construct that supports the positive use of the therapist's perception in terms of aesthetic knowledge of the phenomenological field of the therapeutic situation. The Aesthetic Relational Knowledge Scale is suitable for training purposes, supervision and research.

Conceptualizing Pain Therapy
Simone Bruckner
AAGTP/GTA

A holistic approach in the treatment for people who suffer from so called unspecified chronic back pain is known to be the most helpful, but still rare in practice. A Gestalt Theoretical psychotherapist who is part of such a multimodal team presents her experience of working hand in hand with other professions in a medical rehabilitation center in Vienna. The focus of interest is applying the concept of the critical realism and its differentiated view on the bodily experience to get a better understanding of iatrogenic risk factors in the development of chronic pain as well as conceptualizing its practical relevancy in regards to a holistic treatment.

Societal Polarization as a Reflection of the Insufficiency of Absolutist Morality
Edward Ragsdale
GTA

Today's widespread phenomenon of societal polarization may well reflect a societal regression, foreseen by Neumann (1960) when normal paths of conscious growth are blocked. At such times, energy needed to fuel conscious growth instead retreats from understanding and comes defensively to oppose it. To understand the source of this blockage, it helps to consider the larger role of polarization in establishing a capacity for moral differentiation. Since all traditional morality appears absolutist and dualist in nature, that structure appears particularly well-suited to the task of establishing morally differentiated consciousness. With the birth of formal societal morality, members come to identify with the societal view of truth and goodness and dis-identify with realm of beliefs and behavior at odds with the common good. The internalization of morality may entail polarization of the psychological field around these opposing absolutes – a (prosocial) realm of goodness vs. a realm of evil – to be scorned and hopefully eliminated. This absolutist, dualist moral beliefs would appear to follow from the psychical polarization that may be required, at least initially, for the internalization of morally differentiated consciousness. Even if absolutist morality is necessary for establishing moral consciousness, it nevertheless eventually becomes detrimental to further moral development. By casting good and evil as absolutes, and their differences as irreconcilable – it would divide psyches and societies irretrievably from themselves and one another. Without course correction, this might inevitably land us in a moral wasteland – the lineaments of which are perhaps becoming visible today. Two psychological schools recognize this problem and suggest remedies. The depth psychologist Erich Neumann (1960) champions a more honest and holistic "new ethic," without which absolutist morality may continue to regress and degrade. Gestalt psychology asserts "relational determination" (e.g., Asch, 1952) as the needed corrective. My own Polarization model explores some important areas of alignment between depth psychology and the Gestalt field-theoretical view, particularly as regards the problem of intrapsychic value conflict. My talk will examine the practical and theoretical problem and consider potential solutions.

Language, Parts and Wholes revisited. Via Gestalt and other theoretical approaches (Moderator: Savina Raynaud)

Language and Speech as open, context-dependent wholes. A view from Prague
Savina Raynaud
Università Cattolica del Sacro Cuore, Milan

Since language is the collective focus of this thematic workshop, the talk follows both historiographical and theoretical perspectives. The first deals with Prague as a Middle-European town, with a German and Czech University from 1882 to 1918, where a philosopher, Anton Marty, from the Brentano school, focuses on language and semasiology in the framework of a psychology from an empirical standpoint. He cites Christian von Ehrenfels, and underscores the relational approach to psychic dynamism but, crucially, he emphasises the oscillations between linguistic "sketches" and semantic comprehension. Sprache ist eine

Skizze, listeners are lead through suggestions, Nebenvorstellungen, to grasp meanings, Bedeutungen which do not coincide with the mere addition of explicit, variable components. Simultaneously, Vilém Mathesius, forthcoming founder (1926) of the Prague Linguistic Circle, dealing with English language and literature, enquires into the spontaneous ability of listeners to grasp, infer, integrate ellipsis in a sentence, consisting of a missing word, in omissione vocabuli, quod non dictum tamen cogitatur. Language enquiries will then require psychology, will aim to explain inferences, to infer implicit from explicit. The effort to obtain the whole, via super- or even subsummativity processes, has been a special topic for Gestalt psychology. Context being the proper habitat for both language and mind, we follow the fil rouge which leads directly to Gestalt contributions and further developments, e.g., inferential semantics and pragmatics. In conversation, as in architecture, less is more. We strive to prove this.

Der Gestaltbegriff im Denken Bühlers

Janette Friedrich
Sigmund Freud PrivatUniversität, Wien

Im Kapitel 4 von Bühlers Sprachtheorie, das den Titel trägt „Über den Aufbau der menschlichen Rede“, findet der Leser eine Anwendung des Gestaltbegriffs auf die Erklärung sprachlicher Phänomene. Dabei bezieht Bühler zu Beginn eindeutig Position gegen die in der Psychologie vorherrschenden sogenannten Gestaltidee, die die Frage des „Stoffs“ (oder der das Ganze bildenden Elemente) einfach ausblendet. Dieser Kritik Bühlers, die sich vor allem gegen die Vulgarisierung und Verflachung der von Ehrenfels und der Meinong-Schule eingeführten Begriffe richtet, folgt eine Ankündigung. Er wolle „die Sprachphänomene selbst zum Reden bringen im Sinne des Satzes, dass es weder Stoff ohne Form noch Form ohne Stoff gibt“ (ST, S. 285). Was dies nun bedeutet, werden wir in unserem Beitrag an zwei Phänomenen exemplarisch zeigen. Zum einen interessieren wir uns für Bühlers These von der Gestalthaftigkeit der Wortbilder und der darauf fußenden Behauptung von der Konstanz des phonematischen Signalements der Wortbilder im Wechsel ihres Klanggesichtes. Zum anderen, analysieren wir Bühlers Überlegungen zur „stoffbedingten Gestaltung des Lautstroms der Rede“. Die Silbengliederung, wie auch die Sprechtakte, all das, was man aktuell als Artikulation bezeichnet, werden von ihm als der menschlichen Sprache eigene Gestaltungstendenzen vorgestellt. In diesem Zusammenhang wendet er sich klar gegen eine rein grammatikalische Erklärung dieser Phänomene. Das dabei sich zeigende Spannungsverhältnis zwischen einer „rein linguistischen“ Betrachtung und der psychologischen Perspektive, die Bühler entwickelt, soll im Abschluss näher beleuchtet werden.

Compositionality and contextuality in natural language sentences

Aldo Frigerio
Università Cattolica del Sacro Cuore, Milan

Compositionality is one of the basic features of natural languages. A language is compositional if the meaning of the larger units is function of the meaning of the smaller units. If languages were not largely compositional, we could not understand “new” combinations of words, namely combinations of words we have never met before. The meaning of any combination of words would be understood only based on a specific learning. Fortunately, this is not so. The creativity and the productivity of languages are possible precisely in virtue of their compositionality. However, that languages are largely compositional does not mean that they are wholly compositional. Some linguistic phenomena run contrary to compositionality: in such cases, it is the meaning of the whole that determines the meaning of the parts. Specifically, it is the linguistic context that determines the meaning of the words present in that context. Some cases will be analysed: idioms, anaphora, the contextual determination of word meaning. This talk aims to analyse these two opposite tendencies in the interpretation of the meaning of sentences: from the parts to the whole and from the whole to the parts. It will be shown that this double movement is often virtuous and that has some similarities with the hermeneutic circle.

Gestaltic views of the Finnish lexicon. The word and its structural context

Markus Hamunen
South-Eastern Finland University of Applied Sciences

Excluding sporadic studies, Gestalt did not truly arrive explicitly to linguistics until 1970's. It seems to be that in linguistics Gestalt approach has not ever become mainstream, but instead certain Gestalt psychologistic concepts and theoretical views has been borrowed by Cognitive linguistics, which is one of the main orientation within current functional linguistics (versus mainstream generative). This has been taken place merely without explicit historical narration to Gestalt tradition. Conversely, traditional Gestalt psychology did not focus on symbol function as most of the established knowledge in the field has been gathered through studying sensory perception via strict experiments. However, "Gestaltish" views are not totally unfamiliar within linguistics before the rise of Cognitive linguistics. This presentation demonstrates two case studies in Finnish word morphology representing attractive ideas of lexical structuring and lexicon formation in mind. Generally, any connections between Gestalt tradition and linguistics are highly significant as such. The first study, by Terho Itkonen (1957), deals with inflectional allomorphy (= many forms, one meaning) in some Finnish substantives in certain plural cases (omenoi-den ~ omeni-en 'apple-PL.GEN'). Itkonen reaches the term Gestalt while aiming to clarify the cognitive rivalry between allomorphic lexical forms in the mind of individual speakers. The second study, by Heikki Paunonen (1976) performs the principles how inflected lexical types (formal Gestalts) constitutes overlapping inflectional paradigms or fields between lexical type groups. My goal is 1) to examine Gestaltic reading of these papers, and 2) to reflect the implicitness of "Gestaltish" linguistic orientation and its influences in this respect.

Visuo-orthographic processing in developmental dyslexia: evidence from the Reicher-Wheeler paradigm

Daniela Traficante
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In shallow orthography languages (e.g., Italian, German, etc.), eye movement recordings during reading texts or lists of words revealed, in children with dyslexia, very small and numerous saccades indicative of their inability to process words holistically (De Luca et al., 1999; 2002; Hutzler and Wimmer, 2004). As a consequence, they engage in a sequential, fractionated encoding expressed by a strong dependency on the length of the target word (Martens and de Jong, 2006; Spinelli et al., 2005; Ziegler et al., 2003). In this contribution, data from experiments on letter processing in Italian children with dyslexia and typically developing readers will be discussed, according to the framework proposed by Grainger, Dufau, and Ziegler (2016), in order to provide suggestions in understanding the role of visual factors in reading development and reading disorders. A two-alternative forced choice task (Reicher-Wheeler paradigm) was used in different conditions (with simultaneous or sequential presentation of the letters) and with different stimuli (word, pseudowords, non-words, symbols). The comparison of this results with data from reading tests suggests that children with dyslexia can gain advantage from word recognition, but suffer from an early deficit in making perceptual operations that require the conjunction analysis of a set of letters. This deficit is not due to an inability to scan the letter string or to activate whole-word representation, is confined to orthographic stimuli and does not extend to other types of visual targets.

Reconstructed multisensoriality. Reading The Catcher in the Rye

Paola Tenchini & Andrea Sozzi
Università Cattolica del Sacro Cuore, Brescia

In natural face-to-face interactions, verbal communication always occurs in association with some expressions of non-verbal behaviour: facial expressions, eye behaviour, body movements and postures, spatial behaviour, automatic physiological and physio-chemical reactions, vocal behaviour. The functional contribution of these multimodal aspects to the meaning of the message and to its effects often fulfils multiple communicative functions which differ according to the speaker's intentions, to the interpersonal

relations between the speaker and the addressee, to the nature of the message and to the context. When the non-verbal behaviour is verbalized and reconstructed in a written literary text, it turns out to be always necessary and functional to the textual and narrative process because it serves as a signifier for the reader. A fictional character is never a unique, fixed and unchanging character: each reader creates her own character equipped with gestures, facial expressions, voice, and movements which makes it human because "words are not words but when they are said by someone" (Ortega y Gasset 1957). Through writing, each author encourages the explicit or implicit evocation of a multisensorial world which the reader decodes and reconstructs, inevitably conditioned by her cognitive and cultural environment. In our talk we will refer to Salinger's novel The Catcher in the Rye to analyse the literary valence of representing the characters' multisensorial communication, focusing on the core relationship between the explicit and the evoked or inferred parts in reconstructing the psychological depth of a literary character.

Zur Aktualität der Feldtheorie Kurt Lewins / On the Actuality of Kurt Lewin's Field Theory (Moderator: Marianne Soff)

Innere Beziehungsräume – Bewusstsein als psychologischer Lebensraum – Feldtheoretische Betrachtungen der Mindfulness Bewegung

Dirk Paul Bogner
Eberhard Karls Universität Tübingen

Der geplante Vortrag unternimmt den Versuch, sich den „geheimnisvollen Kräften" (Harris 2020, S.10), dem „Mysterium" (Harris 2020) unseres Bewusstseins mit feldtheoretischen Begrifflichkeiten und Konzepten zu nähern und zu untersuchen ob nicht der Feldbegriff, wie ihn Kurt Lewin konzipiert hat, ein geeignetes Modell bietet, sich diesem „Mysterium" zu nähern und zu beschreiben. Bewusstsein ist klassischerweise ein Phänomen mit dem sich im akademisch-theoretischen Kontext insbesondere die Psychologie, die Philosophie und die Neurowissenschaften beschäftigen. Bewusstsein ist aber darüber hinaus auch der zentrale „Forschungsgegenstand" in einer anderen Traditionslinie, die sich ebenfalls ganz explizit unseren Wahrnehmungen und unseren mentalen Zuständen im Hier und Jetzt zuwendet. Es handelt sich um das sogenannte Achtsamkeits-/Mindfulnesskonzept in der Tradition Jon Kabat-Zinns, Thich Nhat Hanhs und Daniel Siegels, das seit geraumer Zeit zunehmende Beachtung in Theorie und Forschung zukommt. Im geplanten Vortrag sollen Achtsamkeitspraxis und Feldtheorie zusammengedacht werden.

Hartmut Rosa und Kurt Lewin: Brüder im Geiste?

Neslihan Sriram-Uzundal
Concordia University

Was könnte Kurt Lewins (1890 – 1947) Feldtheorie mit dem Resonanzkonzept Hartmut Rosas (*1965) gemeinsam haben? Liegen die Theorien nicht in einer solchen zeitlichen Distanz zueinander, dass die Vergleichbarkeit fragwürdig erscheint? Derartige Überlegungen steuern gegen die Interdisziplinarität und vertreten den Duktus des domänenspezifischen Arbeitens. Dass ein Dialog zwischen unterschiedlichen Disziplinen allerdings einen erheblichen Mehrwert haben kann, durch welchen spezifische Situationen und Sachverhalte eingehender beschrieben werden können, soll anhand der Zusammenführung von Lewins Feldtheorie und Rosas Resonanzkonzept verdeutlich werden. Beide Theorien vereint, dass räumliche Charakteristika herangezogen werden, um (im-)materielle Beziehungen zu beschreiben, während die Welt als Bezugsrahmen fungiert, die diese beeinflusst, gar ‚formt'.

Durch die Brille von Kurt Lewin – Studierende modellieren gelebte Wirkungsräume/Through the Glasses of Kurt Lewin – Students design Spaces of Experience

Herbert Fitzek & Jüly Incel
BSP Business and Law School Berlin

Once a year we have the honour to give a Lewin lecture at an Austrian university. We start with an introduction into life and work of the most influential business psychologist of the middle of the 20th century and focus on his concept of Gestalt and field theory. Deliberately neglecting historical preciseness (which even might have been appreciated by Lewin), we encourage the students to apply his imaginative concept on the dynamics of their own working contexts and visually design the structures and cultures of concrete enterprises as Lewinian spaces of experience.

Die praktische Theorie – in meinen Praxisfeldern/The practical theory – in my fields of practice

Monika Stützle-Hebel
GTA, DGGO, DVG

Field theory increasingly shapes my perception in practice and thus the focus of my interventions. I bring examples from supervision, coaching, psychotherapy, team development and training such as the overstrained leader, dizziness as a conflict dynamic, a world championship relay team, a meeting of novice masters, a field theory workshop for group dynamics training candidates. I would like to link a selection of these with the relevant field theory concepts and discuss this with the workshop participants and encourage them to shine a light on their own practical situations in this way.

Lewins psychologische Verarbeitungen von Krieg / Lewin's psychological processing of war

Ines Langemeyer
Karlsruher Institut für Technologie

Kurt Lewin volunteered in the First World War. Two writings bear witness to how the war preoccupied him psychologically: "Kriegslandschaft" from 1917 and "Time Perspective and Morale" from 1941. In „Kriegslandschaft", Lewin shows that a phenomenological approach is applicable to the perspective situation of attack and defense in the battlefield. In "Time Perspective and Morale", it is about the degrees of freedom that a societal structure or an organization, leaves to the individual. Crucial psychological moments are to be found in the relationship between authorities and subordinates, leaders and led. Against the background of blind obedience as a typical characteristic of the fascist regime, Lewin highlights the qualities of democratic leadership and democratic societies. He crystallizes as the morality of democracy the ability to recognize difficult situations and to admit mistakes, not in the sense of a special "love of truth," but as an insight into their "political necessity".

Demokratieförderung in der Schule / Democracy promotion in school

Marianne Soff
University of Education, Karlsruhe / GTA

Lewin referred to the experiments on the effects of autocratic, democratic, and laissez-faire leadership on the social atmosphere in groups (1937-39) in many subsequent works. Together with Gertrud Weiss-Lewin (1941), for example, he discussed the extent to which education for democracy can be implemented in schools. Based on this and some of Lewin's further work on democracy, it is asked again what conditions are needed in schools, and especially in classroom management, in order to make a lasting contribution to the promotion of this precondition-rich form of living together.

TALK SESSIONS

Experimental Phenomenology and Epistemology
(Moderator: Ivana Bianchi)

Experimental phenomenology: present and future

Ivana Bianchi[1] & Roberto Burro[2]
[1]*University of Macerata*
[2]*University of Verona*

The presentation summarizes the picture which has emerged from a "mosaic" of short video-recordings made by colleagues invited to share their ideas about potential areas of research which can make use of Experimental Phenomenology. These areas go beyond the classic boundaries concerning the Psychology of perception (i.e. Experimental aesthetics, the Psychology of reasoning, Psychometrics, the Psychology of risk and safety, Environmental Psychology, Cognitive Linguistics, Philosophy). The "mosaic" was created on the occasion of an international symposium at the University of Macerata (6-7 April 2022) dedicated to Ugo Savardi and entitled "The experimental study of perception from a phenomenological perspective: from present to future". Some ideas focus on its potential contribution in terms of methodology; others focus on how it clarifies the perceptual grounding of linguistic categorization. Other ideas refer to the value of Experimental Phenomenology in: the definition of user experiences in the domain of computer interaction design; the reconstruction of what operators involved in work accidents really had in mind, in the area of the Psychology of safety; the highlighting of the differences between the perception of risk for experts versus non-experts; emphasizing the importance of a subject's attitude toward the perceived validity of a psychometric test (i.e. face validity); the explanation of the paths that our thoughts follow in insight problem solving and the affective component of the A-ha experience; for showing how subjective feelings of certainty/uncertainty drive effective thinking in metacognitive control processes and in design, comic effects, the Psychology of sport and Psychotherapy. An intriguing selection!

Thinking in opposites facilitates insight problem solving, especially if done in small groups

Erika Branchini[1], Roberto Burro[1], Elena Capitani[2], Ivana Bianchi[2]
[1]*University of Verona*
[2]*University of Macerata*

A key difficulty with insight problems is that an "impasse" resulting from the initial representation of the problem may "constrain" the boundaries of the search area. We present three studies on visuo-spatial problem solving which aim to test whether thinking in opposites triggers the representational change needed to find the solution (see Branchini et al., 2015a, 2016, Bianchi et al., 2020). This follows an initial intuition of Wertheimer (1919) and Duncker (1935) which was subsequently developed by Branchini et al. (2009, 2021). Thinking in opposites keeps thought processes anchored on the phenomenal structure of a problem, thus satisfying the requirements of epistemic vigilance (Mercier & Sperber, 2011), acting as a filter during the search for a solution (Bozzi, 1962, 1965; Branchini et al., 2015b). The participants were organized into small inter-observational groups. They were requested to make a detailed analysis of the perceptual characteristics of the problem (e.g. horizontal, co-planar, attached, aligned) and to consider whether the solution required transforming one of these characteristics into its opposite (i.e. vertical, on different planes, separated or misaligned. The results showed that using this strategy, their success rate improved and less time was needed to find the solution. The type of drawings they did during the search phase were also more fruitful. Thinking in opposites produced better results when the participants worked in groups. Possible reasons for this will be discussed.

Can we hope for a paradigm shift in the Psychological Sciences? If so, what needs to be done?
Esra Mungan
Boğaziçi University, Istanbul

In my talk I will discuss whether there are chances for a paradigm shift, i.e., a shift away from the (almost without much thought) taken-for-granted sequential, from piece-to-whole mainstream understanding of the now almost 70-year old information processing perspective to a perspective that takes as its starting point the whole, and hence meaning. The whole may stand for an object as embedded in its immediately salient as well as inconspicuous environment, where parts cannot be made sense of without knowing and understanding their roles in the larger configurations. It may stand for an organism or an organismic collectivity as embedded in its environment, a person or a collectivity of people in their embedded immediate and phenomenal field, who we will also not understand unless we understand their larger environmental, societal and cultural embeddedness. Lev Vygotsky is said to have gone into a crisis in his journey of meaning-making once he saw that the complexity of the human could not be understood within a simple, linear, reflexologist perspective. Impressively, this led him to courageously change his entire conceptualization only a few years before his early death in an ideologically divided world. Alexander Luria was well aware that human cognition could never be understood without understanding cultural mediation, historical development, and praxis, and that all these layers are in such an intricate, complex interrelation that we cannot simply split or slice them for isolated analyses. In today's scientific climate where the mainstream information-processing perspective is serving as an unchallenged, often hidden assumption within neuroscience and computer science, the two popular sciences that are casting their almost suffocating shadows on psychology, I will look for recent, promising developments which might nonetheless be paving the road to a perspective so long ago proposed by the Gestaltists yet somehow "lost in translation".

The link between personality and wine preferences
Roberto Burro[1], Veronica Barnaba[1], Elena Capitani[2], Erika Branchini[1], Arianna Fermani[2], Carita Paradis[3], Ivana Bianchi[2]
[1]*University of Verona*
[2]*University of Macerata*
[3]*Lund University*

Is there a correspondence between the wines we like and our personality? Following on from previous studies on the relationship between food preferences and consumer personality traits (e.g., Conner et al., 2017, Pfeiler & Eglof, 2018 and Ufer, Lin and Ortega, 2019), this study investigates the link between the personality profiles and socio-demographic characteristics of non-expert wine consumers and their preferences for certain wines. The 1,176 Italian adults who participated were asked to complete an online form giving socio-demographic information. Their personality profile was established by means of the BIG Five Inventory 2 (Soto & John, 2017) and they were asked to specify their favorite wines (open response). The wines listed by the participants (N=406) were described by 4 of the experimenters (two of whom are sommeliers) in terms of a series of variables based on official reviews. These variables, which are considered fundamental to descriptions of the sensory experience of wine at a basic level (i.e. non-expert), concern: Type (e.g. still, sparkling, dessert, liquorous); Color (e.g. white, red, rosé); the Aroma and the degree of Alcohol, Acidity, Sweetness, Body, Tannicity, Sapidity and Persistence (on a 0-3 scale). There were some interesting new correlations with respect to previous findings (e.g. Saliba, Wragg & Richardson, 2009 and Sena-Esteves, Mota, & Malfeito-Ferreira, 2018). For example, it appears that extroverts prefer more acidic wines, sociable people like wines with a more complex bouquet, people with lower emotional stability prefer more flavorful wines and open-minded people favor wines with a persistent flavor.

Changing Minds – Sensing Atmospheres
Sriram Jayanthan
Concordia University

The split between body and mind has been inscribed in modern philosophies of mind, self and understanding. What was professed by Descartes reached its epitome in the philosophy of Immanuel Kant and his critique of pure (!) reason as monumental treaty on the nature of knowledge and understanding independent from experience. This experience is always bodily (leiblich), beyond empiricism, entrenched in our perception and the connection of body and world. In this talk the combination of Gernot Böhme's philosophy of atmospheres and the anthropological approach of sensory studies as practiced by David Howes remedies the epistemological and ontological divides of body and mind. Our sensorium is never just the experiential channel of perceiving the external world but a critical method of building knowledge and understanding political, social and ethical underpinnings of our cultures. We perceive and move through atmospheres in the co-presence of body and world and in their ephemerality, these atmospheres convey more than just feelings and moods. With olfaction as an example of the common sensorium, I want to pose a new epistemology of atmospheres as aisthethics – a modal, grounded, anthropological way of sensing to bridge binaries of body and mind.

Comunication, Thinking, and Clinical Psychology (Moderator: Fabrizio Sors)

Susanne K. Langer: von der Gestalt zum Symbol: Gegensatz, Ergänzung oder Entwicklung?
Norbert Andersch
SFU Wien/Berlin

Vor knapp 100 Jahren betrat eine junge Frau selbstbewusst die Domäne exklusiv männlicher Bewusstseinsforschung: Susanne K. Langer. Kurz und knapp postulierte sie: „Der Sieg des Empirismus in der Naturwissenschaft wird durch die überraschende Wahrheit in Frage gestellt, daß unsere Sinnesdaten in erster Linie Symbole sind….und das Gebäude des menschlichen Wissens keine Sammlung von Sinnesmitteilungen, sondern ein Gebilde aus Symbolen und deren Bedeutung." Kennzeichnend für Langer ist ihr Fokus auf Frühformen der Bewusstseinsbildung, aber auch ihre Symboldefinition, die schon auf den frühen mentalen Formierungs- und Gestaltungsebenen deren Potential als lebendige Spannungsträger herausarbeitet: als "kodifiziertes Paradoxon", als eine in-Form-Setzung eines Komplementaritaetsprinzips, als energiegeladene Bausteine menschlichen Denkens und Handelns. Der Übergang noch diffuser Wahrnehmung zu Gestalten und Bildproduktion - so S. Langer - ist die Umwandlung der ursprünglichen motorischen Impulsantwort, die den nicht durchgeführten Akt ersetzt. Traum, Imagination, Fühlen und Denken entstehen aus der Fortsetzung eines nicht konsumierten Bewegungsimpulses. Hier wird die paradoxe Natur der Traumerinnerung ganz unfreiwillig in eine erwachende Verbildlichung überführt; eine die Erscheinung bloss registrierende Position zu der einer Bedeutungsgebung...oder schliesslich willentlichen Ausführung von Symbolhandlungen wie frühen Tierzeichnungen, Ornamenten und Skulpturen, aber auch in rituellen Handlungen, in Tanz, Rhythmus und Musik. Fühlen steht bei Langer nicht im Gegensatz zum rationalen Denken sondern ist (auch heute noch) Fundament und Teil von dessen Entwicklungsgeschichte. Auch Gefühle haben schon umrissene Formen, die in fortschreitender Artikulation begriffen sind. Sie sind der Moment an dem ein biologischer Prozess eine Dynamik und Dimension von Erfahrung bekommt: kein Hinzufügen, sondern ein neuer Modus, eine neue Qualität, eine Exemplifikation, Dieser Prozess des 'symbolic import', d.h. von einer langwierigen Form- und Gestaltbildung hin zu einer Symbolrepräsentation hat Jahrtausende gedauert, bis diese mentalen Bewegungsformen an aeußere Objekte oder Phänomene geknüpft oder in Bilddarstellungen festgehalten wurden, und damit stabilisiert, "gedacht" und überhaupt erst erinnerbar wurden. Bedeutung wurde zu allererst nur als 'maechtiger Einfluss' (als Magie oder Faszination) verspürt/gefuehlt; ein noch viel faktischeres, koerperlich-physikalisches Phänomen als heute. Langer nennt diesen Zustand 'Communion', aber noch nicht Kommunikation, weil 'communion' noch Teil eines ausgeführten motorischen Aktes, oder der Gesamthandlung selbst ist. Langer postuliert, dass Formsuche, Gestaltbildung und alle Entwicklungsschritte der Symbolisierung immer ein lebendes Spannungsmoment ausdrücken; eine Polarität, einen Dualismus: eine Verbindung von Form, Ereignis und Sein von geradezu dialektischem Charakter. Nach ihrem Bestseller "Philosophy in a New Key."(1942), der in den USA mehr als 500.000 mal verkauft wurde folgte in den 1960er und 70er Jahren ihr dreibändiges Hauptwerk: "Mind: An Essay on Human Feeling", das bis heute leider weitgehend ignoriert, und bislang nicht in andere Sprachen übersetzt ist. Mein Beitrag möchte auf diese letzte grosse Arbeit Susanne K. Langers fokussieren: Wie sieht sie das Verhältnis von Gestalt und Symbol? Als Parallelität, als komplementäre Verschränkung oder eine sich ablösende Entwicklungsstufe der Denktätigkeit?

Social environment in the brain

Olgierd Borowiecki
Nicolaus Copernicus University in Torun, Poland

Environment is unique for a given organism. Ecological psychology and evolutionary biology investigate the dynamic relations between an organism and its environment known as affordances. However, one's environment is also social, particularly in the case of H.sapiens. To some extend this social environment is recognised within 4E cognitive sciences, but primarily it is investigated in the Theory of Mind research. However, little emphasis is put on the neurobiological basis of affordances between social agents. Brain correlates of the interactions between social agents are in focus of this presentation. Common understanding of the deontic actions implies that social context is represented in the brain in shared format. Particularly, it is believed that the medial temporal lobe is involved in representing abstract cognitive spaces, under which a social space could be classified. Hippocampal activity in animal model is involved in representing a position in space of the self and conspecifics. Beside obvious importance in memory encoding, the hippocampus is crucial in a broad range of cognitive phenomena including planning, counterfactual thinking, recursive problem solving, and imagination. Therefore, it is reasonable to assume that the abstract spaces represented in the medial temporal lobe include the social space of agents interacting according to mutually shared causal rules of behavior. In summary, it is important to identify the structures of the brain underlying the context-rich space of the Theory of Mind.

Healing Trauma in the path of Recovery

Rafael Cortina
IN-Sight Transformative Therapy Group

Traumatic childhood and life events shape the way an individual's see themselves and the world which has a direct impact on relationships, self-perception, coping skills, self-esteem, etc. Unfortunately, a common and initially effective way of managing the impact of trauma and adjusting to the world is through addictive behaviors. They provide temporary relief and anesthetize emotional and relational pain. The focus of this presentation is to provide a deeper understanding on the relationship between addiction and trauma, the role of the nervous system, adverse childhood experiences, polyvagal theory, and the application of this knowledge through the framework of Gestalt Psychotherapy to support healing experiences. This training will focus on teaching a clinical model of treatment for Trauma and addiction through Gestalt perspective to help clients develop their ability to explore the contact boundary and build new experiences that may lead to growth opportunities and recovery.

Perception and Cognition
(Moderator: Matteo De Tommaso)

Space-luminance and pitch-luminance crossmodal correspondences in the baby chick (Gallus gallus): an investigation of predisposed and learned mechanisms

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Our senses are constantly reached by several stimulations coming from all sensory modalities. Unimodal sensory inputs from the same referent (object) are then integrated into a coherent representation by higher neural centres. However, there are cases in which separate inputs are matched even in the absence of explicit rule, a phenomenon named crossmodal correspondence. For instance, we match high luminance with high pitch sounds, or with the right hemispace, and low luminance with low pitch sounds, or with the left hemispace. Instances of crossmodal correspondences were reported also in preverbal infants and some non-human species (i.e., chimps, monkeys, and dogs), suggesting an early origin or at least a widespread mechanism. Here we investigate crossmodal correspondences in a precocial bird species (i.e., the domestic

chick), providing first evidence in a non-mammalian species. In particular, we focused on the association between spatial position and luminance, and that between auditory pitch and luminance. We employed different experimental methods exploiting on either predisposed (i.e., free-choice task) or learned (i.e., reversal learning task) processes, which allowed us to investigate distinct aspects of this perceptual phenomenon, and to unveil the role of innate vs. learned mechanisms.

Habituation contexts facilitate new distractor filtering. Learning to ignore is easier where we already did it

Matteo De Tommaso[1], Massimo Turatto[1], Giada Pricolo[2], Cinzia Chiandetti[2]
[1]*Università degli Studi di Trento*
[2]*Università degli Studi di Trieste*

Thanks to habituation mechanisms organisms can discard irrelevant stimuli and focus on crucial ones. Hence, with repeated exposure the brain learns to ignore, i.e. ceases to respond to, the irrelevant but potentially distracting stimulation. Previous studies have shown that habituation can be context specific: when the response to a given stimulus has habituated, the response recovers if the same stimulus is experienced in a new context. Here, we examined whether the context in which habituation has occurred retains some general habituative capacity when a new, to be ignored stimulus is presented. Two groups of human participants performed a task in one context, which was defined by a background image depicting either a natural or an industrial landscape, and in which an abrupt onset distractor occasionally appeared in a specific location of the screen. The next day, the same task was performed with a novel distractor, that for one group appeared in the previous context, whereas the context changed for the other group. The results showed that: (1) on the first day the orienting response to the distractor decreased with training, indicating habituation; (2) the next day the novel distractor elicited a recovery of the orienting response in both groups, showing that habituation was stimulus specific; (3) habituation for the novel stimulus was however faster in the context that did not change. Hence, the context in which habituation had already occurred favored habituation to a new stimulus, showing that it is easier to ignore new stimuli where we already learned to ignore other stimuli.

Contextual habituation

Andrea Dissegna[1], Cinzia Chiandetti[1], Massimo Turatto[2]
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Animals, humans included, live in a world full of stimuli, which for the most part are irrelevant to the current goal of the organism. Because distracting stimuli compete with the relevant ones to gain access to the limited processing resources of the nervous system, an evolutionary strategy has been that of equipping animals with mechanisms for distractor filtering. Habituation, consisting in the progressive response waning to a repetitive stimulation, reflects the ability of the neurons to learn to disregard the irrelevant sensory input. Whereas habituation is usually defined as a prototypical example of non-associative learning, as a matter of fact learning to ignore a given stimulus can surprisingly be specific for the context in which the stimulus is repeatedly experienced. Here, we review evidence from decades of research on the behaviour of a wide range of animal species showing that, in some cases, habituation can indeed be context-specific. In other words, the habituated response does not transfer from one context to another, which means that the habituated response recovers if the ignored stimulus is presented in a new environment. This bulk of evidence confirms that habituation may have an associative nature, and that the underlying learning mechanism is more sophisticated than usually thought. Context-specific habituation could represent a mechanism that has evolved to reset the filter applied to a familiar stimulus when it is met in an unusual context, thus reactivating the attention system's response to previously disregarded stimulation that may become meaningful in the new context.

Polyphony for single voice. Compositional project for a single polyphonic voice
Davide Coppola
Kunstuniversität Graz

The composition of *come voci* arose from a desire to experiment with the technique of *virtual polyphony*, encountered in the context of J.S.Bach's music for solo instrument, so that it could permeate into my personal compositional journey. The intent was to find an expressive formulation that went beyond the phenomenology of polyphony itself. The instrument of the voice allowed me to find even more interesting compositional solutions, as well as the possibility to step outside the traditional listening context. Therefore, I decided to study separately how sound and text can establish a polyphonic relationship with themselves: on the one hand, the observation of Bach's techniques and those of later composers allowed me to understand how at the acoustic-compositional level the linear sound manifestation can multiply by bringing out multiple expressive levels; on the other hand, the text and its semantic-linguistic value became an object to be polyphonized, revealing new and stimulating keys to interpretation. Finally, I put sound and word together, exploring the sound aspect and acoustic possibilities within the text and the semantic value within the musical gesture. To the study of the phenomenon from an artistic-musical point of view, I placed a parallel reflection at the phenomenological level, suggested by the theories of Gestalt psychology and the approach that Paolo Bozzi and Giovanni Vicario have addressed to interrupted sound flows. The result of my work is a piece of research in which the voice (but perhaps even the composer) discovers that it can express its multiplicities thanks to and in spite of its condition of singularity: *the one, singing, makes the many resonate.*

Mindfulness through the mindlessness of Zen meditation
Alessandra Galmonte[1], Luca Pilat[2], Tiziano Agostini[1], Tullio Giraldi[1,3]
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Life is complemented by joys, sorrows, illusions, disappointments, and by ageing/illness/death's inevitable troubles. These existential dimensions have always been contemplated by religions, philosophies, medicine, and psychology. Buddhism, since its inception 2,500 years ago, offered its way to overcome life's sufferings through morality, wisdom, knowledge and meditation. Zen especially attracted western's psychologists/psychiatrists, for its potential in psychotherapy, developing cognitive-behavioral and mindfulness-based interventions, which obtained numerous and significant results in different fields (e.g., depression). Mindfulness then became a mass consumption product, where meditation become progressively less relevant, and who perform mindfulness-based interventions often lack an in-depth meditation experience. Paradoxically, neurosciences, psychology and cognitive psychotherapies consider Mindfulness as a tool for strengthening the self, while one of Buddhism's foundations is the non-existence of the self. For these reasons, the chosen intervention modality is Zen meditation: It essentially consists in remaining seated, following the breath, with a deep «effortless» concentration. In this way a progressive mental calmness is obtained, reducing the mental «noise» of ordinary thoughts and «ruminations» that crowd the mind: The «mindlessness» allows the achievement of a greater awareness (i.e., «mindfulness»), aiming to acquire a clearer vision of one's internal and external world. Biological psychiatry, neurosciences and cognitivism use mechanistic/reductionistic approaches that address little the manifold life's and existential mental suffering factors' complexity, non-linearity and interrelation: A Zen practice, psychodynamic, and humanistic principles-based approach, could overcome these limits, avoiding the passive expectation of an external "cure" and encouraging a deeper active acceptance of the existence's facets, little susceptible to medical/psychological/pharmacological treatments.

Impatto del covid-19 nei lavoratori degli ospedali e dell'università. Il ruolo del deidroepiandrosteronesolfato (dhea-s) come marcatore di benessere

Francesca Larese Filon & Emanuela Lucci
Azienda Sanitaria Universitaria Giuliano Isontina

Una delle conseguenze più pesanti della diffusione del Covid-19 è la crisi sanitaria in cui i professionisti di questo settore sono stati in prima linea ad affrontare un'emergenza epocale, che ha inciso sui carichi di lavoro e sul logoramento fisico, ma anche e forse soprattutto sulla loro salute psicologica. Gli effetti negativi sulla salute, associati all'esposizione a lungo termine allo stress, sono dovuti all'esposizione prolungata ai glucocorticoidi ed al rilascio di adrenalina e noradrenalina. Il progetto intende valutare lo stress lavoro correlato nei lavoratori dell'ospedale nel periodo COVID-19, studiare il livello del DHEAS come marcatore di benessere nelle due popolazioni coinvolte (proxy di basso stress) ed analizzare il beneficio di un programma di mindfulness su un gruppo di lavoratori ad elevato stress lavoro correlato confrontando questo strumento con la formazione generica sulla gestione dello stress lavoro-correlato, attuale Standard of Care per i dipendenti ASUGI e UniTs. La mindfulness è un processo mentale che ha come obiettivo la presa di consapevolezza di sé stessi e del momento che si sta vivendo. Quando l'infelicità o lo stress prendono possesso della mente e del fisico, si imparerà a trattarla come se fosse un qualcosa di inconsistente e a guardarla con un occhio diverso. In sostanza, la mindfulness permette di catturare modelli di pensiero negativo prima che questi ci spingano in una spirale verso il baratro e di iniziare un nuovo processo vitale che porta al controllo della nostra vita.

Current Research Trends in Trieste Psychology (Moderator: Andrea Carnaghi)

BODY PROBAND: Cognitive functioning and Body Representation in Overgrowth syndromes– Preliminary findings of a comprehensive neuropsychological assessment

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Sotos Syndrome and Beckwith-Wiedemann Syndrome are known as overgrowth syndromes as they involve an excessive growth of the whole body or of specific body parts. In this project we investigated the neuropsychological and behavioural profile in children and adolescents with overgrowth syndromes by administering standardized tests and questionnaires. Moreover, given the inherited alterations of their bodily experience, we explored whether adolescents with overgrowth syndromes could present impairments in perceiving and representing their bodies. For this purpose, we adapted from previous studies and administered to clinical and control samples a standardized body image questionnaire, a computer-based task assessing reaching- and comfort-distance with social and non-social stimuli, a virtual reality full-body illusion paradigm, and tasks assessing interoceptive accuracy and awareness. Preliminary results highlighted specific strengths and weaknesses in the neuropsychological profile of each syndrome, as well as characteristics of their emotional-behavioural functioning. Moreover, adolescents with overgrowth syndromes presented abnormalities at multiple levels of body representation compared to healthy samples of adults and children. These findings shed light on how atypical bodily features could shape the way own body signals are perceived and represented, with likely consequences on socio-cognitive abilities and emotional-behavioural development. These results have also important theoretical implications for the critical role of the body as primary context in which the Self get structured.

A FHIR based HUB for the management and support of patient with chronic pain

Annamaria Caruso[1], Vania Manzelli[2], Pierluigi D'Antrassi[3], Alfredo Cuzzocrea[4], Marco Prenassi[1], Chiara Savino[2], Maria Teresa DePippo[2], Stefano Lenzi[5], Roberta Ferrucci[6], Costanza Conti[3], Giulia Candiani[7], Francesca Memini[7], Elda Judica[8], Massimo Corbo[8], Marianna Masiero[6,9], Gabriella Pravettoni[6,9], Sara Marceglia[1]

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My research activity is developed within the PainRELife project aimed at creating a dynamic and integrated technological ecosystem based on big data management and analysis technologies for the continuity of care of pain patients. The general purpose of my research is to design and implement a tool for Patient Report Outcomes collection for chronic pain patients also treated with transcranial Direct Current Stimulation, in order to allow reliable efficacy assessment of therapies, as well as patient's support. The project objectives: 1) to develop a digital platform and mobile apps to manage digitized care pathways for patient with chronic pain; 2) to implement, in the same tool, features for supporting patients and caregivers in the management and administration of treatment; 3) to identify prognostic factors based on the Patient Record Outcomes collected through the application and the platform, in conjunction with patient's clinical history. To date, the system implements three digital care pathways for the management of post-stroke pain, pain related to early breast cancer and pain treated with transcranial Direct Current Stimulation. Each care pathway involves the execution of a workflow in the Nu platform, including all the clinical scales and treatments to be completed by the patient, that can be collected either by the care team in the ambulatory setting or by the patient/caregiver at home using the developed apps, and the integration with devices providing patient's related information (transcranial Direct Current Stimulation devices and smartbands for activity monitoring). The validation started in May 2022.

On the "invisibility" of Black women: A non-prototypical, numerical minority and disempowered group

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Two studies investigated how individuals belonging to multiple social categories that are perceived to be non-normative can be victims of intersectional non-prototypicality: Black women are "invisible" within both Black people and women. The present research investigated cognitive invisibility and its relation with three factors: representativeness, population prevalence, and socioeconomic status. Results were consistent in the pilot study and Study 1 unless otherwise noted. Ethnocentrism guided the representation of both women and men, and only in the pilot study, it was stronger for women. Androcentrism guided the representation of both Black and White people, and it was stronger for Black people. For both estimated population prevalence and salary estimations (only examined in Study 1), ethnocentrism guided the estimated population prevalence of both women and men; contrary to representativeness, it was stronger for men. Androcentrism guided the estimated population prevalence of both Black and White people; contrary to representativeness, it was stronger for White people. The stronger the representativeness of the White man, the higher the estimated proportion of White men in the population (or vice versa) and the lower the representativeness of the Black woman, the lower the perceived socioeconomic status of Black women (or vice versa). Hence, Black women may be "invisible" due to the cooccurrence of multiple causes. The overestimated prevalence of White men within White people and men renders Black women a numeric minority. White men are the highest social status category among both White people and men, which contributes to the social disempowerment of Black women.

Neurodegenerative analysis with Magnetic Resonance Imaging for cognitive impairment in glaucoma disease

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Glaucoma is an optic neuropathy characterized by a progressive degeneration of retinal ganglion cells and their axons, resulting in a distinct appearance of the optic disc and a concomitant pattern of visual loss. It is estimated that glaucoma affects more than 66 million individuals worldwide with at least 8 million bilaterally blind. Glaucomatous neuronal death is not limited to changes in the retinal ganglion cell axons, soma, and dendrites; neurons in the lateral geniculate nucleus and the visual cortex are also lost. Dementia and glaucoma are both neurodegenerative conditions characterized by neuronal loss leading to cognitive and visual dysfunction, respectively. A variety of evidence exists linking the two diseases including structural signs, specifically degenerative changes within ganglion cells. The goal of this study is to employ improved analysis methods functional Magnetic Resonance Imaging to evaluate changes not only in the optic tract, optic radiation, and primary visual cortex in glaucoma patients but also in other cortex area. Morover we examine the association between neurocognitive status, fMRI parameters and other diagnostic test.

Visuospatial Dysfunction and Art Therapy in Parkinson's Disease: current evidence and future perspectives

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Visuospatial symptoms are regarded as highly prevalent and poorly understood non-motor features of Parkinson's disease. Over time, the cumulative disability arising from impaired visual functions may lead to physical and psychological withdrawal, thus further accelerating the disease progression. Moreover, impaired visual feedback may affect complex motor behaviors critically relying on accurate visuospatial integration, such as balance and locomotion. Indeed, systematic perceptual biases have been linked to veering, freezing of gait, postural abnormalities, and recurrent falls in this clinical population. The process of art-making relies on the repeated engagement of complex perceptual functions, including shape recognition, depth perception, figure/background segregation, spatial reasoning, visual imagery, etc. As such, art training may improve visuospatial symptoms, with broad clinical benefits, potentially extending to patients' motor function. In this presentation, we will highlight the current evidence regarding visuospatial dysfunction in Parkinson's disease as well as its relationship with complex motor behaviors. The preliminary experimental data supporting the use of art therapy for visual rehabilitation in Parkinson's disease will be also discussed.

The interaction between math anxiety and working memory in math learning: evidence from primary school students

Alessandro Cuder
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In an increasingly numerate and high-technology world, mathematical abilities are fundamental to individual's personal, educational, and economic success. It is well established that mathematical achievement is influenced both by affective (e.g., general anxiety, math anxiety) and cognitive (e.g., verbal and visuospatial working memory) factors, while the interaction between them has received little attention. According to the Processing Efficiency Theory, math anxiety would negatively affect math performance by interfering with working memory resources via negative intrusive thoughts. For this reason, two studies have been conducted to shed light on the role of these factors in predicting mathematical abilities in primary school children. In the first study, general anxiety, math anxiety, and working memory were assessed to observe their longitudinal effects on mathematical achievement. In the second study, the interaction between working memory capacity and math anxiety on children's performance on different math tasks has been assessed. According to the findings of the two investigations, working memory mediates the negative effect

of math anxiety on mathematical achievement. Furthermore, we found that children high in visuospatial working memory suffered more the negative effects of math anxiety on math tasks, and this effect seemed to depend on the strategies used by children in solving the mathematical tasks. To sum up, in agreement with the Processing Efficiency Theory, working memory appears to play a central role in explaining how math anxiety negatively affects mathematical performance. Implications for future studies will be discussed.

Is the STEARC effect consistent across tasks? A systematic investigation of spatial associations for time

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The Spatial-Temporal Association of Response Codes (STEARC) effect consists in faster left-hand responses to early-onset events and faster right-hand responses to late-onset events. This effect has only been established with direct tasks; no research using indirect tasks with auditory cues have been conducted. Using a procedure similar to that used by Ishihara et al. (2008), the current study investigated the occurrence of the STEARC effect in indirect tasks across three experiments. Experiment 1 was a conceptual replication of the original study, in which participants were explicitly asked to discriminate the onset (early vs late) of a target sound after listening to a sequence of auditory clicks. In Experiment 1, a STEARC effect was found, thus replicating the study by Ishihara et al. Experiments 2 and 3 followed the same procedure as Experiment 1, but participants were asked to discriminate the timbre of the stimuli (indirect task) instead of directly assessing time variations. In both experiments, no STEARC effect was observed. This shows that the auditory STEARC effect is only elicited when temporal information is explicitly processed.

Are groups better than individuals? Testing group argumentation in the disinformation context

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Modern society favors groups over individuals in most areas of decision-making, but groups are not exempt from social and cognitive bias. Nevertheless, experimental evidence from the argumentative theory indicates that group argumentation helps to increase the quality of decision-making. This theory, however, produced more robust evidence with problems with an intuitive wrong answer and a demonstrably correct answer. The present study tests the argumentative theory in the disinformation context. In phase 1 participants read 4 news and signed their intention to share and their judgement of truthfulness. In phase 2, participants re-read the same news and then they argued their position regarding its accuracy in a context of individual analysis or in a group discussion. Finally, they expressed again the judgements of phase 1. Our results show that group argumentation represents the cognitive strength of the group also in an applicative context, specifically increasing the ability to recognize fake news.

Combining social concepts: The case of age and sexual orientation categories intersection

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Recent research hypothesized that Elderly gay men (i.e., EGM) were stereotyped as less old and younger than Elderly men (i.e., EM) because considered an atypical subtype of both EM and Gay men (i.e., GM) constituent categories. Three studies (Ntot = 364) were run to directly test the perceived (a)typicality of EGM with respect to age (Study1) and sexual orientation categories (Study2). Also, we tested whether, and to what extent, traits associated with EGM overlap with those associated with its constituent categories (Study3). Study1 showed that EGM were perceived as less typical of EM than Elderly heterosexual men

(i.e., EHM). Study2 showed that EGM were perceived as less typical of GM than Young gay men. Study3 tested whether the atypical intersectional category of EGM would display unique traits that are not the result of simply adding the traits of the constituent categories (i.e., EM + GM). We specially predict that the number of unique traits listed for EGM will be higher than the number of traits listed for other intersectional categories (e.g., EHM). Overall, the unique traits associated with EGM distance this group from both EM and GM prototypes, contributing to the atypicality perception of EGM relative to EM and GM.

Effects of non-pharmacological and pharmacological treatments on Habituation and Sensitization outcomes in Migraine

Manuela Deodato, Antonio Granato, Miriam Martini, Alessandra Galmonte, Paolo Manganotti
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In the physiopathology of migraine two opposing processes, depression (habituation) and facilitation (sensitization), determine the timeline of a migraine attack: Sensitization is a behavioral increase response to repeated stimulation; Habituation is a behavioral decreased response to repeated stimulation. Aim: The main aim of this study is to compare a non-pharmacological treatment, such as physical therapy, with a specific dual task protocol of active exercise with concomitant cognitive tasks, with the pharmacological prophylactic Monoclonal Antibody treatment, in relation to habituation (Transcranial magnetic stimulation) and sensitization (Algometer assessment) neurophysiological outcomes. The second aim is to compare these non-pharmacological and pharmacological treatments concerning to clinical outcomes (intensity of pain, duration of attacks and frequency of pain; neurophysiological test on executive functions). Method: Three studies were conducted: 1) a cross sectional study that evaluated habituation and sensitization clinical and neurophysiological outcomes in 30 migraine patients respect to 30 healthy controls; 2) a Randomized Control Trial on 30 migraine patients, that compared the dual task protocol in patients with migraine with active exercise only and cognitive training only concerning habituation and sensitization outcomes; 3) an observational study that compare the two emerging pharmacological and non-pharmacological treatments, respectively, monoclonal antibody and dual task protocol, on the same habituation and sensitization outcomes. Conclusion: Monoclonal antibody seems to be more useful than dual task protocol in pain intensity, but frequency and duration of attacks decreased in both pharmacological and non-pharmacological threatens. Dual task seems to be more useful than monoclonal antibody in some habituation outcomes.

“If only I hadn’t overthought at bedtime”: Counterfactual thoughts and counterfactual emotions related to insomnia

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Counterfactual thinking involves mentally representing how the world would be now if things had been different in the past. Counterfactual thinking and counterfactual emotions (regret, shame, and guilt) contribute to sleep disturbances. Previous works have not yet investigated the content of counterfactuals produced at bedtime nor the frequency and impact of past and future thoughts on insomnia. Participants completed a questionnaire with an open hypothetical sentence (i.e., "I would have fallen asleep/ fallen back asleep sooner if only…") and questions about insomnia severity, bedtime thoughts, anxiety, regret, and general questions. Results showed that about 1/3 of participants attributed their falling asleep problems to bedtime thoughts (i.e., I would have fallen asleep sooner if only I hadn't thought about my problems); regret and future thoughts are rated as the most frequent bedtime thoughts; regret has an indirect effect on insomnia through bedtime thoughts.

Effects of electrical stimulation on the physiology of skeletal muscle cells

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Electrical stimulation (ES) has been proposed as a tool to counteract muscle atrophy and to enhance muscle strength. ES mimics nerve activity eliciting muscle cell contraction. Changes in the ES protocols induce different muscle responses. Depending on the entity, muscle contraction leads to a dynamic modulation of cellular activity in terms of intracellular Ca2+ changes, subcellular structures reorganization, gene transcription, myokine release, etc. Skeletal muscles are mostly responsible for the systemic increase of circulating IL-6 induced by exercise. A transient short-term and local action of IL-6 is related to the autocrine and paracrine activity modulating muscle cell proliferation and differentiation. Mimicking physical exercises in vitro, different field electrical stimulation protocols were able to induce IL-6 release detectable in the external medium of cultured mice myotubes. It is also known that tetanic ES protocols induce two separate types of Ca2+ signals, a fast one, mediated by ryanodine receptors (RyRs) and related to the excitation-contraction mechanism and a slower signal, mediated by Inositol-1,4,5-triphosphate receptor (IP3R), related also to transcriptional events. Through confocal fluorescence microscopy we detected IP3Rs in subsynaptic areas of the endplate. In in vitro denervated myofibers a reduction in the subsynaptic IP3R was observed, whereas field electrical stimulations were able to prevent such decrease. In conclusion, our data indicate the field electrical stimulation in vitro as a helpful model to analyze the effects of ES on skeletal muscle physiology at molecular level.

Playing cards: a novel kind of stimuli to disambiguate the role of order and magnitude in the SNARC effect

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Numerical cognition studies how people conceive numerical information. For instance, the spatial-numerical association of response codes (SNARC) effect (Dehaene et al., 1993) indicates that western people tend to respond faster to small numbers with a left key, and to large numbers with a right key, suggesting that numbers are represented on a Mental Number Line (MNL). Accumulating evidence suggest that this effect is determined both by number's order and magnitude; however, their roles are still not clear. This study aims to disambiguate the role of order and magnitude in the SNARC effect, using stimuli familiar to most people, namely playing cards. When playing cards, some people organize them in ascending order (AO), and some in descending order (DO). Thus, DO people should spontaneously associate low magnitude cards (e.g., 2) to the right, and high magnitude cards (e.g., 6) to the left. Therefore, in DO individuals, the representation of cards' order and magnitude would be inconsistent with the MNL. We will ask participants (AO vs. DO) to perform a magnitude classification on single digits numerals, and a card value classification on cards stimuli. The crucial outcome will be the results for the DO group in the cards value classification task. If magnitude prevails on order, the SNARC effect should occur; if order prevails on magnitude, a reverse SNARC should emerge. The results of the present study will provide information on a longstanding issue, namely the roles that order and magnitude play in the SNARC effect.

A one-year longitudinal study in bariatric surgery patients: pre-operative bulima and food preoccupation as vulnerability factors for poorer bariatric surgery success

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Dysfunctional eating behaviours are common in candidates for bariatric surgery (BS). However, the impact of preoperative eating habits on poorer weight loss after bariatric surgery is still unclear. The main aim of this study was to investigate how pre-intervention eating habits help predict BS success in terms of

percentage of Body Mass Index loss (%EBMIL) over 3 to 12 months after surgery. The data set includes 175 (120 women) BS candidates, interviewed between 2011 to 2019. Each patient self-reported Eating Attitude Test (EAT26) scales, on average 11 months before surgery. Their BMI was objectively recorded before intervention and at 3, 6 and 12 months after BS. Post-surgery %EBMIL flow showed that 30.3% of BS patients had a successful outcome at 3 months, 74,9% at 6 months, and 89.1% 1 year later. BS patients with a 1-year negative outcome had pre-surgery higher BMI values compared to those with a positive outcome. No significant correlation emerged between EAT26 scales and pre-surgery BMI levels. Regression analyses for longitudinal data revealed that higher pre-surgery EAT26 Bulimia and Food Preoccupation predicted poorer bariatric success as %EBMIL 3 months after surgery, further contributing to indirectly affect poorer weight loss at 6 months after surgery via its effect on weight loss at 3 months. The current results suggest that the first semester after intervention is critical for BS patients and that pre-intervention dysfunctional food intake and food preoccupation play a small but significant role in obstacoling post-surgery weight loss.

Structure-function relationship analysis in macular diseases
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The relationship between anatomical structure and output function is a crucial topic in neuroscience. With the new imaging techniques introduced in Ophthalmology, this relationship can be easily analyzed in retinal and macular diseases. The Optical Coherence Tomography (OCT) is a non-invasive diagnostic technique based on interferometry that renders an in vivo cross-sectional view of the retina with 5-7 microns resolution with approximately 20.000-40.000 scans per second. The increased scans rate allows a 3D reconstruction of all retinal layers. The research project aims to enroll patients with a monocular or binocular macular disease who present metamorphopsia as the main symptom. Patients with age-related macular degeneration, diabetic macular edema, or epiretinal membrane were included in the study. These macular diseases are characterized by the involvement of different structural loci in the retina: in AMD an involvement of the outer retinal layers, in diabetic macular edema of the intermediate retinal layers, and in epiretinal membrane of the inner retinal layers. At baseline and during the follow-up, all patients were evaluate for a quantification of the degree of metamorphopsia. Horizontal and vertical metamorphopsia scores will be tested using M-charts, a diagnostic tool to objectively quantify the degree of metamorphopsia. These results will be correlated to the in vivo analysis of the different retinal layers' involvement using the OCT cross-sectional analysis.

Congressino di Primavera
(Moderators: Alessandra Galmonte e Rossana Actis Grosso)

I contesti di assuefazione facilitano il filtraggio di nuovi distrattori: Imparare a ignorare è più facile dove lo abbiamo già fatto
Matteo De Tommaso, Giada Pricolo, Cinzia Chiandetti, Massimo Turatto

Amplificazione dei movimenti dello sguardo
Claudio de'Sperati

Virtualiter: costruzione di un ambiente di apprendimento virtuale per lo sviluppo di abilità utili alla gestione del colloquio di lavoro
Claudio Tonzar, Stefano Roncali

La consapevolezza della “mindfulness” attraverso la meditazione Zen
Alessandra Galmonte, Luca Pilat, Tiziano Agostini, Tullio Giraldi

Color blindness e bordi colorati: un caso studio in una situazione ecologica
Rossana Actis Grosso

Anticipazione nell'improvvisazione musicale
Natale Stucchi

Nuovi sguardi sul vino: linguaggio e personalità
Roberto Burro, Ugo Savardi, Ivana Bianchi, Arianna Fermani, Erika Branchini, Stefania Torquati, Elena Capitani, Veronica Barnaba, Hang Truong

L'età del viso è mappata sugli assi orizzontale, sagittale e verticale
Mario Dalmaso, Stefano Pileggi, Michele Vicovaro

Percezione visiva del rimbalzo e del salto
Michele Vicovaro, Loris Brunello, Giulia Parovel

Movimento percepito in immagini statiche, il fattore estensione e l'apprezzamento estetico
Stefano Mastandrea, John M. Kennedy

I musicisti hanno una memoria a breve termine migliore rispetto ai non musicisti? Una proposta di ricerca multi-lab
Massimo Grassi, Elvira Brattico, Anne Caclin, Barbara Carretti, Véronique Drai-Zerbib, Laura Ferreri, Jessica Grahn, Marco Roccato, Antoni Rodriguez-Fornells, Swathi Swaminathan, Barbara Tillmann, Peter Vuust, Jonathan Wilbiks, Marcel Zentner, Francesca Talamini

Associazioni spaziali per numerosità simboliche e non simboliche
Valter Prpic, Yasmine A. Basamh, Courtney M. Goodridge, Tiziano Agostini, Mauro Murgia

Il ruolo della teoria della mente nella presa di prospettiva altrui
Alessandro Soranzo

POSTERS

Context-based predictions are differently impaired in children with autism and dyspraxia
Sara Boscarol[1], Alessandra Finisguerra[1], Tiziana Zilli[1], Antonio Narzisi[2], Cosimo Urgesi[1,3]
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Bayesian perspective of autism postulates an exacerbated reliance on sensory information at the expense of a poor usage of prior knowledge to predict events. Recent findings demonstrated an impairment in children with autism in using contextual priors when predicting other peoples' actions. However, it is unclear whether the impairment in using contextual priors is specific for the social domain or also generalizes to non-social events and may be explained by the motor deficits present in autism. To assess these issues, we tested children with autism (n=31) or with dyspraxia (n=33) as compared to age-matched controls with typical development (n=78) in a social (action) and a non-social (shape) prediction task. In these tasks, we exposed participants to videos showing different probability of co-occurrence (low or high) between a specific contextual cue and a particular action or shape. Familiarization aimed to implicitly promote expectations building. During a subsequent testing phase, videos were occluded to reduce the amount of sensorial information and induce the usage of expectations to predict event unfold. While controls' performance was facilitated in high-probability conditions in both tasks, such facilitation was absent in children with autism, either for the social or non-social task. Differently, children with dyspraxia showed poor reliance on contextual prior in the social task only, but not in the non-social task. These results provide evidence for a

domain independent deficit in autism in using priors to predict events, and for a domain- (social) specific deficit in individuals with deficits limited to motor competence.

Spatial frequency tuning of body gender adaptation

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Protracted exposure to specific body stimuli (e.g., female bodies) leads to biased visual aftereffects to the opposite direction (e.g., perception of ambiguous bodies as being male). Previous studies have reported that both parvocellular and magnocellular channels are sensitive to face adaptation, but their relative sensitivity to body gender adaptation is yet to be explored. We report a 3-experiment investigation on the parallel, cross-transfer and contingent aftereffects of body gender adaptation across high- (HSF) and low- (LSF) spatial frequency (SF), which tap, respectively, on parvo- and magnocellular channels. In Experiment 1, participants were exposed to female or male bodies, presented non-filtered or containing only HSF or LSF information; then, they were asked to recognize the gender of non-filtered androgynous models. We confirmed that, independently from the SF content of the adapting stimuli, adaptation to a female or male body made non-filtered androgynous bodies to appear as more masculine or feminine, respectively. In Experiment 2, we separately adapted participants to HSF or LSF stimuli and tested the subsequent aftereffects on both SF stimuli. We obtained significant results for both the adapted and non-adapted SF channels, pointing to cross-channel transfer of aftereffects. In Experiment3, we exposed participants, within the same session, to opposite gender-typing features in the two SF channels and tested aftereffects on both SF stimuli. The results revealed that, while HSF stimuli were consistently adapted to their SF-tuned gender, no effects were detected for LSF stimuli, suggesting greater HSF-to-LSF cross-transfer of body gender adaptation, which prevented contingent aftereffects of LSF channel.

The influence of task constraints in human planning and reconfiguration

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The influence of different types of constraints on planning has been investigated very sparsely, despite the importance of this topic for cognitive science. Almost no studies examined the reconfiguration processes taking place when task constraints change over time, as happens in real-world dynamic environments. However, research in cognitive science suggests that planning difficulty depends on the interaction between the constraints of the problem, the problem space, the representations and strategies employed by the planning agent, and the agent's previous experience. In this poster, we will outline a research project aiming at investigating the influence of different types of constraints and their variation over time on human planning and reconfiguration processes. After the presentation of the project goals and our general planning framework, we will illustrate the experimental task designed to study the planning/reconfiguration processes: a modified (and animal-free) version of the Zoo Map test. Then, we will present a study (N = 120) that investigated errand planning in this task environment under different sets of ordering constraints. In particular, we examined how participants solved a series of multiple-errands problems when asked to minimize the overall distance travelled using a three-group between-participants design: (1) no ordering constraints between errands, (3) ordering constraints enforcing a shortest-length solution, (3) ordering constraints not enforcing a shortest-length solution. We then examined participants' performance in the same problems after the removal of the constraints, to appraise the reconfiguration processes. The results of the study and their theoretical implications will be discussed during the presentation.

Arithmetic word problem-solving in primary school children: the role of cognitive, emotional and motivational factors

Eleonora Doz, Elisa Colombini, Sandra Pellizzoni, Maria Chiara Passolunghi
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Solving arithmetic word problems is a fundamental ability that predicts children's school achievement as well as their future occupational and financial success. Thus, investigating the factors underlying this skill is essential for educational and social purposes. In two studies we evaluated the role of cognitive, emotional and motivational components in the resolution of a specific word problem type - namely compare problems - which contain a relational term (e.g., more than and less than) that compares the value of two variables. Study 1 aimed to clarify the relation between children's general cognitive skills and their ability to solve compare problems. 182 fourth and fifth graders were tested on fluid intelligence, reading comprehension, inhibition, updating, and arithmetic problem-solving. Results revealed that (a) reading comprehension was the strongest predictor of arithmetic problem-solving performance, and (b) both updating and inhibition yielded significant direct paths to problem-solving accuracy. In Study 2 we evaluated the role of emotional (i.e., math anxiety) and motivational (i.e., perceived task difficulty) aspects on the performance of compare problems. Eighty-one fifth graders were administered a math anxiety scale, an arithmetic word problem task and a task evaluating the perception of problems' difficulty. Results indicated that math anxiety predicted students' problem-solving achievement and it mediated the relationship between perceived task difficulty and problem-solving performance. Overall, the findings of the two studies highlight the need to consider both cognitive and affective-motivational factors when investigating students' difficulties in arithmetic word problem-solving. Practical implications and future directions will be discussed.

The use of virtual reality and motor imagery in post-operative rehabilitation protocols after lower limb fractures

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Post-operative management of lower limb fractures differs if early or late weight-bearing (up to 12 weeks after surgery) is prescribed and if immediate mobilization is allowed. Immobilization could bring to complications because of lack of mechanical stimulus and delay the return to work. Less movement is also due to contraction of cortical representation zones. Existent protocols in rehabilitation after orthopedic surgery refers to reduction of inflammation, pain management, increased range of motion and muscular strength recovery. Less importance is given to motor control and its alteration after injury or surgery in subjects with no central nervous system lesions. Cognitive strategies are proposed in neurological physiotherapy. They could be included as adjunctive method in rehabilitation programs after surgery. Virtual reality is an interactive technology for person-centered rehabilitation and has similar effects to exercise. Motor imagery as mental representation of movement without any body movement, is proposed to increase the abilities in the execution of motor action in sport or in neurorehabilitation to speed up the recovery after brain injuries. Implementing motor imagery practice into the course of physical therapy could enhance various physical outcomes during acute postoperative recovery. Patients included in this study are assigned into 3 groups: physiotherapy, physiotherapy with motor imagery and physiotherapy with virtual reality. Clinical data are collected for each patient and gait analysis with optocinetic evaluation is conducted in motion capture laboratory. Evaluations are repeated at 6 weeks, 3 months and 6 months after surgery. To keep cortical activation normal during immobilization helps the recovery of function.

I sound consonant, therefore I am. A comparative approach to the study of acoustic consonance in animacy perception

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To make sense of the outside world, and thus enhance the chances of survival, a great variety of animal species make use of acoustic communication. This is particularly true in those taxa that live in groups, where this type of communicative medium proved to be integral in managing social interactions. Despite the great interest and recent development in the emerging field of bioacoustics, few studies have considered the acoustic mechanisms at the basis of agents' recognition, i.e., the acoustic signatures of animacy; therefore, this project aims at broadening our knowledge concerning the biological roots of the capacity to identify animate objects in the environment through sound. In particular, a perceptual feature that seems to be exploited as a means to spot an organism is consonance. Consequently, we have adopted a comparative approach, taking into account different types of vocal emissions belonging to various avian and mammalian species, with the aim of analysing the statistical composition of these natural sounds.

Exploring consciousness in cephalopod molluscs: from practical applications to behavioral indicators

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The majority of marine animals globally harvested as seafood are killed with little or no consideration for their welfare. Killing methods used for cephalopods for human consumption include e.g., slicing through the brain, reversing the mantle or holding the animals in a suspended net (causing asphyxia); none of these cause immediate death and loss of consciousness. The inclusion of these invertebrates in the Directive 2010/63 regulating the use of live animals in research, and concerns about their sentience, are promoting increasing attention to cephalopod welfare in various areas, from scientific research to public awareness. Furthermore, cephalopod molluscs' sophisticated behavioral repertoire and cognitive abilities strongly suggest the presence of complex conscious states in these animals where neural hallmarks of, and consciousness multiple dimensions are possibly traceable. Cerebral concussion is agreed to induce a disruption of the nervous system in vertebrates, resulting in an instantaneous diminution or loss of consciousness without gross anatomical changes in the brain. As one of the key tangible outcomes of my Ph.D. project, I will test the efficacy of percussive stunning (non-penetrating bolt driven by air pressure), applying a mechanical stunning for the first time and thus exploring neural correlates of consciousness stata in target species, by assessing also effects of the stunning at the morphological level in the nervous system. In addition, I will explore trace conditioning paradigm to identify behavioral indicators of consciousness.

Enriched mind in enriched context: preliminary results from a Multisensory room intervention for children with ASD

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Autism Spectrum disorders (ASDs) is associated with a reduced context sensitivity: the inability to perceive and understand objects or situations based on their physical, abstract or spatio-temporal meanings, this study aims at implementing context-based intervention and assessing its effectiveness. We adopted randomized controlled trial design without blinding. 12 participants between 3 and 11 years of age were randomized into: intervention group (n=6) who were offered Multisensory room intervention program (MS) delivered by therapists in addition to normal practices, and a control group (n=6) who were treated as usual (ABA intervention only). Twenty-four half-hour sessions in the room, twice a week for about 3 months are needed. Several cognitive (NEPSY II) and sensorimotor skills (ABC2-m) were measured before and after

interventions. Moreover adaptive behaviors (Vineland-II) were assessed with parents at the baseline and three months after the end of intervention. Cognitive performance on several domains and motor performance did not differ between groups (the Mann-Whitney test for score differences were all above significance level with $p \geq 0.05$). Interestingly, the overall difference score on adaptive behaviors does show an improvement in IQ scores comparing 6 experimental participants with 5 controls. The independent Mann-Whitney t-test for the differences in pre-post total QI was significant ($p=0.01$, effect size=0.87). Even if no difference between usual treatment (mainly ABA) and MS room intervention has emerged in the short-term, adaptive behaviors gain is a promising outcome for long-term improvements, further data will be collected in the near future.

Does Mindfulness Reduce Anger Intensity?

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Mindfulness has been defined as the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment. It is well-known that mindfulness can improve emotion regulation; however, there is still poor evidence on the effects of mindfulness on anger regulation. Relying on a new behavioral task to study anger, we decided to test whether a mindfulness training of 6 weeks can improve the regulation of this emotion. In particular, 38 participants (27F, mean age = 22,34±2,62) were presented with 90 stimuli about interpersonal situations that could elicit anger. The intensity of this emotion was then rated, for each stimulus, on a likert scale (0-6). The same task was presented before and after a 6-week mindfulness training. A Wilcoxon signed-rank test was conducted to compare the mean level of anger for each participant before and after the mindfulness course. Results show that there was a significant difference in anger scores before (M=5.01, SD=0.86) and after (M=4.46, SD=1.10) the mindfulness course ($V = 655.5$, $p<0.001$). The results of the current study show that mindfulness can increase anger regulation, since the intensity of this emotion experienced in the same interpersonal situations decreases after a training of 6 weeks. This preliminary study proves the potential of mindfulness in anger management in interpersonal situations.

Work related stress and dehydroepiandrosterone sulphate levels in healthcare workers during covid-19 pandemic: an intervention study

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One of the heaviest consequences of Covid-19 spread is the health crisis that is affecting national health systems around the world. Long-term psychosocial stress and work-related stress cause reduction in dehydroepiandrosterone sulphate (DHEA-S) levels. Workplace stress may influence workers' wellness and lead to health troubles. About half of all work absence is due to work-related stress disorders. The objective of this study is to investigate associations between DHEA-S levels and work-related stress risk factors, in a sample of public sector employees. Work related stress and level of DHEA-S in plasma will be measured in healthcare workers of Azienda Sanitaria Universitaria Giuliano Isontina (ASUGI) that will undergo periodical medical surveillance at Unit of Occupational Medicine from September 2022 for 12 months. DHEA-S levels will be analyzed in plasma. Work related stress will be assessed using the Health and Safety Executive questionnaire (HSE) with additional questions on coping strategies and fear of COVID-19 infection, for a total of 45 items. The relation between DHEA-S, psychological factors, individual characteristics and coping strategies will be investigated. A randomized controlled trial (RCT) will be performed to evaluate the effectiveness of a mindfulness course Vs usual course in subjects with low level of DHEA-S and high level of stress. We expected to involve 600 workers that will be assessed for work-related stress and underdo the evaluation of DHEA-S plasmatic levels. Between them we will identify 64 subjects with low level of DHEA-S & high level of work-related stress that will be involved in RCT: 32 will be randomly allocated in the group of cases and 32 in controls. First group will follow a mindfulness course, the second one a stress management standardized course. Improvement of work related stress and well-being will be evaluated. Primary end-point will be represented by employee psycho-physical wellness

improvement and its extension over time, thanks to mindfulness meditative techniques, decreasing sick leave in the long run.

Ecological context and the immediately given in visual perception: Differences and agreements with conventional Gestalt psychology.

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In order to describe most of the constituents concerning visual perception, it is insufficient to describe them only with a phenomenological attitude. The phenomenological attitude is needed but the attitude must be complemented by a realistic attitude. With the help of a new transdisciplinary discipline called ecological optics the realistic attitude uses concepts to make the environment and the gestalts in it explicable und shows them as informationally specified. The active pick up of optical information by the perceptual system is not only constitutive for what gets perceived of the environment but also for the experience of immediateness or of being directly given. Immediateness of the given is not only a descriptive term of awareness but has an explanatory value. It is the way to make it evident to the observer that he/she is in contact with the real environment around without intermediations. Gibson called the ecological approach a sort of ecological Gestalt psychology. To ask about for the differences, disagreements and agreements with conventional Gestalt psychology is as far as I know an uncompleted task. If one does accept that the basis of both is the recognition of the immediately given as the common ground psychology must deal with. This is especially true when psychological research needs to address visual perception.