



# Arts Engagement & Aesthetic Experience: Bridging the Gap between Arts & Sciences

28 September – 2 October 2025  
Monte Verità, Ascona, Switzerland

Program & Abstracts

**ETH** zürich



Congressi  
Stefano Franscini



Social  
Brain  
Sciences

# Map of Useful Locations



 Walking Route – Central Ascona to Monte Verità

**Ascona Centro (Piazza) → Via del Borgo → Scalinata della Ruga stairs → Strada Collina (No. 84) → Monte Verità entrance.**

Distance ~1.1 km, 12–15 min walk.

# Benvenuti a tutti!



We would like to extend a warm welcome to all participants at the 2025 Arts Engagement and Aesthetic Experience Conference – Bridging the Gap between Arts and Sciences, hosted by the Social Brain Sciences Lab at ETH Zürich in collaboration with Congressi Stefano Franscini in beautiful Monte Verità, Ascona.

As the boundaries between artistic practice and scientific inquiry continue to blur, it is becoming increasingly vital for researchers, artists, and educators to engage in meaningful dialogue across these traditionally separate domains. The aim of this conference is to bring together visual and performance artists, art educators, psychologists, and cognitive neuroscientists to explore cutting-edge research findings, theoretical advancements, and methodological innovations in aesthetic experience. Together, we will examine how biological and psychological factors contribute to arts engagement while fostering the transparency, reproducibility, and social impact of research in this rapidly evolving field.

To encourage diversity and interdisciplinary exchange, we have invited senior and junior researchers as speakers from a wide range of disciplines related to aesthetic experience. The conference features an engaging mix of keynote addresses, invited talks, and poster presentations, providing everyone the opportunity to share and discuss the latest research on the frontiers of arts and science in an integrative manner. We are delighted to welcome you to the beautiful Monte Verità conference centre in Ascona, Switzerland, for this unique gathering of diverse minds, and hope you find the next four days both intellectually stimulating and personally enriching!

Speriamo che passiate dei bei momenti con noi!

Emily S. Cross and Ionela Bara, Co-Organisers, Social Brain Sciences Lab, ETH Zürich



# General Overview – 28 September – 2 October

## **SUNDAY 28 September 2025 – ARRIVAL DAY**

*Participants arrive according to own schedule.*

17:00	Registration desk opens for participants to collect name badge & conference materials
18:00	Welcome drink
19:00	Dinner at Monte Verità restaurant

## **MONDAY 29 September 2025 – PROGRAM DAY 1**

7:30 – 9:00	Breakfast at Monte Verità for those staying at Monte Verità
9:00 – 12:00	Talk sessions 1 & 2 (coffee break 10:20-11h)
12:00 – 13:30	Lunch at Monte Verità restaurant
13:40 – 14:40	Keynote #1 – Beatriz Calvo-Merino
14:40 – 16:00	Poster blitzes / poster session 1 (odd #s) with coffee
16:00 – 17:15	Talk session 3
19:00	Dinner at Monte Verità restaurant

## **TUESDAY 30 September 2025 – PROGRAM DAY 2**

7:30 – 9:00	Breakfast at Monte Verità for those staying at Monte Verità
9:00 – 12:00	Talk sessions 4 & 5 (coffee break 10:20-10:40h)
12:00 – 13:00	Lunch at Monte Verità restaurant
13:00 – 14:00	Keynote #2 – Fredrik Ullén
14:30	Departure from Monte Verità for Val Verzasca excursion
	Fixed menu dinner at Grotto Brogginì
21:30	Approximate return to Monte Verità

## **WEDNESDAY 1 October 2025 – PROGRAM DAY 3**

7:30 – 9:00	Breakfast at Monte Verità for those staying at Monte Verità
9:00 – 12:00	Talk sessions 6 & 7 (coffee break 10:30-11h)
12:00 – 13:30	Lunch at Monte Verità restaurant
13:30 – 14:30	Keynote #3 – Anjan Chatterjee
14:30 – 15:50	Poster blitzes/poster session 2 (even #s) with coffee
16:00 – 17:00	Poster awards, outlook & final discussion
19:00	Dinner at Monte Verità

## **THURSDAY 2 October 2025 – DEPARTURE DAY**

7:30-9:00	Breakfast at Monte Verità for those staying at Monte Verità
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*Following breakfast, participants conclude their conference experience and depart independently. We hope our days together were intellectually rewarding and professionally enriching for all!*

# Program – Day 1 – Monday, 29 September

Venue: Monte Verità Auditorium

## **Day 1: Musical, Performing, Textile and Literary Arts**

- 09:00 – 09:20 Welcome and Program Overview: Emily S. Cross, ETH Zurich
- 9:20 – 10:20**
- Ophelia Deroy** - *Ludwig Maximilian University of Munich (Germany)*  
Beyond joint action and the inactive audience: Rethinking participation in performance
- Manuel Anglada-Tort** - *Goldsmiths University of London (UK)*  
From individual cognition to collective creativity: Insights from experiments on social networks
- Magda Stanová** - *Academy of Fine Arts in Prague (Czech Republic)*  
Fade rate combo
- 10:20 – 11:00 Coffee – Balint Hall
- 11:00 – 12:00**
- Eugen Wassiliwizky** - *Max Planck Institute for Empirical Aesthetics (Germany)*  
The art of perception: Tracing the aesthetic attitude in the brain
- Christine A. Knoop** - *Max Planck Institute for Empirical Aesthetics (Germany)*  
Genre-specific reading modes and their impact on feelings of uncertainty
- Manuel Flurin Hendry** - *Zurich University of the Arts (Switzerland)*  
The startup shrink: Exploring human-AI interaction through theatrical performance
- 12:00 – 13:30 Lunch at the Monte Verità Restaurant
- 13:40 – 14:40**
- Keynote 1 - Beatriz Calvo-Merino** - *City St George's, University of London (UK)*  
A tale about scientists and dancers exploring the sensorimotor brain
- 14:40 – 16:00**
- Poster Session 1 – Odd #s (25m poster intro blitz at start) & Coffee** – Balint Hall
- 16:00 – 17:15**
- Young-Jin Hur** - *University of the Arts London (UK)*  
From the sublime to fashion psychology
- Indre Viskontas** - *University of San Francisco (USA)*  
Are we there yet? Creating meaningful yet rigorous neuroscience-informed experiences with large cultural institutions
- Susan Magsamen, Emmeline Edwards & Indre Viskontas (hybrid)**  
*International Arts + Mind Lab, Johns Hopkins University (USA)*  
Building cohesion in the Neuroarts field: A framework for interdisciplinary research and collaboration
- 19:00 Dinner at Monte Verità

## Program – Day 2 – Tuesday, 30 September

Venue: Monte Verità Auditorium

### **Day 2: Visual Arts, Architecture & Music**

- 09:00 – 10:20**
- Anna Franklin** - *University of Sussex (UK)*  
Infant visual aesthetics and arts engagement
- Eftychia Stamkou** - *University of Amsterdam (Netherlands)*  
Awe awakenings: The experience of awe in early childhood
- Letizia Palumbo** - *Liverpool Hope University (UK)*  
Space design and well-being: The restorative effect of multisensory environments
- Zaira Cattaneo** - *University of Bergamo (Italy)*  
Beyond beauty: The brain and negative aesthetic experiences
- 10:20 – 10:40
- Coffee – Balint Hall
- 10:40 – 12:00**
- Johan Wagemans** - *KU Leuven (Belgium)*  
How to enrich empirical aesthetics research? A story about gaps, bridges and stepping stones
- Edward Vessel** - *City University of New York (USA)*  
The role of the default-mode network in aesthetic appeal
- Eva Specker** - *Leibniz-Institut für Wissensmedien (Germany)*  
Varieties of aesthetic experience: Considering breadth, length, and depth
- Eric Munar** - *University of the Balearic Islands (Spain)*  
What have we learned on preference for curvature in recent decades?
- 12:00 – 13:00
- Lunch at the Monte Verità Restaurant
- 13:00 – 14:00**
- Keynote 2 - Fredrik Ullén** - *Max Planck Institute for Empirical Aesthetics (Germany)*  
The complex relationship between creativity and mental health: New results from genetically informative studies
- 14:30 (promptly!)**
- Meet at main lobby of Monte Verità for excursion to Val Verzasca, followed by dinner at Grotto Brogini**
- 21:30
- Approximate return to Monte Verità**

# Program – Day 3 – Wednesday, 1 October

Venue: Monte Verità Auditorium

## **Day 3: Dance and Visual Arts**

- 09:00 – 09:10 Introduction to Final Day: Emily S. Cross, ETH Zurich
- 9:10 – 10:30**
- Guido Orgs** - *University College London (UK)*  
The neurocognition of liveness
- Hanna Poikonen** - *ETH Zürich (Switzerland)*  
Dance experts' brain oscillations during live performance and transfer effects in rehabilitation
- Kohinoor Darda** - *Arisa Foundation (India)*  
The space between artist, artwork, and audience in context
- Ionela Bara** - *ETH Zürich (Switzerland)*  
When the gaze turns away: How *Rückenfigur* shapes aesthetic judgments and gaze behaviour
- 10:30 – 11:00 Coffee – Balint Hall
- 11:00 – 12:00**
- Emily S. Cross** - *ETH Zürich (Switzerland)*  
Dancing brains, thinking bodies & algorithmic aesthetics
- Andrea Orlandi** - *Sapienza University of Rome (Italy)/Macquarie University (Australia)*  
When your brain goes padam-padam: Cardiac interoception shapes biological motion aesthetic evaluation
- Julia Christensen** - *Max Planck Institute for Empirical Aesthetics (Germany)*  
A feasibility study accompanying a hip-hop dance exercise program in school children
- 12:00 – 13:30 Lunch at the Monte Verità Restaurant
- 13:30 – 14:30**
- Keynote 3 – Anjan Chatterjee** - *University of Pennsylvania (USA)*  
Approaching the ineffable: Characterizing aesthetic experiences
- 14:30 – 15:50**
- Poster Session 2 – Even #s (25min poster intro blitz at start) & Coffee** – Balint Hall
- 16:00 – 17:00**
- Presentation of Poster Awards, Final Discussion, and Future Outlook**  
(all)
- 19:00 Dinner at Monte Verità

## Abstracts – Keynote Speakers

### **Anjan Chatterjee - Approaching the ineffable: Characterizing aesthetic experiences**

The University of Pennsylvania, USA

Aesthetic experiences can be mysterious and are often regarded as ineffable. Yet, ineffability is predicated on identifying the effable. I propose that language plays an important role in understanding the effable and review our work in developing a taxonomy of cognitive and affective impacts of aesthetic experiences. With this taxonomy as a tool, we ask questions about the nature of digital and in-person aesthetic encounters, the effects of considering art slowly, public art changing impressions of urban neighborhoods, and art being used to index emotional recovery. The approach also offers insight into neural bases of these impacts. Finally, the taxonomy makes explicit the gap between deep first-person phenomenological experiences and third person aggregated descriptions. I will touch on our recent attempts to use large language models to close this gap and further chip away at the boundaries of the ineffable.

### **Beatriz Calvo-Merino - A tale about scientists and dancers exploring the sensorimotor brain**

City St George's, University of London (United Kingdom)

We discuss the journey of neuroscientists and performing artists as they strive to understand the sensorimotor brain and its role in aesthetic and emotional perception. A ride anchored in specific questions driven from two disciplines, cognitive neuroscience and performing arts. First, a description of how the sensorimotor brain (and the expert dancer brain) shapes how we see and how we feel when observing other people's actions, dance or facial emotions. Second, a thought inspired by physiological data about how embodied cognition theories can benefit from comparing multidimensional embodied processes in neurodivergent individuals and expert dancers. And third, a question based on the cognitive representations of the artist themselves while creating artistic sequences. Finally, we end the talk by proposing a framework for art and science collaboration grounded in science/art methods and inspired by multilayered questions (initially related to aesthetics and emotion perception given the history, but to expand to other processes and social interactions), that target systematically the brain and its cognitive mechanisms, the process of creativity and the integration of the artist with the observer in the world.

## Abstracts – Keynote Speakers

### **Fredrik Ullén - The complex relationship between creativity and mental health: New results from genetically informative studies**

Max Planck Institute for Empirical Aesthetics, Germany

The notion that creativity and psychiatric symptoms are associated goes back at least to Plato's discussions of divine madness and inspiration. At the same time, many studies report that engagement in creative activities can be beneficial for well-being and mental health. Here, I will address this conundrum using results from large-scale twin studies. First, I will report key findings from a recent longitudinal analysis of associations between creativity and mental health performed in a large sample of Swedish twins (N = 14,658). Creativity was assessed broadly, using measures of artistic and scientific real-life achievement, personality (openness), as well as psychometric creativity (divergent thinking). Mental health was measured using both self-report data and registry-based diagnoses. Findings overall confirmed an association between creativity and mental health problems, in particular for the artistic domain. Twin modelling and polygenic score analyses suggested that shared genetic influence played a major role for observed associations. Secondly, I will summarize recent work showing that psychological flow experiences may have causal protective effects on mental health. In other words, while there is a genetic overlap between creativity and risk of psychiatric disease, engaging in flow-promoting creative activities may in itself be positive for mental well-being. Overall, the findings highlight the complex and domain-specific nature of creativity-mental health associations and their underlying biology.

# Abstracts – Invited Speakers

---Please note the abstracts are presented in alphabetical order by last name of presenting author---

## **Manuel Anglada-Tort – From individual cognition to collective creativity: Insights from experiments on social networks**

Goldsmiths, University of London, United Kingdom

How do complex cultural artefacts—such as music and art—evolve in structured human environments? This talk presents a series of large-scale behavioural experiments that investigate how individual cognitive processes (e.g., perception, aesthetic preferences) interact with social structures (e.g., network topology, human–AI interaction) to shape collective creativity and cultural evolution. First, I present findings from large-scale simulations of cultural evolution with human participants (N=1,797), where musical melodies are passed from one person to the next by singing over many “generations”. These experiments reveal causal links between individual cognitive biases and emergent population-level structures, such as musical scales and tonality. Second, I extend this paradigm to experimental social networks (N=2,704), examining how evolutionary mechanisms (i.e., topology and selection) shape the evolution of aesthetically appealing melodies. Finally, I explore hybrid networks combining human participants and AI agents (N = 996), who collectively generate creative short stories by selecting, modifying, and sharing content with their network neighbours. Results show that AI-only networks outperform human groups in generating creative content, but they reduce the diversity of collective creations. Together, this research bridges the psychology of aesthetics, cultural evolution, and creativity, offering a unified experimental framework for understanding how collective creativity emerges in structured human and hybrid systems.

## **Ionela Bara – When the gaze turns away: How *Rückenfigur* shapes aesthetic judgments and gaze behaviour**

Social Brain Sciences Lab, ETH Zürich, Switzerland

Front-facing human figures in visual art play an essential role in shaping social perception and aesthetic experience by directly engaging the viewer through eye contact, facial expression, and bodily cues. In contrast, back-view figures, known as *Rückenfigur*, by obscuring facial and bodily features, have been theorised to promote immersive aesthetic engagement by inviting the viewer to adopt the figure's viewpoint as a means of understanding and appreciating the depicted scene. Yet empirical evidence supporting these claims remains limited. To address this knowledge gap, the current pre-registered study used eye-tracking and Bayesian regression modelling to investigate the extent to which front- versus back-view human figures impact aesthetic experience and gaze behaviour. Fifty participants viewed artworks featuring both figure types and evaluated them on aesthetic preference, perceived understanding, and emotional evocativeness, while their eye movements were recorded. Across all aesthetic dimensions, participants consistently rated artworks with back-view figures higher than those with front-view figures, suggesting that *Rückenfigur*-type representations enhance viewers' aesthetic experience. Gaze behaviour results demonstrated that both figure types captured attention at comparable levels, as reflected in similar dwell times. However, the back-view rather than front-view figures prompted a greater number of fixations, suggesting more sustained visual attentional engagement. Taken together, these findings provide novel evidence for the aesthetic and attentional mechanisms underlying human figure perception in visual art, demonstrating that body orientation critically shapes viewers' aesthetic experience.

## Abstracts – Invited Speakers

### **Zaira Cattaneo - Beyond beauty: The brain and negative aesthetic experiences**

University of Bergamo, Italy

Neuroaesthetics has not given equal attention to positive and negative aesthetic evaluations, mostly focusing on the former and neglecting the latter. However, the engagement of domain-general neural systems suggests that hedonic valuation may occur across a broader affective spectrum - from pleasure to displeasure. In this presentation, I will share the results of a recent meta-analysis assessing neural correlates associated with negative aesthetic evaluations towards visual artwork and with viewing or evaluating negative non-artistic images (taken from the International Affective Picture System). The findings highlight the involvement of several brain regions, including the cerebellum. Focusing specifically on the cerebellum, I will also present preliminary data from a study in which participants evaluated the experience of being moved by positive and negative art whilst receiving non-invasive electrical stimulation on the cerebellum. These data suggest that the cerebellum may indeed play a role in aesthetic experiences - particularly in mediating the experience of being “moved” by art.

### **Julia Christensen – A feasibility study accompanying a hip-hop dance exercise program in school children**

Max Planck Institute for Empirical Aesthetics, Germany

Presenter and co-author(s):

Julia F. Christensen, Klaus Frieler, Daniel Müllensiefen, Christina Minz, Linn Körner, Emily S. Cross, Stefan Lechermann, Franziska Degé, & Fredrik Ullén

A close link between physical exercise, social-emotional learning (SEL), executive function (EF), and wellbeing in children is widely reported. The Berlin Senate for Education, Youth and Family is now offering dance-based supplementary school lessons through The Flying Steps Education gGmbH (FSE), a non-profit dance-teaching organization in Berlin. Certified FSE teachers provide weekly dance classes to >2000 school children in Berlin. The objective of the present investigation was a 10-12-weeks-long feasibility study (May–July 2025), to test whether specific questionnaire measures, applied via an online survey tool, can provide an empirical characterization of possible changes in SEL, EF, and wellbeing. Changes were assessed (1) over time, as children engaged in the dance-exercise curriculum, and (2) as compared to children in a control group (no dance classes). For this feasibility study, a subset of approximately 400 of the current participants in the hip-hop dance program were invited, along with a similar number of control participants who did not receive dance classes (age ranges of 12–15 years; grades 5–9). Approximately 195 children took part in the experiment at Time Point 1 (T1). T2 testing was still ongoing at submission date, with 180 children having completed T2. Results from the feasibility study will be presented and future avenues discussed.

## Abstracts – Invited Speakers

### **Emily S. Cross – Dancing brains, thinking bodies & algorithmic aesthetics**

Social Brain Sciences Lab, ETH Zürich, Switzerland

This presentation explores the intricate interplay between dance, neuroscience, and technology, inspired by age-old questions concerning why do we dance, and what draws us to this mesmerizing art form? Unraveling the complexities behind our innate desire to dance, I navigate through contrasting perspectives, ranging from personal motivations to social bonds. Drawing inspiration from dance scholar Kimerer LaMothe, who posits that humans have evolved as creatures destined to dance for the very essence of our bodily becoming, I examine the psychological, neuroscientific, and AI dimensions of dance perception. This interdisciplinary journey goes beyond a mere dissection of the phenomenology of dance, aiming to reveal new insights that diverse scientific disciplines offer into this universal form of expression. As dance remains a timeless conduit for social bonding, artistic expression, and recreation, my talk argues that the most groundbreaking revelations will emerge at the intersection of arts, sciences, and technology. Emphasizing the transformative potential of collaborative efforts, I contend that the future of dance research lies in transcending disciplinary boundaries and exploring the expansive realm of human experience through bodily movement.

### **Kohinoor Darda - The space between artist, artwork, and audience in context**

ARISA Foundation, India

What does it mean to study art in context? This talk explores what contextual, culturally sensitive, and intersectional research in empirical aesthetics can look like, drawing on my work at the ARISA Foundation, where research, education, and community engagement are equally valued pillars of inquiry. At ARISA, we approach aesthetic experience as a dynamic interplay between the artist, the viewer, the artwork, and the world around them. Our projects examine how context—cultural background, medium of encounter, and social setting—shapes perception, interpretation, and value. We ask: how do individuals from different cultures evaluate the same artwork? Does seeing art in a museum versus digitally shift the nature of engagement? How does solitary viewing differ from collective experience? My talk will also reflect on *Her Canvas, Her City*, an exhibition curated by ARISA at the Zapurza Museum of Art and Culture that features women artists from Pune, India. The project interrogates whether and how artists' intentions align with audience interpretations, raising important questions about authorship, gendered gaze, and the politics of interpretation. Grounded in participatory methods and informed by Indian systems of knowledge and aesthetics, our work invites a more holistic, pluralistic vision for empirical aesthetics—one that foregrounds not only the artwork but the layered, lived contexts in which it is experienced.

## Abstracts – Invited Speakers

### **Ophelia Deroy - Beyond joint action and the inactive audience: Rethinking participation in performance**

Ludwig Maximilian University of Munich, Germany

Music, dance, and theatre are often described as forms of joint action—but this framing creates a double bias. On the one hand, taking the label of joint action seriously, performers are expected to act with clear shared goals and coordination; on the other, audiences are treated as largely passive, even when “participation” is loosely invoked. Both views obscure the fluid, distributed, and often unscripted nature of engagement found in collective improvisation, participatory theatre, and many kinds of dance. This talk introduces a framework based on participatory intentions—the ways in which performers and audiences orient themselves toward responsiveness, contingency, and shared affect. Drawing on empirical research in audience entrainment, and group dynamics, I show how this lens reinterprets existing findings and reveals meaningful distinctions between aesthetic participation and the more rigid, scripted involvement typical of ritual. The result is a conceptual and empirical framework for capturing the real diversity of participation in performance—beyond metaphor, and beyond the binary of action and inaction.

Ophelia Deroy is a philosopher and cognitive scientist whose work redefines how we understand perception and social interaction. Formerly Associate Director at the Institute of Philosophy in London, she is now Professor at LMU Munich, where she directs the Munich Interactive Intelligence Initiative and founded Terra Cognita, a platform bridging science, philosophy, and the arts. A strong advocate for social interaction as a foundation of culture, she has collaborated with institutions including Tate, Getty, Biotopia, and the Museum of Tomorrow.

### **Anna Franklin – Infant visual aesthetics and arts engagement**

University of Sussex, United Kingdom

Whilst infants are unlikely to have a mature aesthetic response, we aim to show that how infants look at art, architecture, colour and natural stimuli has both theoretical and practical implications. First, we present a series of studies which find relationships between adults’ aesthetic judgements and how long infants look at such stimuli. For example, infants look longer at the colours, van Gogh landscapes and building façades that adults find most pleasant. Using image analysis, we identify the role of low and mid-level visual properties in infants’ response. We illustrate how infant looking can provide insight into the sensory component of aesthetics, the role of visual complexity, and the extent to which our visual systems are biophilic. Second, we describe another project where we have investigated infant art engagement in a museum and gallery context. We present further eye-tracking data, alongside recordings from head-mounted cameras worn by infants during visits to Brighton Museum & Art Gallery, which shed light on infants’ visual perspective in this context. We also present a thematic analysis of caregiver interviews following a visit to the Fitzwilliam Museum with their baby: caregivers perceived there to be benefits to their infants’ social and linguistic development, as well to their own postnatal wellbeing. We describe how we have used these findings to produce a resource for museums and galleries on provision for infants. We also describe how professional artists and designers have applied our research to the design of baby drama, books, and sensory materials.

## Abstracts – Invited Speakers

### **Manuel Flurin Hendry – The startup shrink: Exploring human-AI interaction through theatrical performance**

Zurich University of the Arts, Switzerland

"Friendly Fire at the Shrink" is an artistic research project investigating human responses to interactive AI agents. A 3D-printed mask serves as a canvas for a projection-mapped, animated face. User input is captured via camera and microphone, with their speech and facial expressions analyzed for emotional content in real-time. This multimodal data informs a large language model, which generates conversational and emotional responses delivered through synthesized speech and dynamic facial animations via the Unreal Engine. Drawing parallels to Joseph Weizenbaum's pioneering 1960s chatbot ELIZA, our work explores the "ELIZA effect" – the human tendency to anthropomorphize computational systems and project genuine understanding and emotion onto them. The performance is designed as a contemporary case study to probe these psychological mechanisms. Through semi-scripted, emotionally charged interactions, we observe participants readily ascribing consciousness, history, and feelings to the machine, echoing Weizenbaum's concerns about the power of even simple programs to induce "delusional thinking." This presentation argues that performance art can serve as a meaningful and ecologically valid methodology for studying the complexities of human-computer interaction and the nuances of aesthetic and emotional engagement. It provides a bridge between artistic practice and scientific inquiry, offering insights into the psychological impact of emerging AI technologies.

### **Young-Jin Hur - From the sublime to fashion psychology**

University of the Arts London, United Kingdom

Despite the sublime being one of the oldest concepts in modern aesthetic theory, and fashion being among the most common everyday aesthetic objects, empirical research on these topics remains relatively scarce. Based on published and ongoing research, I will present empirical findings that focus on the visual triggers (e.g., presentation size) and emotional dimensions (with a particular focus on fear) of sublime experiences. The talk will then explore recent research on individual differences in clothing preferences, highlighting its implications for everyday aesthetics and the broader study of individual differences.

## Abstracts – Invited Speakers

### **Christine A. Knoop - Genre-specific reading modes and their impact on feelings of uncertainty**

Max Planck Institute for Empirical Aesthetics, Germany

Genre impacts the way we read: it affects reading speed, semantic and formal processing, and the way we evaluate and remember texts after the reading process is completed. Readers are known to adopt genre-specific reading modes even before they start reading; these reading modes are shaped by expectations that can be met, altered, or frustrated during reading, but that also influence the reading process itself. Genre-specific reading modes have the potential to create feelings of uncertainty in the reader, as these feelings often form part of genre expectations. They may pertain to the plot (the sequence of events) or the story (the emotional and thematic elements and arrangement) of a narrative, e.g., in a crime novel. They may also pertain to phonological or morpho-syntactic aspects, e.g., in contemporary poetry. However, in other genres, genre-specific reading modes show the opposite potential, namely by easing the effects of semantically challenging, counterintuitive or even contradictory information, like in the fairy tale or in folk poetry. Based on recent research on poetry, metaphor, fairy tales, and narrative suspense, this presentation explores the link between genre-specific reading modes and feelings of uncertainty and discusses the role of style in this dynamic. Furthermore, it examines the extent to which different genres develop different uncertainty profiles to strike an engaging balance between predictability and unpredictability that keeps the reader challenged, but not overwhelmed. Lastly, it looks into how different genres attract different personality types, not all of whom are equally interested in feeling uncertainty during reading.

### **Susan Magsamen - Building cohesion in the neuroarts field: A framework for interdisciplinary research and collaboration**

International Arts + Mind Lab, Johns Hopkins University, USA

Presenter and Co-Authors/Co-Presenters:

Susan Magsamen, Emmeline Edwards, Indre Viskontas

The emerging field of neuroarts is rapidly evolving at the intersection of brain science, arts, health and wellbeing with the goal of making arts and aesthetics mainstream in medicine, public health and society. While research in this domain has grown in recent years, it remains fragmented across disciplines, institutions, and methodologies. Establishing a coherent and collaborative framework is essential to advance all the disciplines in the neuroarts ecosystem into a mature field. Interdisciplinary collaboration is the cornerstone of this evolution, ensuring that scientific rigor, artistic practice, and lived experience inform and strengthen each other. Research cohesion in the neuroarts field will lead to more consistent findings, shared resources, and scalable, impactful applications. This presentation outlines the development of a structured neuroarts research agenda designed to establish theoretical foundations, identify mechanisms of action, and define appropriate methodologies to study the effects of the arts on brain health and well-being. Drawing on the collaborative work of thought leaders, the research agenda provides guidance for cross-sector engagement, shared language, and data harmonization. The goal is to foster a unified, collaborative neuroarts research ecosystem that can drive the field forward. The session is an invitation to review the research agenda and provide additional insight.

## Abstracts – Invited Speakers

### **Enric Munar - What have we learned on preference for curvature in recent decades?**

University of the Balearic Islands, Spain

Presenter and Co-Authors:

Enric Munar & Erick Chuquichambi

In academia, we have evidence of preference for curved lines at least two centuries ago when Hogarth (1753) wrote that curved lines are ornamental because they vary in length and in degrees of curvature, whereas straight lines vary only in length, and therefore are less ornamental. Our group has been studying this preference for more than a decade, so we already have some conclusions. We will present our most relevant findings and relate them to other studies. So, we found preference for curvature in small-scale societies relatively uninfluenced by Western culture. We also found it in great apes. The effect size is bigger in meaningless patterns than in images of real objects. People react faster to circles than triangles, contrary to some studies. We also found that the effect is mainly caused by an inclination toward curved contours and not by rejecting sharp-angled contours. Familiarity does not explain the effect. We found that curved drawings are also preferred to draw than sharp-angled ones. We found the effect in paintings, both in the lab with digital paintings and in museums, with the original artworks. There is a remarkable breadth of variation among participants in most of our studies. In a systematic meta-analysis, we found a medium effect size of the visual preference for curvature that and the results suggested that the effect is a reliable but not a universal phenomenon. However, we advocate that the effect seems innate as it manifests itself behaviourally in certain situations that favour its appearance.

### **Guido Orgs - The neurocognition of liveness**

University College London, United Kingdom

Evolutionary theories propose that dance and music have evolved as collective rituals for social bonding and signaling. Yet, neuroscientific studies of these art forms typically involve people watching video or sound recordings alone in a laboratory. Across three live performances of a dance choreography (Detective Work, by Seke Chimutengwende in collaboration with Stephanie McMann), we simultaneously measured real-time dynamics between the brains of up to 23 audience members using mobile wet-electrode EEG. Interpersonal neural synchrony (INS) in the delta band (1–4 Hz) was highest when performers directly interacted with audience members (breaking the fourth wall) and varied systematically with the dancers' movements and artistically predicted and actual continuous engagement. In follow-up studies using video recordings of the performance we show that audience brain synchrony and engagement are highest when dance is experienced live and together. Thus, the ancient social functions of the performing arts are preserved in engagement with contemporary dance.

## Abstracts – Invited Speakers

### **Andrea Orlandi - When your brain goes padam-padam: Cardiac interoception shapes biological motion aesthetic evaluation**

Sapienza University of Rome, Italy; Macquarie University, Australia

Over the last decades, growing attention to internal bodily signals has highlighted their role in shaping cognitive and emotional processes. Evidence shows that cardiac interoception influences the perception and evaluation of emotional faces, affecting judgments of intensity and trustworthiness, and modulating memory and emotional learning. Recent findings extend these effects to emotional and aesthetic evaluations of static dance postures. To expand this research, we preregistered a series of studies investigating how cardiac signals and their awareness influence aesthetic appreciation of biological motion, a key aspect for social cognition. We created point-light videos of upright human walkers and compared them with inverted and scrambled versions. Pairs of videos from the same category were presented side by side, with one always faster than the other. On half of the trials, the slower video matched participants' heart rate, and on the other half, the faster video did. Participants indicated which video they preferred and which appeared faster. Cardiac interoceptive accuracy was assessed using the heartbeat counting task, along with empathic, cognitive, and anxiety traits, and interoceptive capabilities. Our findings reveal a general preference for faster over slower videos, regardless of movement category. Importantly, participants also preferred walkers synchronized with their heart rate, but only when upright, not inverted. Interoceptive cardiac accuracy further modulated preference for synchronized videos. These findings indicate that the integration of interoceptive cardiac signals with visual configurational processing contributes to aesthetic preferences for human movement, possibly reflecting an entrainment-like mechanism underlying embodied social cognition.

### **Letizia Palumbo - Space design and well-being: The restorative effect of multisensory environments**

Liverpool Hope University, United Kingdom

Presenter and Co-Authors:

Letizia Palumbo, Nooshin Momenzadeh, Tobiasz Trawinski, & Irene Senna

Understanding sensory sensitivity and preferences is essential in the design of restorative spaces. Multisensory rooms (MSRs) are increasingly being adopted to enhance overall well-being in educational, therapeutic, and community settings. This study aimed to: 1) explore individual differences in sensory sensitivity and preferences using an online questionnaire (N = 111); and 2) assess the effectiveness of a multisensory space on mood and arousal (N = 34). The experimental task in the sensory room employed a within-subjects design with six conditions, each lasting five minutes. Participants began with a rest condition (baseline) without sensory stimulation. This was followed by the presentation of 60 emotional images from the International Affective Picture System (IAPS), 30 positive and 30 negative (counterbalanced). The MSR conditions consisted of observation of the available sensory tools (contemplation) and interaction with preferred tools (engagement). Each MSR condition was preceded by the baseline and IAPS conditions. Galvanic Skin Response (GSR) was recorded using a portable device during each condition, and subjective valence and arousal were rated using the Self-Assessment Manikin (SAM) at the end of each condition. The results showed that only the engagement condition significantly reduced GSR (corrected to baseline) compared to the IAPS condition. In terms of subjective arousal and valence, both contemplation and engagement conditions were effective. Overall, the findings highlighted individual variations in preferences for sensory stimulation and demonstrated that active engagement with preferred multisensory tools had a positive restorative effect. This study offers insights for the design and implementation of multisensory spaces.

## Abstracts – Invited Speakers

### **Hanna Poikonen - Dance experts' brain oscillations during live performance and transfer effects in rehabilitation**

ETH Zurich, Switzerland

How does dance influence in our brain functions, wellbeing and health? In this talk, I will cover our EEG research made with professional dancers and musicians in laboratory and theater contexts in collaboration with the McMaster University and University of Helsinki. Our results suggest that dancers have stronger theta phase synchrony than novices when watching dance on video and live in a theater, and that expertise in music or dance enhances delta phase synchrony when watching live dance or listening to music, respectively. In addition, I will present our ongoing InMotion intervention study, made in collaboration with the Örebro University Hospital, which combines creative movement and physical exercise aiming to alleviate negative symptoms in adults with schizophrenia, and two educational Erasmus+ projects co-funded by the European Commission: DanceBrainRehab (2023-2024) and DanceCARE (2024-2026). In DanceBrainRehab our partners from Italy, Spain and Romania applied dance for fragile groups like dementia, autism and psychotic illnesses. In DanceCARE, we design and test a dance intervention, which combines the dance movement therapy and WiseMotion methods, to support emotional wellbeing and resilience of long-term caregivers in Spain, Italy and Greece.

### **Eva Specker - Varieties of aesthetic experience: Considering breadth, length, and depth**

Leibniz-Institut für Wissensmedien (IWM) & University of Tübingen, Germany

Presenter and Co-Authors:

Eva Specker, Anna Lena Knoll, Tristan Barriere, & Helmut Leder

Aesthetic experience has been a highly debated concept in both psychology and philosophy, leading some to argue for abandoning the term. In the current paper we put forth an alternative approach. We propose that aesthetic experience is a continuum rather than discrete: i.e. experiences can be characterized as more or less aesthetic rather than as being aesthetic or not. We argue that if we explicitly consider the three dimensions of breadth, length, and depth, we can have a more systematic discussion. Specifically, we argue that if we acknowledge the wide breadth of aesthetic experience and allow for variations in length and depth (i.e. a continuum) then the concept of aesthetic experience can be a very useful concept for empirical aesthetics. The aim of the paper is not to end discussion, but rather to reshape the current discussion with this new perspective.

# Abstracts – Invited Speakers

## **Eftychia Stamkou - Awe awakenings: The experience of awe in early childhood**

University of Amsterdam, Netherlands

Presenter and Co-Authors:

Eftychia Stamkou, Berkan Akin, Dacher Keltner, Eddie Brummelman, & Milica Nikolic

In a world brimming with enigmas and wonders, the experience of awe—a prototypical aesthetic emotion—should naturally captivate the young explorative mind. Yet, in stark contrast to the flourishing body of research on aesthetic experiences and awe in adults, the scientific understanding of these emotions in early childhood remains underexplored. This gap largely arises from methodological constraints and outdated assumptions that young children cannot experience complex aesthetic emotions without a fully developed sense of self. Addressing this gap, the present research systematically investigates the emergence and nature of awe in early childhood (0-7 years) through a series of four preregistered studies using diverse methodologies, including parental recollections (Study 1, N=150), naturalistic observations (Study 2, N=300), and controlled laboratory experiments with validated artistic stimuli (animated films; Study 3A, N=301 Study 3B, N=70). The findings reveal that awe emerges earlier than previously assumed, with clear experiences reported as early as toddlerhood. Unique childhood-specific elicitors of awe, such as fictional scenarios, differentiate early aesthetic experiences from adult triggers. Distinct expressive profiles (wide eyes, jaw drop, stillness, exclamations) observed in both naturalistic and lab settings further distinguish awe from related emotions like joy and surprise. Physiologically, awe corresponds with increased parasympathetic nervous system activation, indicated by elevated respiratory sinus arrhythmia (RSA). Collectively, these findings challenge existing theories of emotional development, establishing that children as young as two years old fully experience aesthetic awe. This research enriches the theoretical understanding of aesthetic emotions, highlighting awe's critical role in early emotional and aesthetic engagement.

## **Magda Stanová - Fade rate combo**

Academy of Fine Arts in Prague, Czech Republic

A repeated joke isn't funny, but looking at the night sky seems to impress us every time. A metaphor often turns into a cliché, but sometimes it becomes a regular expression. Some experience triggers—artworks gossips, movies, stand-up, sport watching, botanical gardens—wear off quickly, others slowly, while some might get better and better over time. Are triggers that “always work” fading as well, but so slowly that we die before we notice them fading? Can we foresee at first sight whether an artwork will grow on us? Can genres be distinguished according to the shapes of fade-rate curves? And what happens when two or more triggers of various fade rates are mixed together (e.g., reproductions of artworks trapped in outdated calendars, thinking about deep time during a guided tour through a cave only to be interrupted by an invitation to throw a coin into a puddle and make a wish)? In this drawing-based talk, I will combine my experience of an artist with ideas from cognitive sciences about creative process and perception of art.

## Abstracts – Invited Speakers

### **Edward A. Vessel - The role of the default-mode network in aesthetic appeal**

City College, The City University of New York, USA

Presenter and Co-Authors

Edward A. Vessel & Hannah Ovadia

Aesthetically appealing experiences, during which a person derives hedonic pleasure from the act of sense-making, can be highly impactful. In several brain imaging studies, we have found that in addition to modulation of sensory and reward systems, aesthetically appealing experiences with visual art engage the default mode network (DMN), a set of brain regions thought to mediate aspects of internally directed mentation. Our working hypothesis is that moving experiences with artwork are accompanied by simultaneous external and internal focus, a mental state that enables artwork to “reach inside” and resonate with, or even modify, the self-construct. Yet the exact role of the DMN in aesthetic judgment remains unclear. Here we present an updated view of DMN engagement drawn from literature on a wider range of aesthetic domains, including visual art, music, dance, landscape and narrative arts. DMN activity and connectivity increase for a variety of appealing and engaging stimuli including narratives and some cases of music and dance, but not during other experiences with music nor for appealing landscapes. Given this heterogeneity, we evaluate several alternative hypotheses for how the DMN contributes to aesthetic appeal, focusing on the network’s role in sense-making. We suggest that differential DMN engagement for aesthetically valued stimuli reflects differences in the need for integration of complex information – between external information and internal aspects of the self-construct, and also across time. By studying these rare yet deeply meaningful brain states, cognitive neuroscience can achieve a more complete understanding of complex network dynamics during naturalistic cognition.

### **Indre Viskontas - Are we there yet? Creating meaningful yet rigorous neuroscience-informed experiences with large cultural institutions**

University of San Francisco, USA

In this talk, Dr. Indre Viskontas will present her insights and approach to creating meaningful neuroscience-informed experiences in collaboration with arts organizations, museums and for-profit companies. Trained as both a neuroscientist and an opera singer, Dr. Viskontas turned to stage direction and event consulting as a way of capitalizing on her unique skill set as a neuroscientist and story-teller. She will discuss her work with several large cultural institutions, infusing neuroscience into their offerings, including developing an interactive neuroscience of creativity activation during an immersive Van Gogh experience at South Florida PBS, using live brain tracking during a concert with the New World Symphony, consulting for the Museum of Science and Industry in Chicago on an immersive exhibit about music and the brain, developing a chill-inducing playlist for a partnership between Now that's what we call music and Sonos and her ongoing collaboration at the California Academy of Sciences in San Francisco, investigating the impact of conservation photography on museum guests. As the President of the Society for the Neuroscience of Creativity and the Chief Science Officer at Reverberation, a company co-founded by musician Peter Gabriel to help "everyone do everything better with music", she will map out her view of the future direction and opportunity space in the field of applied neuroaesthetics, in the context of work with large cultural institutions.

## Abstracts – Invited Speakers

### **Johan Wagemans - How to enrich empirical aesthetics research? A story about gaps, bridges and stepping stones**

University of Leuven (KU Leuven), Belgium

Arts engagement and aesthetic experience are rarely studied in their full-blown forms in empirical aesthetics, computational aesthetics, and neuro-aesthetics. The majority of studies in these scientific areas of research are focused on stimulus factors in relation to responses on rating scales, and neural correlates of participants looking at images of natural scenes or paintings. This situation reflects a huge gap between the humanities and the sciences (C.P. Snow's "two cultures") and between the arts and the sciences more broadly. In this talk, I will try to sketch a path towards more integration, an attempt to bridge these gaps. The essence is to provide intermediate stepping stones in the form of studies that go beyond the mainstream S-R focused approaches, acknowledging the role of individual differences (e.g., art interest and expertise), additional information (e.g., about the materiality of an artwork or the intention of the artist), context (e.g., lab or museum), and their interactions. I will present some examples of ongoing studies in my research group that try to dig deeper into proper engagement with art and richer forms of aesthetic experience than those generated by brief snapshots of images on computer screens when participants provide ratings. I will also discuss some challenges and limitations of such studies. The bottom-line will be a plea for more diversity in research methods, because the key is in their complementarity.

### **Eugen Wassiliwizky - The art of perception: Tracing the aesthetic attitude in the brain**

Max Planck Institute for Empirical Aesthetics Germany & Karolinska Institutet, Sweden

Presenter and Co-Authors:

Eugen Wassiliwizky & Fredrik Ullén

What does it mean to perceive the world from an aesthetic attitude? This long-standing concept from the philosophy of aesthetics refers to a distinct mode of perception and engagement, characterized by focused attention, emotional sensitivity, and openness to the sensory and affective qualities of objects—often facilitating what is termed an aesthetic experience. The aesthetic attitude (also called aesthetic stance) enables individuals to vividly perceive and appreciate qualities such as beauty, harmony, or expressive form in both natural objects and human-made artifacts. In this neuroimaging study, we sought to identify the neural correlates of the aesthetic attitude across a range of stimulus types. To trigger this particular mode of processing, participants were asked to dwell on and rate the beauty of three categories of stimuli: natural objects with biological relevance (human faces), natural but biologically irrelevant objects (butterflies), and a human-created artform (piano recordings of arpeggios, i.e., broken chords played sequentially). These beauty evaluations were contrasted with a non-aesthetic task in which participants rated shape-related features of the same stimuli (facial roundness, butterfly wing aspect ratio, arpeggio velocity). This design allowed us to probe both domain-specific and domain-general neural mechanisms underlying an aesthetic attitude. By including both natural and artistic stimuli, and distinguishing between biologically relevant and irrelevant categories, we offer a broader and more nuanced view of how the brain adopts an aesthetic stance across different domains of perception.

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# Abstracts for Poster Presentations

## **1. What is in an aura? Emotion sharing between contemporary artists and viewers of the post digital age in original and digital contexts**

Alexandra Victoria Alvarez (Ava)<sup>1,2</sup>, Eva Specker<sup>3</sup>, Theresa Demmer<sup>1</sup>, Adrian Biel<sup>1</sup>, & Kristoffer Sturm<sup>1</sup>

<sup>1</sup>University of Vienna; <sup>2</sup>University of Continuing Education Krems; <sup>3</sup>University of Tübingen

In the post-digital age, an era defined by the ubiquity of digital technologies in everyday life, museums, hospitals, and educators increasingly rely on digital surrogates to present artworks to their audiences. Yet, the epistemic and emotional implications of this shift remain underexplored. While prior research has independently demonstrated that artists and viewers can share emotional responses, and medium affects art experience, these threads have rarely been brought together. This project addresses that gap by investigating how mediation, the technological and contextual reshaping of an encounter, influences emotional resonance between contemporary artists and viewers across original and digital contexts. We collaborated with four professional, internationally exhibiting artists, each commissioned to create two original artworks and systematically record their felt emotions during the creation and the specified intended emotions of each piece. The artworks were shown in two mixed-media gallery conditions, each displaying eight paintings: one original and one same-sized digital surrogate from each artist. Viewers' reported their emotions using a 16-item scale of phenomenal experiences, and were also asked to infer both the artists' intended emotions and felt emotions during painting. Preliminary patterns suggest that emotional transmission occurs across both modalities, though possibly in different forms. Building on findings by Specker et al. (2020), we also consider how perceived genuineness of the artwork may moderate affective engagement. Rather than framing digital formats as diminished, our design explores how the psychological encounter with an artwork is preserved, transformed, or even amplified. We propose that affective synchrony between artist and viewer offers an empirical pathway to conceptualizing the artwork's aura (Benjamin, 1936) in an increasingly mediated world.

## **2. Improvising with machines: AI and the art of real-time musical interaction**

Oded Ben-Tal<sup>1</sup> & Örjan de Manzano<sup>2</sup>

<sup>1</sup>Kingston School of Art, Kingston University London, United Kingdom

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Recent advances in AI have been used for generating music, paintings, poetry and resulted in eye-catching headlines. Most of the focus has been on the artefacts generated; how they measure-up to human creations or can be deceptively presented as such. In music, companies such as Udio or Suno promise that anyone can become a songwriter or media composer with just a few mouse clicks; but what about live music extemporization? Can AI meaningfully improvise alongside human musicians in real time on stage in front of an audience? Since 2022, Dr. Ben-Tal has been developing an AI-inspired system for live, real-time improvisation with a human partner. Improvisation is a particularly interesting domain to study as it melds together most aspects of music – listening, performing, creating, evaluating, imagining – live and in real-time. As such, it is highly demanding for humans and uniquely challenging for a computational system. Together with Dr. de Manzano they saw this challenge as an opening for a collaborative Science-Art research project exploring the musical, technical, and conceptual challenges of putting AI on stage as an improvisation partner. In addition, this endeavour has offered opportunities to interrogate notions of creativity, performance, and flow experiences through the lens of human-computer co-creation. We will discuss the ongoing development of the AI system, the musical interactions with different pianists, and results from interviews and physiological measurements of pianists engaging in free improvisation with an artificial partner in the unique setup of the ArtLab at the Max Planck Institute of Empirical Aesthetics.

# Abstracts for Poster Presentations

### 3. Exploring aesthetic perception of educational robots among university students

Manuel Bernal-Lecina<sup>1,2</sup>, Lucie Klose<sup>1</sup>, Léa M. Pereyre<sup>1</sup>, & Luca Leisten<sup>2,1</sup>

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Public perception of robotics and artificial intelligence (AI) is increasingly shaped not only by functionality but also by aesthetic, emotional, and experiential dimensions. Recent research highlights how visual and emotional design significantly influence trust, engagement, and acceptance of robotic systems, especially in public and educational contexts. Aesthetic appeal has been shown to impact user affection and perceived trustworthiness, while emotional design enhances engagement by addressing users' visceral, behavioral, and reflective responses. Furthermore, imagined affordances—the culturally and socially shaped interpretations of what a technology can do—play a critical role in mediating these perceptions and guiding user expectations. To explore how these dimensions resonate with higher education populations, we conducted initial validation rounds of online questionnaires among students from Swiss universities. The first round (N = 51) focused on general attitudes and conceptual associations with robotics, while the second (N = 15) investigated preferences related to robot aesthetics and emotional expressivity. These preliminary findings inform the refinement of our instruments, paving the way for a broader, cross-institutional deployment. Our results underscore the importance of designing robotic systems that appeal to users on both aesthetic and emotional levels, particularly in educational and public settings where engagement and trust are key to adoption, while keeping equity and gender biases at bay. Future work will involve scaling these surveys to diverse university populations, incorporating cultural and social variables, to better understand and shape human-centered robotic and AI development.

### 4. Developing a dance intervention for healthy aging: Dance for intergenerational community engagement

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Cognitive, physical, and social decline are inevitable as we age. Arts engagement, exercise, and intergenerational interactions can help to mitigate the deleterious effects of age-related decline. Dance-for-health interventions that combine the aesthetics of art and athletics of exercise show particular promise as accessible, effective ways to promote health and wellbeing in older adults. Despite this promise, the field lacks consensus on intervention design and reporting, and has not rigorously explored the suggested further health benefits offered by intergenerational interactions. In response to the dance-for-health field's call for co-designed, theory-driven, well-reported interventions tailored to participants' needs, we are in the process of developing **Dance for iNtergenerational Community Engagement (D4NCE)**. This program integrates theories of social cognition, healthy aging, and dance-health research to support cognitive, physical, and social health in older adults. Once developed, D4NCE will be implemented in a real-world community setting. D4NCE creation and implementation consists of three phases: 1) Co-design through focus groups, 2) Specification of intervention elements by researchers, 3) Intervention implementation including pre and post cognitive, physical, and social measures. Given past findings, we hypothesize: D4NCE will improve some cognitive, physical, and social outcomes, and intergenerational interactions will enhance such improvements more so than same-generational interactions. Overall, we aim to develop and implement a dance intervention to support health and wellbeing in older adults, as enhanced by intergenerational interactions. This would offer older adults an accessible and enjoyable way to form meaningful bonds with other individuals of various ages, while simultaneously mitigating the effects of age-related decline.

# Abstracts for Poster Presentations

## **5. Artistic insights into psychiatric care: Architectural and therapeutic interventions at Klinik Hietzing**

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Blurring the boundaries between art and science, this study examines how dynamic natural and architectural elements influence psychiatric care at Klinik Hietzing in Vienna. Building on prior research into virtual window views, we focus on the therapeutic potential of open, unfenced gardens, circular layouts, and historical facades that shape patient well-being. Through interviews, observational studies, and a historical review of Vienna's evolving psychiatric facilities, we illustrate how artistic principles and empirical methods converge to reduce stress, promote autonomy, and strengthen social ties. The synergy between nature and architecture engages multiple senses—visual, tactile, and social—thereby transforming institutional spaces into immersive healing environments. Findings reveal that design features such as biophilic elements, daylighting, and fluid circulation can counteract stigma, enhance community integration, and foster holistic recovery.

Multidisciplinary collaboration among architects, healthcare providers, and researchers emerges as essential for optimizing mental health outcomes. By embracing a patient-centered approach that prioritizes inclusivity and historical continuity, Klinik Hietzing sets a precedent for reimagining psychiatric care as a space of refuge, belonging, and renewal. The results highlight the importance of bridging aesthetic sensibilities with evidence-based practice, offering actionable insights for stakeholders seeking to integrate dynamic, nature-driven strategies into mental health infrastructure. Additionally, the historical analysis culminated in a large-scale hand-drawn visualization, an artistic communication aimed at engaging the wider public in the evolution of psychiatric facilities. Ultimately, this art–science synthesis paves the way for future research and innovation in therapeutic design, showcasing how architecture can serve as a catalyst for transformation and recovery.

## **6. Semantic congruence overrides shape effects in product preference and taste expectations**

Erick Gustavo Chuquichambi<sup>1</sup>, Nina Veflen<sup>2</sup>, Enric Munar<sup>1</sup>, & Carlos Velasco<sup>2</sup>

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People infer the taste of products based on semantic knowledge (e.g., associations with category and brand elements). They also link shape features with certain taste qualities through inherent associations commonly referred to as crossmodal correspondences. This research examined how shape influences the evaluation of familiar and unfamiliar products, and thus varying levels of semantic knowledge. Participants evaluated the expected taste, familiarity, liking, and willingness to purchase products with curved and angular logos paired with sweet, bitter, and neutral characteristics, as well as unfamiliar products. The results of Experiment 1 indicated that the curved logos were preferred and associated with greater sweetness, while the angular logos were less preferred and associated with bitterness. However, in Experiment 2, these differences disappeared when the logos were paired with familiar (sweet, bitter, and neutral) and unfamiliar product packages. In Experiment 3, the expected tastes for the logos were more pronounced when they were framed as representing new or unfamiliar products than sweet and bitter familiar products. The difference in expected sweetness between curved and angular logos was greater for unfamiliar products than for familiar sweet products, and the same pattern was found for expected bitterness. These findings suggest that feature-based expectations of taste are absent or diminish when semantic knowledge about the products is greater.

# Abstracts for Poster Presentations

## **7. Art in your pocket: Can microdoses of art via a neuroaesthetic mobile app enhance wellbeing and emotion regulation?**

Jennifer Davison<sup>1</sup>, Matthew Pelowski<sup>2</sup>, Guiomar del Cuvillo Schröder<sup>3</sup>, & Bea Robein

<sup>1</sup> Arts for Health Austria

<sup>2</sup> University of Vienna, Department of Neuroaesthetics and Cognitive Psychology

<sup>3</sup> University of Amsterdam, Department of Psychology

In response to rising mental health challenges and the need for accessible, humane tools, this study evaluates the *ArtWave App* – a mobile intervention delivering curated “microdoses” of art (visual, literary, and performing) to support emotion regulation, reduce stress and cravings, and address loneliness. Grounded in neuroaesthetic theory and arts-in-health research, the app invites users to “tune in” to their emotional and physical state, then presents a brief artwork tailored to their reported feeling and energy level. Using an ecological momentary assessment (EMA) design, we followed 36 university students over three weeks. After a one-week baseline with no app use, participants received twice-daily prompts to report mood and could optionally engage with one artwork per prompt. Immediate affective shifts were captured via in-app pre/post measures, while end-of-day diaries and pre/post surveys assessed longitudinal outcomes (e.g., mood, stress, cravings, loneliness, wellbeing, and emotion regulation). This exploratory study examines (1) engagement and usage patterns, (2) changes in emotional state and self-regulation, and (3) the feasibility of a scalable, digital art-health intervention. Developed by artists and wellbeing facilitators, *ArtWave* aims to democratize access to the emotional benefits of art by offering a scalable, user-friendly intervention that integrates easily into daily life. This project explores a novel synthesis of science, art, and technology – demonstrating how small, engaging artistic moments can spark meaningful emotional shifts, build self-regulatory capacity, and foster emotional resilience in the digital age through accessible and enjoyable micro-interventions.

## **8. Measuring embodied attention in Japanese architecture**

Susana dos Santos

Tokyo University, Japan

This research explores the intersection of architecture and neuroscience by investigating how real architectural spaces affect human attention. Using an embodied approach, the study applies Mobile Brain/Body Imaging (MoBI) and EEG technology to analyze real-time neural and physiological responses as individuals move through built environments. Focusing on selected Japanese architectural spaces, chosen for their simplicity and the atmosphere attributed to them, the study examines how elements such as scale, materiality, and spatial transitions influence attention and bodily experience. Rather than relying on simulations or representations, the research prioritizes in-situ exploration of actual spaces to capture lived, multisensory perception. Participants from two groups—individuals with no specific movement training and professional dancers—are recorded while walking through these environments. This comparative approach allows the study to identify differences in attentional engagement and bodily awareness shaped by prior movement experience. By integrating architectural analysis with neuroscientific data, the research contributes to the emerging field of neuroarchitecture and provides evidence-based insights for designing more attuned and human-centred environments. This interdisciplinary approach supports a broader understanding of architecture as an active agent in shaping experience—where perception is not only visual but also embodied. Ultimately, the study seeks to elevate the body not as a sum of parts, but as a unified and essential medium through which space is sensed, experienced, and understood.

# Abstracts for Poster Presentations

## **9. Exploring aesthetic emotional responses in depression: From visual images to artworks**

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Department of Psychology, University of Milano-Bicocca, Italy

Aesthetic experience involves a complex interplay of perceptual, cognitive, and emotional processes in response to aesthetic stimuli, resulting in evaluative judgments and subjective emotional states. Based on the assumption that emotional responses emerge from automatic and subjective evaluations of stimuli, with the artistic context fostering appraisal processes that shape affective experience, we present a research project exploring the relationship between aesthetic emotions, depression, and the perception of artworks. As a first step, we conducted a systematic review of the literature on the processing of emotionally valenced visual stimuli (negative, positive or neutral) in individuals with depressive symptoms, aiming to establish a baseline for disambiguating responses to images with and without artistic value. Inclusion criteria were: (1) recruitment of participants with depressive symptomatology, (2) quantitative assessment of emotional responses, and (3) focus on visual emotional stimuli, excluding studies on facial expressions. Preliminary findings (seventy studies) indicate that depression is associated with a tendency to interpret negative, ambiguous, or neutral stimuli more negatively, and positive stimuli less positively. This altered emotional processing is supported by neuroimaging and physiological data. Aesthetic emotions are influenced not only by features of the artwork but also by viewer characteristics, such as prior art knowledge, past experiences, personality traits, and affective states. Guided by this framework, the second phase of our research will investigate how depressive symptoms modulate emotional and aesthetic evaluations of artworks with different emotional valences, using behavioural and neuroimaging methods. This will help clarify how mood-related biases shape the experience and perception of art.

## **10. Neuroaesthetics and color perception: Towards a state of the art**

Consuelo González-Dávila Boy<sup>1</sup>, María Concepción Morán Martínez<sup>1</sup>, & Gabriela Pérez Acosta<sup>2</sup>

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Neuroaesthetics is an interdisciplinary field that combines neuroscience, psychology and art to investigate the brain processes involved in the aesthetic experience. In this sense, the perception of color becomes relevant due to its influence on emotion, cognition and aesthetic valuation of human beings. The present work aims to make a state of the art through a documentary review that systematizes the theoretical, methodological and empirical advances based on the relationship between neuroaesthetics and color perception. It is planned to analyze the main theories and findings on the neural mechanisms involved in the aesthetic experience, as well as the emotional responses generated by different visual stimuli. It also examines the research methods used, including neuroimaging technologies and recordings of brain electrical activity, and highlights the contributions of contemporary artistic proposals — such as James Turrell's light installations — that allow studying the interaction between perception, context and artwork. The review also identifies current theoretical and methodological challenges, emphasizing the need for interdisciplinary work. It is concluded that, as technology evolves, neuroaesthetics has the potential to offer a more precise and comprehensive understanding of color-mediated aesthetic experience, providing the opportunity for new lines of research that will allow us to understand aesthetic experience at the cerebral, cognitive and social levels.

# Abstracts for Poster Presentations

## **11. Form aesthetics of the blind: How touch and vision affect the aesthetic appreciation of three-dimensional forms**

Golfam Goodarzi & Ronald Hübner

Department of Psychology, University of Konstanz, Germany

Despite a growing interest in empirical aesthetics, research predominantly focuses on the visual modality, largely neglecting other senses. This is particularly true for aesthetic experiences conveyed through the haptic sense. Furthermore, the limited existing studies in this area primarily examine the aesthetic haptic effect of surface features like texture. To address this gap, we conducted a study on haptic form aesthetics, investigating how blind individuals aesthetically evaluate various objects. We also included sighted participants to explore the influence of visual experience, employing three conditions: touch only (blindfolded), see and touch, and see only. The stimuli consisted of diverse three-dimensional objects: an Archimedean spiral, a golden spiral, seven S-shaped figures with varying curvatures, and three polygonal shapes (curved or angular). Participants judged these objects based on aesthetic criteria. Our results indicate that touch and vision lead to different aesthetic preferences. Notably, for certain shape features, preference increased as the influence of vision decreased. For instance, the haptically preferred curvature of the S-shaped figures was more pronounced than the visually preferred curvature. Overall, our findings demonstrate that shape aesthetics mediated by touch differ significantly from those mediated by sight, especially for blind individuals with no visual experience. These results suggest that formal features intended to elicit positive aesthetic experiences should be modified or emphasized depending on the sensory modality involved.

## **12. God, nature and AI: How Christians and non-religious people differ in their views on art**

Gregor U. Hayn-Leichsenring

Institute of Anatomy I, University Hospital Jena, Germany

This study investigates whether the religiosity of individuals is related to their view of art. 471 participants (308 Christians, 168 non-religious) were asked to fill out a questionnaire on opinions on artworks. In comparison, Christians were more likely than non-religious people to state that items must fulfil a social function to be considered as artworks. In contrast, non-religious people were more inclined than Christians to state that it is the intention that makes an item an artwork. The same participants were asked to categorize 100 single items from 13 different classes as “artwork” or “no artwork.” Overall, Christians and non-religious people categorized the same number of items as artworks. However, while Christians categorised natural objects, AI objects and body ornaments as artworks with greater frequency, non-religious people did so with music, literature and photographs. As an example for a single item, the universe was considered to be an artwork by 45% of Christians, but only by 20% of non-religious people. Christians tend to see natural objects as art, perhaps because they believe that nature was generated by a Creator. Furthermore, Christians are also more likely to categorise AI objects as artworks than non-religious people, which is perhaps because they are more open to the idea that there is creativity (divine or artificial) to produce works of art outside of human agency. The results indicate that religiosity not only has an influence on how people think about art but also show that Christians view different items as artworks than non-religious people.

## Abstracts for Poster Presentations

### **13. Aesthetic appreciation of Japanese traditional dance: A mixed-methods cross-cultural comparison between Japanese and German perspectives**

Jimpei Hitsuwari, Selina Weiler, Maria Manolika, & Thomas Jacobsen

Helmut Schmidt University, Germany

This mixed-methods study investigated the cross-cultural aesthetic appreciation of Bugaku, a traditional Japanese court dance performed in religious ceremonies for over a millennium, between Japanese and German viewers. In Study 1, we combined questionnaires with German Bugaku practitioners and an interview with a Japanese Bugaku instructor in Germany. Results revealed cultural differences in the perception of Bugaku's movements, characterized as slow, flowing, and grounded compared to Western dance. German participants reported experiencing awe and sublimity when viewing Bugaku, highlighting its transcendent qualities. In Study 2, Japanese (n = 392) and German (n = 409) participants watched a professional Bugaku performance and evaluated it on aesthetic dimensions derived from Study 1. Factor analysis identified five dimensions: Preference, Transcendental Experience, Gracefulness, Harmony and Structure, and Movement Comprehension. Japanese participants reported higher ratings for preference, transcendental experience, gracefulness, and perceived harmony, while German participants reported higher movement comprehension. Hierarchical multiple regression analyses controlling for demographic variables and other individual differences revealed two significant cultural interactions: cultural background moderated the relationship between movement comprehension and preference, with higher comprehension predicting lower preference among Germans but not Japanese, and culture also moderated how harmony and structure influenced gracefulness perception, with this relationship being stronger among German participants. This cultural variation can be attributed to differences in cognitive processing styles (holistic versus analytical) and long-term memory representations formed through cultural exposure. Our findings demonstrate how traditional performing arts are experienced through culturally specific cognitive frameworks while evoking universal emotions such as awe and transcendence.

### **14. The poetics of inquiry - using embodiment to navigate environmental unknowns**

Ishraki Kazi<sup>1</sup>, Anna Romanov<sup>2</sup>, & Dimuthu Hasanthi Thanippuli Arachchi<sup>3</sup>

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Poetics of Inquiry is a series of projects that stem from close collaboration between an artist Ishraki Kazi, and a scientist, co-exploring the unknown. The first version of the project titled "Poetics of Inquiry: How to Stay with Trouble" was developed in collaboration with Anna Romanov, a bioengineer and immunologist, and explored the undocumented subjective noise data within life science research. And the second version of the project titled "Poetics of Inquiry: Agential Self" emerged in a collaboration with Dimuthu Arachchi, a material scientist. It draws inspiration from J-aggregates, molecular self-assembling nanostructures, to relocate the self as an extension of the environment. The projects use different modes of guided audio journey to explore the fascinating world of shape shifting identities from an embodied perspective, and by doing so it invites participants to imagine selfhood from a more-than-human perspective. These collaborations are part of an ongoing research into how aesthetic and scientific methodologies can be merged to interrogate questions of self, perception, and knowledge production from an expanded lens. Using such guided and immersive techniques, artists and scientists can invite subjectivity into research that is usually far removed from human experience. Ultimately, Poetics of Inquiry is not only an aesthetic experience but also a hybrid research experiment. Its broader contribution lies in demonstrating how art-science collaborations can circulate across cultural platforms, scientific journals, and academic conferences to build a more integrated, reciprocal culture of inquiry—one that extends beyond aestheticizing scientific data and into the co-production of experimental, theoretical, and embodied knowledge.

# Abstracts for Poster Presentations

## 15. Perceived emotional expression of synthetic singing voices in Vocaloid music

Elke B. Lange<sup>1</sup>, Felix Baltes<sup>1</sup>, Kilian Vogt<sup>2</sup>, & Cathy Cox<sup>3</sup>

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In Japanese Vocaloid music the voices of singers are artificially generated and often described as emotionless and empty (e.g., Doi, 2014; Nakai & Kamimura, 2022). A systematic investigation of these voices' expressions is lacking. In two experiments (each N=38), Western listeners—without knowledge of lyrical meaning or associated culture—evaluated perceived emotion expressions of Vocaloid songs, selected from two Japanese databases, covering a broad range of genres, emotion expressions, synthetic voices and recording qualities. Listeners evaluated 30 Vocaloid songs, each in three versions: instrumentals-only, melody-only, and the full versions (instrumental + melody). The melody was performed either by a Vocaloid singer (Exp. 1) or a synthesizer (Exp. 2). Whereas the Vocaloid timbres included acoustic features such as vibrato and pitch glides, the synthesizer did not. We analyzed the emotion evaluations and agreement between raters by ANOVAs and post-hoc pairwise comparisons with Bonferroni correction. We asked how expressions changed by adding the melody of one of the two timbres to the instrumentals. Listeners noted a wide range of emotions across all stimuli, with melancholy and rebelliousness as key expressions. Emptiness was on the lowest rank. In comparison to the instrumentals, the Vocaloid timbre in the full versions specifically increased perceived in-love, despair, and overall intensity, but reduced overall liking. Between-rater agreement did not change. While synthetic singing voices may lack authenticity, they do not sound empty but can convey a variety of emotions, contributing to their emotional intensity, even in love songs.

## 16. Building communal atmospheres: Multisensory art as a catalyst for aesthetic experience & social cohesion

Joseph Macke<sup>1</sup>, Marius Troy<sup>2</sup>, & Irene Rembado<sup>3</sup>

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This community-based project investigates how multisensory participatory art can strengthen social bonds and enrich aesthetic experience in diverse public settings. By integrating visual, auditory, and haptic modalities, these practices cultivate atmospheres— affective environments understood as real and shaping forces, drawing on the work of Böhme, Sloterdijk, Pallasmaa, and Zumthor. These atmospheres do more than modulate perception; they carry societal and political significance by fostering collective presence, reimagining public space, and enabling more inclusive and empathetic modes of interaction. Central to our approach is the emphasis on haptic perception—the first and most primal human sensory modality—as a means of intuitive, non-verbal engagement. We hypothesize that tactile interaction enhances cognitive and affective dimensions of aesthetic experience, particularly across cultural and linguistic boundaries. Since the Enlightenment, Western thought has privileged logic and reason as the dominant frameworks for knowledge production. While this orientation has yielded significant advancements, it often sidelines other vital epistemologies—those grounded in emotion, embodiment, and sensory experience. In response to growing societal disconnection and digital abstraction, this project offers a counterpoint: advancing social cohesion and civic resilience through artistic experimentation and sensory research. Our studio positions itself as a translator — an interface that bridges increasingly divided domains such as the spiritual, scientific, political, and cultural spheres. Through immersive installations and participatory methods, we seek to transform abstract inquiry into tangible, shared experiences that invite critical reflection. Drawing from AI-generated design processes and transdisciplinary collaboration, we provide formats through which research can become sensorially accessible and socially resonant. We warmly invite researchers from the sciences, humanities, and beyond to join this evolving initiative. Together, we aim to build a living, interdisciplinary community—one capable of shaping public discourse and generating new ways of understanding and engaging with the world. The project also reflects on methodological questions around capturing subjective aesthetic experience in public art contexts, offering insights for future interdisciplinary study design. Its long-term impact is sustained through digital documentation and the evaluation of participatory outcomes. This presentation contributes to the growing dialogue on how multisensory artistic practices can bridge the gap between scientific inquiry and socially grounded action.

# Abstracts for Poster Presentations

## **17. Conjecture mapping for architectural aesthetics: A framework for transdisciplinary inquiry and evidence-based design**

Archontia Manolakelli

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Aesthetic experience is a key dimension of architectural design, yet remains difficult to evaluate systematically. In complex typologies such as atria—central nodes that facilitate social connection, navigation, and daylighting (Hills et al., 2024)—the effects of design on cognition, affect, and wellbeing are underexplored. While empirical work is expanding (e.g., Vartanian et al., 2015), integrated, testable frameworks linking design, experience, and building performance are still lacking. We present a conjecture mapping framework developed from a review of over 150 sources, including empirical studies, case reports, and architectural standards (e.g., BREEAM, WELL, LEED). Drawing on Sandoval's (2013) design-based research methodology, the framework structures design features—such as light, scale, and materiality—as hypotheses about their impact on psychological outcomes like awe, attention, and social perception. For example, vertical openness is hypothesized to support attentional expansion and social orientation (Joye & van den Berg, 2011). It incorporates mixed methods: self-report, behavioral observation, building systems data, and qualitative inquiry. The framework has informed the early-stage design of a new atrium and is being adapted for post-occupancy evaluations. It connects aesthetic reasoning to measurable mediators and outcomes, while contributing to a broader system linking operational carbon, user behavior, and spatial design. As a metascientific tool, it supports transparent, reproducible, and testable design reasoning. This transdisciplinary approach offers a roadmap for collaboration across epistemic cultures—including cognitive scientists, humanities scholars, and design practitioners. Findings from ongoing applications in live design projects will inform future iterations and validation of the framework in real-world settings.

## **18. The renaissance of replicas: Professionals' perspectives on their revival and role in museum practices**

Olivia McConnell & Rebecca Chamberlain

Goldsmiths, University of London, United Kingdom

Replicas have been integral to museums since the 18th and 19th centuries (Foster and Curtis, 2015). Historically, they served as educational tools, exemplified by the Cast Courts, which allowed visitors to study architectural masterpieces without travelling (Victoria and Albert Museum, n.d.). However, the 20th-century emphasis on 'aura' and authenticity diminished their status (Benjamin, 1936; Baker, 2010). Recently, replicas have resurged alongside the advancements in 3D scanning (Tissen, 2021). Despite this renewed interest, little research has explored how museum professionals perceive and implement replicas today. This study examines how museum professionals perceive and implement replicas in museums. Through interviews with curators, educators, and imaging specialists in British and Irish museums, it aims to explore their experiences, practices, and perceptions with replicas. A qualitative, semi-structured interview approach was employed to gather insights from 20 museum professionals. Thematic analysis will be used to identify key themes related to how replicas are utilised, valued, and integrated. Preliminary findings are expected to highlight three key themes: (1) the functional role of replicas, (2) the tension between perceived authenticity and practical utility, and (3) the growing interest in replicas driven by technological advancements. While museum professionals may recognise the value of replicas, their beliefs on authenticity may shape how they are judged. This research will provide valuable insights into how museums can effectively integrate replicas. By addressing ongoing debates surrounding authenticity, the study aims to offer practical recommendations for stakeholders seeking to maximise the impact of replicas in contemporary museum practice.

## Abstracts for Poster Presentations

### 19. Structure of musical dislikes: Findings from multiple musical genres and countries

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<sup>2</sup> Department of Psychology, James Cook University, Australia

This study aimed to investigate the structural dimensions underlying musical dislikes, and to explore how these reasons vary across musical genres and countries. 1,098 participants (728 female, 289 male) with a mean age of 22.8 years ( $SD = 8.67$ ) from different countries (475 USA, 253 AUS, 241 SG, 129 other) took part in an online survey. Participants rated their familiarity with and liking of 49 musical genres. For disliked genres (defined as a rating of 1-4 on the 9-point scale), participants provided reasons for their dislike using 42 items. Latent factors of reasons were analyzed using factor analysis. Linear mixed models were fitted investigating differences in disliking reasons between genre as well as countries. Genres were selected based on occurrence. Results show that reasons did not vary across countries, but across genres. Musical dislikes stemmed from various factors, including perceived complexity, emotional impact, social incongruence, and mainstream appeal. Genres such as electronica, metal, rap, and techno were seen as too complex or emotionally lacking, while country, gospel, and seasonal music were viewed as overly simple or sentimental. Metal, rap, and religious music evoked strong displeasure, often linked to stress, or personal experiences. Social incongruence also played a role, with country, opera, and religious music clashing with listeners' identities or values. Additionally, mainstream genres such as seasonal music were criticized as overplayed, while niche genres such as opera and metal were seen as requiring specific taste. To conclude, reasons for disliking musical genre are shaped by both cognitive and cultural factors.

### 20. fNIRS at the museum: Investigating the neural correlates of art experience

Stephanie Miller<sup>1</sup>, Theresa Demmer<sup>1</sup>, Marta Pizzolante<sup>2</sup>, Ceren Eksi<sup>3</sup>, Marta Pastor<sup>4</sup>, & Matthew Pelowski<sup>1,5</sup>

<sup>1</sup> University of Vienna, Faculty of Psychology, Austria; <sup>2</sup> Catholic University of Milan, Italy; <sup>3</sup> University Medical Center Hamburg-Eppendorf, Department of Neurophysiology and Pathophysiology, Germany; <sup>4</sup> University of Skövde, Sweden; <sup>5</sup> Vienna Cognitive Science Hub, Austria

Art experience is a complex phenomenon that has been said to play a vital role in human societies, fostering emotional, cognitive, and social engagement. Most research on art experience has been conducted in laboratory settings and/or relied on self-report measures. In this preregistered study, we employed an exciting new approach combining emerging neural and behavioural methodologies in an ecologically valid setting—the museum. We paired mobile functional near-infrared spectroscopy (fNIRS) with a novel behavioural measure developed by our team. This validated self-report measure assesses participants' emotional-phenomenal experiences, assigning each reported experience to one of five 'Experience Types': harmonious, novel, disengaged, negative, or transformative. With this approach, we aimed to first demonstrate the feasibility of using mobile fNIRS in real-world art-viewing settings (i.e. museum, gallery, or studio), as well as investigate potentially shared patterns of brain activity for each of the Experience Types. The study was conducted in the Albertina Museum (Vienna, Austria), with all participants viewing Monet's *Water Lily Pond*, one of the artworks included in the measure-development study. Brain activity was measured in regions of interest (mPFC, dIPFC, ATL, IFG) previously associated with higher-order (emotional) processing, self-reflection, and empathic connection. Before viewing the artwork, participants ( $n = 89$ ) were fitted with the fNIRS device and completed demographic questions. After viewing the artwork, they completed a post-experience questionnaire, which included the 16-item Experience-Typing measure, aesthetic judgments, and broader experiential evaluations. Behaviourally, results show reasonable consistency with findings from the reference study; fNIRS results ( $n = 73$ ) show varying patterns in activation across ROIs and Experience Types.

# Abstracts for Poster Presentations

## 21. Experiencing and learning about art using VR-replicas

Maximilian Kenzo Molitor, Jens Maiero, Laura Peiffer-Siebert, Birgit Brucker, Eva Specker, & Peter Gerjets

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This pre-registered study examined the effectiveness of Virtual Reality (VR) as an extension for museum exhibitions, exploring its impact on learning and art-experience. Three research questions addressed whether VR-replicas, VR copies of physical exhibition-rooms, can achieve learning and aesthetic experiences comparable to the physical exhibitions, whether integrating 360°-images of the exhibition room into VR enhances learning and art-experience, and if the museum-location positively influences learning and art-experience in VR. Two within-subject studies (N = 81) tested these effects using a highly embodied VR-replica of two physical exhibition rooms of an art-historic museum. Participants subsequently experienced either two VR-replicas with and without 360°-images at a laboratory-location (Study 1) or a physical exhibition room and a VR-replica without 360°-images at the museum-location (Study 2). Dependent variables included knowledge-tests and questionnaires on presence, motivation, situational-interest, motion-sickness, and art-experience. Results indicated that the VR was able to achieve similar results concerning learning and art-experience compared to the physical exhibition room. Further, results showed that the 360°-images caused significantly worse learning gains in VR when experienced in the first room. It is theorised that a negative novelty effect occurred due to the more difficult learning conditions of using the 360°-VR's controls. Lastly, analyses revealed no significant positive effect of the museum-location on learning and art-experience in VR. The findings provide empirical backing for employing VRs as accessible and remote museum extensions that may be able to deliver museum-like experiences, while identifying further research gaps in confirming why 360°-images had a negative effect on learning in VR.

## 22. The BreraBicocca project: An academic dialogue between art and science

Margherita Adelaide Musco<sup>1</sup>, Giulia Tomasetig<sup>1</sup>, Lucia Maria Sacheli<sup>1,2</sup>, Stefano Pizzi<sup>3</sup>, & Eraldo Paulesu<sup>1,2</sup>

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The BreraBicocca project is a collaboration between the University of Milano-Bicocca and the Academy of Fine Arts of Brera, in Milan (Italy). Launched in 2014, the initiative aims to promote joint research while transforming the spaces of Bicocca into vibrant settings for artistic expression. The inaugural exhibition, Salòn, was held in 2015 and featured around 100 artworks displayed throughout the halls of the University of Milano-Bicocca, celebrating the partnership between the two institutions. Since then, BreraBicocca has hosted five more exhibitions, showcasing the work of young artists from the Accademia di Brera. Each exhibition is guided by a central theme – often rooted in scientific or societal issues, such as the relationship between perception and action or contemporary representations of work – chosen by the project's academic committee. Before each exhibition, participating artists take part in a thematic workshop before creating their pieces, allowing for a deep engagement with the selected topic. In addition to the exhibitions, the project also explores the intersection of neuroscience and art through experimental research on the neural correlates of art creation and perception in professional artists. This research will culminate in the 2025 exhibition titled The Artist's Mind, where twenty artists will present paintings inspired by their own brain activity recorded via fMRI while viewing their own artworks. BreraBicocca stands as an example of the mutual enrichment between art and science: Through its exhibitions and research, it shows how art can reflect scientific exploration, while science can offer profound insights into the artistic process.

# Abstracts for Poster Presentations

## **23. Creativity and beauty: Is symmetry a good strategy for visual composition?**

Yejeong Mutter & Ronald Hübner

University of Konstanz, Germany

This study extends our previous findings on expertise effects in creative assessment (Mutter and Hübner, 2024) by investigating how symmetry—a fundamental visual property that facilitates processing fluency—influences both the creation and evaluation of compositions across different expertise levels. In a two-phase experiment, we first tasked 39 participants (20 experts, 19 non-experts) with creating compositions aiming for beauty and creativity using five pairs of basic elements. Subsequently, 49 different participants (23 experts, 26 non-experts) evaluated 78 individual compositions using both beauty and creativity rating scales. Results revealed significant divergence between expert and non-expert evaluations: non-experts demonstrated higher inter-rater reliability and stronger correlation between beauty and creative judgments, favoring linear compositions and symmetric arrangements. In contrast, experts showed lower consensus in their evaluations but their ratings positively correlated with creator expertise and showed preference for well-organized asymmetry. Notably, experts preferentially valued compositions that conveyed various, equivocal interpretations over compositions with singular, definitive meanings. These findings suggest the operation of a dual-process mechanism in creative cognition: while an initial symmetric impression facilitates rapid processing and aesthetic appeal (first stage), the subsequent discovery of subtle asymmetric elements within the same composition triggers intellectual engagement and pleasure (second stage)—particularly among experts who more readily distinguish between aesthetic appeal and creative merit. This interplay between perceived symmetry and discovered asymmetry within individual compositions illuminates how different levels of familiarity and experience shape our approach to creative assessment.

## **24. Rasa in motion: Analysing the role of body movements in perceiving emotions**

Gayatri Nerpagar<sup>1,2</sup> & Vineet Vashista<sup>1</sup>

<sup>1</sup> Department of Cognitive Science, Mechanical Engineering, Indian Institute of Technology Gandhinagar, India

<sup>2</sup> Meta Motor Lab, Hector's Institute for Education Science and Psychology, University of Tübingen, Germany

Emotion recognition and perception are fundamental aspects of social cognition. While facial expressions have been widely studied as a primary means of conveying emotions, recent research highlights the ability to perceive emotions through body movements alone. Various datasets based on different emotion theories have demonstrated that body movements can effectively communicate emotions. In this study, we developed a dataset of 40 stick figure animation videos depicting nine emotions based on rasa (emotion) theory from the Indian school of aesthetics and a neutral state; created using motion capture technology with four Indian classical dancers. This dataset was used to investigate how emotions are perceived solely through body movements without facial expressions. The study specifically focused on identifying the body segments that play a crucial role in emotion recognition through movement. We analyzed the eye-tracking data of the observers and movement data of the dancers. Our findings revealed that observers predominantly focused on the torso and arm regions to recognize emotions. The torso, being the central part of the body, draws attention and provides a comprehensive view of the movement. In contrast, the variability in arm movement distance, velocity, and acceleration offers dynamic cues crucial for emotion recognition. These results underscore the significant role of body movements in emotion perception and suggest that both the torso and arms are key areas that convey emotional information effectively.

# Abstracts for Poster Presentations

## **25. Perceiving intentions in moving shapes — from predictions to aesthetic preferences**

Hong B Nguyen & Benjamin van Buren

The New School, New York, USA

Thinking about others' behaviors as reflecting underlying mental states can be a useful strategy to more efficiently predict their future behavior. But in addition to thinking about other minds, we also see them much more directly — as when even simple shapes irresistibly look goal-directed, or emotionally expressive, depending on the particular ways they move. In ten experiments, we tested whether perceiving cues to animacy and intentionality in moving shapes allows us to more efficiently predict their behavior. In two experiments, we used a staircasing method to measure the minimum exposure time that observers needed to predict the future orientation of a moving shape through a brief period of occlusion: only very brief exposures were needed to accurately predict the future orientation of a moving dart in 'Wolfpack displays' in which the dart continuously faced toward a moving disc, compared to inanimate-looking displays (e.g. in which the dart faced away from the disc) which were closely matched on lower-level features, such as symmetry and correlated motion. If displays with cues to goal-directed motion are processed more efficiently, then they might also evoke more positive hedonic responses — a well-known marker of visual processing fluency. We confirmed this prediction in further experiments — two comparing explicit preference judgments between animate-looking Wolfpack displays and inanimate-looking control displays, and two comparing valenced implicit associations. We conclude that seeing simple shapes in goal-directed terms allows us to efficiently predict their behavior, which in turn drives positive affective responses.

## **26. Neurophysiological responses to digitalized and digital art: A pilot study on generations Z and Y in virtual museums**

Federica Piccoli<sup>1,2</sup>, Marco Bilucaglia<sup>1,2</sup>, Margherita Zito<sup>1,2</sup>, & Vincenzo Russo<sup>1,2</sup>

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The increasing digitisation of the arts and culture sector has led to the development of virtual museum environments, which are designed to provide remote visitors with experiences by reproducing physical works of art or presenting digital content created specifically for this purpose. While these innovations have introduced new ways to enjoy art, it is unclear how they affect the emotional and cognitive responses of viewers. This pilot study aims to investigate whether the nature of the artistic stimulus (digitalized vs. natively digital) and the communicative framing preceding the experience influence the aesthetic and neurophysiological responses of users, particularly those belonging to Generations Z and Y. Adopting a multidimensional approach, the study examines user reactions to two types of virtual museum: (A) a digital reproduction of a physical museum (digitalized art), and (B) a natively digital museum (e.g., featuring cryptoart or NFTs). A brief introductory framing was implemented as an experimental manipulation, and participants were randomly assigned to one of three conditions: no brief, congruent brief, and incongruent brief. Neurophysiological data were collected using EEG, eye-tracking, galvanic skin response (GSR), and heart rate monitoring (HR). Additionally, post-experience questionnaires were administered to assess aesthetic evaluation, perceived authenticity, immersion, time perception, and behavioral intention. It is hypothesized that the congruence between the stimulus and the communicative framing will significantly affect both neurophysiological and subjective responses. The expected outcomes aim to deepen our understanding of the cognitive and emotional mechanisms underpinning digital aesthetic experiences and to offer practical insights for the design of more engaging and effective virtual museum environments tailored to digitally native audiences.

## Abstracts for Poster Presentations

### **27. Exploring aesthetic experience in virtual and physical art: The *Colombo's Metaverse* project**

Marta Pizzolante<sup>1</sup>, Caterina Restano<sup>1</sup>, Manuela Ferrante<sup>2</sup>, Stefano Boccalini<sup>3,4</sup>, Corinna De Vecchi<sup>3</sup>, Giorgio Pizzagalli<sup>3</sup>, Marco Scotini<sup>3,5</sup>, Andrea Gaggioli<sup>1</sup>

<sup>1</sup>Research Center in Communication Psychology, Università Cattolica del Sacro Cuore di Milan; <sup>2</sup>Studio Volpi, Srl; <sup>3</sup>Archivio Gianni Colombo, Milan; <sup>4</sup>Nuova Accademia di Belle Arti, Milano; <sup>5</sup>Dipartimento di Arti Visive e Studi Curatoriali, Nuova Accademia di Belle Arti, Milan, Italy

The increasing adoption of Virtual Reality (VR) has expanded the possibilities for studying, preserving, and experiencing art and cultural heritage. This project investigates the aesthetic, emotional, and cognitive impact of VR-based reconstructions of Gianni Colombo's kinetic spatial artworks, with a particular focus on how immersive digital environments shape perceptual and affective engagement with art. The research follows a two-phase experimental design. In the first phase, 20 participants explored two VR reconstructions of Colombo's installations using either Head-Mounted Displays (HMDs) or a desktop interface. Results indicated that the HMD-based condition significantly enhanced users' sense of immersion, emotional activation, and reported a better overall experience compared to the desktop-based condition. These findings suggest that VR can intensify aesthetic experience and emotional resonance in ways that traditional digital interfaces may not. Moreover, while most participants reported limited prior knowledge of kinetic art, the majority had prior experience with VR and were frequent museumgoers—highlighting the potential of immersive technologies to engage new audiences with underrepresented artistic movements. The second phase of the study, currently under development, will involve a separate group of 20 participants interacting with the physical version of *Spazio Elastico*, hosted at the Archivio Gianni Colombo in Milan. This phase aims to compare perceptual and emotional responses between virtual and physical encounters, further examining the role of technological mediation in aesthetic experience. Ultimately, the findings are expected to inform curatorial strategies, digital exhibition design, and heritage conservation practices by evaluating how immersive media may enhance accessibility while preserving the phenomenological depth of art. More broadly, the project contributes to ongoing debates about the evolving role of VR in contemporary aesthetic and cultural experiences

### **28. Beyond one kind of curious: How curiosity's dimensions shape learning**

Tessa N. Portier & Emily S. Cross

Social Brain Sciences Lab, ETH Zurich, Switzerland

Curiosity drives our desire to explore, question, and learn about the world and is essential for problem-solving, creative thinking and knowledge gain. How curiosity powers learning has previously been approached from a single dimension view of curiosity. We propose a more nuanced multidimensional approach. We aim to examine two qualitative dimensions—interest (driven by the pleasure of finding out) and deprivation (driven by the discomfort of not knowing)—alongside two quantitative ones: breadth (the range of topics that elicit curiosity) and depth (the intensity of engagement). Rather than assuming curiosity is uniformly beneficial, this study asks how these emotional and structural elements interact to shape learning outcomes. To shed light on this, we will recruit 100–150 participants (ages 18+) who will complete a trivia task. Participants will rate their curiosity and emotional responses for each question and can choose to explore answers in greater depth. Eye-tracking will provide an implicit behavioral measure of curiosity by capturing fixation times and saccades. A post-task recall test will evaluate learning outcomes. By disentangling how the emotional and structural dimensions of curiosity interact, this research will contribute to our understanding of how curiosity is conducive to learning.

# Abstracts for Poster Presentations

## 29. Curiosity, information-seeking, and aesthetic appreciation

Charlotte Potter, Laura Devis, Mavahib Drabu, Rosa Schues, Blanca Wortelmann & Stacey Humphries

Goldsmiths, University of London, United Kingdom

Curiosity is the intrinsic desire to explore and seek information and is thought to be related to aesthetic and creative experiences, although these links are not yet well-established. Labels that accompany artworks may enhance aesthetic experiences if the viewer finds the information interesting, but museum-goers are not usually able to choose the type of information they receive. To test the hypothesis that curiosity plays a significant role in aesthetic experiences, we manipulated the amount of agency participants had over what and how much information they received about artworks. Our experiment included three categories of information per artwork: Artist, Meaning and Context. Participants provided initial liking and curiosity ratings on each painting. Then, each painting was randomly assigned to one of three agency conditions: No Agency (50% chance of receiving information from one category), Some Agency (choice to receive one piece of information from a random category), or Full Agency (participants decided whether, what, and how much information to receive). After receiving 0–3 pieces of information, determined by the agency condition and participants' choices, they re-evaluated their liking and curiosity towards each painting. Initial aesthetic ratings were significantly higher for paintings that participants subsequently chose to receive information about, and information enhanced the aesthetic experience only when participants chose to receive it. Finally, information reduced curiosity, except in the Some Agency condition—where participants were consciously aware of remaining information gaps that they could not resolve. These early findings are encouraging and have implications for museums and galleries.

## 30. How lasting is the 'Awe'-someness of AI art?

Priya Rajpurohit<sup>1</sup>, Stacey Humphries<sup>1</sup>, Rebecca Chamberlain<sup>1</sup> & Robyn Landau<sup>2</sup>

<sup>1</sup> Goldsmiths, University of London, United Kingdom

<sup>2</sup> Kinda Studios, London, United Kingdom

Art universally expresses human emotions through formal elements, though its individual interpretation varies. Awe is an ambivalent emotion that arises from perceived vastness and accommodation. Despite the anthropocentric bias found towards AI generated art, it can generate perceived emotions and alter aesthetic perception. This study tries to examine if AI generated hyper-realistic visual artworks are reshaping our aesthetic perception, potentially diminishing awe provoked by real-world beauty. Participants will view 15 images of either AI generated images or images of awe-inspiring nature in the real world. A pilot study was done to ensure awe comparability. Thirteen-day daily diary will be conducted for two groups (control group and target group), a that will assess the emotion of awe using questionnaires like AWE-S, Aesthemos and VAIK. And the stimuli, whether AI generated or real-world image, will be shown on the seventh day. Analyses of changes in awe and well-being will be done using multi-level modelling, with adjustments for multiple comparisons and outliers. It is anticipated that for the group that is exposed to AI generated images the daily diary scores will fluctuate for a day or two after exposure and come back to normal level as the week before the exposure. It is also predicted that overall well-being of participants in the target group decreases, and the daily experience of awe is significantly related to openness to experience. This study aims to bridge the gap between the field of AI Art and our understanding of human emotional responses, particularly awe, and their influence on psychological well-being.

## Abstracts for Poster Presentations

### **31. The neural representations of embodied musical emotions**

Maya Tara Rassouli<sup>1</sup>, Vesa Putkinen<sup>1,2</sup>, & Lauri Nummenmaa<sup>1,3</sup>

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<sup>3</sup> Department of Psychology, University of Turku, Finland

Music has the remarkable ability to elicit bodily sensations, which are intricately intertwined with the emotional experience. Previous research has highlighted the importance of both emotions and bodily sensations in shaping our perception and appreciation of music. Although emotional and bodily responses to music are widely recognised, the neural underpinnings of embodied musical emotions remain poorly understood. This study aims to investigate the neural activity patterns underlying embodied music-induced emotions. Specifically, we seek to elucidate the correspondence between the representational geometry of the neural patterns and of the bodily sensations induced by music. Hemodynamic brain activity was measured using fMRI while subjects listened to emotionally engaging music pieces. Bodily sensation maps were measured using the previously validated embODY tool. The neural patterns were analyzed using a general linear model (GLM) and were correlated with the bodily sensation maps using representational similarity analysis (RSA). The GLM analysis revealed increased BOLD responses in regions such as insula, precentral and postcentral gyri. The RSA results revealed that sensorimotor and auditory areas show significant similarity with bodily sensation models. Our GLM results indicate that areas associated with motor control, somatosensation, interoception and emotional processing support emotional embodiment during musical experiences. Moreover, the RSA results suggest a somatotopic organization of different music-induced emotions.

### **32. Neuro labyrinths and visual illusions: Exploring the therapeutic power of organic checkered patterns**

Zainab Safri<sup>1</sup>, Amanda C. Glueck<sup>2</sup>, & Zabeen Mahuwala<sup>2</sup>

<sup>1</sup> Syracuse University, USA

<sup>2</sup> University of Kentucky, USA

This study investigates the potential of organic checkered patterns as a therapeutic visual intervention to mitigate medical professional burnout and enhance cognitive resilience. By integrating insights from neuroaesthetics, cognitive neuroscience, and psychology, we explore how structured, yet fluid visual stimuli influence stress levels, attentional restoration, and overall well-being in medical professionals. Given the increasing demands of high-stress environments, identifying effective, non-invasive strategies for mental rejuvenation is crucial. Utilizing a prospective study design, participants will be randomly assigned into one of three groups: still image group, dynamic patterns group, and blank screen control group. Participants will be asked to complete weekly interventions involving their assigned visual. Each session will last for five minutes and occur twice weekly over an eight-week period. Neural and psychological responses related to anxiety, stress, and overall well-being are measured before and after each intervention session. Through interdisciplinary collaboration, this research contributes to the broader dialogue on the intersection of art and science, highlighting the role of aesthetic experiences in enhancing mental health, fostering emotional resilience, and informing environmental design. We emphasize the need for further exploration of aesthetic interventions as accessible and effective tools for improving human experience and quality of life. Future directions include incorporating behavioral assessments, eye-tracking, and neurophysiological measures such as EEG and heart rate variability to deepen our understanding of the mechanisms by which visual art can support psychological and cognitive well-being.

## Abstracts for Poster Presentations

### **33. Neuro labyrinths: The aesthetic illusion of healing and cognitive resilience**

Zainab Safri<sup>1</sup>, Amanda C. Glueck<sup>2</sup>, & Zabeen Mahuwala<sup>2</sup>

<sup>1</sup> Syracuse University, USA

<sup>2</sup> University of Kentucky, USA

Can visual art rewire the mind for healing and resilience? This study explores the therapeutic potential of organic checkered patterns—structured yet fluid designs that act as perceptual labyrinths—engaging cognitive and emotional processes to reduce stress and enhance mental well-being. Rooted in neuroaesthetics, cognitive neuroscience, and psychology, our research examines how these intricate visual forms interact with the brain's predictive coding mechanisms, influencing attentional restoration, emotional regulation, and physiological responses. Using a mixed-methods approach, we integrate behavioral assessments, neurophysiological measures (EEG, HRV), and eye-tracking analysis to assess how these patterns impact diverse audiences, including medical professionals facing burnout, patients in clinical settings, and art connoisseurs seeking cognitive engagement. By triggering a balance between familiarity and novelty, organic checkered patterns may optimize neural efficiency, promote relaxation, and foster resilience in high-stress environments. This study positions aesthetic experience as more than passive observation—it is an active force in cognitive and emotional health. By bridging the gap between art and science, we reveal how perceptual illusions, and immersive visual stimuli can transform healthcare, architectural spaces, and art therapy practices. Our findings contribute to a growing body of research advocating for intentional aesthetic interventions in professional and everyday environments. In an era where mental well-being is increasingly challenged, this work underscores the power of visual art in shaping human experience, offering innovative pathways for therapeutic design, environmental psychology, and the science of perception.

### **34. Emotional dynamics and sense-making in art experiences across age groups**

Gemma Schino<sup>1</sup>, Lisa-Maria van Klaveren<sup>1,2,3,4</sup>, Theisje van Dorsten<sup>4</sup>, Barend van Heusden<sup>5</sup>, & Ralf F. A. Cox<sup>1</sup>

<sup>1</sup> Department of Psychology, University of Groningen; <sup>2</sup> Institute for Education and Training, Amsterdam UMC, University of Amsterdam; <sup>3</sup> Amsterdam Public Health Research Institute; <sup>4</sup> University College Groningen, University of Groningen; <sup>5</sup> Department of Arts, Culture, and Media, University of Groningen, Netherlands

Art fosters self-reflection and interpersonal understanding by prompting individuals to engage emotionally with their own experiences and those of others. This study investigates the interplay between affect, bodily engagement, and sense-making strategies in art experiences across age groups, using a multi-method approach. Participants (N = 64, aged 6-17) were invited to bring a personally meaningful artwork and discuss it with a peer. During the experiment, the dyads engaged in an audio-visually recorded, semi-structured conversation in which they reflected on both artworks, and they answered pre- and post-questionnaires. Results reveal differences in the relationship between movements, self-reported emotions (categories and intensity) and bodily sensations (reported through body mapping tasks). When reporting their bodily activations about art, younger participants appear to rely more on their sense of movement and body actions; whereas teenagers seem to engage in more abstract, reflective processing. Together these findings underscore that art experience is not a linear process but a dynamic interplay between bodily and emotional dimensions that changes across development.

# Abstracts for Poster Presentations

## **35. Building on preliminary insights: Advancing the study of aesthetic experiences through a large-scale diary approach**

Gemma Schino<sup>1</sup>, Lisa-Maria van Klaveren<sup>1,2</sup>, Cristina Buzzo<sup>3</sup>, Bilge Sayim<sup>4</sup>, & Ralf F. A. Cox<sup>1</sup>

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Aesthetic experiences (AEs) are often described as intense, meaningful, and deeply emotional. Buzzo and Sayim's (2023) online study on everyday AEs characterized them as highly important and intense (M = 5.5 and 5.8, respectively, on a 1–7 scale), capable of momentarily altering one's time perception (for 68% of the sample, N = 101). Similarly, Schino, van Klaveren, and Cox (2024) conducted a pilot diary study (N = 61, 226 entries), and found 64.6% of AEs featured temporal distortions. Their results also revealed that, regardless of prior mood, positive emotions were predominant, with nature being the most frequently reported trigger (36.7%). Additionally, mind-wandering (MW) occurred in 38.9% of cases, correlating with emotional arousal, while emotional intensity was significantly predicted by art interest. This poster sets out to corroborate and extend the preliminary evidence of these studies by presenting a longitudinal research using a Qualtrics online survey as a diary tool, allowing participants to document AEs in real-time. Participants can describe details such as the level of intensity, the different triggers of the experiences, temporal aspects such as examining how these experiences unfold over time, and cognitive and emotional factors that shape them. Data will be collected through validated questionnaires and single-item open questions to provide an in-depth exploration. The overarching aim is to define the nature and prevalence of AEs in everyday life, focusing on how mind wandering, emotions, self-reflection, insight, art interest, and knowledge interact and vary across individuals (e.g., age, sex, gender).

## **36. FreshAIR for innovation: Designing for people and planet breathing together**

Cecelia Schoening

Scenic Route Studios USA, Founder

What if innovation began not with a breakthrough, but with a deep breath? We believe that FreshAIR (Aesthetic, Interdisciplinary, Regenerative) might reinvigorate how we build towards the future. Our presentation explores new frameworks for innovation at the crossroads of behavioral design, ecological systems thinking, and creative strategy, rooted in aesthetic and behavioral inquiry. Cecelia Schoening holds a B.A. in Cognitive Science from Yale University, and brings a decade of experience in tech, design, and sustainable innovation across public and private sector. She founded Scenic Route Studios in 2022 to integrate her breadth of experience, operating both as a creative agency and experimental R&D lab. Scenic bridges the analytical and the aesthetic, creating actionable insight through participatory research, nature-based solutions, aesthetic engagement, creative partnerships, and north star value realignment — helping her clients build regenerative futures for people + planet. We are excited to debut FreshAIR as a new methodology for innovation. Our strategy leverages mindfulness, biophilic design, and aesthetic engagement to identify patterns of opportunity across experience ecosystems. Grounded in both behavioral science and multidisciplinary arts practice, our unique model invites slowness, sensory immersion, and narrative intelligence as tools for systems transformation. Drawing from industry case studies and experience across several creative domains, our approach proposes art not merely as expression, but as a strategic and somatic infrastructure for ecodiplomacy — a means of building bridges between disciplines, cultures, and ways of knowing. In so doing, we reframe innovation itself as a living, breathing process of relational design.

## Abstracts for Poster Presentations

### **37. Do accessories matter? EEG evidence for neuroaesthetic impact in interior spaces**

Yaren Şekerci & Sevgi Şengül Ayan

Antalya Bilim University, Turkey

Decorative accessories are routinely treated as minor refinements in interior design, yet their neuroaesthetic weight remains unclear. We investigated whether accessories modulate emotional engagement and aesthetic judgment by comparing accessorised (Scene A) and minimal (Scene B) versions of a photorealistic living-room rendered in virtual reality. Phase I involved 48 participants (24 designers, 24 non-designers; 12 women + 12 men per subgroup) who explored both accessorised (Scene A) and minimal (Scene B) 360° VR panoramas for 15 s each in counter-balanced order while 4-channel mobile EEG was recorded. The Approach-Withdrawal Index (AWI) served as a neural proxy for arousal and motivational valence. Phase II employed an independent, gender-balanced sample (40 participants: 20 women, 20 men) who rated scene beauty on a 1–7 scale. Cohen's  $d$  revealed a large AWI effect for non-designer females ( $d = 1.13$ ), moderate-to-large for designer males ( $d = 0.63$ ), small-to-moderate for non-designer males ( $d = 0.34$ ), and minimal for designer females ( $d = 0.13$ ). Aesthetic ratings mirrored the neural pattern: accessorised spaces were preferred overall, with the highest scores from non-designer females ( $M = 6.0$ ). These results indicate that gender and design expertise jointly modulate neuroaesthetic engagement, with non-experts—particularly women—showing heightened approach-related neural activity and explicit preference for visually enriched interiors. Findings align with dual-process models in empirical aesthetics, whereby rapid, affect-driven evaluations dominate non-expert judgments. These results show empirically that decorative accessories, though often seen as peripheral, markedly shape occupants' emotional experience, confirming their importance in evidence-based interior design.

### **38. Exploring neural and gaze signatures of emotion recognition through 'Navarasa' dance movement**

Shrinithi Sriram & Vineet Vashista

Indian Institute of Technology, Gandhinagar, India

The purpose of this study is to create a cognitive database for the 'Navarasa' dance movements. Derived from the Indian Rasa Theory, 'Navarasa', the 9 emotions with unique facial expressions, hand gestures and body positions; includes, Raudra - Anger, Veera - Bravery, Beebatsya - Disgust, Bhayanaka - Fear, Adbhuta - Surprise, Karuna - Kindness, Shanta - Peace, Hasya - Laughter, Shringara - Love. The study investigates the distinct neural patterns and gaze behavior elicited by each dance movements during emotion recognition to empirically categorize them. Stick-figure animation videos were created focusing on motor movement for all the 9 emotions to eliminate any dancer-based bias. Participants observed the stimuli and Electroencephalography data (EEG) were recorded. Power Spectral Density analysis was applied to EEG data to examine frequency-specific dominant emotions across Delta, Theta, Alpha, Beta, and Gamma bands. Statistical analysis involved Repeated Measures ANOVA and One-Way ANOVA to identify significant differences across emotions, followed by post-hoc tests for pairwise comparisons. To validate the findings of EEG data, the visual attention was captured using an Eye-tracking device. Then, for every emotion, the gaze behavior was analyzed through heat maps highlighting fixation patterns over hand and leg movement regions on an x-y coordinate plane for the left and right eyes. To conclude, a data-driven classification grouped emotions consistently by combining the groupings based on frequency bands and gaze clusters. These findings provide empirical evidence for the neural and attentional mechanisms underlying embodied emotional engagement with the 'Navarasa' Dance Movements.

## Abstracts for Poster Presentations

### **39. Dialogue between improvisation and neuroscience – lessons learnt?**

Mari Tervaniemi & Tommi Makkonen

University of Helsinki and Centre of Excellence in Music, Mind, Body, and Brain, Finland

During the past ten years, our interest in Helsinki has been to widen the perspectives of music-related neuroscientific studies from laboratory settings toward ecologically valid concert contexts (for a review, see Tervaniemi, 2023). In our poster, we will describe three projects along these lines: First of them was conducted in collaboration with a musician who gave an improvisatory concert of six hours by playing kantele (Finnish zither). Second of them offered us a possibility to work with a trio consisting of classically trained musicians who also had experience in improvisation. During their live performances, we recorded electroencephalogram (EEG) from a total of 16 participants (for details, see Tervaniemi et al., 2022). Most recently, we collected EEG data in the context of a classical improvisation course and its final concert from musicians and members of the audience. The first and last endeavors are to be considered as case studies— one might also call them proof-of-concept studies. Because of their challenges but also affordances, we will tell more in our poster about the fruitful dialogue we encountered with innovative and open-minded musicians.

### **40. Comics as aesthetic and multimodal tools in African education: A scoping review**

Sarah Toner<sup>1</sup>, Sheena Shah<sup>1</sup> & Michael Bitz<sup>2</sup>

<sup>1</sup> King's College London, United Kingdom

<sup>2</sup> Ramapo College, United States

Comics, as culturally embedded, visually expressive, and narratively rich media, represent an underexplored aesthetic tool for engaging cognitive and emotional processes in education. In African educational contexts, where structural and pedagogical barriers often overlook learners' diverse cognitive and affective needs, comics may offer a culturally grounded approach to scaffold learning, reduce cognitive load, and foster emotional engagement. This scoping review maps existing research on the use of comics as aesthetic and multimodal learning tools in African education systems, with a secondary focus on their potential contribution to learner well-being and mental health. Rather than serving as simple illustrative aids, comics can function as integrated aesthetic experiences that engage perceptual, narrative, and affective processing, while validating diverse ways of knowing and learning. The review identified a small but emerging body of research on the use of comics to support comprehension and learner engagement in African classrooms. However, the evidence base remains limited and fragmented. Few studies explicitly explore the intersection of pedagogy, arts-based interventions, and psychosocial well-being, with learner mental health emerging as a critical yet underexplored area within African educational contexts. This highlights a gap in research on how comics' visual narratives and emotional resonance might support emotional expression, resilience, and social connection for learners. Overall, comics emerge as culturally resonant, scalable, and learner-centered resources. Realising this potential will require interdisciplinary collaboration among educators, artists, neuroscientists, and mental health professionals to co-design culturally grounded interventions that respond to the cognitive and emotional needs of learners in African education systems.

# Abstracts for Poster Presentations

## **41. From Fuseli to Fomison: Mapping functional connectivity and autonomic responses in aesthetic experience**

Tamar Torrance<sup>1</sup>, Geet Vashista<sup>2</sup>, & Paul Corballis<sup>1</sup>

<sup>1</sup> University of Auckland, School of Psychology

<sup>2</sup> Auckland University of Technology, Department of Psychology and Neuroscience

Aesthetic experience is a complex phenomenon thought to arise through the interplay between sensory-motor, emotional, and cognitive processing. While neuroaesthetics research has shed light on key features of aesthetic response—from beauty and reward to predictive-coding, embodiment, and subjectivity—the large-scale networks underlying aesthetic experience remain poorly understood. This study employs electroencephalography (EEG), electrocardiography (ECG), and electrodermal response (EDR) to investigate the neural and autonomic correlates of aesthetic response to artwork from the Auckland Art Gallery Toi o Tāmaki exhibition *Gothic Returns: Fuseli to Fomison*. Each artwork was presented for 60 seconds, after which participants rated their experience using an Aesthetic Experience Questionnaire (AEQ) adapted from Wanzer and colleagues (2020). The AEQ assesses emotional, cultural, perceptual, understanding, and flow dimensions of aesthetic experience, and was used to identify artworks that elicited the highest and lowest aesthetic responses. EEG epochs corresponding to peak and minimal aesthetic experiences were compared to analyse network dynamics associated with heightened aesthetic engagement. We estimated functional connectivity between regions of interest using the weighted phase lag index (wPLI) and graph-theory analysis to characterise the topology of neural networks involved in aesthetic perception. We also used ECG-derived heart rate variability (HRV) and EDR to provide complementary measures of autonomic responses linked to emotional and sensory engagement. By investigating how distributed neural networks coordinate to shape aesthetic experience—and how this resonates with viewers on a more visceral level—our data offer an integrated understanding of the mechanisms underlying aesthetic engagement with visual art.

## **42. Effect of dopaminergic medication and DBS on aesthetic appraisal in Parkinson's disease**

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Dopaminergic medication and deep brain stimulation (DBS) are effective treatments for motor symptoms in Parkinson's disease (PD), however the way they operate in high-level cognitive processes as in the case of aesthetic appraisal remains poorly understood. Here, we investigate the effect of levodopa and DBS as pharmacological and electrical network modulators of aesthetic appraisal of visual stimuli presented with different exposure times. We found a significant effect of disease on "rate of beauty judgement" (RoBJ) denoting the rate by which patients judged stimuli as beautiful particularly at shorter exposure times and "rate of not sure" (RoNS) denoting the rate by which patients were unable to judge stimuli. No significant effect of levodopa and DBS on RoNS and RoBJ was revealed. Interestingly, RoBJ was significantly higher for artificial than naturalistic stimuli which supports previous observations about brain differential processing between categories. Our findings support no involvement of the dopaminergic system on the aesthetic appraisal of visual stimuli in PD, thus stressing the role of alternative neuromodulatory systems, i.e. cannabinoid, serotonergic and gabaergic systems.

# Abstracts for Poster Presentations

## **43. Embodied creativity: Analyzing motions and emotions in improvised body movement**

Tanja Laura Ulrich<sup>1,2</sup>, Simon Henein<sup>1</sup>, Emily Cross<sup>2</sup>, & Ryssa Moffat<sup>2</sup>

<sup>1</sup> Instant Lab, EPFL Lausanne, Switzerland

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Our ability to be creative is one of the highest levels of human performance and is key in the 21st century. We need creativity to adapt, solve problems, and learn new things, skills that become increasingly important with the growing complexity of our society and its problems. Dance has become a widely used tool in research to study the human brain and behavior. Especially dance improvisation has been proposed to study creativity, as it involves the interaction of minds, bodies, and the environment. Originating creativity is proposed to be a situated practice encompassing embodied experience embedded in socio-material environments. We aim to detect kinematic patterns underlying embodied creative processes expressed through movement. This may elucidate how to drive humans into states facilitating embodied creativity and contribute to the understanding of the dynamic, situated nature of cognition and social interaction. Addressed questions include: How can dance improvisation help us understand creative processes expressed through movement? Can we detect kinematic patterns in embodied creative processes? Which role does a subject's emotional state and relation to the environment play in embodied creative processes? Can we exercise creativity through dance improvisation? To answer these questions, we are collecting quantitative data using optical motion tracking in video recordings and assessing participants' emotional state before and after the movement task, their dance sophistication, and characteristics through validated questionnaires such as The Flow Short Scale, The Gold Dance Sophistication Index and Inclusion of Other in the Self Scale.

## **44. Attentional dynamics drive aesthetic preferences for art photographs**

Benjamin F. van Buren & Hong B. Nguyen

The New School, New York, USA

When different people view the same scene, they attend to different parts of it — and these differences in attention influence how much they like the scene. Patterns of attention may be highly idiosyncratic across individuals, but their effects on preferences may not be. Here we demonstrate this using a novel method of attentional transplants. In Experiment 1, 50 observers viewed landscape images through a small circular window which they moved their cursor, and rated how aesthetically pleasing they found each image. For each image, we identified two 'attentional donors' — the Liked-it-Best observer who rated the image highest (relative to their other ratings) across observers, as well as the Liked-it-Least observer who rated the image lowest across observers. Next, we recruited 100 new observers to serve as 'attentional recipients'. These observers viewed each image, but now passively, through a moving window which reproduced the viewing pattern of either the previous observer who Liked it Best, or the observer who Liked it Least. Recipients gave substantially higher ratings to images when they received the viewing pattern of the observer who Liked it Best, compared to when they received the viewing pattern of the observer who Liked it Least. In subsequent experiments, we replicated this effect, and found that Liked-it-Best viewing patterns are more predictable. We conclude that individual differences in preferences for scenes are partly explained by differences in how we dynamically attend — but that attention drives preferences in similar ways across observers.

## Abstracts for Poster Presentations

### **45. Tattooed beauty? How social norms and expertise shape the aesthetic appreciation of tattoos**

Selina M. Weiler, Christian Duer, Dustin Krämer & Thomas Jacobsen

Experimental Psychology Unit, Helmut Schmidt University/ University of the Federal Armed Forces Hamburg, Germany

Scientific interest in body modifications has recently turned to tattoos, positioning them as a key subject within empirical aesthetics. While prior research has explored conceptual aspects of tattoo aesthetics, mechanisms of their aesthetic appreciation remain underexplored. This study examined how tattoos influence the perceived beauty of human stimuli, focusing on the roles of age, expertise, and tattoo status—factors likely tied to internalized social norms. We digitally manipulated images of a male and female model to show six levels of tattoo coverage: Baseline (no tattoos), Light, Moderate, Heavy, Extreme, and Extreme + Face. A total of  $N = 487$  participants with varied tattoo experience and age demographics rated the beauty of these stimuli. Participants were grouped by age (under vs. over 50), expertise (tattoo artists vs. nonexperts), and tattoo status (tattooed vs. nontattooed). Results showed that overall beauty ratings decreased as tattoo coverage increased, with the Extreme + Face condition rated lowest. Experts rated higher tattoo coverage more positively than nonexperts, while older and nontattooed participants evaluated all tattooed conditions less favorably. These findings suggest that aesthetic appreciation of tattoos is shaped by individual characteristics and social norms, with age emerging as a particularly influential factor. The study highlights the complex interplay between body modification, aesthetic judgment, and societal perceptions. It contributes to a deeper understanding of how tattoos are evaluated and perceived in different social contexts. Limitations and directions for future research—especially regarding cross-cultural generalizability—are discussed.

### **46. The beauty in defilement. How morally contentious content alters aesthetic judgment**

Selina M. Weiler, Christian Duer & Thomas Jacobsen

Experimental Psychology Unit, Helmut Schmidt University/ University of the Federal Armed Forces Hamburg, Germany

In an online experiment ( $N = 460$ ), we examined how subjective beauty ratings of photographs featuring morally contentious elements are influenced by descriptive framing. Each photograph was paired with either a neutral description or a negative description emphasizing the morally problematic aspect. We further investigated whether this effect was mediated by affective responses and moderated by biospheric values, representing pro-environmental beliefs. Results showed that participants in the Negative Condition rated the photographs as significantly less beautiful than those in the Neutral Condition. This relationship was partially mediated by increased negative affect. Furthermore, participants with higher biospheric values provided lower beauty ratings in the Negative Condition, suggesting that personal values amplify the impact of moral framing on aesthetic evaluations. These findings support theoretical models in empirical aesthetics that highlight the role of both affective and cognitive processes in aesthetic judgment. Our study demonstrates that beyond formal visual properties, descriptive context and individual values significantly shape aesthetic experiences of morally complex stimuli. Limitations include reliance on online data collection, which reduces experimental control, and a sample skewed toward high biospheric values, potentially limiting generalizability. Future research should investigate a broader range of morally charged content and participant profiles to better understand the interplay between framing, emotion, and value-driven aesthetic evaluation. This study contributes to empirical aesthetics by elucidating how moral context, affective response, and personal values interact in shaping beauty judgments. It advances our understanding of how individuals process and evaluate morally complex visual stimuli within aesthetic contexts.

## Abstracts for Poster Presentations

### **47. The business of aesthetic experience: Designing workplaces at the intersection of art, science, and strategy**

Sylvia Winter

INSEAD Business School, France

Aesthetic experience in workplace design is not merely a matter of visual appeal- it is a strategic business imperative that shapes organizational identity, employee well-being, and commercial success. This poster explores the critical intersection of business and design, demonstrating how workplaces prioritizing functionality and aesthetics create environments that foster engagement, innovation, and brand differentiation. Drawing on empirical research and case studies, we examine how businesses leverage design principles- from spatial harmony and multisensory elements to curated art and flexible layouts- to deliver pleasurable and productive experiences. These environments enhance employee satisfaction and performance and serve as powerful tools for attracting and retaining talent and clients in a competitive marketplace. We further discuss how integrating critical and design thinking enables organizations to align user needs with business goals, resulting in innovative, actionable, and economically sustainable solutions. Methodological innovations for measuring the impact of aesthetic interventions, such as physiological monitoring and real-time user feedback, are highlighted as essential for evidence-based decision-making. By bridging the gap between the arts, sciences, and business strategy, this work offers a multidisciplinary framework for understanding and advancing the business of aesthetic experience design in the modern workplace.

### **48. Bharatanatyam and the brain: cognitive and memory enhancements through classical Indian dance**

Anwasha Dutta

Newcastle University, United Kingdom

Bharatanatyam, one of India's oldest classical dance forms, originated over 2,000 years ago in South Indian temples, integrating storytelling, music, rhythm, and expressive movement. Rooted in the Natyashastra, an ancient treatise on performing arts, it combines dramatic elements (natya), interpretative dance (nritya), and pure movement (nritya), involving complex hand gestures (mudras), footwork (adavus), facial expressions (bhavas), and aesthetic emotions (rasas). Beyond its cultural and artistic value, Bharatanatyam demands high levels of cognitive and sensorimotor coordination, offering significant benefits for brain function. This article explores its role in enhancing memory, executive functions, and emotional intelligence through multisensory integration and neuroplastic engagement. Neuroimaging studies suggest Bharatanatyam dancers exhibit increased hippocampal and prefrontal cortex activity, regions critical for memory, spatial awareness, and decision-making. Regular practice improves working memory, fine motor skills, rhythm perception, and emotional processing. Furthermore, Bharatanatyam's structured choreography and symbolic expressiveness activate brain regions tied to empathy, attention, and sensorimotor learning. As a neuroprotective tool, the dance form shows therapeutic promise for patients with Parkinson's and Alzheimer's diseases, supporting balance, mood, motor function, and cognitive resilience. The dance's rhythmic, memory-intensive, and expressive demands align with mechanisms involved in neuroprotection and cognitive health. While emerging research highlights these benefits, more longitudinal and comparative studies are necessary to establish Bharatanatyam as a viable clinical intervention. Overall, this dance form transcends its traditional artistic boundaries, positioning itself as a powerful, holistic tool for cognitive enhancement and neurological well-being. Future integration into therapeutic and rehabilitation settings could yield innovative approaches to brain health.

# Abstracts for Poster Presentations

## **49. The transformative potential of cultural heritage: a neuro-physiological study**

Kalliopi Ioumpa, John Stins & Nadia Dominici

Vrije University Amsterdam, Netherlands

Recent years have seen growing evidence of the positive impact of art experiences on human wellbeing. This project explores the transformative potential of cultural heritage, using an integrative approach that combines behavioral, neural, and physiological measures. Healthy adult participants perform a laboratory-based task involving two experimental conditions. In one condition, they engage with audiovisual stimuli consisting of documentation of cultural heritage artifacts presented in either a neutral or emotionally expressive way. In the other condition, participants view validated stimuli with positive, negative, or neutral valence, matched to the heritage stimuli. Throughout the task, participants stand on a force platform to record their Center of Pressure (COP), a marker of subtle postural shifts. In parallel, EEG recordings capture brain activity, and a wearable wristband device records physiological responses. The COP data analyses offer insight into bodily responses: emotionally engaging stimuli are expected to reduce sway variability due to attentional capture, elicit backward leaning in response to negative stimuli, and forward leaning in response to positive stimuli. EEG analyses focus on estimating an approach-withdrawal index, based on frontal alpha asymmetry, and a cognitive effort index, based on theta-band activity. Finally, skin conductance level serves as an indicator of arousal. By combining different measures, this study seeks to deepen our understanding of how cultural heritage experiences shape cognitive and emotional states. Ultimately, it aims to provide evidence-based insights for cultural professionals on designing emotionally resonant and mentally enriching encounters with heritage.

## **50. AI-based analysis of environmental aesthetics and neural responses to urban parks**

Josef Musil & Irene Gallou

Foster and Partners, United Kingdom

This interdisciplinary study leverages cutting-edge artificial intelligence methods to explore how visual aesthetics in urban natural environments influence psychological states, bridging neuroscientific research with artistic experience. Participants equipped with mobile EEG headsets and eye-tracking glasses navigated urban park environments and transitional walks, with neural and visual data continuously recorded. Advanced AI algorithms—including Vision Transformer-based semantic segmentation (Segment Anything Model) and multimodal embeddings (CLIP: Contrastive Language-Image Pre-training)—quantified environmental composition, aesthetic complexity, color harmony, and the ratio of natural versus artificial visual elements. These AI-derived metrics were then quantitatively compared to analogous visual properties from renowned landscape artworks using deep neural embeddings, assessing parallels between environmental aesthetics and artistic experience. Neural responses were evaluated using performance metrics (e.g., stress) derived from Emotiv's EEG analytics platform. Results demonstrated that park environments with aesthetic characteristics closely matching classical landscape paintings induced lower stress levels according to Emotiv performance metrics, indicating greater restorative potential. Conversely, visually cluttered or less harmonious scenes corresponded with elevated stress responses. Our findings illustrate how AI-driven scene analysis systematically predicts psychological restoration based on principles derived from art theory, providing empirical support for integrating artistic aesthetics into urban environmental design. Ultimately, this approach demonstrates the transformative potential of combining AI-powered visual analytics with neurophysiological methods, offering evidence-based guidelines to enhance restorative urban environments.

# Abstracts for Poster Presentations

## **51. Intersubjective sense-making in motion: A 5E approach through movement, touch, and affordance**

Lisa-Maria van Klaveren<sup>1</sup>, Klara Łuczniak<sup>2</sup>, Julian Zubek<sup>2</sup>

<sup>1</sup>University of Groningen, The Netherlands

<sup>2</sup>University of Warsaw, Poland

This project develops a theoretical and methodological framework for investigating intersubjective sense-making as a 5E cognitive process—embodied, enactive, embedded, extended, and emotional—by bringing together Laban Bartenieff Movement Studies (LBMS), ecological psychology, and biosemiotics. We use Contact Improvisation (CI) as a case to explore how people think together in motion (Sheets-Johnstone, 2009): a dynamic, affective negotiation of weight, balance, and spatial cues through movement and touch. The historical resonance of Monte Verità—as a place where embodied practices, arts, and holistic sciences converge—makes it a uniquely fitting setting to explore the integration of LBMS into contemporary aesthetic theory. To analyse this process, we draw on LBMS's categories of effort and shape. Effort captures how energy modulates through time, space, weight, and flow, while shape describes how the body adapts spatially. Together, they illuminate how movement embodies relational and affective dynamics. Integrating LBMS with biosemiotics and ecological psychology allows us to frame movement as meaningful, relational action, embedded in fields of affordances and semiotic processes. Sense-making here involves perception, imagination, conceptualisation, and dynamic coupling with the environment. Methodologically, we combine LBMS-informed coding with non-linear time series analysis: Chromatic Recurrence Plots (CRPs) and (Cross) Recurrence Quantification Analysis (CRQA) uncover temporal patterns and coordination between dancers. Video-cued interviews, analysed through a semiotic coding scheme, complement the movement analysis by foregrounding participants' lived experiences. We propose this integrated framework to investigate intersubjective aesthetic sense-making as an unfolding 5E process. Our approach opens interdisciplinary dialogues between movement analysis, cognitive science, semiotics, and cultural theory.

## **52. Aesthetic affordances in action: Dialogue between biosemiotics and ecological psychology**

Lisa-Maria van Klaveren<sup>1</sup>, Gemma Schino<sup>2</sup>, Ralf Cox<sup>1</sup>

<sup>1</sup>University of Groningen, The Netherlands

<sup>2</sup>Leibniz-Institut für Wissensmedien, Germany

How can we describe aesthetic sense-making in terms of perception and action? How do landscapes of affordances—relations between organisms and their environment, grounded in physical, social, and cultural niches (umwelts)—shape and constrain aesthetic experience? More broadly, how can we account for aesthetic phenomena through a scientifically grounded yet artistically sensitive lens? These are the guiding questions of this poster. We propose an explicitly interdisciplinary approach, drawing together insights from biosemiotics and ecological psychology to develop a framework for understanding aesthetic sense-making. In biosemiotics, sense-making is conceived as the active exploration of a field of possibilities, grounded in the dynamic realisation of meaning through action. Building on Kull's (2022) notion of beauty as perfect semiotic fitting, we frame aesthetic experience as a "beautiful fit" between organism and umwelt, marked by either a relatively stable bond or a continuous reconstructive adjustment to inevitable and often irreversible environmental changes. Ecological psychology expands the boundaries of cognitive systems, emphasizing the body and environment, and seeks to illuminate perception, action, and cognition through the lawful dynamical principles underlying the organisation of nature across multiple scales. This ecological view resonates with biosemiotic perspectives, offering fertile ground for integration. We conceptualize aesthetic sense-making as layered sensorimotor organisations and resonances, unfolding across three interwoven dimensions: the perceptual (experience of beauty), the behavioral (craftsmanship and technique), and the semiotic (emergence of meaning and sense). By encouraging dialogue between the arts and sciences, we aim to foster constructive discussions at the intersection of biology, psychology, and the arts.

## Abstracts for Poster Presentations

### **53. Judging books by their covers: the impact of text and image features in the aesthetic evaluation and memorability of Italian novels**

Kirren Chana<sup>1</sup>, Jan Mikuni<sup>2</sup>, Simone Rebora<sup>2</sup>, Gabriele Vezzani<sup>2,3</sup>, Anja Meyer<sup>2</sup>, Massimo Salgaro<sup>2</sup>, Helmut Leder<sup>1</sup>

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Book covers are often the first item seen before a reader engages with its contents, therefore careful consideration is placed into the text and image features that constitute its design. This study investigates the effects of the presentation of verbal (text) and visual (image) material on memorability and aesthetic evaluations in the context of book covers. To this aim, 50 participants took part in a memory recognition task where the same book cover information was encoded in a learning phase, but either text or image features from the book covers acted as an informational cue for memory recognition and aesthetic evaluations. Our results revealed image features significantly aided memory performance more than text features. Image features that were rated more beautiful were not better recognized as a result, however differences in memory performance were found in relation to familiarity and, in a non-linear fashion, the extent to which the book's contents could be inferred from the image informational content. Additionally, reading behaviour was not found to influence memory performance. These results are discussed with regard to the interplay of text and image informational cues on book cover perception and provide implications for future studies.





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