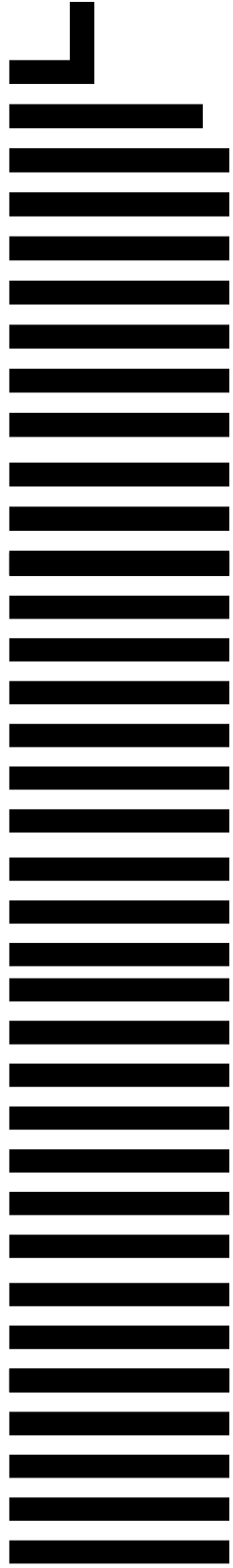




iaea
Jena 2026
Abstracts

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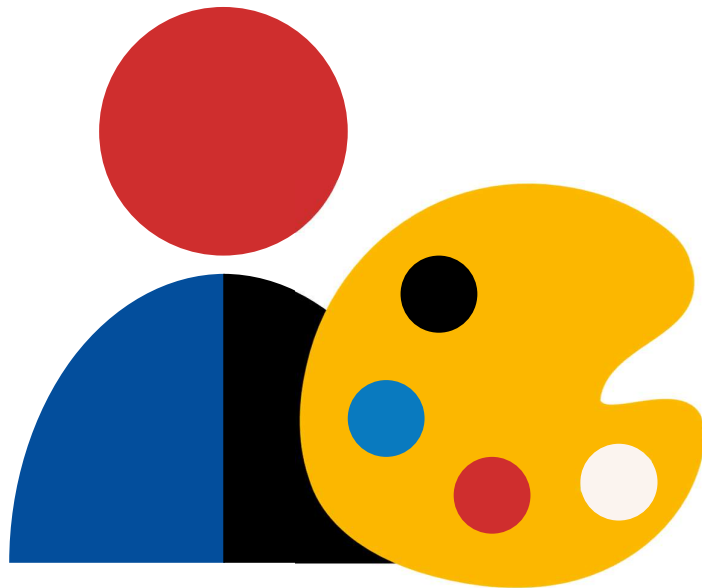
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Artist Contributions



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Artists Contributions Overview

 **LEA DEUTSCHMANN**
Verbunden 2026

 **KATYA GRANOVA**
Spinnerei Summer Camp

 **FRITZI JARMATZ**
Imagine being drawn

 **ROMI ZAKSE**
Places of Longing

 **CHRISTINE GEYER**
Between blossom and horizon

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 **LEONE BURRIDGE**
Illusory Colours in Monocular Rivalry: Paintings

 **CHRISTOPH REDIES**
„Abstract Works“

 **MARGARETE JAHRMANN & ALEXANDER HACKL**
„It didn't rain that day“

			<p>LEA DEUTSCHMANN • Verbunden 2026 Wednesday 6 – Friday 8 May Location: Czapski</p>
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Lea Deutschmann is a multidisciplinary artist and designer exploring art's role in mental wellbeing and human connection. Her work counters social isolation and digital overload, emphasizing empathy and togetherness. Through installations, art concepts, and design projects – including her co-founded app “Attentive” for healthier smartphone habits – she fosters reconnection with oneself and others in our digital era.

www.leadeutschmann.com

Instagram: @lea_deutschmann

Attentive app: <https://apps.apple.com/app/attentive-digital-wellbeing/id1559421907>

“Verbunden”, 2026

This interactive installation invites visitors to find support, hope, and strength through shared experience. The cushions encourage hugging, curling up alone or with others, creating a space where personal burdens are collectively carried. Visitors are invited to leave their smartphones aside, resisting digital overload, and fully engage with one another. Through physical interaction and presence, the installation fosters empathy, togetherness, and reflection. “Verbunden” responds to social isolation and tension, offering a poetic gesture of closeness. By embracing, resting, and connecting, visitors experience the healing potential of being held, collective strength, and the magic of unity in an increasingly fragmented world.

			<p>KATYA GRANOVA • Spinnerei Summer Camp Wednesday 6 – Friday 8 May Location: Czapski</p>
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Katya Granova is a contemporary artist based between Leipzig and London. Her paintings draw on archival, mundane photographs, which she translates into large-scale canvases and approaches as portals into an unreachable past. She employs energetic brushwork and vibrant colour to place herself within those forgotten moments, challenging existential limitations and uncovering hidden narratives and emotional tensions within standardised histories.

Spinnerei Summer Camp

My works are often based on found old photographs, and this particular one draws on an archival image from the Spinnerei Factory. The Spinnerei Factory was a large yarn factory operating in Leipzig for nearly a century, being a town in the town, and the photograph shows factory workers' children and teens on their way to a summer camps. It looks from about the 1980s, the presence of a change is clearly visible, yet the image still carries a slightly propagandistic tone, aiming to depict happy life of workers' kids. I approach the scene through painting in order to connect and interact with the figures, to insert my presence into this moment, and to touch the lost histories—especially real narratives obscured beneath propaganda. I believe this can contribute to the conference by showing how painting can move beyond representation and function as a performative medium, creating a bodily connection with something impossible, such as a vanished past.

FRITZI JARMATZ • Imagine being drawn

Wednesday 6 May

Location: Czapski

Fritzi Jarmatz is a communication designer living and working in Berlin. She works in the broad field between mediation, artistic research, exhibition design and visual communication for regional and national non-profit organizations and institutions

Imagine being drawn

When drawing — and being drawn — a special momentum develops between the model and the artist. It is a mutual interaction: an act of precise observation paired with a deep awareness of being observed. The senses sharpen, yet a state of relaxation arises.

Imagine being drawn – is a transient installation that explores and symbolizes the physical experience of "being drawn". It invites to become part of the installation and explores the personal experience and its transferability. Participants are invited to lie down, listen through headphones to the sound and scratches of pens on paper, and surrender to their imagination. Afterward, they can share their experience and leave it on site, so the installation grows from the visitors' experiences over the course of the exhibition.

ROMI ZAKSE • Places of Longing

Wednesday 6 May

Location: Carl-Zeiss

As a self-taught watercolourist and scientist who discovered her passion for painting in 2019, Romi is determined to capture light and vibrant shadows using the transparency, luminosity and unique flow of watercolours. Although her works are representational, conveying mood is more important than a faithful reproduction of a subject.

Places of longing.

This selection of watercolours invites the viewer to join me on a brief, personal journey to places or situations that stir a sense of longing within me. Inspired by travel, everyday life or photographs of unfamiliar places, I captured landscapes, still lifes and moments of leisure. Experience, among other things, the picturesque German town of Quedlinburg by night, dangle your feet in the water whilst fishing, or enjoy delicious cheese and wine. Which place do you like best?

CHRISTINE GEYER • Between blossom and horizon

Thursday 7 May

Location: Carl-Zeiss

Christine Geyer lives near Jena and works as a lead dental assistant at the Center for Dental Medicine, University Hospital Jena. Alongside her work in the dental field, design, painting, and drawing have always been integral parts of her life. Her passion for the arts began in childhood and has remained a constant presence ever since. In recent years, she has

discovered watercolor painting - a medium whose lightness and vibrancy particularly fascinate her.

Between blossom and horizon

In her flower and landscape watercolors, Christine Geyer seeks to capture beauty in both the small details and the vast landscape - between blossom and horizon. Color, light, and the mood of a moment are at the heart of her work. It reflects her joy in nature and her wish to preserve its quiet, often fleeting impression.

SANDRA STARK • Speaking Bodies

Thursday 7 May

Location: Rosenthal

Sandra Stark works at the intersection of education, research, and embodied practice. Grounded in design, Community Dance and politicized somatics, their work engages with social change at a microsociological level, foregrounding lived experience in its entanglement with broader power relations. Drawing on relational ontologies, Sandra extends this inquiry into the more-than-human. Speaking Bodies is their first material investigation through weaving.

Speaking Bodies

Speaking Bodies explores weaving as a relational practice in which loom, thread, and body are understood as porous, responsive materials that sense and co-shape one another. The installation centers on continuous strand weaving, a technique in which warp and weft emerge simultaneously, as a material enactment of continuity: rhythm over resolution, one movement leading into the next without predetermined end. The large-scale horizontal loom functions as a communal surface. Participants are invited to sit, touch, and weave. The fabric growing over the course of the conference becomes a material protocol carrying the memory of gestures, failures, friction, and touch as evidence of embodied encounter.

LEONE BURRIDGE • Illusory Colours in Monocular Rivalry: Paintings

Thursday 7 May

Location: Exhibition presented with the poster session

Leone Burridge graduated in medicine from the University of Sydney in 1981, and graduated with a Bachelor of Fine Arts (Hons) Painting from the National Art School Darlinghurst Australia in 2011. Her interest is in the way the mind can generate percepts from minimal information. For the past decade, she has been exploring illusory colours through the medium of paintings on canvas.

Illusory Colours in Monocular Rivalry: Paintings.

Monocular rivalry is the term used to describe the phenomenon where there are two alternating precepts from a single image. This is a presentation of paintings which demonstrate illusory colours fluctuating in monocular rivalry. Only two colours and grey are used, but most viewers perceive four colours, alternating in perpendicular pairs. This seems to be an alteration between assimilation and simultaneous contrast of colours, but the actual underlying mechanism remains unexplained.

CHRISTOPH REDIES • „Abstract Works“

Friday 8 May

Location: Carl-Zeiss

Christoph Redies started painting abstract artworks as a hobby in his youth. He was trained in medicine and neuroscience. For the last two decades, he has been studying quantitative image properties in artworks and how they relate to visual perception. Besides his scientific work, he continues abstract painting, asking himself what he is doing when he is painting.

„Abstract Works“

The fruitful exchange between scientists and artists can be hindered by conceptual and technical incompatibilities between the two fields. To promote common ground, my colleagues and I investigated abstract paintings that I created by myself. I thus served simultaneously as artist and scientist. The paintings were used in experiments on the creation and pictorial composition of abstract artworks. They provided insights that would have been difficult to obtain without the harmonization of their artistic and scientific bases. At the meeting, I am exhibiting some of the paintings used in our experiments, as well as some of my other artworks.

MARGARETE JAHRMANN & ALEXANDER HACKL • „It didn't rain that day“

Friday 8 May

Location: Rosenthal

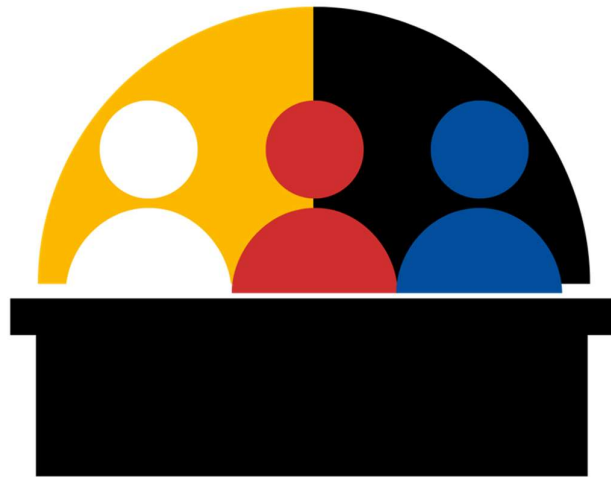
Margarete Jahrmann is an internationally renowned artist, researcher and professor Experimental Game Cultures at the University of Applied Arts Vienna. 2025 she received the Austrian media art price 2025 and in 2020 she received the Media Art Prize of the City of Vienna for her continuous work in critical media and ludic art. She had a major solo-show at the Vienna AIL gallery and exhibited at the Biennale Habana 2021, re:publica 2024, AMAZE Berlin 2023, Kuandu Museum of Fine Arts, Taipei, Taiwan 2024. 2026 she published a monograph, KOPFGELD and Other Ludic experiments, on artistic research, neurosciences and art. In her collaborative and interdisciplinary arts practice, she developed the LUDIC method, explores the human and non-human, the cognitive, emotional linked to the ecological, democratic and society. Her focus lies on playable, performative and installation pieces that explore AI and role play, bleeding of fiction into realities of AI and art.

„It didn't rain that day“ A neo-historical Play-thing, AI Role-Play Installation
Our “Investigation Game” draws on the Turing Test as a simulation of human communication and explores how our daily role-play with large language models is reshaping our past.

The installation examines how different Large Language Models (LLMs) generate meanings, connections and emotions, and how these, in turn, impact collective memory and cultural trauma.

In the role of “investigators”, visitors act as time travellers in an AI-generated historical scene. The focus is on a political event: the assassination of the Austrian philosopher Moritz Schlick in 1936. Distortions, errors, blind spots and hallucinations in the AI's presentation of facts are omnipresent, palpable in the interaction with the system—and structurally embedded in the statistical language model.

Symposia Abstracts



iaea 2026 



Symposia Overview

EMPIRICAL AESTHETICS OF DYNAMIC ARCHITECTURAL ENVIRONMENTS

SELF-TRANSCENDENT EMOTIONS EVOKED BY MUSIC LISTENING

**FROM UNCERTAINTY TO INSIGHT:
THE SCIENCE OF CURIOSITY IN ARTISTIC ENCOUNTERS**

CULTURAL PERSPECTIVES IN EMPIRICAL AESTHETICS

**URBAN AESTHETICS: EMPIRICAL APPROACHES TO PUBLIC ART,
CITY DESIGN, AND MENTAL WELL-BEING**

**CHARACTERIZING AESTHETIC ENGAGEMENT WITH ART:
TESTING THEORY WITH NEW APPROACHES**

**TOWARD A UNIFIED ART-SCIENCE FRAMEWORK FOR DANCE
RESEARCH: BRIDGING THEORETICAL FOUNDATIONS WITH
EMPIRICAL AND APPLIED APPROACHES**

**PERSPECTIVES ON WELL-BEING AND AESTHETIC EXPERIENCE IN
CONTEXT: ECOLOGICALLY VALID RESEARCH FROM URBAN SPACES
TO MUSEUMS**

**THE ARTS AND THE DRIVE FOR KNOWLEDGE: PHILOSOPHICAL,
PSYCHOLOGICAL, AND NEUROSCIENTIFIC PERSPECTIVES**

EMPIRICAL AESTHETICS OF DYNAMIC ARCHITECTURAL ENVIRONMENTS

Wednesday 6th May • 14:30 • Location: Raum Clara und Eduard Rosenthal

Moderator: Na Wei

This symposium brings together multiple complementary perspectives to advance an empirical, design-grounded understanding of aesthetic and emotional experience in architectural environments.

Architecture is not reducible to discrete forms or visual artifacts but emerges as a dynamic, multisensory, and situated environment. To address this complexity, the session begins by introducing a multi-phase experimental framework designed to study aesthetic and emotional experience across representational, physical, and immersive scales. Developed through collaborative research in architecture, psychology, and neuroscience, the framework aligns empirical inquiry with architectural thinking and provides a foundation for integrative, iteratively generated design knowledge. Building on this foundation, the second talk presents findings from a controlled study examining foreground–background curvature relationships in spatial scenes. These results illustrate how carefully structured empirical methods can yield perceptually meaningful distinctions and inform the evolution of design-led experimental frameworks. The third contribution expands the conceptual ground by articulating the notion of atmospheric flow—how individuals encounter, interpret, and emotionally inhabit architectural environments—and connects these experiential dynamics with scripts, affordances, and cultural narratives. The fourth talk introduces an agent-based modeling approach for exploring environmental complexity, offering a computational method for testing behavioral variability and extending empirical studies beyond the constraints of full-scale experimentation. Together, these contributions outline an interdisciplinary approach to architectural aesthetics—integrating empirical methods, experiential theory, environmental modeling, and architectural composition. The session concludes with a roundtable discussion bringing together researchers and practitioners from architecture, psychology, neuroscience, and computational spatial analysis to consider emerging directions for empirical aesthetics in built environments. In doing so, the symposium echoes the conference theme’s call for a contemporary Gesamtkunstwerk: a shared, multi-perspectival framework through which the future of aesthetic research grows from, and expands upon, its intellectual past.

1. A Multi-Phase Framework for Studying Aesthetic and Emotional Experience in Architectural Environments

Na Wei, Martin Skov, Erick Gustavo Chuquichambi, Claudia Damiano, Vasiliki Meletaki, Anjan Chatterjee, Keaton Bruce, Xianyou He & Dirk B. Walther*

** Tyler School of Art and Architecture, Temple University*

This talk introduces a multi-phase experimental framework developed to study aesthetic and emotional responses to architectural curvature across representational, physical, and immersive spatial scales. The framework is grounded in the premise that architectural experience is inherently dynamic, embodied, and multisensory, and therefore requires empirical approaches that remain sensitive to spatial logic, compositional structure, and the lived temporality of built environments. The project integrates empirical methods into architectural workflows through a three-phase sequence: image-based evaluation (Phase 1), object-based spatial interaction (Phase 2), and full-scale immersive experience (Phase 3). Each phase is supported by a design-led stimulus generation process in which architectural elements are abstracted from built works, recomposed through controlled spatial logics, and translated into increasingly embodied conditions. The framework emphasizes progression, iteration, and the cumulative emergence of perceptual patterns across spatial modalities. Phase 1 employs custom-rendered architectural

stimuli to examine perceptual and emotional responses to foreground–background curvature within controlled 2D scenes. Phase 2 transforms perceptually salient spatial configurations into a 1:10 physical model to explore how dimensionality influences aesthetic judgments and behavioral inclination. Phase 3 expands these principles into a full-scale installation paired with a virtual-reality digital twin, enabling the collection of physiological signals, spatial choices, and movement trajectories through wearable biosensors within immersive environments. Together, these phases form an iterative design–research loop in which empirical findings inform subsequent spatial constructions, and spatial constructions in turn generate new empirical insight. The framework is also extended to architectural pedagogy through a new design-research studio that integrates VR, biosensor data, and behavioral tasks, positioning empirical inquiry as a generative component of the design process. By aligning experimental structure with architectural thinking, the framework provides a scalable methodology for studying aesthetic experience while preserving architectural specificity and complexity.

2. Foreground–Background Curvature and Emotional Experience: Evidence from Controlled Architect-Designed Stimuli

*Dirk B. Walther**, *Erick Gustavo Chuquichambi*, *Claudia Damiano*, *Na Wei*, *Vasiliki Meletaki*, *Keaton Bruce*, *Anjan Chatterjee* & *Martin Skov*

** Department of Psychology, University of Toronto*

This talk presents empirical findings on how foreground and background curvature jointly shape emotional, aesthetic, and behavioral responses to interior architectural spaces. The study uses a unique set of 56 architect-designed stimuli that systematically manipulate the curvilinearity and angularity of spatial background structures and foreground elements while holding all other visual variables constant. Thirty participants rated each space on aesthetic pleasure (liking, beauty), perceptual qualities (curvature, angularity, coherence), emotional states (PANAS-based selections), and behavioral tendencies (hominess, willingness to spend time, perceived privateness). Results revealed robust main effects of curvature across nearly all measures: curved spaces were experienced as more pleasing, beautiful, coherent, and comforting than angular ones. Importantly, the study demonstrates that foreground curvature exerts a stronger influence than background curvature on many experiential dimensions. This finding offers practical implications for contexts in which structural modifications are limited—such as healthcare, educational, or workplace environments—showing that introducing curvilinear foreground elements (e.g., furniture, partitions, display structures) can substantially enhance emotional engagement and positive affect. The talk also highlights methodological advancements addressing common limitations in neuroarchitecture research, including stimulus confounds, semantic inconsistencies, and ecological validity. By integrating architectural design principles into stimulus construction—using modular spatial hierarchy, behavioral flow, and composition—the study establishes a model for architect-scientist collaboration that maintains rigorous experimental control without reducing architecture to abstraction. These results contribute to ongoing debates about curvature effects in real-world settings, challenge previous null findings based on computational curvature metrics, and support the relevance of subjective curvature perception for predicting emotional and aesthetic responses. The talk concludes with suggestions for future immersive and physiological studies (VR and full-scale replicas) to validate and extend the findings.

3. From Atmospheric Flow and Scripts to Narrative in Architecture: A Case Study

*Michael A. Arbib**

** University of Southern California*

It is often said that a building has an atmosphere, but in fact the atmosphere as experienced by an inhabitant changes from individual to individual and changes for each individual as they act and interact within the space. We thus shift the emphasis from the atmosphere of a building to the atmospheric flow experienced by an individual. But the architect (unless designing a home for a particular family) cannot anticipate the needs and emotions of every visitor to the building

they are designing. Instead they must imagine the reasons why different people will come to the building. We define these as entailing a set of scripts for general patterns of behavior of each type of inhabitant, and for these the architect must provide not only the affordances for the actions but also the atmospheric cues for emotions and feelings. As a case study, we employ these notions to explore the evolution of sacred architecture from a time before humans had languages, architecture, or religions but experienced “protosacred” atmospheres in diverse natural settings. We argue that the cultural evolution of languages was the necessary complement to such experiences for the emergence of religions. It made our species both *Homo quaerens* (the humans who ask questions) and *Homo narrans* (the humans who tell stories), able to ask existential questions and to develop shared narratives and rituals to provide answers that a group could accept. We offer examples from diverse religions and close with suggestions for a range of experimental investigations to address our hypotheses. Note: This presentation will be delivered via Zoom.

4. Behavioral and cognitive modeling for empirical aesthetics on curvature forms

Kristine Mun and Arkar Hein**

** Isomorphic Lab, Academy of Neuroscience for Architecture*

** Columbia University, Teachers College*

Empirical aesthetics and neuroarchitecture show that small manipulations of curvature, enclosure, and openness can alter affective experience and neural responses in architectural settings. Yet most studies continue to rely on static scenes rather than modeling how people dynamically move through space. This talk introduces a behavioral and cognitive modeling framework that treats aesthetic experience as an unfolding pattern of experience. The treatment of curvature draws on theoretical and design research in continuous geometry, particularly early work by Spuybroek exploring how filleted surfaces, folded planes, and continuous variation foster kinaesthetic engagement, perceptual flow, and multisensory orientation. These projects anticipate contemporary findings in multisensory architectural perception and provide a generative design framework for modeling how form might entrain movement. Using agent-based modeling in a 3D game engine such as Unity, we simulate neurotypical occupants navigating designed layouts. Agents differ in spatial ability and exploratory tendency, informed by validated spatial cognition measures such as environmental spatial ability and sense of direction and by empirical work on navigation strategies. Virtual environments systematically manipulate design variables from empirical aesthetics—including curvature versus rectilinearity, ceiling height, enclosure and openness, and configurations linked to perceived coherence, fascination, and hominess. In a concrete scenario, we layout spaces that differ in wall curvature and ceiling height while holding function constant. Within each layout, agents pursue goals such as reaching an exit or exploring for a fixed duration. We record path structure, dwell time, revisits, and hesitation at visually complex junctions, interpreting these patterns as candidate behavioral correlates of aesthetic qualities—for example, whether curved configurations produce slower, more meandering trajectories and longer stays. We position agent-based modeling as an additional generative phase alongside image-based studies, immersive virtual reality, and full-scale installations. The simulations yield design-sensitive and testable hypotheses about how formal configurations organize movement, attention, and anticipated action across different agent profiles, to be evaluated in subsequent behavioral, physiological, or neuroimaging studies.

SELF-TRANSCENDENT EMOTIONS EVOKED BY MUSIC LISTENING

Wednesday 6th May • 14:30 • Location: Raum Siegfried Czapski

Moderator: Jonna Vuoskoski, Diana Omigie

Experiences of awe and being moved have traditionally been conceptualized as ‘aesthetic emotions’ in the context of the arts and music. However, more recent research has framed these experiences as ‘self-transcendent emotions’ that occur in a broader range of contexts, including significant life events, nature, social relationships, and personal achievements. Specifically, self-transcendent emotions motivate attention being directed outwards or away from the self: The experience of awe entails increased attention toward larger entities and diminishment of the individual self, while the experience of being moved involves a reduced salience of the self through an increased sense of interpersonal connectedness. This symposium will present work addressing the proposed self-transcendent nature of the experiences of being moved and awe in the context of music listening. Fleckenstein will present a study examining how the perceived humanness and morality of the music’s creator influences listeners’ experiences of being moved, alongside other emotional and aesthetic responses. Vuoskoski’s presentation will then explore the elicitors, socio-affective and behavioural correlates of being moved and awe in the context of a live concert and an online study. In Arthur’s presentation, the extent to which culture shapes the understanding, emotional responses to, and long-term impacts of awe and the sublime is investigated by comparing the responses of Japanese and UK participants in an online survey. Finally, Omigie provides insights into neural underpinnings of music-induced awe, and throws light on some of the nuances of the experience with respect to its musico-acoustic drivers and epistemic consequences. By bringing together findings obtained using a range of different approaches, the four presentations provide converging and complementary evidence of self-transcendent experiences in the context of music listening. Studying music’s capacity for self-transcendence has important implications for understanding the role music may be playing when it provides the “setting” for self-transcendence promoting therapies.

1. Do humanness and morality affect emotional and aesthetic responses to music?

*Abbigail Fleckenstein**, *Mariola Paruzel-Czachura*, *Katarzyna Pypno-Blajda*, *Henna-Riikka Peltola* & *Jonna K. Vuoskoski*

**University of Oslo, Norway*

Background: When listening to novel music, extramusical information about the musician may shape listeners’ evaluations of the music. This experiment examined how information about musicians’ humanness and morality affected listeners’ emotional and aesthetic responses to music. Research outside the domain of music has established that experiences of being moved, empathy, and aesthetic appreciation of visual art, are modulated by appraisals of morality. However, in the context of music, such modulations might be contingent on the perceived presence of a human agent (i.e., whether the music is composed and performed by humans, or is AI-generated). Research on AI-generated music has reported inconsistent effects of human vs. AI origin on listener responses; some studies indicate a bias against AI music, while others have reported more mixed results.

Methods: The study was conducted as an online experiment, following a 2 (Humanness: Human vs. AI-model) × 2 (Vocalist Sex: Male vs. Female) × 3 (Morality: Moral, Immoral, Neutral) mixed factorial design. Participants (N = 400) were randomly assigned to one of four groups where they read descriptions depicting moral, immoral, and neutral behaviors and listened to unfamiliar songs randomly paired with the descriptions. Emotional and aesthetic responses to songs were measured using the GEMS-9 scale (Zentner et al., 2008), as well as items measuring feeling moved, connectedness, beauty, liking, and creativity.

Results: Linear mixed-effects models showed significant main effects of morality for all dependent variables, including feeling moved and connectedness, with immoral descriptions consistently resulting in lower ratings. Contrary to predictions, no significant main effect of humanness or interaction between morality and humanness was observed. Exploratory analysis showed that higher trait empathy was associated with stronger emotional and aesthetic responses overall, with the exception of “unease” ratings. Present findings highlight how socio-cognitive processing of extramusical information affects emotional and aesthetic responses.

2. Experiences of awe and being moved evoked by music: Exploring elicitors and socio-affective and behavioural correlates

*Jonna K. Vuoskoski**

**University of Oslo, Norway*

Awe and being moved have recently been framed as ‘self-transcendent emotions’ that reduce the salience of the self and direct attention outwards. However, in the context of music listening, such experiences have typically been conceptualised in terms of aesthetic responses or aesthetic emotions. The aim of the two studies presented here was to investigate the extent to which music-induced experiences of awe and being moved are associated with self-transcendence by exploring the elicitors and socio-affective and behavioural correlates associated with such experiences. Study 1 was a live concert experiment, where 91 participants listened to a string quartet performing classical and folk music, and reported their felt emotions, social connectedness, and trait empathy. Participants’ body motion was tracked using accelerometers. Being moved correlated positively with enjoyment ($r = .59$) and feeling connected to the performers ($r = .59$) and other audience members ($r = .48$), but only weakly with awe ($r = .19$). Conversely, awe did not correlate with enjoyment or connectedness to audience members, and only weakly with connectedness to the performers ($r = .21$). Trait empathy significantly predicted being moved, but not awe. Awe was negatively associated with body motion. Study 2 was an online experiment, where 66 participants heard 3 music excerpts randomly paired with an awe-evoking or moving video, or no video. The experience of chills was significantly predicted by being moved, but not by awe. Being moved was also a stronger predictor of enjoyment. Awe was positively predicted by valence, while being moved was predicted by both valence and arousal. Taken together, the findings suggest that music-induced being moved is associated with prosocial elicitors and increased connectedness, while awe is elicited by vastness and is experienced as less pleasurable. The implications of the findings will be discussed in relation to current theories on self-transcendent emotions.

3. How culture shapes musical awe, beauty, and the sublime: Emotional qualities and long-term impact among British and Japanese listeners

*Yuko Arthurs**

** Goldsmiths, University of London, UK*

Strong emotional responses to music are reported in the psychological literature as being highly valued by listeners. However, a large body of research suggests that emotions are shaped by personal, environmental and societal factors, highlighting the relevance of examining cultural variations in how music-induced emotions are understood and experienced (Tang, 2024). 181 British and 153 Japanese participants completed an online survey in which they described their personal understanding of awe, alongside beauty and sublime experiences from music and provided ratings of the emotional responses to, and the long-term impact that such experiences had had on them. Thematic analysis of participants’ descriptions revealed five themes across experiences: musical and aesthetic factors, absorption and transportation, emotional responses, extraordinary states and percepts, and perceived meanings and impacts. Preliminary findings from linear mixed models examining emotional qualities and impact show that Japanese participants reported - across the three experiences - a greater sense of diminished self, a stronger feeling of the supernatural, and stronger perception that music expressed virtue compared to UK participants. Awe elicited higher ratings for time slowing and perceived skillfulness among UK participants, whereas Japanese participants rated such pieces as more

mentally challenging. In brief, findings suggest that the conceptual and emotional framing of some aesthetic experiences are shaped by culture, highlighting the need for a more culturally sensitive approach to the understanding of aesthetic experiences through music.

4. The neural correlates and consequences of music-induced awe

Silvia Castellano & Diana Omigie*

** University of Salford*

Awe is a complex emotional state that has been reported to have wide-reaching consequences for cognition, social dynamics and wellbeing. However, in the context of music listening, its musico-acoustic drivers, epistemic consequences and neural underpinnings remain relatively unexplored. In two studies (one ongoing), we utilised immersive VR to present awe-inducing music experiences while recording participants' electroencephalography data. In study 1, 40 participants experienced high-awe and low-awe 360° visual scenes that had been systematically paired with high-awe and low-awe musical excerpts. They continuously rated their feelings of awe during the audiovisual experiences and provided subjective responses for the music and visual stimuli separately in a later session. In study 2, participants were presented with positive awe, negative awe and neutral music conditions. They also continuously rated their feelings of awe during the experience, before completing several outcome measures (including social connectedness, self size, self transcendence, meaning and divergent thinking) after each condition. In terms of the neural correlates of awe, results largely corroborated previously reported neural signatures of awe (reduced parieto-occipital alpha) but showed them to be most reliable when awe-inducing music was accompanied by awe-inducing visuals. In terms of musical drivers and consequence of awe, preliminary results show positive experiences of awe to more readily promote feelings of connectedness and meaning (than negative awe) and suggest that while some musical drivers are shared across awe experiences, others (e.g. loudness, roughness and pulse clarity) may differ between positive and negative experiences of awe. Taken together, the studies point to the relevance of seeking a better understanding of music-induced awe and showcase the power of immersive VR for studying such rich music listening experiences.

**FROM UNCERTAINTY TO INSIGHT:
THE SCIENCE OF CURIOSITY IN ARTISTIC ENCOUNTERS**

Thursday 7th May • 14:00 • Location: Raum Clara und Eduard Rosenthal

Moderator: Ana Clemente

Curiosity is a fundamental driver of human cognition and behaviour, shaping how individuals seek, select and integrate information to reduce uncertainty and enhance learning. It is, therefore, a central catalyst in artistic experiences, influencing how individuals explore, interpret and derive meaning from artworks and other stimuli. Within empirical aesthetics, curiosity helps explain why visual, auditory or multimodal features capture attention, motivate exploration and elicit emotional and cognitive responses.

Across psychological, neuropsychological and computational domains, contemporary research has converged on the view that curiosity is not a unitary construct but a dynamic, multifaceted process that supports adaptive behaviour. Psychologically, curiosity encourages exploration, motivation, creativity and resilience, while dysregulated forms of curiosity are implicated in anxiety, compulsive information seeking and attentional vulnerabilities. Neuropsychological evidence reveals that curiosity engages distributed neural systems integrating reward, memory and cognitive control – particularly dopaminergic circuits linking the midbrain, hippocampus and prefrontal cortex – thereby facilitating enhanced encoding, flexible reasoning and goal-directed exploration. In parallel, computational frameworks formalise curiosity as an information-theoretic or reward-modulated mechanism guiding efficient learning under uncertainty. Models such as intrinsic motivation algorithms, Bayesian surprise and active inference provide mechanistic accounts that connect behavioural evidence with underlying neural computations, while also inspiring artificial systems capable of autonomous exploration and adaptive learning.

This symposium brings together psychological, neuropsychological and computational perspectives to advance a unified understanding of curiosity as a core engine of cognition. By integrating empirical findings, theoretical models and translational applications, the session aims to highlight how curiosity shapes learning trajectories, decision strategies and adaptive behaviour—and how these insights can inform clinical assessment, educational practice, the design of intelligent systems, as well as the creation and appreciation of art.

1. Neurocomputational mechanisms that bridge between valuation and knowledge to generate curiosity

*Jacqueline Gottlieb**

** Department of Neuroscience, The Kavli Institute for Brain Science, The Zuckerman Institute for Mind Brain and Behavior, Columbia University*

Although the importance of curiosity has long been recognized in the arts and humanities, the neural and computational mechanisms of this process are largely unknown. I will present evidence that curiosity arises from large-scale interactions between two distributed networks: executive control and valuation networks on one hand and high-level sensory and knowledge networks on the other. I will start by describing a biologically plausible model that generates cost-benefit computations for deciding when and about what to become curious (seek information). I will present evidence from single-neuron recordings and fMRI imaging that these computations are accomplished in an executive circuit comprising the anterior cingulate cortex, neuromodulators dopamine and norepinephrine, and spatiotopic visual maps involved in attention control. I will then discuss evidence that the model detects uncertainty by monitoring representations of visual categories in object-selective temporal cortex. Finally, I will discuss how valuation and knowledge- aspects of curiosity-driven behavior map on distinct personality traits. Together, the results show that curiosity is a large-scale distributed process that involves cost-

benefit choices regarding our knowledge structures and allow the brain to decide how to build on these structures in an endogenous, self-organized fashion.

2. Curiosity as a missing piece in music neuroscience: insights from laboratory, pharmacological, and real-life naturalistic experiments

*Antoni Rodriguez Fornells**

** Cognition and Brain Plasticity Unit (CBPU) [University of Barcelona and Biomedical Institute Bellvitge Hospital (IDIBELL)], ICREA (Catalan Institution for Research and Advances Studies)*

Curiosity is a central component of intrinsic motivated behavior, driving information seeking, exploration, and engagement with novel stimuli. Yet within musical neuroscience, it has received far less attention than musical pleasure, despite its potential role in shaping how listeners approach, explore, interpret music and potentially develop musical interests. A series of studies will be presented on how curiosity interacts with reward processes to influence music engagement at behavioral, experiential, and neurochemical levels. Our first studies examined the cost of music curiosity. In a new laboratory exploration/exploitation paradigm, participants indicated how much money they were willing to sacrifice to hear an unfamiliar music piece. A real-world adaptation of this paradigm at an electronic music concert confirmed that triggered curiosity promotes exploratory decisions and enhances later memory for new music. These findings identify curiosity as a major driver of exploration, closely linked to musical reward sensitivity and deeper cognitive encoding. A follow-up complementary pharmacological study showed that blocking opioid receptors selectively impairs curiosity-driven exploration without altering curiosity itself, revealing a dissociation between the experience of curiosity and the resources invested in information seeking. A second set of findings examined the temporal dynamics of curiosity and pleasure during a live classical music event. Continuous experiential measures showed that curiosity and pleasure unfold in distinct yet interdependent trajectories: curiosity initially acts as an anticipatory state facilitating pleasure, while subsequent information gain associated to learning information about the song listened, boosts pleasure feelings during re-listening (while keeping curiosity levels stable). These results challenge the classical notion of rapid curiosity satiation and highlight the complexity of music as a learning and predictive experience. Together, these studies position curiosity as a foundational but underrecognized component of musical listening, shaping exploration, enhancing pleasure, and guiding engagement across diverse contexts.

3. Hedonic foraging as a framework for understanding curiosity and creativity

Olivier Penacchio & Ana Clemente*

** Bridging Research in AI and Neuroscience, Computer Vision Center (Spain) and Computer Science Department, Universitat Autònoma de Barcelona (Spain)*

Curiosity-driven exploration is a core component of human behaviour. Traditional cognitive and neuroscientific theories have largely framed curiosity as a drive to acquire information or knowledge. More recent accounts present a more cohesive framework, demonstrating that progress in learning itself is a major source of curiosity-driven exploration. Yet these perspectives still struggle to explain how curiosity is balanced against other fundamental, more pragmatic drives, such as seeking food or maintaining safety, to produce efficient and goal-directed action. In this talk, we will introduce hedonic foraging, a theory of motivated behaviour that integrates hedonic evaluation – the assignment of positive or negative value to observations – with active inference – a unifying principle in the cognitive and biological sciences in which behaviour emerges from the imperative to minimise variational free energy, the divergence between actual and preferred states. Hedonic foraging formalises reward maximisation as a process in which hedonic evaluation continuously monitors, motivates and shapes free-energy minimisation. The theory accounts for behaviour across a wide continuum, from basic allostatic processes observed across species to sophisticated cultural practices in humans. It shows that motivated behaviour can be naturally expressed as jointly guided by epistemic and pragmatic motivations. In doing so, hedonic foraging reconciles contemporary treatments of curiosity-driven exploration

with exploitative behaviour, providing a principled and mechanistic account of cognition and action. We will show how the framework captures the interplay and impact of pragmatic and epistemic value, distinguishing two fundamental types of curiosity, and explains well-characterised phenomena in art appreciation, including statistical learning, perceptual and cultural biases and insight-related experiences such as Aha or Erlebnis moments.

CULTURAL PERSPECTIVES IN EMPIRICAL AESTHETICS

Thursday 7th May • 14:00 • Location: Raum Siegfried Czapski

Moderator: Jimpei Hitsuwari

Over the past two decades, empirical aesthetics has flourished as a field. However, the predominance of research originating from Western contexts feels notably WEIRD—and stands in stark contrast to the incredible variety of art and aesthetic experiences across human cultures. This Western-centricity manifests in three key dimensions: samples, stimuli, and concepts. Many studies recruit Western participants, present Western paintings or Western music, and measure constructs such as beauty. In contrast, research that examines, for example, Japanese or Indian participants responding to ikebana (Japanese art of flower arrangement) or Bharatanatyam (Indian classical dance), while measuring culturally-grounded concepts such as wabi-sabi (a Japanese aesthetic sensibility that finds beauty in imperfection) or rasa (aesthetic emotions experienced by the audience in Indian aesthetics), remains remarkably scarce. Recognizing this gap, *Psychology of Aesthetics, Creativity, and the Arts* dedicated a special issue to "Racial and Cultural Issues" in 2021. The response far exceeded what could be accommodated in a single issue, resulting in publications spanning two issues in 2023 and 2024 (Goldstein & Vartanian, 2024; Vartanian et al., 2023). Building on this momentum, the present symposium aims to further advance cultural perspectives in aesthetic research. We believe that considering the diversity of aesthetic experiences through a cultural lens is essential for the continued development of empirical aesthetics as a field. This symposium brings together four speakers who have been conducting empirical aesthetics research from cultural perspectives. Each will present research addressing both cultural differences and commonalities in aesthetic experience. Beyond individual presentations, the symposium will provide a forum to explore fundamental questions: What does "culture" mean in empirical aesthetics? (e.g., in-group bias, expertise, schemas) What can be gained by incorporating cultural perspectives? (e.g., building more universal theories) Through critical integration, we aim to identify key insights and chart directions for culturally grounded empirical aesthetics research.

1. Shared determinants of beauty with culture-dependent weights: Evidence from German–Japanese studies

Jimpei Hitsuwari & Thomas Jacobsen*

** Experimental Psychology Unit, Faculty of Humanities and Social Sciences, Helmut Schmidt University*

Whether, or not, there are universal determinants of beauty is a central question in empirical aesthetics. Cross-cultural comparisons offer a way to approach this issue. In our German–Japanese comparative work, we have often found interactions between culture and independent variables in predicting aesthetic evaluations. These interactions usually do not show opposite effects; rather, effects point in the same direction in both cultures but differ in magnitude (i.e., slope). We illustrate this with several studies using Japanese art forms and comparing Japanese and German observers. In a study on haiku, a short form of Japanese poetry (Hitsuwari & Nomura, 2024), lower perceived ambiguity was associated with higher beauty ratings in both groups, with a stronger effect among Germans. In a study on bugaku, a form of classical Japanese court dance (Hitsuwari et al., 2025), German participants showed higher liking when their understanding of the movements was lower, whereas Japanese participants did not. In both cultures, higher perceived harmony was associated with higher ratings of gracefulness, again more strongly among Germans. In ongoing work on ikebana (Japanese flower arrangement; Hitsuwari et al., in preparation), German data are not yet available at the time of submission (both samples will be presented at the conference). In Hitsuwari & Jacobsen (2025), however, even

Japanese participants, who are often assumed to prefer asymmetry, rated ikebana arrangements as more beautiful when they were perceived as more symmetrical. This effect may be even stronger among German observers. These findings challenge simplistic East–West contrasts that cast Western aesthetics as centered on perfection, symmetry, and harmony, and Japanese aesthetics on imperfection, asymmetry, and chaos. Cross-cultural research in empirical aesthetics is still scarce, and further work beyond Japanese–German or generic East–West comparisons is needed to clarify both cultural differences and potential universals in aesthetic experience.

2. The Role of Age, Art Interests, and Art Knowledge in Cultural-Match Effect on Art Appreciation in Adolescents

Magdalena Szubielska & Robbie Ho*

** Institute of Psychology, Nicolaus Copernicus University in Toruń*

People tend to appreciate artworks more when the artworks align with their cultural background. In empirical aesthetics, this phenomenon refers to as the cultural-match effect on art appreciation and has been observed primarily among adults. This talk presents two studies investigating this effect in Western adolescents (Polish primary and secondary school students). Study 1 included 150 participants representing three age groups (12–13, 14–15, and 16–17 years). Participants viewed paintings from different origins (Western vs. Eastern) and periods (historic vs. contemporary) on a computer screen with no time limit. They assessed each painting on art identification, liking, and understanding. Participants viewed culturally matching (Western) paintings longer than Eastern ones, supporting the cultural-match effect in the implicit measure of viewing time. Explicit measures showed a more complex pattern; the cultural-match effect emerged mainly within historic paintings and among the 16–17-year-old group. For contemporary paintings and other age groups, results showed either no cultural-match effect or even a cultural-mismatch effect, with Eastern paintings appreciated more. The ongoing follow-up Study 2 explored whether differences in art knowledge and art interest explained the conflicting effects in the youngest and oldest groups. Using the same materials and age ranges, participants selected (a quantitative part) and justified (a qualitative part) their five most- and five least-appreciated paintings. In the second stage, participants assigned all paintings to their origin, one by one (a quantitative part). Our studies indicate that the cultural-match effect in adolescents may not apply to contemporary art and may vary developmentally.

3. The rasa theory as a framework for cross-cultural empirical aesthetics

*Kohinoor Monish Darda**

** ARISA Foundation*

Navarasa, the classical Indian taxonomy of nine aesthetic–emotional states, offers an unusually well-specified non-Western theory for empirical work on dance. In this talk, I use Navarasa in dance as a test case for what a cross-cultural empirical aesthetics might look like. I first sketch the roots of the rasa theory and contrast its assumptions with dominant models of emotion and aesthetic experience. I then review studies that operationalise Navarasa in Indian classical dance, drawing on behavioural ratings, eye-tracking, EEG and functional connectivity, as well as recent computational analyses of facial expression and movement. Across these methods, I ask what is gained and lost when a rich indigenous aesthetic vocabulary is translated into experimental variables. I end by outlining how Navarasa can inform study designs, measurement choices and interpretation when working across cultures, and how it challenges default notions of universality in the science of aesthetic experience. The talk will highlight practical issues (stimulus construction, expertise, language, and translation) and argue that treating Navarasa as a partner theory, rather than an exotic case study, can help empirical aesthetics move toward more plural, reflexive and methodologically sensitive cross-cultural frameworks.

4. Cross-Cultural and Dispositional Influences on Real-World Engagement with Cultural Heritage

*Tobiasz Trawiński**

** School of Psychology, Liverpool Hope University*

A key question in empirical aesthetics is whether responses to artworks are driven mainly by universal perceptual mechanisms or shaped by cultural learning and individual dispositions. To address this, we conducted a series of mobile eye-tracking studies that move beyond traditional laboratory settings and capture spectator's engagement in museums and archaeological sites. Working with National Museums Liverpool, the National Museum in Warsaw, the Bode Museum in Berlin, and the Polish Centre of Mediterranean Archaeology Mission in Sudan, we recorded how visitors visually explored paintings and heritage environments. By combining eye-movement data with self-report, behavioural measures, and indicators of cultural background and expertise, we examined how perceptual cues interact with culturally informed expectations and personal preferences. Across contexts, we found that patterns of visual exploration are shaped not only by stimulus properties or task demands but also by culturally learned interpretative habits and individual dispositions. These findings challenge assumptions of universal viewing strategies and demonstrate the value of naturalistic, cross-cultural methods for understanding how perception and cultural meaning jointly structure aesthetic experience.

URBAN AESTHETICS: EMPIRICAL APPROACHES TO PUBLIC ART, CITY DESIGN, AND MENTAL WELL-BEING

Friday 8th May • 11:30 • Location: Raum Clara und Eduard Rosenthal

Moderators: Anjan Chatterjee, Matthew Pelowski, Joerg Fingerhut

Urbanization is reshaping human life. By 2050, nearly 70% of the world's population—around 6.7 billion people—will live in cities. As urban environments expand, so does the importance of understanding not only their infrastructural and economic dimensions but also their aesthetic and cultural qualities. The visual, spatial, and artistic character of cities—their public art, urban design, multisensory atmospheres, and architectural forms—plays a crucial role in shaping perception, affect, and experience.

Growing evidence from the urban mind sciences shows that aesthetic features of the built environment can influence stress, motivation, social cohesion, and mental health. Yet access to positive aesthetic experiences is unevenly distributed, often mirroring existing social inequalities. This session examines how urban aesthetics and public art can contribute to mental health, well-being, and urban flourishing, framed within the emerging field of neuroarchitecture and neurourbanism. We explore how the designed environment interacts with psychological processes and how aesthetic and cultural infrastructures can help build more livable, equitable cities.

To address these questions empirically and comparatively, the symposium brings together three leading international research groups whose work collectively spans urban neuroscience, empirical aesthetics, and public art research.

The Penn Center for Neuroaesthetics (University of Pennsylvania) adds cognitive neuroscience and community-based research on how public art, neighborhood form, shape perception, affect, and social connection.

The Empirical Visual Aesthetics Lab (EVALabs) and the ARTIS Lab at the University of Vienna offer complementary methodological innovations, including mobile psychophysiology, in-situ experience sampling to investigate how people encounter public art and aesthetics in real urban settings.

The Research Platform Neurourbanism (Humboldt-Universität zu Berlin/Berlin University Alliance) contributes interdisciplinary studies mapping aesthetic experience and stress responses across Berlin's neighborhoods, linking environmental neuroscience with philosophy and urban design.

By structuring the symposium around these three interconnected research hubs, we aim to highlight converging empirical insights, compare methodological approaches, and outline a shared agenda for advancing an evidence-based understanding of how urban aesthetics contribute to mental well-being.

1. Engaging with public murals changes the experience of urban neighborhoods

Darlene Leohansson, Eileen Cardillo & Anjan Chatterjee*

** Penn Center for Neuroaesthetics*

Art can positively impact people's lives by serving as a vehicle for social cohesion. In these studies, we test the hypothesis that public art enhances the experience of urban environments. We previously established an empirically derived taxonomy to characterize the impact art can have on viewers (Christensen et al. 2023). This impact taxonomy consists of 11 broad dimensions

which at a coarse level describe positive affect, negative affect, a sense of immersion, and the possibility of transformation. Philadelphia has the largest open air art gallery in the US, with over 4,000 murals visible in every neighborhood. We (Estrada Gonzalez et al., under review) found that murals had greater positive emotional impacts on participants than empty walls. Importantly, perceptions of the neighborhood changed after viewing the murals. A poorer neighborhood was experienced as more interesting and safe and a more affluent city center was experienced as less noisy. We then leveraged the Aesthetic Triad framework to enhance public art engagement of murals. Participants viewed murals in two conditions: with no explicit guidance, or after watching a 5-minute video describing the Aesthetic Triad to guide viewing art (i.e., attending to what you see, what you feel, and what you think in response to an artwork). Consistent with our prediction, watching the video enhanced participant ratings of pleasure and edification for murals, led to greater reported understanding gained from the murals, and interestingly decreased negative responses to walls lacking art. Participants who watched the video had more positive perceptions of the poorer neighborhood both before and after viewing the murals, rating the area's perceived safety, noisiness, and friendliness of locals more favorably. Findings contribute to our understanding of how attention directed to one's inner experience enhances art engagement and underscore the positive impact public art has on the experience of urban environments.

- 2. Dynamic Aesthetic Experience in the City: Mobile Methods and Public Art Research in Vienna**
Kirren Chana & Anna Lena Knoll*, Oliver Tab Bellman, Marco Constantin, Margot Dehove, Theresa Demmer, Pia Caecilia Kolbe, Jan Mikuni, Martin Karl Moser, Matthew Pelowski, Katharina Prager & Emma Louise Wood*
** Faculty of Psychology, University of Vienna*

This talk presents research from Vienna's empirical aesthetics initiatives that investigates how art and multisensory experiences shape spatial perception, evaluation, and wellbeing in everyday urban environments. It brings together large-scale mapping, in situ measurement, and experiential data to understand how people see, feel, and move through the city. The first part, Art in the City, examines how public artworks such as sculptures, murals, and installations can be mapped and analysed as features of urban space. Using spatial mapping, visibility analysis, and surveys, the project documents how artworks are distributed across neighbourhoods, how visible they are in daily routes, and how their presence relates to people's evaluations of local character, identity, and attractiveness. This part of the talk highlights how public art can make urban spaces more legible and distinctive, and how these visual landmarks may support space planning and well-being. The second part, Walking in the City, turns to the multisensory and dynamic dimensions of urban exploration. Here, participants complete walks equipped with mobile eye tracking and physiological sensors, including heart rate and skin conductance, to capture real-time responses to visual and auditory stimuli. By linking these continuous measures with on-site reports of experience, the study identifies not only the role of public artworks but also which other urban elements—such as greenery, traffic, signage, or crowding—tend to be experienced as pleasing or displeasing. These findings are used to derive concrete, empirically grounded principles for aesthetic urban planning. Together, these studies advance a multifaceted account of urban aesthetics that integrates spatial structure, sensory experience, and affective response. The talk will show how this approach can inform decisions about public art integration, street- and neighbourhood-level design, and the creation of cityscapes that actively support wellbeing.

- 3. Public Art and Urban Aesthetics: Empirical Approaches to Well-Being in Cities**
Corinna Kühnappel, Joerg Fingerhut, Felix Bentlin, Angela Millon, Tanja Beier, Shadi Bagherzadeh-Azbari & Mazda Adli*
** Faculty of Philosophy, Humboldt-Universität zu Berlin*

Urbanization intensifies the need to understand how cities affect psychological well-being and social life. Beyond infrastructure, the aesthetic and artistic dimensions of urban environments

might shape perception, affect, and behavior in ways that are not yet fully understood. This talk presents three empirical projects from the Research Platform Neurourbanism (Humboldt-Universität zu Berlin/Berlin University Alliance) that examine how public art and urban aesthetics contribute to well-being and everyday experience in cities. Study 1 reports a 2 × 2 (Art vs. No-Art; Site) mixed-method field experiment investigating how a temporary public art installation shaped aesthetic experience, social affordances, and well-being across two contrasting Berlin sites: a pedestrian Promenade and a traffic-heavy Boulevard. A total of 128 participants provided ratings and open-ended reflections. Art reliably increased beauty and invitingness at both sites and enhanced belonging at the Boulevard. Beauty, and to a lesser extent interest, mediated art's effects on happiness and social affordances. Qualitative responses emphasized art as a landmark and meeting point, highlighting its potential as a scalable aesthetic intervention in urban design. Study 2 draws on Ecological Momentary Assessments from the ongoing "Your Emotional City" project, linking real-time environmental experience to momentary well-being. Analyses of an initial two-year sample (n = 1873) show that urban aesthetic qualities, specifically beauty and interestingness, are reliable predictors of subjective emotional well-being in everyday settings. Additional app-based items on encounters with art allow tests of whether seeing art predicts momentary well-being and whether such effects differ across public and private spaces. Study 3 employs network and latent profile analyses to characterize types of aesthetic and emotional responses to diverse public artworks (murals, installations, sculptures), identifying shared patterns of art-related experience in everyday city life. Together, these studies advance an evidence-based understanding of how aesthetics and art shape psychological and social life in urban environments.

CHARACTERIZING AESTHETIC ENGAGEMENT WITH ART: TESTING THEORY WITH NEW APPROACHES

Friday 8th May • 11:30 • Location: Raum Siegfried Czapski

Moderator: Pablo Tinio

This symposium highlights novel theory-based approaches to examining art engagement in a museum, a virtual art gallery, and within the creative process of Pablo Picasso. A wide range of methodologies are employed including surveys, a large assessment battery, image statistics, and AI. Importantly, these examinations are heavily founded on established theories and frameworks, such as the VIMAP, Mirror Model of Art, and RAISE framework. The first presentation describes a direct test of the Mirror Model. Stimuli were generated from 20 paintings created by Pablo Picasso for the documentary film, *Mystery of Picasso*. The low-level visual features of the stimuli were computed using the Aesthetics Toolbox, and results showed that stimulus complexity changed as predicted across the three stages of the Mirror Model. Behavioral data will also be discussed. The second presentation examines self-directed art engagement in a curated virtual gallery study using the Art Engagement Reflection Scale, which assesses art engagement through three layers defined by the Mirror Model. The study relates levels of art engagement to individual differences in personality and aesthetic experience, as well as through natural language processing analysis of open-ended reflections of participants. The third presentation describes the development of an assessment battery aimed at measuring the cognitive effects of art. An interdisciplinary panel of art experts initially generated conceptual categories, which were then summarized using AI and researcher judgment. The initial pool of items was then tested on visitors to a virtual gallery. The fourth presentation focuses on how and why museums are able to support flourishing in visitors. The research draws on the RAISE framework as well as the VIMAP to examine five domains of human flourishing. Results showed that experiences that were novel, and that promoted reflection, socialization, and expression, led to the most significant flourishing outcomes.

1. **Mirror, Maker, Viewer: Testing the Mirror Model of Art with Picasso's Paintings**

*Oshin Vartanian**, *Hanshu Alexa Zhang* & *Dirk B. Walther*

** University of Toronto, Department of Psychology*

The Mirror Model of Art (MMA, Tinio, 2013) is one of the few frameworks linking creativity to aesthetic appreciation. According to MMA, the creator progresses through three stages during art making: (a) initialization (generating and exploring concepts that motivated the work, ending with the construction of the artwork's geometric skeleton), (b) expansion and adaptation (development of the early structure through addition, modification, and deletion of specific configurational elements), and (c) finalizing (refinements involving colour, texture, and other subtle manipulations that signal the artwork's completion). In turn, the viewer travels the same three stages in reverse order (i.e., mirrors them), beginning with the processing of sensory and perceptual features and ultimately grasping the concept motivating the work. However, testing this model experimentally has proven difficult because typically artworks only exist in their finalized form, which makes investigating their progression through successive stages not possible. Fortunately, we discovered the documentary *Mystery of Picasso* released in 1956, for which Picasso allowed the Director Henri-Georges Clouzot to film him while he completed twenty paintings from start to finish. This historical record provided us with a unique opportunity to test key predictions from MMA. Specifically, we hypothesized that perceptual features of the paintings computed based on low-level visual features would change as they progressed from early to late stages, and that those changes would be detectable by viewers. To test this hypothesis, for each of the twenty paintings we produced three still images selected from early, intermediate and late stages, and computed a series of relevant low-level visual features using the Aesthetics Toolbox (Redies et al., 2025). Our results demonstrated that their values (e.g.,

complexity) change as predicted across the three stages. We are currently collecting viewer ratings, which will be able to demonstrate whether observers are sensitive to the three stages of the artworks.

2. Development of the Art Engagement Reflection Scale (AERS): A Mixed Method Assessment of Art Engagement

Rebekah Rodriguez-Boerwinkle, Zorana Ivcevic & Pablo P. L. Tinio*

** Yale University, Yale Center for Emotional Intelligence*

This talk presents development and validation of the Art Engagement Reflection Scale (AERS), a mixed-method measure theoretically grounded in the Mirror Model of Art (Tinio, 2013), designed to assess how individuals engage with visual art across multiple levels of reflection, building from initial perception to deeper aesthetic experiences. An examination of the scale is built across two studies and carried out with a variety of artworks. Studies include one cross-sectional study with researcher-selected, counterbalanced representational and abstract artworks and one virtual 'field' study, in which artworks were presented within a context-rich virtual environment where participants freely viewed and chose what artwork they would like to respond to via the AERS. Using hierarchical confirmatory factor analysis, we found strong support for a higher-order depth-of-engagement factor that organized responses across the three theoretical stages, while also preserving meaningful stage-specific variance. This structure was robust across artwork types and between studies, with particularly tight coupling between later stages of aesthetic engagement. Convergent validity analyses demonstrated that AERS depth scores were positively associated with dispositional aesthetic responsiveness (AEQ) and with state-level engagement (UAES), providing evidence that the AERS captures both stable propensities and moment-to-moment experiential depth. Further results are shared about the impact of free artwork choice for meaning-rich engagement and about the qualitative features of aesthetic experiences.

3. Measuring the Cognitive Effects of Art Engagement

Pablo P. L. Tinio, Zorana Ivcevic, Rebekah Rodriguez-Boerwinkle & Paul Silvia*

** Montclair State University, Department of Educational Foundations*

This presentation introduces the development of an assessment battery designed to measure the cognitive impacts of engaging with visual art. The goal was to construct unidimensional scales that can function together or independently to capture distinct forms of understandings during art engagement. Development proceeded in multiple phases. First, we convened an interdisciplinary panel—art historian, empirical aesthetics scholar, neuroscientist, creativity researcher, philosopher of art, and artist—to generate and describe categories of cognitive effects of art. In the second phase, we synthesized expert responses using both AI- and researcher-based methods. ChatGPT produced an initial 14 categories, and, when prompted to condense this set, it produced the following six categories: Emotions and Affective States, Existential and Spiritual Reflections, Social and Moral Commentary, Self-Exploration and Identity, Cognitive and Conceptual Inquiry, and Aesthetic and Sensory Engagement. In the third phase, the authors refined the AI-generated categories, a process that yielded eight final categories. In the fourth phase, each author independently drafted ten items per category. Through discussion, we consolidated these into an initial pool of items for empirical testing, which involved a large online study (N = 2,400) using a planned-missingness design. Participants viewed artworks selected from the Vienna Art Picture System, which were narrowed through expert selection and ranking, and responded to subsets of items associated with target category, off-target category, and randomly sampled items from remaining categories. Analyses focused on creating long and short versions of the eight unidimensional scales for use in a variety of research settings (e.g., short version for a museum study and long version for a lab study).

4. Flourishing in Art Museums: Leveraging the VIMAP and RAISE Mechanism Frameworks to Understand Art Viewing Experiences

*Katherine Cotter**

** University of Pennsylvania, Positive Psychology Center*

How do art museums support flourishing in visitors? Recent studies and reviews have found that visiting art museums can promote a variety of benefits, including feelings of social connection and belonging, increases in positive emotional states, and reduction to anxiety and stress. However, why these benefits emerge is less clear. In this project, we rely on two recently developed frameworks, the Reflection, Acquisition, Immersion, Socialization, and Expression (RAISE) framework and the Vienna Integrated Model of Art Perception (VIMAP), to investigate the nature of flourishing benefits during a visit to Philadelphia's Magic Gardens in a sample of 363 adult visitors. We examined five domains of flourishing—psychological distress, social connection, positive self-regard, empathy, and meaning—using a recently developed art museum flourishing instrument and explored how these outcomes connect to the qualities of people's visits (via the RAISE mechanisms) and how the type of emotional and cognitive experience (via the VIMAP) influence flourishing outcomes. We find consistent differences by VIMAP experience types in flourishing outcomes, with novel experiences yielding the best outcomes, and that experiences promoting reflection, socialization, and expression were most closely linked with greater flourishing benefits.

TOWARD A UNIFIED ART-SCIENCE FRAMEWORK FOR DANCE RESEARCH: BRIDGING THEORETICAL FOUNDATIONS WITH EMPIRICAL AND APPLIED APPROACHES

Friday 8th May • 14:00 • Location: Raum Otto Schott

Moderator: Andrea Orlandi & Kohinoor Darda

Dance research spans cognitive psychology, neuroscience, cultural studies, aesthetics, and the performing arts, and its rapid growth highlights the importance of shared conceptual clarity and methodologically robust, culturally informed research practices. Building on the seven-principle framework we recently proposed in our paper *Neurocognition of Dance: Guidelines for Using Dance as Model Behavior and Research Subject in Cognitive Neuroscience*, this symposium unpacks how scientific theory and artistic practice can be translated into scientifically sound, culturally grounded, multimethod experiments, in the lab, live, or as interventions.

Dr Meletaki will introduce the framework, outlining core principles for defining dance, operationalizing expertise, and designing studies that balance laboratory control with ecological validity, as well as real-life applications. Dr Darda will examine how structural and expressive features that shape cognitive and aesthetic processes can be meaningfully studied, using a live Indian classical dance performance as case example. Dr Orlandi will present a multimodal approach to movement aesthetics, integrating behavioural, physiological, and neural measures to examine the role of interoception. Using a recent intervention study with Iranian dance, Dr Christensen will introduce methodological considerations for dance- and movement-based interventions, to ensure translational potential of such research for shaping health and well-being in the community.

In an interactive session, the authors will teach each other a movement sequence from their dance styles, working with colleagues new to that style. Audience members may observe or participate. This activity provides an embodied example of why combining dance and scientific expertise matters, highlighting the role of different bodily skills and neurocognitive processes involved in such work.

Together, these perspectives will demonstrate the relevance of a unified art-science framework to foster coherent, interdisciplinary, and culturally inclusive developments in dance neuroscience, to strengthen research that uses dance to investigate the brain, while also advancing dance itself as meaningful subject of scientific inquiry.

1. Neurocognition of Dance: Guidelines for Using Dance as a Model Behaviour and Research Subject in Cognitive Neuroscience

*Vasiliki Meletaki**

** Penn Center for Neuroaesthetics, University of Pennsylvania, USA*

Dance and movement science bridges cognitive psychology, neuroscience, cultural studies, philosophical aesthetics, and the performing arts. The field has evolved significantly, examining physical, social, psychological, and neural aspects of dance and movement execution and perception, contributing to a deeper understanding of human cognition and of dance itself. As the field expands, shared guidelines that support methodological rigor, reproducibility, and cultural relevance are of paramount importance. This talk will introduce a comprehensive seven-principle research design framework for using dance in cognitive neuroscience. The seven principles include the operationalization of “dance” in empirical sciences, the definition of who is a dancer, measures of expertise, and the importance of a culturally sensitive, holistic, and interdisciplinary approach to its investigation in both laboratory and ecologically valid settings. This framework will benefit research in dance and movement aesthetics as much as investigations in social cognition, affective neuroscience, computer science, and artificial intelligence.

2. A 'four-hand' research: artists and scientists in the lab"

*Andrea Zardi**

** Department of Humanities, University of Turin, Italy*

During the twentieth century, theatre and dance developed multiple theoretical and pedagogical perspectives, focusing on the plasticity of body and brain in the acquisition of theatrical and choreographic techniques. The work of Richard Schechner, Eugenio Barba, Rudolf Laban, Anna Halprin, and William Forsythe has raised questions about how artistic techniques are learned, how movement induces emotion in performer and audience, and the dynamics of the spectator performer relationship. Dance became the discipline to host dialogue with the scientific perspective. Over the past two decades, the spectator-performer relationship has become a key area of inquiry in neuroscience. Recent studies on the neural mechanisms underlying perceptual activity have increasingly focused on dance as an organised behaviour that engages motor imagery, cognitive skills, proprioception, and intersubjective bodily interactions. Seminal contributions in this domain have demonstrated that dance perception and execution are not solely mediated by mirror activity but involve many other brain networks. In a recent fMRI study, we aimed to examine, as a preliminary assumption, how dancers and nondancers perceive differences among various theatrical dance techniques (ballet and modern dance). Carefully considering the phenomenological features, each technique is perceived differently across cultural perspectives and spectator experiences. In this specific case, what distinguishes the approach to the discipline is the core principle that dance knowledge is not merely illustrative or instrumental, but constitutive of experimental logic. Artistic practices inform how movement materials are selected, structured, transmitted, and adapted, shaping research questions and hypotheses related to perception, action, interoception, affect regulation, and social attunement. Conversely, neuroscientific models refine artistic intuitions into testable frameworks without reducing dance to a neutral stimulus. By recognising artists and scientists as equally involved in experimental design and hypothesis building, these guidelines strengthen dance neuroscience as a field producing robust, culturally grounded knowledge while advancing dance-based practices.

3. Linking brain and body in movement aesthetics: A multi-technical research approach

Andrea Orlandi & Emily S. Cross*

** Social Brain Sciences Laboratory, ETH Zürich, Switzerland*

As our aesthetic preferences can be associated with a multitude of factors, studying the processes behind aesthetics offers a unique window into the multiple neurocognitive mechanisms that shape what we like and dislike. Whether they reflect preferential processing for specific stimulus features, affective reactions, or semantic interpretations, there is a great depth of knowledge yet to be explored. It is not surprising, therefore, that empirical aesthetic research now spans diverse neuroscientific domains including interoception and social cognition. To properly address the complexity of such integrated perspectives, there is an increasing requirement for using controlled stimuli and design, multi-method approaches, and engage in close collaborations with experts across different fields. Building on this perspective, our work examines how internal bodily signals shape the perception of other people's bodies, both in static postures and in motion. To unravel the role of this brain-body link in movement aesthetics, we combine behavioural, physiological, and neural measures within the same experimental framework. Moreover, when working with more complex movement stimuli, such as dance, we integrated neuroscientific and phenomenological approaches to draw on the knowledge and strengths of both disciplines and guide our experimental questions and design. In this project overview, we focus specifically on how physiological methods can target cognitive processes linked to cardiac interoception during affective and aesthetic evaluations of body and movement stimuli. We further outline the value of combining electrophysiological and metabolic neural measurements to obtain brain data with both high temporal and spatial precision, thereby capturing complementary aspects of movement perception and appreciation. Finally, we discuss

the practical challenges of implementing a multi-technical approach and the need for streamlined integration of methods and equipment to support future research in this area.

4. Methodological Considerations For Dance-Based Interventions, in the Domain of Health and Well-being research

*Julia F. Christensen**

** Department of Cognitive Neuropsychology, Max-Planck-Institute for Empirical Aesthetics, Frankfurt/M, Germany*

Despite the challenging reality of dance-based interventions for health and wellbeing research, it is time to propose standardized practices and methods. Obvious priorities include larger sample sizes, rigorously designed RCTs and long-term follow-ups. However, also the development of disorder-specific intervention protocols should take center stage. These should take into consideration 1) the characteristics of the symptoms we seek to ameliorate with the intervention, and 2) the characteristics of the dance style that we chose to that end. By means of two case studies (an online Iranian dance intervention during the SARS-COV-19 Pandemic for adults, and a hip-hop dance intervention for school children), I illustrate specific treatment factors 'contained' within the chosen dance styles, and how they link to the neurocognitive processes under investigation. The most reliable and generalizable results are to be expected when intervention protocols are tailored to the specific (clinical) populations under investigation, and, where possible, are designed ensuring gender balance and representation of minoritized groups. Interdisciplinary collaboration is vital to strengthening the clinical and translational impact of dance research – for instance, to ensure that the dance style is correctly operationalized in terms of the treatment factors.

**PERSPECTIVES ON WELL-BEING AND AESTHETIC EXPERIENCE IN CONTEXT:
ECOLOGICALLY VALID RESEARCH FROM URBAN SPACES TO MUSEUMS**

Friday 8th May • 14:00 • Location: Raum Clara und Eduard Rosenthal

Moderator: Helmut Leder

This symposium, comprising three talks, showcases research from Tokyo, Rome, and Vienna that examines well-being and aesthetic experiences in ecologically valid settings across diverse demographics. The symposium investigates how art and environmental encounters—in virtual reality (VR), museums, and urban public spaces—shape mood, social interaction, sensory perception, and key moderating variables.

The opening talk presents studies conducted at a modern museum and in VR environments in Tokyo, assessing the effects of art viewing on mood and emotion with pre- and post-interaction measures, supplemented by one- and two-week follow-ups to track sustained impacts. A second talk, conducted in Rome, explores well-being dynamics tied to social factors, such as sharing exhibition experiences with peers, illuminating the role of interpersonal connections in amplifying cultural benefits. The final talk, from Vienna, focused on urban public squares, testing sensory engagement strategies that elicit varied aesthetic experiences and trigger distinct well-being mechanisms. Overall, the evidence highlights the values from real-world studies for capturing genuine influences on perception, emotion, and well-being.

Across diverse contexts, cultures, heterogeneous samples, and interdisciplinary approaches, this symposium aims to deepen insights into how aesthetic experiences contribute to individual and collective well-being. The findings can inform recommendations for designing museum exhibitions and programs, public spaces, and interventions that cultivate enriching experiences and elevate global quality of life.

We will discuss future directions, practical insights for conducting field studies, and both universal patterns and culturally nuanced dynamics in art–environment–well-being research.

1. Tokyo

Hideaki Kawabata, Hiroko Kawai, Go Furusawa, Jun Shi, Kazuo Isoda, Asami Matsuyama & Ichiro Hisanaga*

** Keio University/Tokyo University of the Arts*

In recent years, various studies have examined the impact of art and the context in which it is encountered on visitors' well-being. This talk shares new findings from Tokyo (Japan) across museum and VR settings. The first part of the talk introduces a study comparing viewing experiences of visitors at a modern art exhibition with a strong message and an exhibition of a permanent collection. We examined visitors' moods before and after their visit and verified how engagement influenced these changes in mood. Furthermore, we investigated whether the impact of the viewing experience persisted by conducting a one- to two-week follow-up survey with open-ended questions. We also examined how differences in visitors' empathy levels influenced these results. Our studies revealed that mood improved after the visit compared to before, and the degree of engagement during the viewing experience moderated this effect. While viewing had a limited influence on recollections of daily life after the experience, we observed individual differences, with empathy quality playing a role to some degree. Another study examined how viewing paintings in a virtual reality (VR) environment with a head-mounted display (HMD) impacted viewers' emotions and the quality of their viewing experience. VR art appreciation has the advantage of easily viewing diverse art images of various sizes and distances, which is impossible in reality. Similar to real museum environments, VR environments enhance viewers' positive emotions by fostering an appreciation for art. As in a museum, the VR environment enhanced viewers' positive emotions by fostering their appreciation of the painting. Also, the engagement during viewing moderates this effect. While our recent research uses

mood fluctuation as an indicator, a more comprehensive understanding is necessary across various experimental conditions and subjects.

2. Rome

Stefano Mastandrea, Gioia Cancellier, Paola Liotta, Marika Mascitti & Eugenio De Gregorio*
** Roma Tre University*

Numerous studies have shown that engaging with art, particularly in museum settings, can positively affect health and well-being by reducing anxiety and stress, even at a physiological level. In this study, we investigated how two different approaches to visiting the National Gallery of Modern and Contemporary Art in Rome - a group visit with a discussion led by a facilitator vs. a self-guided group visit- might influence changes in participants' positive affect, anxiety, and overall well-being. We hypothesized that engaging in group discussion during the museum visit and finding connections between personal experiences and content or compositional features of the artworks, could enhance well-being compared to the group that conducted the visit independently, without structured discussion. Questionnaires were administered before and after the visit to assess affective state, anxiety, and aesthetic experience using measures such as PANAS, STAI, and AEQ. Participants also answered two open-ended questions describing their personal experience of the visit. Findings show that, for the discussion group, no significant changes occurred in positive or negative affect, anxiety, or overall well-being. In contrast, the self-guided group showed a significant increase in positive affect and a decrease in anxiety. Open-ended responses revealed that the discussion group used terms like "anxiety" and "sadness" more frequently, while "interest" and "curiosity" appeared with similar frequency across both groups. A possible explanation is that modern and contemporary art often conveys negative content, which tends to have a stronger impact and greater emotional resonance within groups that engage in discussions both thematic and formal features of the artworks. But even negative aspects can promote personal growth. Conversely, self-guided visitors may exhibit more superficial engagement while still deriving enjoyment from an unstructured exploration.

3. Vienna

Jan Mikuni & Katherine Cotter*
** University of Vienna*

Recent studies in art and aesthetic psychology have consistently shown that positive aesthetic experiences—such as beauty, enjoyment, and meaningfulness—can significantly benefit well-being. However, the psychological processes underlying these benefits remain poorly understood. Inspired by a recent systematic review, this talk presents a field study conducted in an urban public square in Vienna that examines possible mechanisms in real-world settings. Around 130 participants explored the square for 10 minutes under four different conditions that varied the focus of their attention: free viewing, perception focus, self-relevance and meaning, and emotional/affective focus. By manipulating how participants interact with the environment, this study assesses how different qualities of engagement produce varied well-being outcomes. Open-ended questions captured participants' subjective experiences, providing rich qualitative data alongside quantitative measures. This research offers novel perspectives on the underlying psychological processes essential for well-being benefit from aesthetic experiences in everyday urban contexts. The findings highlight the importance of directed engagement strategies, because the way people attend to and interpret their environment shapes the emotional and cognitive benefits derived. These findings inform urban planners and public space designers who aim to create environments that foster positive aesthetic experiences and enhance community well-being. Overall, the study bridges experimental psychology with applied urban design by investigating not just the presence of art or beauty, but how purposeful interaction with space can activate well-being pathways. This evidence-based approach paves the way for designing public spaces that support healthier, more meaningful interactions with our everyday surroundings.

THE ARTS AND THE DRIVE FOR KNOWLEDGE: PHILOSOPHICAL, PSYCHOLOGICAL, AND NEUROSCIENTIFIC PERSPECTIVES

Friday 8th May • 14:00 • Location: Raum Siegfried Czapski

Moderator: Francesca Piovesan

Humans have a deep-seated tendency to seek knowledge and explore their environment, a disposition that has recently attracted growing attention across the sciences and the humanities. Philosophical, psychological, and neuroscientific research is converging on new accounts of this “drive for knowledge,” examining how it shapes core cognitive processes such as learning, memory, attention, and motivation. Alongside these developments, an expanding literature on “epistemic emotions” (including curiosity, interest, wonder, surprise, confusion, boredom, and insight) is shedding new light on the affective dimensions of information seeking and offering a more nuanced picture of our lives as epistemic agents.

At the same time, aesthetic research is undergoing rapid growth, with renewed interest in understanding why humans are drawn to artworks and other objects of aesthetic value. Increasingly, scholars are beginning to connect these two domains, proposing that the drive for knowledge plays a central role in aesthetic and creative experience. On these emerging views, artworks are crafted to elicit epistemic emotions such as curiosity, interest and insight. Some theories go further, suggesting that aesthetic pleasure may arise from the way artworks stimulate and satisfy our informational needs. If this is the case, however, the study of aesthetics can illuminate not only our engagement with the arts but also our broader behaviour as information-seekers, with potential applications in education, communication, psychotherapy, rehabilitation, and cultural heritage.

This symposium brings together the three editors of the forthcoming interdisciplinary Cambridge University Press volume *The Arts and the Drive for Knowledge* to discuss the state of the art across the disciplines at the forefront of this growing research area: philosophy, psychology, and neuroscience. The result is a wide-reaching picture of the relationship between the arts and our information-seeking behaviours, and a foundation for future research on how aesthetic experience and knowledge acquisition intersect.

1. Philosophical Perspectives on Aesthetic Experience and the Drive for Knowledge

*Filippo Contesi**

** University of Cagliari*

This talk provides an overview of philosophical approaches that investigate how aesthetic and artistic experience relates to the human drive for knowledge. Across traditional and contemporary debates, philosophers have explored whether the pleasure we find in artworks is connected to epistemic motivations, whether aesthetic appreciation involves reducing uncertainty, gaining cognitive insight, or responding affectively to opportunities for understanding. The presentation surveys major positions concerning the epistemic dimensions of aesthetic experience, including discussions of whether aesthetic appreciation might be grounded in learning or understanding, whether beauty can be interpreted as a reward for cognitive achievement, what the evolutionary role is, if any, of the relationship between our aesthetic pleasure and our appetite for knowledge, and how ambiguity or complexity in art might motivate engagement. It will also touch on philosophical debates about whether and in what sense art can provide epistemic benefits, and how such benefits might be reconciled with the traditionally non-instrumental character of aesthetic and artistic value. By mapping these conceptual developments, the talk highlights a number of open questions that have begun to shape current research, such as the following. What kinds of cognitive or affective states/processes are constitutive of aesthetic and artistic encounters? How might curiosity and understanding be implicated in the nature of aesthetic appreciation? Is the relationship between aesthetic appreciation and understanding one of reciprocal influence? What are the benefits of

philosophical accounts in the broader context of cognitive science and can they be aligned with empirical findings from psychology and neuroscience? In discussing the questions above, this contribution offers a broad synthesis of the philosophical terrain that outlines the conceptual tools and distinctions that can frame interdisciplinary inquiry into the relationship between aesthetic experience and information-seeking.

2. Art and Learning: A Psychological Overview

*Jacopo Frascaroli**

** University of Turin*

This talk surveys psychological research exploring how learning and epistemic emotions shape engagement with artworks and other aesthetically significant stimuli. A growing body of evidence suggests that emotions such as curiosity, interest, confusion, surprise, insight, and boredom play a central role in regulating attention, exploration, and meaning-making during aesthetic encounters. These emotions, often linked to assessments of uncertainty or cognitive progress, provide a natural point of connection between aesthetic experience and the broader human drive for knowledge. The presentation outlines major strands of research examining how individuals respond to features of artworks that challenge expectations, introduce ambiguity, or invite interpretive effort. It will consider findings on how epistemic emotions motivate sustained engagement, how they interact dynamically during the course of an aesthetic episode, and how individual differences modulate these processes. In addition, the talk highlights psychological work examining whether and how engagement with art may lead to changes in cognitive states, such as shifts in understanding, perspective-taking, or the acquisition of new information. Such questions remain open and contested, yet they reflect growing empirical interest in the possible epistemic affordances of aesthetic experiences. Overall, the presentation provides a broad overview of psychological approaches to aesthetic engagement through the lens of epistemic emotions, emphasising areas of convergence and divergence within the literature and identifying key questions for future interdisciplinary research.

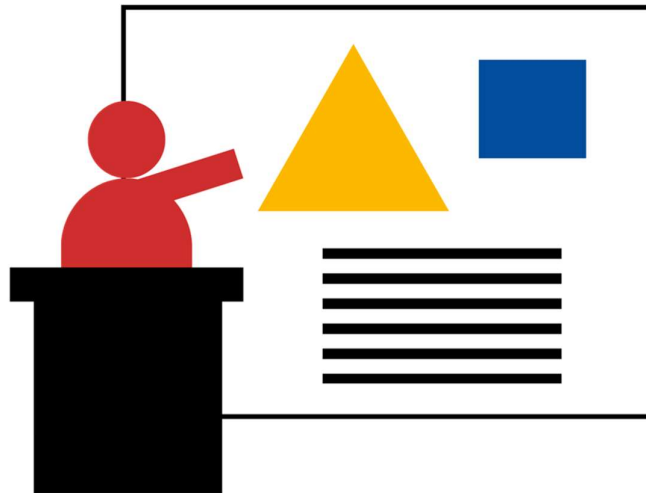
3. Neuroscientific Approaches to Information-Seeking and Aesthetic Experience

*Diana Omigie**

** Goldsmiths, University of London*

This talk offers a neuroscientific overview of how information-seeking processes contribute to aesthetic experience. Research in cognitive and affective neuroscience has increasingly focused on the neural bases of curiosity, uncertainty reduction, and learning. These processes are associated with a range of brain systems, including dopaminergic reward pathways, predictive processing circuits, and large-scale networks involved in attention and cognitive control. Many of these same systems are now understood to play important roles in aesthetic engagement. The presentation reviews major findings that connect aesthetic pleasure, curiosity, and insight to neural responses associated with prediction, expectation violation, and meaning-making. These include studies showing how the resolution of uncertainty can activate reward-related regions, and how prolonged ambiguity may sustain exploratory behaviour. Such findings suggest a deep functional overlap between the mechanisms that drive humans to seek information and those that support aesthetic appreciation. The talk also offers an overview of emerging computational frameworks that aim to characterise how the brain balances the need for stability with the motivation to explore novelty. These frameworks provide promising tools for understanding variability in aesthetic preference, and the role of curiosity in creative engagement. The result will be a rich overview of current neuroscientific approaches that illuminate the relationship between aesthetic experience and the knowledge drive, highlighting theoretical connections, methodological developments, and avenues for interdisciplinary collaboration.

Individual Talk Abstracts



iaea 2026 

The logo for IAEA 2026 consists of a red square, a blue square, and a yellow circle. Inside the yellow circle is a stylized representation of a nuclear reactor core with vertical lines and a central vertical line.

SESSION: DEVELOPMENTAL AND DEVELOPING AESTHETICSWednesday 6th May | 10:45 – 11:45 | Location: Raum Otto Schott**Infant Visual Preferences and Adult Aesthetic Judgements are Predicted by Different Low- and Mid-Level Image Statistics***Katherine A. Symons*, Anna Franklin and Alice E. Skelton*** The Sussex Baby Lab and Nature and Development Lab, School of Psychology, University of Sussex*

Adult aesthetic ratings and infant visual preferences are both partly predicted by low-level chromatic and spatial image statistics (McAdams et al., 2023). Infants also look longer at certain stimuli (e.g., colours, faces, art) that adults prefer (Skelton & Franklin, 2020; Damon et al., 2017; McAdams et al., 2023). This raises the question of how far infant visual biases (which are largely driven by sensory input) are predicted by the image properties that later predict adult aesthetic judgements. We sequentially presented 75 images from a prior computational aesthetic study (Redies et al., 2012), spanning various natural scene categories, to infants (4–8 months; N=29) whilst recording their eye movements. Separate adult groups rated the same images for beauty (N=21) and interest (N=20) on antonymic sliding scales. Partial least squares regression models using low-and mid-level image statistics revealed distinct sets of predictors for infant looking, adult beauty, and interest ratings. Infant looking increased with both parallelism and edge density. In contrast, adults rated images with high degrees of self-similar patterns as most beautiful, whereas ugliness ratings increased with parallelism, mirror symmetry, and anisotropy. Interest ratings, although strongly correlated with beauty ratings, shared only two predictors with beauty ratings: self-similarity positively predicted interest ratings, whereas images containing high mirror symmetry were rated as most boring. Parallelism (contours sharing similar orientations within an image) consistently predicted both infant looking and adult beauty ratings, though in opposite directions. These findings indicate that distinct visual features underlie infant visual preferences and adult beauty and interest judgements. They also shed light on the sensory-based component of the Aesthetic Triad in adults (Chatterjee & Vartanian, 2014) and raise questions about how a mature aesthetic response develops. This research was funded by the European Research Council grant to AF (ref.772193).

Grounding Gesamtkunstwerk into the primacy of action-bound, intentional, expressive traces—the phylogensis of style sensitivity in development*Despina Stamatopoulou****University of Patras*

In this developmental study of children's style sensitivity, the old, method of match-to-sample design tests (3AFC), found in Gardner's studies, was employed across 739 children, aged 4- to 12-year-olds. Two tests were initially used regarding sensitivity to style, Pollock's curving shapes conveying rhythm, movement, and a sense of raw energy, and Mondrian's abstract, angular shapes. These tests preceded a series of 16 matching tests on children's ability to classify by mood, artworks and dynamic, abstract drawings, made intentionally by artists to represent emotional states (6 tasks), and to sort style (7) in a variety of representational and abstract paintings with a constant theme, along with three tests on style in paintings of a varied theme. The sample consisted of 127 (4.5- to 5.5-year-olds), 207 (5.5- to 6.5-year-olds), 205 (8.5- to 9.5-year-olds) and 240 (11.5- to 12.5-year-olds) children. Mood-matchings used a match-to-a schematic face test of three expressions (happy, sad, and angry). A total of 66 high-quality colored photocopies of art reproductions were used. Overall, the results suggest children's ability to correctly associate moods with abstract artistic drawings (scribbles) and their sensitivity to paintings' mood predict aspects of their "style sensitivity". When subject-matter was constant, children's ability to sort Pollock's (not Mondrian's) style, even for the youngest group, had a significant impact on their sensitivity to stylistic aspects of abstract, portraits or still-life paintings, suggesting an understanding of emotional expressivity and its formal properties. Style-matching with varying subject-matter was a difficult task for all children, wherein predictive significant

models emerged for 5.5- 6.5- and 11.5-12.5 year-olds, still indicating the impact of mood on style sensitivity. This account proposes a framework where the human capacity for style and integrated aesthetic experience (Gesamtkunstwerk) is rooted in fundamental, embodied, intentional actions and their residues, suggesting a developmental and potentially evolutionary basis for artistic sensitivity.

SESSION: ART VIEWING IN THE MUSEUM

Wednesday 6th May | 10:45 – 11:45 | Location: Raum Clara und Eduard Rosenthal

Time Alone, Time Together: How Slow Looking Changes the Art Experience

Aleksandra Igdalova, James O. Pawelski, Katherine N. Cotter and Elizabeth N. Johnson*

**University of Pennsylvania*

Museums increasingly encourage slow looking—spending extended time (10 minutes or more) with a single artwork—to foster deeper engagement and reflection, yet few studies have tested what distinguishes this practice from typical gallery visits. Many slow-looking programs also involve paired or group conversation, but how social context shapes these encounters remains underexplored.

This preregistered in-gallery experiment used a 2 × 2 × 2 mixed design to examine within-person differences between slow looking and free viewing, and how these effects varied when viewing occurred alone versus with a partner. Across two counterbalanced sessions held one week apart, 150 participants attended an exhibition of abstract works and engaged in both slow looking (15 minutes with a single artwork) and free viewing (15 minutes exploring the gallery with many works). Participants completed both sessions either individually or with a discussion partner and reported their aesthetic experiences as well as social outcomes.

Slow looking and free viewing were found to be subjectively distinct, but the nature of these differences depended on social context. When experienced alone, slow looking increased perceptual engagement and immersion relative to free viewing. When experienced with a partner, slow looking amplified interpersonal outcomes, leading to greater increases in pair closeness and familiarity, and more perspective change as compared to free viewing.

These findings suggest that slow looking reshapes experience in context-sensitive ways: it deepens perceptual immersion when attention is sustained individually and strengthens social connection and shared meaning when viewing is shared with another. This has direct implications for museum practice, indicating that the impact of extended viewing depends not only on time spent with art, but on how attention is organized and how social interaction is structured in the gallery.

Real, Virtual, Passive: The Effect of Exhibition Modality on Art Perception, Art Appreciation, and Gallery Exploration

Christopher Linden, Gitte Van Winkel and Johan Wagemans*

**KU Leuven*

In recent years, many museums have expanded the online accessibility of their collections. For some, this includes more extensive and detailed information about the artworks, accompanied by static photos. For others, the websites host virtual tours of exhibitions, ostensibly allowing heightened immersion. To assess the immersion of these online art presentation formats, as well as their impact on viewers' art perception and appreciation, we developed a follow-up to a free-exploration Mobile Eye Tracking (MET) study of the Pieter Vermeersch exhibition held at M Museum, Leuven, in 2019, in which we previously collected MET data from 78 participants. M currently hosts an online virtual tour of this exhibition, with 360° views of the gallery space from multiple perspectives. In the current study, 74 participants freely explored this virtual exhibition,

while in a second, passive, viewing condition, 75 participants were shown still images of the exhibition and its artworks. Presentation order and timings of the passive condition were matched to the median data of our original, in-person study. All participants had their gaze tracked with MET, and finally completed questionnaires about their experience, the artworks, and the exhibition as a whole. Passive viewing participants considered the experience more negatively, yet found the artworks to be more beautiful, interesting, and meaningful than virtual tour participants. This may reflect a tension between the less engaged modality, yet higher fidelity images, of the passive sequence. When compared to the original, in-person study, both passive and virtual tour participants considered the exhibition to have less aesthetic merit than real exhibition visitors. Results will also be discussed in terms of the exploration strategies that the virtual tour and real exhibitions elicited from their respective visitors.

Understanding visitor behavior in immersive virtual galleries: The role of artwork complexity

Bengisu Görel and Halime Demirkan*

** Department of Interior Architecture and Environmental Design, I.D. Bilkent University*

The study investigated visitor experiences within an immersive virtual gallery, emphasizing the complexity of artworks. The Virtual Gallery Environment (VGE) software provided an empirical method for analyzing engagement and movement by real-time tracking of viewing time, distance, circulation paths, and heatmaps in a fully immersive virtual gallery. In this experiment, 136 participants explored a virtual exhibition using a head-mounted display, visiting a virtual gallery featuring primarily simple or complex abstract artworks each with one salient artwork of the opposite complexity. Artworks were selected from the Vienna Art Pictures System (VAPS) dataset (Fekete et al., 2023). The results showed that, although the overall complexity of the artworks did not affect the total distance traveled, primarily complex artworks encouraged more focused examination and led to increased revisits, suggesting higher engagement levels. There was no overall trend for visitors to enter the gallery from the right side; however, the placement and complexity of salient artworks appeared to influence visitor navigation in ways that deviated from expected behaviors. Salient complex artworks consistently drew more revisits and longer viewing times, while simple salient artworks received fewer revisits unless they were located at the entrance. Visual complexity did have a strong impact on viewing distance, with salient complex artworks drawing participants in closer. Additionally, the visitor movement flows significantly influenced the nature of interactions: zig-zag movement patterns were correlated with longer viewing times and greater distances traveled, while more central movements indicated less exploration. The visualizations of the visitor behavior revealed nuanced engagement patterns, providing insights into the effects of visual complexity. A significant contribution of this study was the development and implementation of the VGE software, enabling detailed tracking of visitor behavior within a fully immersive virtual gallery environment. This provided insights into how visitors engage with art.

SESSION: DESIGN AND EVERYDAY AESTHETICS

Wednesday 6th May | 10:45 – 11:45 | Raum Siegfried Czapski

The empirical aesthetics of fashion: Contextual factors that shape (or do not shape) clothing preferences

*Young-Jin Hur**

**London College of Fashion, University of the Arts London*

Previous research in the psychology of fashion has examined individual factors that predict preferences for particular garments, including personality (e.g., the Big Five), demographic variables (e.g., age and gender), and national culture (e.g., the UK vs. the USA; Hur et al., 2023, 2025). However, as fashion is multifaceted, clothing preferences may also be influenced by contextual factors. In this talk, I report on two such factors: the attractiveness of a garment's

wearer (the “model effect”) and prior visual exposure. Both sets of studies are currently under review in peer-reviewed journals.

With respect to the “model effect”, I report three studies that consistently demonstrate that when dresses are presented together with a wearer/model, attractive wearers/models increase positive ratings of the dresses. This effect was robust, emerging both when participants were explicitly instructed to evaluate the dress itself (Study 2; N = 180) and when they assessed the image as a whole (Study 1; N = 54), as well as across experimental (Studies 1 and 2) and naturalistic (Study 3; N = 30) settings.

With respect to prior visual exposure, I report three experimental studies (Ns = 172, 162, and 183) in which participants were repeatedly exposed to boiler suits, dresses, and coats, with exposure frequency, task instructions, and stimulus presentation systematically manipulated. The findings, supported by a meta-analysis, indicated that prior exposure alone did not reliably increase preference for a particular garment. Instead, preference increase through exposure were observed only when viewers experienced positive affective responses during exposure. In line with previous research, stable individual differences (age, gender, and personality) robustly predicted baseline preferences.

Taken together, these findings highlight the multifaceted yet selective factors that underpin everyday clothing preferences.

Product Design Liking: The Interplay of Semantic Associations and Fluency-Based Aesthetics

Jan R. Landwehr, Philipp Scharfenberger and Laura K. M. Graf*

**Goethe University Frankfurt*

One of the most iconic product designs in the car market is the design of the Mini. Besides the strong brand, a crucial part of Mini’s market success is that its design immediately triggers very positive symbolic associations such as cuteness, playfulness, and agility. The main premise of the current paper is that the valence of these symbolic design associations is an essential determinant of overall design liking, besides the aesthetics of the design. Specifically, current theoretical models explain product design liking most prominently by fluency-based aesthetic appreciation. To complement this perspective, the current paper introduces a novel approach to quantify the valence of a product’s semantic associations and shows across two studies on office chairs and cars that semantic associations influence product design liking in addition to fluency-based aesthetics. Moreover, we also observe a positive interactive effect between fluency-based aesthetics and the valence of the semantic associations, such that both effects magnify each other. Methodologically, Study 1 examines product design liking of 30 office chairs. To operationalize our dependent and our independent variables, we collect and analyze the results of five different tasks using five different samples of participants based on procedures developed in the domain of color preferences: a task that identifies the dominant semantic associations, a task that quantifies the relation between the design and its semantic associations, a task where participants evaluate the valence of the semantic associations, a task where participants evaluate the subjective fluency of the designs, and a task where they evaluate their product design liking. In our second study, we repeated all five described steps for a set of 77 cars. In sum, our findings point to the importance of considering the symbolic dimension of product design and its interaction with the aesthetic fluency dimension to better understand product design liking.

Externalizing Thought Experiments: A Research through Design Approach to Empirical Aesthetics

Christy Xueying Shao and Steve DiPaola*

** Simon Fraser University, School of Interactive Art and Technology*

Empirical aesthetics has established robust paradigms for measuring immediate responses to stimuli; however, the field faces methodological challenges in investigating longitudinal phenomena such as habituation and aesthetic endurance. This paper proposes Externalizing

Thought Experiments (ETE), a Research through Design (RtD) methodology that reframes designed artifacts as epistemic instruments. ETE treats design not as the production of expressive objects, but as a systematic process of moving a theoretical hypothesis from an internal mental model to an external, parametric system.

Central to this framework is the creation of counterfactual artifacts, as defined in the "material speculation" work of Wakkary et al. (2015). These are functional objects logically inconsistent with standardized reality, yet present in the user's environment. To bridge abstract theory and functional stimuli, we employ vibe coding as an iterative generative method. Vibe coding allows researchers to "sculpt" the affective and temporal qualities of an artifact until it accurately externalizes a specific aesthetic hypothesis.

We demonstrate this through the Lingerin Clock, a counterfactual temporal artifact that accelerates or decelerates based on physiological input. Observations from short field study suggest that temporal mismatch—the conflict between mechanical and felt time—induces meaningful affective responses. This phenomenon is reflected across cultural domains such as historical cinema, retrofuturism, and vintage fashion, where "out-of-sync" pacing provides a site for aesthetic experience to emerge.

By utilizing vibe coding to tune the clock's drift, the ETE framework offers a way to explore the potential for these subtle experiences to shift or deepen across extended temporal horizons. Ultimately, ETE seeks to foster a productive dialogue between the generative insights of design and the evaluative traditions of empirical aesthetics, suggesting a more integrated approach to understanding the complex, lived-with nature of dynamic aesthetic experience.

SESSION: AESTHETICS OF HUMAN FACES

Wednesday 6th May | 12:00 – 13:15 | Raum Otto Schott

Who Do We Remember? Facial Anomalies, Race, and Sex in Social Categorization

Soma Chaudhuri, Isabella Bobrow and Anjan Chatterjee*

** Penn Center for Neuroaesthetics, University of Pennsylvania*

Social categorization often occurs automatically, shaping whom we notice, remember, and group together. The present study examined how visual cues indicative of sex, race, and facial anomaly guide spontaneous categorization, testing the hypothesis that anomaly-based categorization is more malleable than categorization by race or sex. Using a within-subjects Who-Said-What (WSW) paradigm, participants viewed faces that varied by sex, race, and presence of a facial scar, each paired with self-descriptive statements. A surprise recall task required matching statements to faces. Categorization strength was computed from recall errors. Participants showed the strongest categorization by sex, weak categorization by race, and very weak categorization by facial anomaly. Regression analyses revealed a suppression of facial anomaly-based grouping. When sex or race were strongly encoded, scar-based categorization was sharply diminished, and the cue appeared only under relatively weak and infrequent conditions. Thus, although visually salient, facial anomalies did not function as an independent or stable basis for social grouping. These findings demonstrate that the categorization system prioritizes evolutionarily primary cues such as sex, treats race as a comparatively weaker cue, and assigns facial anomalies to a minimal and malleable role. Overall, the results highlight the fragile, low-priority, and easily overshadowed nature of anomaly-based categorization in social memory. Importantly, the fragility of scar-based categorization suggests that negative evaluations of anomalous faces (anomalous-is-bad stereotyping) are not automatically translated into robust memories or categorical organization.

When Perception Lingers: Robust Serial Dependence in Face-Attractiveness Judgments with Selective Sensitivity to Similarity and Sexual-Orientation Groups

Melvin Boog and Gregor Uwe Hayn-Leichsenring*

** Universitätsklinikum Jena*

Does perceived facial attractiveness depend on previously viewed faces? We examine serial dependence (SD) in face-attractiveness ratings and test when this pull strengthens or weakens across response requirements, gender, ethnicity, facial similarity, and sexual orientations.

In an online task, 280 participants from 5 different ethnicities rated the attractiveness of current faces (number of different faces = 298, balanced for gender and ethnicity) in sequential face pairs from the Chicago Face Database (CFD) and CFD-India. In alternating blocks, the preceding face was either rated or only viewed. We quantified SD as the strength of the pull from the preceding face's attractiveness onto the current rating. A robust SD effect emerged ($\beta = 0.099$, Holm-corrected $p < 0.01$). Moderator effects were not supported, but descriptive patterns indicated non-significant tendencies of higher SD when the preceding face was rated rather than only viewed, for same-gender than different-gender pairs, and for different-ethnicity than same-ethnicity pairs. Structural similarity, operationalized as cosine similarity between facial feature vectors, showed no linear gradient, but SD rose sharply in an extreme high-similarity region (top 1 percent most similar pairs; interaction $\beta = 0.205$, $p < 0.01$). Therefore, similarity matters—but only at the extreme. Furthermore, exploratory analyses suggested reduced SD in the bisexual subgroup ($\beta = -0.146$, $p < 0.01$). One possible explanation is reduced reliance on category-based face representations by bisexual individuals, though this interpretation remains speculative. Taken together, the results show robust SD in face-attractiveness ratings, with no reliable moderation by response requirements or category transitions, but SD increases sharply for extremely similar face pairs and is reduced in a bisexual subgroup. Future research should characterize how SD changes across the similarity continuum and identify replicable moderators of SD.

Fast and Stable Perceptions of Attractiveness, Trustworthiness and Dominance in Voices, Dynamic Faces, and Videos

Stefan R. Schweinberger, Celina I. von Eiff, Christine Nussbaum and Romi Zäske*

** Department for General Psychology and Cognitive Neuroscience, Friedrich Schiller University, Jena*

When perceivers hear a voice, see a face or directly perceive speaking people, they rapidly form impressions about the person. Perceptions of attractiveness/trustworthiness and dominance are particularly prevalent. The gating paradigm, in which variable stimulus presentation times are used to elicit participants' perceptual ratings, is a useful technique to elucidate the time course of person perceptions from faces, voices, or videos. In several experiments with young adult perceivers, we used variable presentation times (PT; i.e., 50, 100, 125, 313, 500, 783, 1000, and 1958 ms) to present voices or videos of unfamiliar speakers which were rated for attractiveness, trustworthiness, or dominance on 6-point Likert scales. Separate criterion ratings were obtained with unlimited PT throughout. We then quantified the stability of perceptions from brief stimuli in terms of correlations with criterion ratings at a given PT. Experiment 1 (N = 36) on unimodal voices or faces revealed that facial attractiveness ratings stabilized almost within 100 ms, replicating earlier research. By contrast, vocal attractiveness ratings took much longer to stabilize at ~1000 ms, a point at which correlations with criterion ratings did not increase with longer PTs. In a bimodal video condition of Experiment 2 (N = 60) dominance perceptions stabilized around 300-800 ms, whereas trustworthiness perceptions stabilized earlier at approximately 125-300 ms. A comparison with unimodal face and analogous voice conditions of Experiment 3 (N = 72) suggested that (1) impressions of trustworthiness and dominance are speeded up by the availability of both facial and vocal input, potentially implicating efficient audiovisual integration, and (2) in bimodal situations, dominance perceptions are relatively more driven by the vocal channel, whereas trustworthiness perceptions are relatively more driven by the facial channel. Overall, in research on aesthetic perceptions and perceptions of human beauty and attractiveness, multisensory research can help uncover relevant perceptual and brain mechanisms.

The Gender Attractiveness Gap

Eugen Wassiliwizky and Fredrik Ullén*

Writers from Darwin to Dawkins have noted that, in humans, women are considered the "beautiful sex," whereas in most species, males display more elaborate and visually striking traits. This reversal of typical sex roles has been the focus of extensive theoretical discussion, yet it is surprising that it had never been systematically examined or empirically verified. In this study, we conducted a comprehensive meta-analysis of published datasets on both same-sex and opposite-sex ratings of facial attractiveness from around the globe. Our findings confirmed the existence of a robust Gender Attractiveness Gap (GAP), with female faces rated more attractive than male faces across rater genders, cultural backgrounds, and racial backgrounds of stimuli. Unexpectedly, the effect was more pronounced among female raters, suggesting gender-specific moderation. To better understand these effects, we conducted additional analyses, including controlling for facial morphometry and exploring other explanatory factors such as cultural and psychological biases. We found that the GAP was substantially mediated by structural facial dimorphism. Interestingly, this mediation was asymmetric: controlling for dimorphism substantially reduced attractiveness for female faces while leaving those of male faces unaffected. This suggested a specific preference for structural femininity shared by male and female raters. It also indicated that attractiveness judgments relied on general aesthetic processes beyond heterosexual mate choice. Additionally, we observed a tendency for greater stringency among male raters. Together, these findings advanced understanding in evolutionary psychology, aesthetic processing, and social perception, emphasizing the need to consider gender-specific and cultural influences in attractiveness research.

SESSION: NARRATIVES & GAMES

Wednesday 6th May | 12:00 – 13:15 | Raum Clara und Eduard Rosenthal

Stories that Stick: The Eudaimonic Power of Negative Empathy in Narrative Video Games

*Francesca De Agnoï**

** University of Milan*

Recent research on negative emotions in aesthetic experience has shown that discomfort, moral tension, and ambivalence can deepen engagement and reflection. This study investigates how narrative video games that elicit negative empathy—understood as the co-occurrence of emotional attachment through perspective-taking and moral resistance—shape not only engagement and appreciation, but also the persistence of aesthetic experience over time. Drawing on a mixed-methods reception study combining an online questionnaire (N = 137) with semi-structured interviews (N = 9), the analysis compares two narrative configurations: the branching structure of *Life is Strange* (Dontnod, 2015) and the linear design of *The Last of Us* (Naughty Dog, 2013–2020). The findings reveal a paradox of control: while player agency is commonly assumed to enhance engagement, it can also diffuse moral tension by allowing players to anticipate and revise their choices. In *Life is Strange*, this results in emotionally engaging but comparatively contained experiences, in which conflict remains deliberative and memorability is tied to isolated moments. By contrast, *The Last of Us* sustains affective dissonance, as players remain attached to characters while being required to enact morally troubling actions without the possibility of opting out. This enforced complicity generates not only empathy and attachment, but also negative emotions such as discomfort, guilt, and emotional weariness, which intensify rather than diminish the experience. Further amplified by perspectival shifts, these tensions linger beyond gameplay, fostering reflection and ongoing reinterpretation. The results suggest that thought-provocativeness and memorability in narrative games do not depend on emotional intensity or agency alone, but on how character attachment, moral conflict, and narrative constraint interact to sustain tension. By situating player responses within broader debates on the paradox of painful art and the role of interactivity in aesthetic experience, the study contributes to understanding how video games can produce meaningful

experiences that extend beyond gameplay and continue to challenge, unsettle, and resonate over time.

Divergent Thinking and Narrative Approaches to Creativity Training: Individual Differences in Undergraduate Students

Indre Viskontas, Yoed Kenett, Angus Fletcher, Mikayla Wong, Fania Villarreal and Rosalie Juviler
* University of San Francisco*

If beauty is in the eye of the beholder, then shouldn't individual differences be considered in the context of creativity training? Creativity training programs have gained increasing attention in educational settings, yet the comparative effectiveness of different training approaches remains underexplored, as does their moderation by individual differences. Two possible methods—divergent thinking training, which emphasizes generating multiple solutions, and narrative-based training, which leverages storytelling to foster flexible thinking—may differentially benefit learners depending on individual characteristics. This study examined whether these approaches produce distinct outcomes and whether demographic or cognitive factors moderate training effects. 232 undergraduate students participated in this study. Students were randomly assigned to two creativity training conditions: divergent thinking and narrative-based, and asked to complete the Alternate Uses and Alternate Questions tasks before and after the training intervention, along with a problem-solving task. Using an automated scoring technique, we found no differences in fluency or in the quality or originality of the answers to the problem-solving question. In traditional creativity tasks, we found an interaction between training condition and gender, such that creativity improved among males with narrative-thinking training. In contrast, females showed higher creativity scores after divergent thinking training. Interestingly, we also found a correlation between the quality (but not originality) of the problem-solving answers and attention-deficit/hyperactivity symptoms, as well as with fluency and creativity in the Alternate Questions Task. These findings suggest that creativity training may benefit from personalized approaches that account for individual differences, and highlight the potential value of matching instructional methods to learner characteristics in educational contexts.

Sublime Experiences from the Videogame Journey: A Computational Analysis of 10.000 User Reviews

Egil Ovesen
* University of Agder*

Videogames might very well be the Gesamtkunstwerk of our time. Most of them fuse visual art, storytelling, music, theatre and film into an integral experience, while letting the players experience agency through interactivity. To use the terms of John Dewey, these experiences involve both doing and undergoing.

One of the games that is often mentioned as an example of videogames as art is Journey by Jenova Chen. It was released in 2012 and won five British Academy Games Awards the following year, including the one for artistic achievement.

The visuals of Journey bear strong similarities to the sublime of the Romantic era. In common with the works of Caspar David Friedrich, one of German Romanticism's prominent painters, the videogame features forlorn ruins, gravestones, religious symbols, snow-capped mountains and the player as a small figure in a vast landscape. Furthermore, parts of the videogame provide opportunities to experience what Edmund Burke termed "delightful horror" in his treatise on the sublime and the beautiful.

The aesthetic experiences the players are left with after the game is evident in user reviews on the community website of videogame distributor Steam. Many of the players even describe physical reactions as tears and goosebumps. Over 10.000 of these public reviews were downloaded to provide empirical data for the current study.

Computational methods are needed to utilise such a large dataset. A large language model was used to code the user reviews according to coding principles of thematic analysis. The results were calculated into a matrix of total correlations, and then the codes were grouped into factors using explorative factor analysis. These factors provided the basis for a mediation analysis. The resulting model illustrates the relationship between the sublime, beauty, fear, transformative experiences and connectedness to self, nature and other players met in the game.

Modulated Emotions. On the Relation of Style, Genre and Emotion in the Fairy Tale

Christine Knoop, Thomas Nehrlich, Kirsten Stark, Sabrina Aristei, Alexander Enge, Oliver Lubrich, Werner Sommer and Rasha Abdel Rahman*

** Max Planck Institute for Empirical Aesthetics*

One of the oldest and culturally most successful genres of folk prose, the fairy tale, regularly contains violations of real-world knowledge, like animacy violations. Extant research on counterintuitive phenomena suggests that such phenomena could be expected to make the texts in which they occur more difficult to understand and would trigger increased emotional effects. This presentation introduces two studies that investigate the extent to which fairy-tale style triggers genre expectations regarding counterintuitive story-world events, and how the occurrence of such events impacts emotional response.

In Study 1, we presented micro-narratives with context stories written in unmarked vs. fairy-tale style before target sentences. We compared electrophysiological correlates of semantic processing (N400) elicited by counterintuitive phenomena, common semantic expectancy violations, and intuitive ideas, presented as critical words within the target sentences and as images during encoding. Results show that genre recognition plays a crucial role for the processing of counterintuitive information. Typical N400-effects, as seen in response to MCIs after stories written in an unmarked style, were not observed in response to MCIs after stories written in a fairy-tale style, suggesting that this characteristic style facilitates the encoding of counterintuitive elements.

Study 2 compared our fairy-tale micronarratives with versions containing added emotional vocabulary that disrupted the typically laconic fairy tale style. This change in style significantly increased N400-effects, suggesting profound effects on emotional reader response occur in reaction to even small aberrations from style-driven genre-specific reading modes.

SESSION: FEELING (FOR OTHERS) THROUGH ART

Wednesday 6th May | 12:00 – 13:15 | Raum Siegfried Czapski

Towards an Affective Aesthetic Cognitivism

Joerg Fingerhut and Corinna Kühnapfel*

**Berlin School of Mind and Brain, Department of Philosophy, Berlin, Germany*

Aesthetic Cognitivism (AC) claims that engagement with the arts can contribute to knowledge and understanding, yet empirical aesthetics has struggled to specify which aspects of art engagement support such epistemic impacts and how empirical findings can be responsibly connected to broader theoretical claims. In this paper, we advance an Affective Aesthetic Cognitivism (AAC), arguing that epistemic impacts of art are systematically related to differentiated emotional engagements, rather than to hedonic response or arousal alone.

Methodologically, we introduce Philosophically Guided Supplementary Analysis (PGsA) as a framework for evaluating the theoretical employability of empirical findings—assessing to what extent particular results can support claims about art, emotion, and cognition without overextending their evidential scope. PgSA is applied to three existing datasets addressing the cognitive impact of art from complementary perspectives: (1) network- and taxonomy-based

analyses of affective and cognitive descriptors of art engagement (Christensen et al., 2023), (2) scale-development work on emotions elicited by artworks (Schindler et al., 2017), and (3) survey-based studies linking emotional engagement with reported epistemic states and art evaluations (Miller et al., 2025).

Across all three datasets, convergent patterns emerge: epistemic impacts of art are not associated with positive affect in general, but with specific emotional profiles—most notably interest, challenge, insightfulness, and being moved—that show consistent relations to reported perspective change and understanding. At the same time, PgSA clarifies which epistemic claims remain underdetermined by self-report methods alone.

We conclude that emotion-differentiated approaches, combined with theoretically informed analysis, offer a promising route for advancing empirical research on the cognitive impact of art and for guiding future experimental work using performance-based measures.

heART to heart: The (Pro)-Socially Transformative Impact of Living with an Artwork at Home for a Month, an Experience Sampling Study

Srestha Chakraborty and Matthew Pelowski*

** Faculty of Psychology, University of Vienna*

The arts are increasingly recognised as a potential vehicle for fostering prosocial attitudes and social cohesion in response to contemporary societal challenges, including international immigration. While interest in arts-based interventions spans policymaking, civic initiatives, and psychological research, the field remains limited by scarce empirical evidence and unresolved ethical concerns surrounding agency, representation, and researcher-participant relationships. As a result, the socially transformative impact of sustained, everyday engagement with art remains insufficiently understood.

Grounded in an ethically and empirically informed framework, this study examined how living with an artwork at home for one month influenced Viennese residents' prosocial attitudes and behaviours toward international immigrant populations. In close collaboration with South Asian artists, I co-created a series of artworks expressing emotions related to migration and displacement. Each participant was randomly assigned one artwork, which was installed in their home for three weeks to enable prolonged, naturalistic engagement.

Using an experience sampling methodology, participants completed brief daily smartphone surveys assessing mood, prosocial behaviours, social and moral emotions, and their perceived connection to the artwork and its artist. The study further investigated whether providing background information about the artist and their creative process shaped participants' aesthetic experience, emotional engagement, and meaning-making over time.

In this talk, I present key findings from the study and reflect on ethical challenges inherent in psychological research involving marginalised stakeholders from migrant backgrounds, and additionally underscore the importance of non-extractive research collaborations. I conclude by proposing a longitudinal, ecologically valid impact-assessment approach embedded in participants' everyday lives. By moving beyond conventional museum-based studies reliant on brief, one-time encounters with art, this work offers a novel methodological framework for evaluating the prosocial potential of arts-based interventions in domestic settings.

Beyond the Frame: Cultivating Empathy Through Art

Jennifer Drake and E Louison*

** Brooklyn College, CUNY*

Many of our greatest works of art are negatively valenced, depicting human suffering. We experience positive as well as negative affect from art that depicts negative content (e.g.,

Kawakami et al., 2013; Taruffi & Koelsch, 2014) and the experience of being moved is associated with positive affect (Hanich et al., 2014; Wassiliwizky et al., 2015). It is possible that viewing art showing human suffering evokes empathy for the sufferer. Two studies found that viewing videos of sculptures showing suffering refugees (Dhallu et al., 2025) or attending an art exhibit on refugees increased empathy (Pelowski et al., 2024).

In two studies, we examined whether viewing art induces empathy and whether the valence or framing of the paintings plays a role. In Study 1 (n = 100), participants were randomly assigned to view either 10 negative paintings or 10 positive paintings from the Vienna Art Picture System (Fekete et al., 2023). After each painting, participants rated their positive and negative affect, feelings of being moved, and experience of cognitive and affective empathy. In Study 2 (n = 99), participants viewed only the negative paintings and were either told the paintings depicted real or fictional events.

In Study 1, we found that the valence of the painting mattered. Participants in the negative condition (as compared to the positive condition), experienced higher negative than positive affect, higher feelings of being moved, and higher cognitive than affective empathy. In Study 2, we replicated the affect and empathy findings and showed that these results hold for both real and fictional events.

These studies demonstrate that art depicting suffering is pleasurable because it is moving and it has the power to induce empathy. Viewers respond in the same way whether or not they believe the events depicted to have really occurred, or to be fictional.

Communicating emotions through abstract drawings in autistic and non-autistic adults

Young Ah Kim, Fenja Liebert, Anja Rosenauer, Nesrin Koca, Fannie Jamila Leitner-Sidl, Marie-Sophie Jositz, Giorgia Silani and Matthew Pelowski*

** University of Vienna*

Background: Emotion recognition is often studied through facial expressions. However, autism is related to altered face processing, which can influence the results. Further, most studies focus on how autistic and non-autistic (NA) viewers perceive expressions of NA people, and less about how people perceive expressions of autistic people. To bridge this gap, an emotion communication paradigm using abstract drawings was used to investigate communication between- and within-neurotypes.

Method: In the expression study, 60 adults (29 autistic, 31 NA) were asked to express 4 given emotions (happiness, anger, fear, sadness) through abstract drawings. In the perception study, 128 adults (64 autistic, 64 NA) were asked to view the drawings and guess what emotion is being expressed. They also rated how much they liked each drawing.

Results: At the artist level, there was no group difference in how successfully they communicated the emotion. At the viewer level, NA viewers had a higher correct guess rate (49.6%) than autistic viewers (46.8%) ($p = 0.020$). There was no significant interaction between artist and viewer groups on the correct guess rate. Autistic viewers on average gave lower liking ratings compared to NA viewers ($p < 0.001$). There was a significant interaction effect of artist and viewer groups for the liking ratings ($p = 0.027$), where autistic viewers tend to give higher liking ratings for autistic artists' drawing, while such difference was not present in NA viewers.

Conclusion: Autistic viewers were less successful than NA viewers at guessing the correct emotion. There was no evidence of better communication within the same neurotypes. However, there was some evidence for preference of autistic artists' drawings by autistic viewers. This is the first study to investigate how autistic and NA individuals communicate emotions through abstract drawings.

SESSION: ADVANCES IN MODELLING AND MEASURING AESTHETIC EXPERIENCE

Wednesday 6th May | 14:30 – 16:00 | Raum Otto Schott

Bridging the arts and sciences: 20 years of a framework for the psychology of aesthetics.

*Thomas Jacobsen**

** Helmut Schmidt University / University of the Federal Armed Forces Hamburg*

In 2006, a framework for the psychology of aesthetics was published that uses seven perspectives on the topic (Jacobsen, T. (2006). Bridging the Arts and Sciences: A Framework for the Psychology of Aesthetics. *Leonardo*, 39(2), 155–162.). These vantage points were organized into three groups: the psychophysical mind-body pair of approaches, secondly the person and situation perspectives, stemming from Lewin's field theory - behavior results from an interaction of person and situation variables – in combination with a notion of domains of aesthetic reception and productions, and, lastly, a humanities and cultural sciences approach, using a diachronic and a synchronic or isochronic vantage point. The talk will trace trajectories of research pertaining to the seven perspectives through the last 20 years.

Computational phenomenology of powerful aesthetic experiences: Mapping emotions, perception and meaning from natural language

Jeffery Vadala, Hannah Merseal, Isabella Bobrow and Anjan Chatterjee*

** Penn Center for Neuroaesthetics, Dep. of Neurology, Perelman School of Medicine, University of Pennsylvania, PA, USA*

How do we characterize powerful experiences of art objects? We hypothesize that powerful art experiences follow patterns of mental processes that shape how people move through emotions, perception and meaning. In this study, we used museum visitors' free-responses describing powerful art experiences at the Penn Museum and the Barnes Foundation. 119 visitors reported how a self-selected powerful artwork made them feel. Three AI agents (Claude Sonnet 4.5, running in parallel) inductively categorized the contents of each visitor's free-response report for perceptual, emotional, and conceptual content, deriving patterns directly from natural language rather than from predefined rating scales or categories. We combined these tagged responses into shared networks to examine structures that recur across visitors as a group. Preliminary results show three patterns. First, many descriptions trace paths that begin with sensory features, move through emotional reactions, and end in personal meaning making. Second, emotional content is compositionally rich and often of mixed valence. Visitors report feeling wonder with unease, or appreciation with discomfort, rather than single simple feelings. Third, "connector" states, especially curiosity, beauty, and awe, appear at points where reports shift between perception and meaning. Overall, the findings suggest that powerful encounters with art follow paths that run from perception through emotion into meaning, that these paths are often marked by emotional tension rather than singular simple feelings, and a small set of states connect these dynamic states. Our sample was small and await human validation. However, such computational phenomenology approaches using subjective accounts may have promise in revealing intricate shared patterns of complex art experiences.

Facilitating Novices' Appropriation of Complex Artforms: A Predictive Model

*Shuo Cai**

** Peking University / HEC Montreal*

A persistent paradox in arts engagement is that the ability to appreciate complex artworks depends on interpretive schemata that can only be developed through prior exposure. Novice audiences therefore face a self-reinforcing feedback loop: lacking exposure, they find sophisticated art cognitively demanding and disengage early, which prevents the learning required for future appreciation. Previous studies have shown that novices and experts differ in

how they process and evaluate artistic experiences, yet they have not explained how novices can gradually gain expertise or how this process can be supported.

This research addresses this gap by developing and empirically validating a predictive model of appropriation that integrates arts management theory with concepts from empirical aesthetics. Drawing on dual processing theory and the Pleasure and Interest Model of Aesthetic Liking, the model links the three recursive operations of appropriation (nesting, investigating, and stamping) to reactive and reflective processing modes. It predicts affective outcomes such as pleasure, interest, confusion, and boredom, as well as behavioral intentions such as reconsumption and disengagement, as functions of processing fluency, cognitive effort, and schema alignment.

Three empirical studies validate the model. Study 1 uses semi-structured interviews with 41 participants to examine how different forms of dance-related experience shape attentional focus and appropriation across audience segments. Study 2 tests the model through three contrasting works, showing how schema misalignment, narrative compression, and abstraction shape novice reception. Study 3 examines a quasi-natural intervention, demonstrating how familiar cultural referents and visual enhancement can reduce cognitive load and facilitate novice appropriation. By integrating cognitive-aesthetic mechanisms with audience development theory, this research conceptualizes appropriation as a recursive learning process shaped by repeated interactions between fluency, effort, and expertise. The findings bridge empirical aesthetics and arts management, offering a predictive framework for understanding how aesthetic pleasure evolves into sustained engagement with complex cultural products.

Performance on the New Corpus-Based Assessment of Novelty and Diversity Task is More Closely Related to Real-World Creativity Than the Traditional Remote Associates Test

Amber Rose Lim, Ben Bullock and Benedict James Williams*

** Centre for Mental Health and Brain Sciences, Swinburne University of Technology, Melbourne, Australia*

The associative theory of creative thinking suggests that creativity is linked to an individual's capacity to form connections between distant associations based on the structure of their semantic memory. The traditional measure used to assess this theory is the Remote Associates Test (RAT). Yet the RAT has been criticised for its poor psychometric properties. Recent developments in distributional semantics have enabled new open-ended measures to capture the associative basis of creative thinking. One of these new measures is the Corpus-Based Assessment of Novelty and Diversity (C-BAND) task. We conducted the first performance comparison between the traditional RAT and the new C-BAND via an online study with a sample that included highly creative individuals (N = 332) to determine which task was more closely related to real-world creativity. Real-world creativity was assessed in two ways: (1) by asking participants whether they engaged in regular creative work (yes/no) and (2) by administering the Creative Achievement Questionnaire (CAQ). Our preliminary findings indicate that individuals who engage in regular creative work tend to perform better on the C-BAND than those who do not. Whereas performance on the RAT did not differ by engagement in creative work. RAT and C-BAND performance were positively associated with total CAQ scores, and C-BAND diversity was the strongest independent predictor of total CAQ scores. These findings are interpreted in the context of associative thinking assessment among eminently creative individuals, across the arts and science CAQ domains.

Profiles in aesthetic engagement: A new measurement tool and a snapshot of behavior in the United States

Eileen Cardillo, Hannah Merseal, Raphael Englander and Anjan Chatterjee*

** Penn Center for Neuroaesthetics, University of Pennsylvania*

Arts engagement is increasingly recognized as a potential health-related behavior that supports physical and mental wellbeing. Yet its measurement often relies on narrow, Eurocentric

definitions emphasizing attendance at fine arts institutions, or knowledge of western art history. Such approaches underestimate the variety of ways people engage aesthetically, likely systematically underrepresenting groups who experience barriers to access or prefer engagement outside traditional art venues. Additionally, the rise of digital and hybrid modes of participation further challenge conventional measures. To address these gaps, we developed the Assessment of Aesthetic Participation, a new survey designed to capture a broad spectrum of aesthetic behaviors, including everyday aesthetic activities, religious and heritage embedded practices, and digitally mediated engagement. Using a nationally representative U.S. sample, we validated the Assessment of Aesthetic Participation against previously published measures—the Revised Aesthetic Fluency Scale and the Aesthetic Responsiveness Assessment. Results replicate known demographic trends (e.g., increased participation in younger people and with greater education), while expanding our understanding of participation by race and gender. Latent profile analysis identified five distinct styles of engagement amongst the general U.S. public, differentiated by frequency and preferred activities: the Disengaged at the low end, the Spectator, the Fan, and the Enthusiast at intermediate levels, and the surpassingly engaged Aesthete at the high end. The Assessment of Aesthetic Participation offers a flexible, inclusive, psychometrically robust tool to address limits in existing measures of arts engagement and to advance research on the benefits of aesthetic experiences.

SESSION: ENGAGEMENT WITH LIVE PERFORMANCES

Wednesday 6th May | 17:00 – 18:00 | Raum Otto Schott

Engaged but Not Uplifted: Multimodal Evidence of Audience Engagement and Prosocial Behaviour During a Socially Confronting Live Music Performance

Lauren Fink, Joshua Schlichting, Maya Flannery, Alexander Nguyen and Shreshth Saxena*

** McMaster University*

Not all aesthetic experiences are uplifting; many artworks deliberately confront audiences with social and moral issues. Here, we report a behavioural and physiological study of an experimental live music performance addressing the issue of wrongful imprisonment. The work (see <https://www.the-innocents.com/>) was presented twice as a live, in-person concert (N=61) alongside a parallel online livestream (N=32). Across all audiences, we collected eye-tracking, cardiac, and self-report data, measured via mobile sensors and tablets, or webcam and browser-based surveys, respectively. Contextual information was manipulated between performances: one audience viewed a documentary film (<https://www.youtube.com/watch?v=PyYSohg-Fpl>) about the issue and the creation of the music piece before the performance, while the other audience watched this film after having viewed the performance. We also ran a replication and follow-up study (N=200) with exclusively online audiences. We contrasted the effect of documentary alone vs. performance alone on our multimodal outcome measures related to attention, attitudinal change, and charitable behaviour.

All audiences experienced negative affect throughout the event (with increases observed for those who watched the performance without prior context), yet they consistently reported high levels of concentration, interest, and enjoyment. Attitudinal responses were comparable between in-person and livestream audiences; however, in-person attendees showed greater behavioural support for the cause, which was predicted by empathy. Post-concert donations to a non-profit addressing wrongful imprisonment did not differ between context conditions. Eye-tracking and cardiac analyses reveal patterns of similarity across repetitions of the performance between different audiences, but also how contextual information shapes physiological measures of attention and engagement throughout the event. Preliminary results indicate differences in visual exploration and cardiac synchrony between conditions, pointing to distinct modes of collective engagement, dependent on prior context. Such results suggest that context may shift how audiences collectively engage without shifting overall behavioural outcomes.

Exploring Audience Experiences and Impacts of Live Theatre Performances

Stephanie Miller, Anna Astner and Matthew Pelowski*

** University of Vienna, Faculty of Psychology*

Despite an ancient origin and rich contemporary scene, one artistic domain which has received little attention from empirical researchers, especially regarding viewer experience, is theatre. As a highly resonant art form which necessitates the live, immediate engagement of performing artists and audiences, theatre has long been touted by practitioners to be uniquely transformative and able to shape viewers' understanding of the world around them. Amidst ongoing discussions of the benefits of arts engagement—from health and wellbeing to learning and societal transformation—theatre offers a new, under-explored avenue. To date, there are few empirical studies that investigate theatre directly, and fewer still that investigate the perception of performances or holistically assess audiences' experience of theatrical productions. Recent theoretical and empirical developments in visual aesthetics, however, offer new approaches for assessing phenomenal art-experience and successive impacts on wellbeing and social attitudes.

Following methods from museum studies, we partnered with two local theaters to collect post-show experience reports from over 450 audience members across 24 live performances. Audience members were approached by a researcher and informed about the study before the show or during a mid-show intermission. Those who wished to participate in the study completed a questionnaire after the performance that assessed their experience and evaluation of the production. The questionnaire included a 16-item measure of phenomenal experience that assesses the types of felt-experience reported by audience members, as well as reports of, for example, liking, meaningfulness, immersion, perceived connection to the performers and other audience members, and felt impacts on hedonic and eudemonic wellbeing. We will discuss findings of reported experience types and impacts of performances, as well as consider parallels and differences to previous studies of visual art experiences. This project offers a new approach to studying audience experiences and the impacts of live theatre performances.

I see you! Performer gaze conveys levels of acting during live performances

Albane Arthuis, Leyi Yao and Guido Orgs*

** University College London*

In social settings, other people's gaze conveys information about the environment but also about their own intentions and psyche. People intentionally or unintentionally modify their gaze behaviour to lie or deceive others (Foulsham & Locke, 2015). In the context of live performances, performers can be considered as deceiving their audience when they are on stage, they are not being their 'true self', but using a mix of true and false emotions to perform. Acting, or performing, seems to be more of a continuum than a duality (Kirby, 1972). In a performance experiment titled "Performing and Not Performing, performed by Jia-Yu Corti", we asked the performer to conduct 11 activities, in a mode of performing or in a mode of not performing, while wearing eye-trackers. Audience members were also wearing eye trackers, and were asked to guess, for each activity, if the performer was instructed to 'perform' or 'not perform' the activity. They were also asked to rate their level of certainty and engagement for each activity. We found that audience members were able to guess the instruction given to the performer, but there was no relationship with how much the performer looked at the audience. Meanwhile, the performer looked more at the audience when in a performing mode, so the performer's gaze behaviour conveyed their intention without the audience being aware of it. We also found that the more the performer looked at the audience, the more engaged the audience was. Our findings show that performer gaze is an important cue to the performers intentions and highlight the role of performer-spectator non-verbal communication for audience engagement.

SESSION: ALTERED STATES AND ART VIEWING

Wednesday 6th May | 17:00 – 18:00 | Raum Clara und Eduard Rosenthal

Under the Influence: How Alcohol Shapes Aesthetic and Emotional Responses to Art

Mariola Paruzel-Czachura, Vasiliki Meletaki, Katarzyna Pypno-Blajda, Sonia Bartodziej and Anjan Chatterjee*

** University of Pennsylvania & University of Silesia in Katowice*

People do not always encounter art in neutral conditions. One common situation in which people encounter art is prior alcohol consumption. Some museums host evening events where visitors can enjoy alcoholic beverages while viewing exhibitions. Despite this common practice, we know little about alcohol effects on the experience of visual art. In this preregistered study, we test the hypothesis that alcohol ingestion shapes beauty judgments, liking, and emotional responses to paintings.

One hundred and seventy-three healthy adults were randomly assigned, under a double-blind procedure, to one of three groups: alcohol, placebo, or control. In the alcohol group, a bartender prepared vodka–juice drinks designed to produce a breath alcohol concentration of approximately 0.5‰, equivalent to 0.05% BAC, or 0.05 g/dL. Participants drank their beverages, watched a low-arousal film while their breath alcohol level was monitored with a breathalyzer, and then completed a computer-based rating task.

Each participant viewed six digital paintings (two portraits, two landscapes, two abstract works) in random order. They rated how beautiful they found every painting and how much they liked it. They then reported how the painting made them feel on 11 items capturing aesthetic impacts (enraptured, interested, calm, compassionate/empathetic, pleasure, challenged, edified, enlightened, inspired, angry/enraged, upset). These impacts can be grouped into four clusters: positive and negative affect, epistemic transformation, and immersion. We also measured everyday art engagement with the Assessment of Aesthetic Participation Scale to determine if people who engage more with art are differently influenced by alcohol intoxication.

We predicted that, compared with the placebo and control groups, participants in the alcohol group would rate all paintings as more beautiful and likable, exhibit stronger positive reactions, and report weaker negative reactions. At the conference, we will present analyses that test these predictions and discuss their implications.

DeepDream- Induced Altered States of Consciousness Modulate Aesthetic Perception, Emotion, and Empathy in a Real-Life Museum Setting

Erdem Taskiran, Tomaso Gazzola, Andrea Polo, Andrea Signorelli and Nicola De Pisapia*

** University of Trento, Department of Psychology and Cognitive Science*

Recent findings show that artificially induced altered states of consciousness (ASC) modulate perception, emotion, and cognition by increasing brain entropy and relaxing perceptual priors. When simulated through algorithms like DeepDream, such states provide an ethical and reliable model to explore how altered perception interacts with aesthetic experience. This study examined how an algorithmically induced ASC shapes aesthetic, emotional, and empathic responses in a real museum setting.

ASC was induced using a convolutional neural network algorithm (GoogleNet; inception layers 3b and 4c) that transformed naturalistic video frames into hallucinatory patterns mimicking psychedelic phenomenology. Seventy-four museum visitors with no formal training in art or art history were randomly assigned to either the ASC condition or a silent dim-light control. After exposure, participants evaluated a single painting using the Art Reception Survey, completed an Empathic Response to the Painter measure, and provided a written description of the painting. After the visit, they filled out a Museum Experience Questionnaire assessing overall engagement.

The manipulation was effective: the ASC group showed significantly higher ASC scores than the control group ($p < .001$, $d = 1.3$). Only within the ASC group, higher ASC scores correlated with greater aesthetic quality, positive attraction, self-reference, cognitive stimulation, and expertise (all p 's $< .01$), while across all participants, ASC scores predicted greater empathy toward the painter ($\beta = 0.34$, $p = .003$). To quantify emotional expression, participants' artwork descriptions were analyzed using EmoAtlas, a computational linguistic tool that measures the prominence of discrete emotions in text. Sadness was less represented in the ASC group ($p = .008$, $d = 0.64$).

Finally, total ASC scores significantly correlated positively only in the ASC group with Museum Engagement, Emotional Experience, and Meaningful Experience. None of the above results were influenced by age, gender, showing that transiently altered perception alone deepens emotional and cognitive dimensions of art appreciation.

SESSION: COMPLEX EMOTIONAL EXPERIENCES

Wednesday 6th May | 17:00 – 18:00 | Raum Siegfried Czapski

Being moved by paintings: Is it a distinct emotion, and how is it generated?

Xiaohan Zhou* and Helmut Leder

* Department of Cognition, Emotion, and Methods in Psychology, Faculty of Psychology, University of Vienna

Being emotionally moved is a key dimension of appreciation in visual art research. However, it remains unclear whether this response to paintings, especially those dominated by low-level visual features, reflects a distinct emotion rather than general arousal. We report two exploratory studies investigating being moved in a visual art exhibition and its potential mechanisms. In Study 1, in the exhibition, participants nominated up to five moving paintings during an unguided exploration, then rated each selected work on appreciation variables (e.g., understanding and emotions) and moving-related properties (e.g., elicitors and prosocial tendencies). Moving ratings were broadly distributed yet sometimes reached high levels (33.8% ≥ 7 , range 0–10). Consistent with prior work, moving ratings were significantly associated with distinct moving characteristics such as sadness ($\beta = 0.326^{***}$) and with elicitors like attachment ($\beta = 0.291^{***}$) and communal sharing ($\beta = 0.330^{***}$). By contrast, low-level visual features that participants frequently reported as primary moving factors (e.g., color) were not predictive, suggesting that the emotion arises from higher-level processing rather than visual features alone. Study 2 explored whether being moved would emerge naturally without priming, by using a non-directive survey to capture the emotional profile across the entire exhibition visit, including being moved without emphasizing it. Again, the distribution was broad and sometimes reached high levels (43.8% ≥ 6 , range 1–8). Correlations between being moved ratings and other feelings supported its emotional nature rather than reflecting general arousal (e.g., moderate positive associations with tenderness and compassion, $r = 0.399$ – 0.483). Together, these findings suggest that viewing abstract visual art characterized by simple low-level features (e.g., colors and lines) can evoke genuine, though typically moderate, emotions of being moved. Such emotions appear to depend primarily on viewer-centered meaning-making and interpretive engagement, such as linking the painting to personal experience (predicts being moved: $\beta = 0.326^{**}$).

Mixed emotional experiences aroused by paintings

Hideyuki Hoshi*, Miho Fuyama and Tomohiro Ishizu

* Kinugasa Research Organization, Ritsumeikan University, Kyoto, Japan

Mixed emotional experiences—simultaneous blends of positive and negative valence—are a defining feature of complex art encounters. The field of philosophical aesthetics has extensively debated this paradox of mixed emotions in art. The presence of mixed emotions is exemplified in artistic stimuli, such as music, films, and poems. However, past studies have focused more on temporal than static artworks, and mixed emotional experiences aroused by paintings have

received scant empirical attention. We seek to quantify the intensity of mixed emotional experiences aroused by paintings (The Vienna Art Picture System) and explore their relationships with the paintings' emotional and categorical characteristics as well as with the feeling of beauty. Online surveys revealed strong co-occurrences of aesthetic and basic negative emotions, such as "sad beauty," using both data-driven principal component analysis and theory-driven quantifications with the minimum index (MI). The couplings of basic positive and negative emotions were also quantified using MI and their intensities were associated with the feeling of beauty. Furthermore, both qualitative and quantitative assessments of the paintings revealed that mixed emotional characteristics were distinctive based on their negative emotional constituents. We extended the survey on a larger scale, examining the interactions and dynamics of a wider range of emotional categories and their associations with personal traits. In this talk, I will briefly review previous studies on mixed emotions, psychological models, and their links to aesthetic experiences, followed by an introduction of our study series on the mixed emotions aroused by paintings.

Experiencing the Sublime: Awe as a Pathway to Exploratory and Transformative Action

Luis Oceja, Sergio Villar and Eric Stocks*

**University Autonoma of Madrid*

The sublime has long been described as an aesthetic experience capable of diminishing the self while simultaneously expanding human agency. From the philosophical debates of early Romanticism that flourished in Jena to contemporary research in empirical aesthetics, this paradoxical experience is now captured by the psychological construct of awe. Building on this tradition, we propose that awe can activate a quixotic motivational orientation, fostering engagement in challenging actions oriented toward the improvement of the world.

In Study 1, we developed a self-report measure of awe centered on the subjective quality of the experience. Participants (N = 315) were exposed to sublime and non-sublime (beautiful or activating) stimuli across modalities, and the resulting 10-item scale reliably discriminated awe from other positive emotional states.

In Study 2, we examined the cognitive consequences of awe, testing whether self-diminishment entails passivity or active engagement. Participants (N = 152) viewed the same video clip paired with either sublime or activating music. Consistent with the dynamic conception of the sublime, the sublime condition enhanced perceived transcendence, connectedness, and willingness to explore.

In Study 3, we examined the behavioral consequences of awe. Using a 2 × 2 design, participants (N = 179) recalled a past awe experience (vs. a neutral event) and were then offered the opportunity to engage in a stimulating initiative with a global (vs. local) focus. In line with the awe-quixoteism hypothesis, experiencing awe increased willingness to engage in challenging, world-oriented actions.

Together, these findings show that awe operates as a bridge between aesthetic experience and transformative action, linking the sublime to exploratory cognition and quixotic engagement with world-oriented challenges.

SESSION: EXPERIENCING AND MAKING ART WITH CLINICAL POPULATIONS

Thursday 7th May | 10:45 – 11:45 | Raum Otto Schott

A Transformative Aesthetic Experience in Breast Cancer Survivors

Maria-Chiara Villa, Greta Varesio, Paolo Barbieri, Francesca Cotardo, Tommaso Marletta, Alessandra Laganà, Maria Rosa Stanizzo, Chiara Benedetto, Luca Ostacoli and Irene Ronga*

** BIP (Brain Plasticity and Behaviour Changes) Research Group, Department of Psychology, University of Turin*

Artistic activities are a potent vehicle for emotional expression and regulation (Estrada Gonzales et al., 2024). This may be particularly important for individuals with illness experiences such as breast cancer. Emotional suppression is a key psychological factor associated with the development of depressive symptoms in women with a breast cancer diagnosis (Li et al., 2015). Moreover, breast cancer survivors often exhibit heightened sensitivity to interoceptive sensations, which can amplify fears related to cancer recurrence, becoming a significant source of anxiety (Harris et al., 2017).

Our study, in collaboration with Medicina a Misura di Donna Foundation and Noma Association, explores the ability of artistic expression to serve as a regulatory mechanism in breast cancer survivors, promoting curiosity and attention to the outer world while mitigating anxiety (Barbieri et al., 2024). Fifty women with a history of breast cancer participated in a collective experience, which took place in an historical noble hall in Turin. Participants took part in an artistic session of Random Marble Painting, a technique that generates abstract patterns, under the guidance of a specialised artist. Electroencephalographic data were recorded immediately before, after, and during the artistic session. In addition, participants completed questionnaires on emotional style (Malandrone et al., 2022), perceived well-being (De Beni et al., 2008), and overall satisfaction with the experience.

The EEG results show a decrease in slow-wave oscillations following the artistic performance, accompanied by an increase in high-frequency activity, including gamma waves. These findings suggest an enhanced state of external attention. Moreover, analyses on the surveys show increased general well-being, in line with the high level of satisfaction reported by participants. Overall, artistic activities seem to be a promising tool useful to face emotional distress related illness experience, promoting the mitigation of heightened sensitivity to interoceptive sensations and related well-being in breast cancer survivors.

The affect of dementia on art over a lifespan: do portraits tell a more personal story of cognitive decline?

Thomas Wilcockson and Pik Ki Ho*

**Loughborough University*

For an individual to create art a range of perceptual and cognitive functions are required. Our previous research has demonstrated that perceptual and cognitive systems are impaired as a result of developing dementias (e.g. Wilcockson, et al., 2019). Recently, our research indicated that linguistic analysis could be utilised to identify within an author's writing career their use of language was affected by dementia (Pattison, Begde, & Wilcockson, 2026). This was found to be ten years prior to a dementia diagnosis, indicating a long preclinical period for dementias. Therefore, these results indicate that it is possible to retroactively analyse the work of artists who ultimately receive a dementia diagnosis to identify when in their career their perceptual and cognitive systems are impaired as a result of their developing dementia. In order to explore this hypothesis in the visual arts, six artists were identified; three artists who created art who ultimately received a dementia diagnosis and three artists who created art into their old age but did not experience dementia. For each artist a subset of each artists' paintings were collected, with each painting created at a different period across the artist's lifespan. Image statistics were then calculated for each of the pieces of art, so that we could analyse within-subject changes in art style, but also between-subject differences between dementia and normal ageing artists. Overall the results would indicate whether the early stages of cognitive decline affect the creation of art, potentially ten years earlier than clinical diagnosis. If this is the case, then it may ultimately be possible to consider using art as a diagnostic marker for cognitive decline.

Making Space for Creativity: Piloting a Participatory Artistic Intervention for People with Parkinson's Disease

Paula Angermair, Blanca Spee, Thieme Stap and Matthew Pelowski*

** University of Vienna, Vienna, Austria*

Creativity has been shown to change in a substantial proportion of people living with Parkinson's disease (PD). Recent large-scale epidemiological work by our interdisciplinary research group 'Unlocking the Muse' indicates that over 40% of individuals with PD report changes - including increases, decreases, and fluctuations - in their felt creativity. Complementary pilot research on co-designed arts therapy further suggests that structured creative engagement may enhance well-being, reduce anxiety, and improve quality of life in people with PD.

Building on this work, we conducted a mixed-methods pilot study using the 'Zeichenkassette', an app-based creative engagement program created by a professional artist living with PD. Five individuals with PD (M_age = 73.6 years, SD = 3.05; F = 4) completed the full eight-week intervention. Participants engaged in self-directed drawing tasks via the app and attended three live, guided creative sessions held at the beginning, midpoint, and end of the program. Quantitative self-report measures assessing well-being, self-efficacy, anxiety, and quality of life were collected before and after the intervention. Qualitative data were recorded through semi-structured group conversations led by an art therapist during the live sessions.

Qualitative material has been coded by three independent coders using an inductively developed codebook. Preliminary analysis points to four central themes - aesthetic and artistic process, flow-like states, freedom and autonomy, and overcoming personal thresholds - embedded within the broader context of living with PD.

The preliminary findings suggest that Zeichenkassette supports agency, well-being, and meaning-making through the artistic process and further highlights creativity as a promising component of PD care beyond conventional medical management. This pilot cohort will also serve as a focus group to inform the design of subsequent studies within a participatory research framework.

SESSION: AESTHETICS IN THE WILD

Thursday 7th May | 10:45 – 11:45 | Raum Clara und Eduard Rosenthal

Tracking real-life visual experiences of urban greening

Aenne Brielmann, Momina Ijaz, Rachel Galpin, Catherine Thompson and Neil Harrison*

**Liverpool Hope University*

People tend to rate natural environments as more beautiful than urban ones, and viewing nature is associated with many beneficial outcomes, including cognitive restoration, improved mood, and stress reduction. However, we still know little about how people look at nature in real-life, especially in urban environments, and how such nature experiences impact their psychological states.

To address these questions, we measured the psychological effects of a visit to an urban greenspace environment (the Castlefield Viaduct in Manchester, UK). Participants (N=64) were equipped with mobile eye-trackers during their visit and completed self-report measures before and after to assess changes in mood (PANAS), perceived restoration (ROS), and connection to nature (PRS). They also rated the aesthetic appeal of their visit.

To deal with the large eye-tracking dataset of >100,000 fixations, we developed a computational pipeline that allowed us to automatically classify fixations as falling onto either natural, man-made, human-related, or other content. This algorithm requires no further training and will be openly available. Its agreement with human raters (82-83%) was comparable to inter-rater agreement (88%).

Self-report results showed that after visiting the Viaduct, participants reported significant increases in positive affect, restorative outcomes, and nature connectedness, and a significant decrease in negative affect. Participants who looked more at nature compared to other features of the environment showed increased relaxation and clarity of thought after their visit, and they also reported higher levels of fascination.

In short, our study highlights the short-term psychological benefits of urban greening. In addition, it provides a useful new analytical tool for researchers working with mobile eye-tracking data.

Beyond the Lab: Does the Beauty-Gaze Link Hold in the Wild?

Tristan Barriere, Anna Lena Knoll, Eva Specker and Helmut Leder*

** University of Vienna*

Beauty catches the eye and sustains visual attention. While laboratory experiments consistently show longer fixation durations on attractive stimuli (the “beauty-gaze link”), few studies have investigated whether this link persists in varied real-world environments. We conducted a series of large-scale mobile eye-tracking studies to investigate if, and how, the beauty can influence gaze behaviour in situ. Participants visited one of three real-world environment contexts (Urban environment, art museum, or botanical garden) while equipped with mobile eye-trackers, providing continuous beauty ratings through a dedicated app on their mobile phones. During a lab-follow up one week later, participants viewed footage from their own walk (recorded through the scene-camera of the mobile eye-tracker) while in front of a stationary eye-tracker, again providing beauty ratings on their mobile phones. Our results confirm that while the beauty-gaze link exists in the real world, it is significantly moderated by environmental context (urban environment, art museum, botanical garden), setting (field vs. lab), and content (natural vs. manmade). Further, while the beauty-gaze link exists within each environment and setting, it doesn’t generalise across them. While the real-world settings were consistently rated as more beautiful than the lab, the lab received significantly longer total and average fixation durations. Additionally, while the botanical garden received the highest beauty ratings, the urban environment (after controlling for overall visit duration) received the longest total fixation duration and highest number of fixations. Nature objects were consistently looked at for longer and received higher beauty ratings than manmade ones, in line with our hypothesis, though nature and manmade objects rated as beautiful were looked at for longer. Our findings raise the issue of relying solely on laboratory findings, highlighting the importance of complementing robust laboratory findings with real-world studies wherever possible, to understand how psychological phenomena manifest in everyday life.

A Theoretical Model of Street Art Experience: Aesthetic Experience Beyond the White Cube

Robbie Ho and Magdalena Szubielska*

** Department of Cultural and Creative Arts, The Education University of Hong Kong*

Street art experience refers to recipients’ experience of visual or performing arts encountered in street settings, or gray cubes. Street art has become increasingly common worldwide and holds the potential to shape city dwellers’ everyday experiences; therefore, systematic research attention is warranted. Existing theories of empirical aesthetics have largely evolved from white cube settings, which typically assume focused and undistracted art engagement. This assumption overlooks the fact that art experiences in gray cubes may also be unfocused or distracted, given the diverse personal, artistic, and environmental conditions on the street. Without a framework that captures this divided nature, current understanding and empirical studies risk overrepresenting the experiences of engaged spectators while overlooking unengaged passersby. This talk presents a novel theoretical model we have developed that accounts for the divided realities of street art experience. The model distinguishes between a life mode and an art mode, associated with minimal and maximal aesthetic experiences, respectively, conceptualized as the absence and presence of aesthetic attitude, selective pathway, aesthetic attention, deep processing, flow experience, and deliberate aesthetic evaluation. Extending

beyond the dichotomy of life vs. art mode, the model articulates eight modes of street art experience defined by the three-way interaction of recipient readiness, art identification, and environmental conduciveness. Potential determinants are identified across personal, artifactual, and environmental domains, alongside possible outcomes such as psychological well-being, aesthetic experience, and place perception. Although grounded in street contexts, the present model of street art experience may also extend to non-street settings, including white cubes.

SESSION: ARTIFICIAL AESTHETICS

Thursday 7th May | 10:45 – 11:45 | Raum Siegfried Czapski

Experiences of Artworks Created by Humans and AI

*Sinem Mustacoglu**, *Ralf F.A. Cox* and *Andrea Capiluppi*

* *University of Groningen*

While AI tools continue to evolve and are increasingly incorporated in creative domains as tools and companions, humans are becoming less accurate in distinguishing AI-generated outputs from those generated by humans. AI involvement poses problems with originality, authenticity, copyright infringement, as well as the recognition of the creative value of these outputs. Therefore, it becomes more important to gain insights into the impact of the human-AI interaction on the experience towards human-AI-co-created outputs. In this research, we go beyond the human-in-the-loop and human-out-of-the-loop dichotomy and focus on varying degrees of human-AI-interaction. We hypothesize that co-creative outputs that are generated with increased interaction evoke more similar responses to the human-made outputs when compared to the ones that are generated with minimal human input. To test this hypothesis, this study distinguishes between three levels of human-AI collaboration in creating visual art: minimal, where the output is generated via only a prompt; moderate, where the output is generated and refined with AI; and high, where the output is generated with the extensive interaction with AI. We integrated behavioral methods to explore the participants' experiences of the outputs created with these three interaction levels in contrast with the outputs created by only humans without any AI involvement. We tested the humans' differential behavior in terms of emotional response, as well as the ability to distinguish. We aim to understand 1) whether humans attune differently towards the outputs that are co-created by humans and AI and the ones that are created by humans alone, and 2) whether the levels of involvement regarding the co-creative process affect the experience of those outputs.

Do synthetic singing voices with artificial timbre sound emotionless?

*Elke B. Lange**, *Kilian Vogt*, *Felix Baltes* and *Cathy Cox*

* *Max Planck Institute for Empirical Aesthetics*

In Japanese Vocaloid music, the robot-like timbre of the singing voices has been described as emotionless. A systematic investigation of these voices' expressions is lacking. In three experiments (each N = 38), Western listeners evaluated perceived emotion expressions of 30 excerpts from a diverse range of Vocaloid music in three versions: instrumentals-only, melody-only, and the full versions (instrumental + melody). The melody was performed either by a Vocaloid singer (Experiment 1) or a synthesizer (Experiment 2). Experiment 1 explored the range of perceived emotion expressions of the Vocaloid timbre, revealing melancholy and rebelliousness as key expressions in the Vocaloid music. Emptiness was on the lowest rank. Whereas Vocaloid vocals alone were perceived as emotionally ambivalent with low agreement between raters, instrumental and full versions showed importance of the accompaniment for the perceived emotion expression. By comparing instrumental and full versions from Experiments 1 and 2, we differentiated between perceived changes when adding the melody in general or effects of the specific timbre. The Vocaloid timbre specifically increased perceived in love and despair. Experiment 3 replicated these results in a within-subject design. We conclude that Vocaloid vocals do not sound empty but ambivalent, conveying a variety of emotions in music with some

expressions enhanced by the Vocaloid timbre, and others by melodic features or the accompaniment.

Prediction of Big Five personality traits based on AI-assisted self-image creation

Klaus Kellerwessel, Bernadett Palkó-Arndt and Anikó Illés*

** Moholy-Nagy University of Art and Design Budapest*

Although implicit aesthetic preferences and their relationships with Big Five personality traits have been examined in various domains, and AI-based image generation is becoming increasingly integrated into everyday life, little is known about how personality manifests in AI-assisted self-representation. In this study, 205 young adults (Mage = 21.48 years, SD = 2.09) created images representing themselves using Midjourney. Big Five traits were assessed with the Ten Item Personality Inventory (TIPI). Visual features were extracted from 26,000+ generated images using pretrained neural networks, while prompt sentiment was analyzed with a RoBERTa-based model. Higher extraversion was associated with brighter, more colorful, and more complex images, as well as with more large-group depictions, along with reduced emphasis on faces. Agreeableness was linked to the number of faces shown, but not to the overall number of people. Agreeableness, conscientiousness, and emotional stability were related to more positive prompt valence. No significant associations were found for openness, possibly reflecting the need to capture higher-level image characteristics such as abstractness, variability, and originality. The present findings suggest that the characteristics of AI-assisted image creation processes may help in capturing certain personality traits. With methodological refinements and additional variables, AI-generated imagery could become a valuable complementary tool to traditional questionnaire-based assessments.

SESSION: ARCHITECTURE AND SPATIAL DESIGN

Thursday 7th May | 12:00 – 13:00 | Raum Otto Schott

Determinants of Intuitive Curvature Preference: Modulating Roles of Art Expertise and Interoceptive Accuracy

Jiwon Song, Chai-Youn Kim and Hackjin Kim*

** Korea University*

People consistently show a preference for curved over angular shapes. This curvature preference has been attributed to both biologically grounded innate factors and acquired factors shaped through experience and learning (Gómez-Puerto et al., 2018). However, previous comparisons between art experts and non-experts have yielded inconsistent findings regarding the relative contributions of these two factors. The present study examined how curvature preference varies between art experts and non-experts as a function of presentation time (short vs. long) and stimulus type (everyday objects, abstract patterns, geometric shapes). In addition, we investigated whether individual differences in exteroception and interoception modulate the relationship between curvature preference and art expertise. Participants were divided into expert and non-expert groups and completed three tasks. First, in the preference judgment task, participants viewed curved or angular images and indicated whether they liked or disliked each image. Second, exteroceptive ability was assessed with a psychophysical 2AFC task in which participants selected the more angular of two shapes. Finally, interoceptive ability was measured using a heartbeat detection task, in which participants estimated their own heartbeat count over a fixed interval. Results demonstrated that individuals with lower art expertise exhibited a stronger intuitive preference for curvature under short presentation times, particularly for everyday object stimuli. Moreover, the relationship between art expertise and intuitive curvature preference was moderated by participants' metacognitive accuracy regarding their own heartbeats. These findings suggest that the influence of art expertise on curvature preference is shaped by presentation time and stimulus type, and that individual differences in interoception play a key role in the underlying mechanisms of intuitive aesthetic responding.

The impact of preference for interior space design on incidental recognition memory*Letizia Palumbo*, Nooshin Momenzadeh and Tobiasz Trawinski***School of Psychology, Liverpool Hope University*

The link between visual preference and memory formation remains unresolved (Babo-Rebelo et al., 2022; Lin et al., 2016). This study examined whether aesthetic responses to interior architectural scenes influence incidental recognition memory accuracy, while controlling for individual differences. Stimuli varied systematically in ceiling height, spatial openness and curvature, design features previously shown to affect aesthetic evaluation (Palumbo et al., 2022; Vartanian et al., 2013). In two initial experiments (N=120) conducted online and in the laboratory, participants provided preference ratings and completed immediate recognition memory tasks. Individual differences in Desire for Aesthetics (Lundy et al., 2010) and personality traits, such as Openness to Experience and Extraversion (DeYoung et al., 2007), were assessed. Differently from past research reporting preference for curvilinear designs, here it was found that rectilinear spaces were reliably preferred. However, preference did not predict immediate recognition performance, likely due to ceiling level accuracy. Experiment 3 (N=50) addressed this limitation by increasing the number of stimuli and introduced an intervening filler task and an eight-day delay. Under these conditions, higher preference and greater distinctiveness significantly predicted recognition memory accuracy, with a marginal moderation such that preference effects were weaker for low ceilings and enclosed spaces. Preference effects were weaker for scenes with low ceilings and enclosed layouts. Together, these findings suggest that preference enhances long-term, but not short-term recognition memory, and that design features and stimulus distinctiveness modulate this effect. These findings refine current accounts of the relationship between aesthetic preference and memory by identifying boundary conditions and design factors that shape this link.

What Moves the Museum? Evidence on Indoor Spatial and Design Principles Shaping Affective and Aesthetic Responses*Marta Pizzolante*, Caterina Restano and Andrea Gaggioli*** Catholic University of Milan*

How do the aesthetic qualities of indoor spaces shape the way we feel, explore, and connect with cultural environments? Despite the centrality of spatial design in museum experience, isolating the specific features that drive affective and aesthetic responses remains challenging in real-world settings. Leveraging the high ecological validity of Virtual Reality (VR), this study examines the impact of four visual design principles—colour, lighting, balance, and form dynamism—within a purpose-built virtual museum. Eight immersive environments were created, each contrasting a single principle at two opposing levels. Forty-seven participants (35 women, 12 men; Mage = 25.72, SDage= 7.52) observed all environments in a within-subjects design and provided self-reported ratings of their emotional states (pleasure, arousal, dominance) and aesthetic impressions. Data were analysed using cumulative link mixed models (ordinal mixed-effects regression), which revealed a clear and consistent pattern: warm colour palettes, symmetrical arrangements, and curvilinear forms reliably enhanced reported pleasure, dominance, attraction, and immersion, whereas variations in lighting did not produce significant differences. These findings support a spatial-affective account in which perceptual fluency, predictability, and visual continuity contribute to richer and more positive experiences of indoor environments. Beyond identifying which features matter, the study shows how VR can serve as an experimental medium to evaluate spatial design decisions—providing an ecological and controlled setting to test how museum layouts influence visitors' perception, movement, and emotional responses to the environment.

SESSION: IMAGE STATISTICS AND COMPOSITIONThursday 7th May | 12:00 – 13:00 | Raum Clara und Eduard Rosenthal**Image Composition and Aesthetics: Three Principles Manipulated, Validated and Tested***Lisa Kobmann*, Milan Meulemans, Eline Van Geert, Stefanie De Winter, Michiel Willems and Johan Wagemans***Laboratory of Experimental Psychology, Department of Brain and Cognition, University of Leuven (KU Leuven), Belgium*

Compositional goodness is a key concept in aesthetics and art, yet it has rarely been operationalized and tested empirically in rich images. Here, we focus on three principles often mentioned to underlie composition: Balance, Emphasis, and Repetition. We directly manipulated and validated them separately and tested their effects on aesthetic preference.

Using generative AI and image-editing software, we created 180 images from 60 different motifs, suggesting semi-realistic or fantasy-like scenes, each with a baseline version and versions with more or less of the targeted principle. We also collected demographic data, art interest and knowledge, and qualitative reports of task-specific decision criteria.

Experiment 1 was a manipulation check (N = 37), in which participants ranked the three images within all triplets from least to most of the compositional principle (e.g., least to most repetitive). Plackett-Luce models showed that, in all but three cases, the manipulations produced the expected directional deviations from baseline.

In Experiment 2 (N = 48), participants ranked the images with the same motif (within triplets) by either composition or preference. Global Plackett-Luce models revealed that the pairwise comparisons confirmed the expectations (all $p < .001$), with stronger effects for composition than for preference.

Experiment 3 (N = 345) used a 2AFC task, with all pairwise comparisons across the three levels and motifs, in which participants had to choose either the better-composed image or the one they preferred. Item-level worth estimates derived from Plackett-Luce models showed a significant medium-sized effect of manipulation in the composition condition, but no meaningful overall effect in the preference condition.

Data collection for Experiments 2 and 3 is still ongoing, but our current results show that the manipulation of compositional principles significantly affects participants' composition judgments more than their preference judgements.

Saccade Clustering as a Tool to Quantify Visual Composition in Images of Paintings and Artistic Photographs*Johan Wagemans*, Maarten Leemans, Lisa Kobmann and Doreen Hii***KU Leuven*

While composition is a central concept in art history, it remains elusive and difficult to quantify. It is often argued that viewers' eye movements are guided by the composition of an artwork, yet this relationship has rarely been formalized. In this project, we investigate whether and how eye-movement data can be used to operationalize and visualize visual composition.

Initially, 325 images of paintings and artistic photographs, potentially featuring good compositions, were selected from online sources. This initial selection was based on face validity, descriptions about the composition by art historians and critics, and on museum websites or blogs. Furthermore, some award-winning photographs had jury descriptions. Next, 40 paintings and 40 artistic photographs were retained as our final stimulus set, to be representative for

different art styles and kinds of compositions. We also avoided stimuli that appeared too simple or too complex to three independent judges.

We collected eye-movement data from 41 participants with a wide range of art interest and expertise, while they viewed the 80 images, presented full-screen for 15s without a fixation cross, followed by an aesthetic rating task. We extracted fixations and saccades following the standard criteria, and derived heatmaps and hotspots from the aggregated fixation distributions. We also clustered saccades based on their spatial location, amplitude, and direction. The resulting clusters can be interpreted as backbones of the underlying compositional structure. Current results suggest that this approach captures compositional features in a promising way. In particular, saccade clustering provides a richer representation of composition than the fixation heatmaps and the pairwise transitions between the hotspots. We will present these initial findings, compare them to existing approaches, and discuss future directions for quantifying visual composition using eye-movement data and further validation.

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Modeling Collinearity in Art Paintings: Insights from Gestalt Principles and Visual Cortex Processing

Frederik Beuth and Gregor Hayn-Leichsenring*

** Chemnitz University of Technology, Media Computing*

Why do certain paintings feel visually coherent and compelling, even when composed of simple lines and abstract forms? Collinearity is a concept from neuroscience to reinforces lines that are arranged at a longer, virtual line. In visual Gestalt psychology, the law of good continuation is thought to be utilized in art paintings. However, to which extent the concept of collinearity is deliberately employed in art paintings remains largely unknown. Although related, collinearity and the law of good continuation are not identical entities. In this work, we present for the first time a neuro-computational model of collinearity for art, and use it to systematically investigate collinearity in art paintings. The model is grounded on neuroanatomy and neurophysiology, and includes as novelties: i) a precise view-angle calculation required for viewing of art, ii) a multi-scale level of collinearity, and iii) handling color processing. We demonstrate first the effect of collinearity on six qualitative, representative example paintings. In multiple cases, the analysis reveals previously unreported findings, such as for the works of Piet Mondrian, Bridget Riley, and Morris Louis. Those observations illustrate the effects in art paintings, and how collinearity is exploited to create art by the artists. Next, we analyzed three distinct abstract art styles (action painting, constructivism, suprematism), each represented by five example paintings. We observe that collinearity is utilized across all art styles, with varying degrees. Finally, since our model simulates the human visual cortex, we can contribute to show how humans might process art. Future work may explore via an eye-tracking study whether graded levels of collinearity modulate eye-movement dynamics and aesthetic evaluations, including beauty, harmony, and interest, in art paintings. In conclusion, we demonstrate that collinearity is a new and meaningful structural principle in art paintings, and highlight how artists may exploit it to shape visual art perception.

SESSION: PROCESSING PAINTINGS

Thursday 7th May | 12:00 – 13:00 | Raum Siegfried Czapski

What is the visual art schema? Insight into its content and structure via network analysis.

Jan-Filip Tameling, Valentin Wagner and Thomas Jacobsen*

** Helmut Schmidt University*

Interpreting a situation as an art reception situation shapes the perception and appraisal of incoming stimuli. Theories of aesthetic experience highlight this recognition of an art context as a crucial precondition for aesthetic processing. However, the cognitive basis of this recognition has

yet to be precisely characterized. Existing models either omit a cognitive account altogether or refer to an art schema, the mental representation of art reception, as a narrative placeholder. We address this gap by developing a network model of the art schema that, grounded in schema theory, empirically explicates its content and structure. In a first study, participants provided free-listings to identify the most important concepts associated with situations of visual art reception. In a second study, graph-theoretical techniques were applied to examine a weighted concept network, derived from pairwise association ratings for those concepts. This empirically derived network model of the art schema encompasses central aspects of art situations, including artworks, the exhibition environment, and the responses they elicit, encompassing emotional, behavioral, and cognitive dimensions. Its structure is highly cohesive and efficient, with structural features indicating dense interconnections, integrated organization, and rapid activation. Hierarchical clustering further revealed nested subschemata, suggesting a hierarchical and interconnected organization. Taken together, the results provide a first empirically grounded, specified model of the art schema, clarifying how recognition of art contexts is realized and what cognitive, emotional, and behavioral reactions it guides.

Who is afraid of abstract art? On the different processing of abstract and figurative artworks

Itay Goetz, Jennifer Tesch and Claus-Christian Carbon*

** University of Bamberg*

The origins of abstract art date back to ancient times. Despite that, in the Western world abstract art is mainly assigned to the artistic developments of modern times and considered a relatively inaccessible style. Often viewed as elitist and less engaging for novices, its lack of clear representation can hinder immediate emotional connection. Indeed, previous studies strongly suggest that art novices prefer figurative over abstract artworks; however, these studies are often held online, with limited presentation times. The present study explored how art novices (N=32) engaged with figurative and abstract artworks in a Virtual Reality (VR) gallery, under free viewing conditions. Participants completed two interviews post-visit, which were analysed using Interpretive Phenomenological Analysis (IPA). Figurative artworks were more readily understood, evoking personal connections and emotional responses with ease. Abstract artworks, however, initially caused confusion and detachment. Yet, when participants committed to engaging with them, they employed more elaborate associative thinking, contemplation, and focused closely on visual elements like colour and form. These deeper engagements often led to intense experiences involving peak emotional reactions, which were not recorded with figurative artworks. Thus, we propose that abstract art, though demanding, and perhaps due to its open-endedness, can evoke uniquely profound, idiosyncratic and long-lasting responses, even in art novices.

“Every painter paints himself”: Turning the Right Cheek in 2,353 self-portraits

*Chris McManus**

** University College London*

In a 1973 paper, ‘Turning the Left Cheek’, McManus and Humphrey showed that painted portraits more often showed the **left** rather than the right cheek. A 2022 review of 61 studies of cheeks in portraits found that 37 (61%) studies had more **left cheek portrayals** and 7 studies (12%) showed more right cheeks (with no bias in the other 19 studies).

A few days after the 1973 paper was published, Walter Landauer wrote to say that of 302 painted self-portraits in Goldscheider’s Five Hundred Self-Portraits (1937), a majority showed **right** cheeks (183 right cheeks; 60.6%), the reverse of the left cheek excess generally found in portraits. The present study, in collaboration with Annukka Lindell, describes a corpus of 2,353 self-portraits, dating back to 1450.

Does the right cheek effect in self-portraits vary historically, or by artist gender? Also, as Lindell has claimed, are ‘midline’ (symmetric) portraits more common after the invention of photography

in 1840? The Corpus shows that for ‘asymmetric’ self-portraits (i.e. excluding ‘midline’) there is a consistent excess of right over left cheeks historically, confirming Landauer’s original finding. For midline self-portraits there is a striking increase from the second half of the 19th century, supporting Lindell’s hypothesis.

How do right- and left-handed artists portray themselves in self-portraits? Self-portraiture traditionally requires a mirror. Mirrors though reverse images left-to-right. Portrayed artist handedness could be inferred in 199 Corpus self-portraits where a pencil, brush, mahlstick or palette was held in the hand, with 181 artists appearing to be right-handed (91.0%) and 19 (9.0%) left-handed. Apparent left-handedness was rare before 1900 but then increased dramatically. Earlier self-portraits had reversed the image in the mirror to appear right-handed, whereas 20th century artists often portrayed themselves as left-handed, veridically representing the reversed image in the mirror, sometimes flagged by painting the mirror itself.

SESSION: AESTHETIC BRAINS

Thursday 7th May | 14:00 – 15:30 | Raum Otto Schott

Aesthetic value is behaviorally and neurally dissociable from reinforcement value

Edward Vessel and Adam Reynolds*

* *City College, The City University of New York*

Is aesthetic value represented separately from other value signals? “Common neural currency” accounts of value hold that all forms of value are encoded similarly within the Brain Valuation System (BVS). Yet while reinforcement value arises from conditioning with tangible rewards (e.g. food, money) that produce approach or avoidance (incentive salience), theoretical accounts of aesthetic value suggest that it results from perceptual and conceptual sense-making (“pleasure from understanding”), and imaging evidence suggests that aesthetic value is encoded in fine-grain activity patterns of the Default Mode Network (DMN). We therefore investigated whether aesthetic value is behaviorally and neurally dissociable from reinforcement value. Human observers (final N=55) rated their aesthetic appeal for a set of abstract visual images, which were then associated with differential reinforcement values in a monetary reinforcement paradigm. Aesthetic value did not affect reinforcement, and reinforcement only minimally impacted subsequent aesthetic ratings. In a brain imaging experiment using fMRI (final N=28), we found distinct neural signatures for reinforcement history and aesthetic value in the BVS and DMN, and common value coding in the ventral medial prefrontal cortex. Unlike reinforcement, aesthetic value was reflected in fine-grain activity patterns of the DMN and in activity of higher-level perceptual regions. Thus, while aesthetic value and reinforcement are not entirely independent, aesthetic value is a psychologically distinct construct that is both behaviorally and neurally dissociable from reinforcement value.

Eliciting neural components of the aesthetic triad during art viewing in fMRI

Hannah Merseal, Isabella Bobrow, Vasiliki Meletaki, Darlene Leohansson, Eileen Cardillo and Anjan Chatterjee*

* *University of Pennsylvania*

The aesthetic triad framework proposes that aesthetic experience emerges through the interaction of three psychological systems—sensory-motor, emotion-valuation, and knowledge-meaning—linked to distinct large-scale brain networks (Chatterjee & Vartanian, 2014; 2016). Although widely adopted in neuroaesthetics, studies have not experimentally manipulated engagement with these systems during neuroimaging. In the present study, we developed a novel training video to guide viewer engagement with artworks through the lens of each component of the aesthetic triad. These strategies then served as experimental conditions during functional MRI.

Participants viewed artworks in the scanner while engaging in one of three attentional modes: focusing on sensory-perceptual features, emotional experience, or the ideas and associations evoked by each work. We conducted task-based activation analyses and seed-to-voxel functional connectivity analyses to test the hypothesis these attentional modes differentially recruited visual-perceptual, salience, and default mode networks.

Sensory-focused attention, seeded in medial visual cortex, was associated with increased coupling with visual and visuomotor regions, particularly relative to associative thinking. Affective engagement was characterized by enhanced connectivity between the right anterior insula, a key salience network node, and perceptual regions including fusiform cortex. Associative thinking was associated with increased coupling between medial prefrontal cortex and a distributed semantic-conceptual network—inferior frontal gyrus, angular gyrus, and middle temporal gyrus—alongside reduced coupling with visual-perceptual regions. Sensory and affective conditions showed substantial neural overlap, consistent with difficulty experimentally dissociating these processes during art viewing.

Exploratory analyses revealed that epistemic curiosity predicted in-scanner engagement across all conditions, whereas perceptual curiosity did not. In-scanner engagement and epistemic curiosity also predicted post-scan self-reported personal connection and new knowledge gained. This work offers a scalable method to dissociate neural systems underlying aesthetic experience and provides initial evidence that aesthetic engagement is anchored in meaning-seeking processes.

Individually Tuned Deep Neural Networks as Proxies for Human Internal Representations: Modeling How Familiarity and Uniqueness are Shaped by Experience

Zoryana Andrusyak and Edward A. Vessel*

** City College, The City University of New York*

How does prior knowledge shape aesthetic experience? Aesthetic valuation influences decision-making, learning, and well-being, yet its underlying psychological mechanisms remain poorly understood. Rather than adopting a “universalist” view that aesthetic value derives from fixed stimulus properties, we take an interactionist approach, examining how artworks engage individual internal models shaped by experience and learning. We use individually tuned deep neural networks (DNNs) as computational proxies for these internal representations, extracting layer-wise metrics to link learned knowledge with judgments of familiarity and uniqueness.

Artworks from WikiArt were embedded into a high-dimensional similarity space using DreamSim, a neural network optimized to match human similarity judgments. Participants were trained to distinguish artworks by two visually similar artists using half of the stimulus space. After training, they rated artworks spanning trained (independent identically-distributed, IID) and novel generalization (out-of-distribution, OOD) regions for familiarity and uniqueness and performed category judgments. In parallel, we fine-tuned DNNs on each experimental condition's training set, creating personalized models that mirrored individual learning histories.

Participants (N=48) learned the categorization task and showed strong generalization to novel stimuli, with performance declining near the category boundary. Uniqueness ratings peaked for novel OOD artworks close to the train/generalization boundary. Similarly, fine-tuned DNNs successfully learned the task, with training on distance-to-category-boundary yielding more human-like generalization than training on artist labels.

Building on these findings, we extract representational metrics from strategic layers of individualized DNNs across multiple architectures (VGG16, ResNet, ConvNeXt). We compute layer-specific metrics (e.g., inverse sparsity, entropy, mean activation, and distance/similarity to training examples) and hypothesize that output layers capture categorical uncertainty related to familiarity, while intermediate layers capture distinctiveness related to uniqueness. Preliminary

analyses reveal promising layer-specific patterns. Our goal is to relate these metrics to behavioral ratings to quantify how learning reshapes representations underlying aesthetic experience.

Exploring the link between aesthetic experience and attention: a series of EEG studies

Irene Ronga, Paolo Barbieri, Martina Berto, Pietro Sarasso, Jacopo Frascaroli, Giacomo Handjaras, Francesca Piovesan, Giorgio Gnecco and Davide Bottari*

** BIP (Brain Plasticity and Behaviour Changes) Research Group, Department of Psychology, University of Turin*

A growing number of studies suggest a link between the perception of beauty and a distinctive state of heightened attention toward aesthetically preferred stimuli. While this idea has motivated influential claims about the cognitive benefits of aesthetic engagement, only a few experiments have directly tested whether aesthetic experiences can be systematically linked to measurable attentional enhancements. In this registered-report study, we address this question using electroencephalography (EEG) combined with advanced machine learning techniques. We conducted a series of EEG experiments in which participants viewed both synthetic and natural images while performing either an aesthetic task (beauty judgments) or a pragmatic task (symmetry judgments). We analyzed visual evoked potentials and neural oscillatory activity to assess whether aesthetic engagement modulates attentional and perceptual processing.

Our results show a significant reduction in prestimulus alpha and beta power during the aesthetic compared to the pragmatic task, indicating an enhanced preparatory attentional state. In addition, aesthetic judgments elicited larger late positive potentials, as well as increased N170 amplitudes for natural images. Machine learning analyses further demonstrated that prestimulus oscillatory activity and N170 responses reliably predicted task type, confirming systematic neural differences between aesthetic and pragmatic tasks. Taken together, these findings provide converging evidence that aesthetic contexts are associated with enhanced perceptual processing and heightened attentional engagement, and they contribute to a clearer understanding of the neural dynamics underlying aesthetic experience and its cognitive significance.

Beauty beyond categories: A domain-general neural signature predicts perceived visual aesthetics of everyday objects

Xinyu Liang, Kaixiang Zhuang, Yun Wang, Emmanuel Stamatakis, Daniel Kaiser, Martin Hebart and Deniz Vatansever*

** Institute of Science and Technology for Brain-inspired Intelligence, Fudan University, Shanghai, China*

Converging evidence across neuroaesthetics research has revealed that visual experience of beauty engages both domain-specific perceptual/semantic processes and domain-general valuation systems. However, this neural evidence has been largely derived from the study of artworks or architectural designs, leaving unclear whether aesthetic valuation reflects specialized aesthetic mechanisms or more general value computations that operate across everyday contexts. Recent theoretical perspectives propose that aesthetic experience may be understood as a form of sensory valuation, whereby perceptual representations are transformed into hedonic value using neural mechanisms shared with other forms of valuation, yet this hypothesis has not been directly tested for everyday objects. To address this critical gap, we combined large-scale behavioural aesthetic judgments with dense sampling at ultra-high field 7T fMRI. During a continuous object recognition paradigm, twenty participants viewed over 1,280 unique naturalistic object images spanning 16 high-level semantic categories and 1,854 concepts, with beauty ratings obtained from a large set of independent observers ($n = 3,750$). Using a machine-learning-based multivariate predictive modelling framework, we identified a distributed neural signature that robustly predicted perceived beauty across object categories (overall $r = 0.83$). This signature was primarily driven by activity in both the higher-order visual cortex, as well as the medial prefrontal cortex regions associated with the core valuation circuitry. Importantly, the same predictive pattern generalized across multiple independent datasets, accurately predicting

not only aesthetic beauty but also monetary value, providing direct evidence for a shared, domain-general valuation mechanism. Mediation analyses further revealed that experienced pleasantness plays a central role in linking sensory representations to aesthetic valuation, offering mechanistic support for the sensory valuation model. Together, these findings demonstrate that beauty judgments for everyday objects are grounded in domain-general neural mechanisms for hedonic value computation, advancing neuroaesthetics theory by bridging perceptual representations with broader valuation systems.

SESSION: CURIOSITY & LEARNING THROUGH AESTHETIC ENGAGEMENT

Friday 8th May | 11:30 – 13:00 | Raum Otto Schott

Emotional Dynamics and Sense-Making in Art Experiences Across Age Groups

*Gemma Schino**, *Lisa-Maria van Klaveren*, *Theisje van Dorsten*, *Barend van Heusden* and *Ralf F. A. Cox*

* *Aesthetics and Learning Lab, IWM Tübingen*

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. Self-reported emotions, bodily sensations (via Body Sensation Maps), and conversational content were analysed to explore developmental differences in how art experiences unfold. 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. Our MANOVA results underscore that art experience is not a linear phenomenon but rather a dynamic interplay between these factors, changing across the lifespan. These findings underscore that art experience is not a linear process but a dynamic interplay between bodily, and emotional, and semiotic dimensions that changes across development. This study shows how children and teenagers experience art differently through emotions and their bodily expressions. Younger children connect feelings to concrete movements and sensations, while older youth engage in more reflective and dialogical ways of understanding art. These findings highlight how art—and the sense-making it invites—can foster emotional growth and empathy across development, making it a powerful tool for learning and well-being.

Curiosity, More than Openness, Predicts Engagement with and Learning from Challenging Art

*Isabella Bobrow**, *Rodin Bantawa*, *Hannah Merseal* and *Anjan Chatterjee*

* *Penn Center for Neuroaesthetics*

Engaging with art not only provide pleasure; in some cases, it can change a viewer's perspective or impart new knowledge by evoking complex emotional responses. Artists may seek to challenge the viewer by depicting uncomfortable topics – for example, a mural dedicated to victims of suicide or a figurative sculpture pierced by nails. What traits predict engagement with challenging art pieces such as these? We predicted that individuals higher in Openness to Experience and curiosity are more likely to report new knowledge or understanding when exposed to a challenging piece of art. In an online survey, 300 participants completed questionnaires for Openness to Experience, perceptual curiosity, and epistemic curiosity. They then rated 12 artworks (selected for high “challenge” and “pleasure” in a prior norming study) on various aesthetic impacts, self-relevance, and reported the knowledge they thought they gained. Results revealed a positive association between curiosity and new knowledge acquisition, mediated by how challenging the participant found the piece. Openness was negatively correlated with new

knowledge, complicating assumptions about its role in learning. These findings suggest that while openness may foster an initial attraction to novel stimuli, curiosity drives active engagement necessary for meaningful learning. The study highlights the importance of differentiating between affective and cognitive motivational components of personality in understanding how individuals learn from complex, ambiguous stimuli.

Curiosity and Aesthetic Appreciation in Language Processing: Insights from LLMs

Francesca Piovesan, Emily Van Hove, Tim Van De Cruys and Sander Van De Cruys*

** University of Turin*

Language comprehension is accompanied by a continuous stream of subtle and often fleeting epistemic emotions, including curiosity, suspense, confusion, boredom, and, crucially, insight. Recent empirical work has shown that moments of insight are not merely epistemic events but are also affectively charged: experiencing insight is reliably associated with positive evaluation and aesthetic pleasure.

This connection suggests that aesthetic appreciation in language may be grounded, at least in part, in the dynamics of meaning discovery and knowledge updating during comprehension. The advent of Large Language Models (LLMs) offers new methodological tools to study these epistemic emotions quantitatively. LLMs make it possible to extract computational metrics from linguistic stimuli, such as entropy, surprisal, and Bayesian surprise, that have been shown to correlate with behavioral responses and neurophysiological markers of prediction, uncertainty, and information gain.

These metrics provide a principled way to operationalize curiosity, suspense, and insight, opening new avenues for investigating their role in aesthetic appreciation during language processing. We tested this approach using data from a behavioral verbal insight-generating task, the Polysemous Associates Test (PAT). Preliminary analyses suggest that LLM-derived metrics systematically relate to participants' reported insight experiences. These findings support the idea that computational measures of uncertainty reduction can capture key aspects of human insight, and, by extension, aesthetic pleasure. More broadly, this work raises new questions about the extent to which LLMs can model and potentially generate linguistic stimuli that elicit epistemic emotions and aesthetic appreciation in human readers.

Curiosity, Art, and the Pleasure of Knowing

Stacey Humphries, Charlotte Potter and Maria Herrojo Ruiz*

**Goldsmiths, University of London*

Curiosity, the intrinsic drive to seek information, likely shapes aesthetic experiences, but the mechanisms linking curiosity, reward learning, and aesthetic value remain unclear. We tested these links across three studies.

Study 1 used a volatile reward-learning task to compare motivated behaviour aimed at acquiring information versus money. Participants learned which of two visual cues predicted rewards while stimulus-outcome contingencies changed over time. Accuracy and learning rates were similar for both reward types, but participants updated their beliefs about environmental volatility more quickly when the reward was information. In other words, wins and losses were more readily interpreted as signals of changing contingencies for information than for money, producing more stochastic (exploratory) decision-making for information rewards.

Study 2 examined the relationship between curiosity and aesthetic value. 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. Decisions to seek information were strongly predicted by initial liking. Crucially, information enhanced aesthetic appreciation only when participants opted to receive it; choosing not to

receive information produced downward revisions of liking. These findings demonstrate that the reward value of information depends on both agency and prior aesthetic preference.

Study 3 adapted the art task for 7–11-year-old children and broadly replicated the results found in adults, indicating that the curiosity–liking relationship is present in middle childhood as cognitive engagement with art develops.

Together, the results suggest that information functions as an intrinsic reward with distinct learning dynamics promoting exploratory updating, and that agency over information acquisition determines whether knowledge amplifies aesthetic appreciation. These findings have implications for models of intrinsic reward and for practical design of museum labels, learning experiences, and exhibitions that promote curiosity to enhance aesthetic engagement.

SESSION: CROSS-CULTURAL AND INDIVIDUAL DIFFERENCES

Friday 8th May | 16:00 – 17:15 | Raum Otto Schott

What We Share and Where We Differ in Art Experience

Vicente Estrada Gonzalez, Kohinoor Monish Darda, Eileen R. Cardillo, Zuha Nasim, Amy Krimm and Anjan Chatterjee*

** Penn Center for Neuroaesthetics, University of Pennsylvania, Philadelphia*

Aesthetic experience is a complex psychological process that encompasses multiple cognitive and emotional components. Using the Penn Taxonomy of Aesthetic Impacts, we investigated how basic affective responses and higher-order cognitive states vary across individuals, and whether such variation depends on viewing context.

Participants viewed artworks and museum artifacts either in situ (Barnes Foundation; Penn Museum) or as high-resolution digital reproductions. They rated each stimulus on eleven impact dimensions grouped into four higher-order categories: positive affect, negative affect, immersion/motivation, and epistemic transformation, alongside traditional preference measures (beauty and liking). Similarity on perceived affective and cognitive responses was quantified using the Mean-Minus-One (MM1) method, which indexes how closely each individual's pattern of responses aligns with the group.

Across contexts, agreement was highest for preference judgments and basic affective responses, and significantly lower for higher-order impacts, particularly immersion/motivation (e.g., interest, enrapturement) and epistemic transformation (e.g., inspiration, enlightenment, edification). Thus, while people largely converge on what they find beautiful or pleasant, they diverge more strongly in how artworks engage them cognitively and motivationally. Viewing context had minimal influence on overall agreement, although digital presentations yielded slightly higher consensus for negative affect and epistemic transformation. Individual differences in art experience and openness to experience did not reliably predict agreement.

These findings support a hierarchical view of aesthetic experience: early affective appraisals are relatively shared, whereas meaning-related and transformative responses are more idiosyncratic. This work clarifies which components of aesthetic experience are common across observers and which reflect personal routes to understanding and engagement, with implications for theories of aesthetic processing and for museum and digital exhibition design.

Shared and Diverse Impressions of Portrait Paintings: Agreement and Causal Structure from Individual Differences

Takanori Sano and Hideaki Kawabata*

**University of Tokyo*

Portrait paintings combine face-like social cues with artistic expression, potentially yielding both shared and diverse aesthetic impressions. We investigated (i) rater agreement across multiple impression dimensions and (ii) the causal structure linking impressions to individual differences in aesthetic interests and values. In an online study, 621 Japanese adults rated 100 WikiArt portraits (50 male, 50 female) on five dimensions: attractiveness of the depicted person, beauty of the painting, abstract-figurative, emotional arousal, and masculinity-femininity. Agreement was quantified using participant-level Mean Minus One (MM1), and data-driven causal discovery was conducted with the linear non-Gaussian acyclic model (LiNGAM), incorporating measures of art interest/attitudes (VAIAK) and trait engagement with beauty (EBS-R subscales). MM1 showed relatively high agreement for masculinity-femininity and abstract-figurative impressions, whereas emotional arousal showed the lowest agreement. Notably, beauty exhibited higher agreement than attractiveness, suggesting that judgments of pictorial beauty rely on more shared criteria (e.g., compositional and stylistic cues), while attractiveness and arousal are more sensitive to subjective interpretation. Causal discovery indicated that the relationships among impressions differed by portrait sex. For male portraits, attractiveness predicted beauty, consistent with a bottom-up route from person-related appeal to overall pictorial beauty. For female portraits, beauty predicted attractiveness, and emotional arousal played a stronger role, consistent with a more top-down route involving semantic and affective processing. Moral beauty and beautiful ideas contributed indirectly to final evaluations via masculinity-femininity impressions and emotional arousal. These findings highlight how portrait impressions simultaneously reflect shared evaluative standards and structurally diverse pathways shaped by individual differences and portrait sex.

World Aesthetic Survey (WAS): Aesthetic preferences for shape, curvature, colour, and music across 62 societies

Harin Lee, Eline Van Geert, Elif Çelen, Zofia Hołubowska, Manuel Anglada-Tort, Raja Marjieh, Pol van Rijn, Minsu Park and Nori Jacoby*

**University of Cambridge*

Understanding the origins of aesthetic preference requires determining whether preferences reflect universal cognitive mechanisms or culturally learned patterns. We conducted a global experiment with 31,288 participants across 61 countries and one small-scale society (Tsimané people living in Bolivian rainforest), examining aesthetic preferences across five modalities: shapes, curvature, colour combinations, musical harmony, and melody.

Prior research has typically used fixed stimulus sets, restricting sampling to narrow regions of feature space and introducing researcher bias. To overcome this limitation, we employed continuous sampling: on each trial, stimuli were stochastically generated in real time across the full parametric range of each modality. Aggregating preference ratings across participants revealed the topological structure of aesthetic taste within each culture. These topological maps then could be used to identify preference peaks shared across cultures (suggesting universal mechanisms) and culture-specific peaks (suggesting learned patterns).

Cross-cultural variation in aesthetic preferences was systematic. Education level, socio-cultural values, and economic factors emerged as the strongest predictors of variation. Musical preferences showed the strongest adherence to mathematical ratio relations, while colour preferences exhibited more categorical tendencies. Classical 'universal' findings (e.g. preferences for symmetry and consonant music harmonies) replicated robustly in most industrialised populations but were substantially weaker or absent among the Tsimané, demonstrating how

cultural histories and exposure profiles can modulate or even eliminate putatively universal biases.

These findings and data (to be made open access) provide a framework for empirical aesthetics research to systematically distinguish which aesthetic features reflect shared human preferences and which emerge through cultural learning.

Conceptualizing Art Across Belief Systems: A Comparative Network Analysis of Art Classification

Gregor Uwe Hayn-Leichsenring and Yoed Kenett*

** University Hospital Jena*

Does religious affiliation correlate with individual understanding of art? 600 participants (100 each of Buddhists, Christians, Hindus, Jews, Muslims, and atheists) completed a questionnaire on art philosophy.

Although the groups shared many common views on art, meaningful inter-religious differences also emerged. For example, Hindu participants emphasized the social and communal role of art more strongly than other groups, while placing comparatively less weight on art's individual impact on the viewer. These findings highlight how cultural-religious frameworks shape meanings attributed to artistic practice.

The same participants then took part in a binary classification study, categorizing 100 objects from 14 categories (e.g., paintings, sculptures, movies, design objects, nature) as "artwork" or "not artwork."

Based on the classification results, we conducted a computational network analysis to examine differences in classification patterns across religious groups. Relative to other groups, Christians exhibited the most random-like network (with high connectivity, artwork being „closer“ to each other in this conceptual space, and less category-based structure), whereas atheists exhibited the most organized-like network (with opposite effects).

These findings suggest that Christians display a more globally integrated and less compartmentalized classification structure of "artwork," indicative of a more unified and generalized conceptual representation of art across object categories. Atheists, by comparison, exhibited a more compartmentalized and weakly clustered classification network, consistent with a more differentiated and category-specific conceptual organization of "artwork."

We interpret our results as indicating that the more integrated structure observed among Christians may be related to art traditions in Christianity which often span multiple media, possibly fostering cross-category integration. Importantly, these results do not imply qualitative differences in evaluative ability, openness, or conservatism across groups, but rather reflect differences in the structural organization of classification patterns. Overall, we provide evidence that religious beliefs are related to understanding of art.

SESSION: DIVERSE APPROACHES TO MUSICAL AESTHETICS

Friday 8th May | 16:00 – 17:15 | Raum Clara und Eduard Rosenthal

Cognitive-Emotional Listening Modes: Trait and Instruction Effects in Live Classical Music

Julia Merrill and Melanie Wald-Fuhrmann*

** Max Planck Institute for Empirical Aesthetics*

This study investigated how instructed listening modes—emotional versus intentional/structural—and individual differences in musical traits shape listeners' engagement with live classical music. Drawing on Paul Hindemith's writings on listening modes, two groups attended concerts featuring sonatas by Hindemith and Debussy, with listening-mode instructions

counterbalanced across concerts. Participants (N = 69) completed demographic questionnaires and several trait measures (Gold-MSI, Music Empathizing–Systemizing Scale, Aesthetic Perception and Experience Scale). After each piece, participants reported the extent to which they engaged in both the intentional and emotional listening modes, allowing the comparison of instructed versus self-reported listening behavior. Skin conductance response and pulse were measured continuously during the concerts.

Linear mixed-effects models revealed that the listening-mode manipulation was effective: participants reported stronger engagement in the instructed mode and lower engagement in the non-instructed mode. Engagement levels varied across pieces, with higher intentional-mode engagement reported for the Hindemith sonata. Individual differences moderated these patterns: musical training and systemizing tendencies strengthened intentional-mode engagement, whereas aesthetic sensitivity and coherence-related perceptual traits enhanced emotional-mode engagement. Moreover, participants who generally tended to adopt one of Hindemith's listening modes reported stronger engagement in that same mode during the concerts. Psychophysiological indicators showed mode-dependent shifts in arousal that paralleled the self-reported listening experiences, providing converging support for the manipulation.

Together, these findings show that listening behavior in the concert hall arises from an interaction between situational framing and stable individual predispositions. They highlight the value of incorporating trait-sensitive approaches in music-perception research and suggest practical applications for performance and concert design: providing multiple entry points—structural and expressive—may better accommodate diverse listener profiles and enhance engagement. More broadly, the results underscore that guided listening can shape audience experience, but only in alignment with listeners' habitual cognitive–emotional orientations.

Your voice is music to my ears: Conveying prosodic affect through musical improvisation

Shlomo Frige, Zohar Eitan and Bruno Gingras*

** Hebrew University of Jerusalem*

Comparative studies of music and speech perception suggest that prosodic and musical features such as melodic contour, dynamics and rhythm, function analogously, providing parallel structural and expressive cues between the two domains. Although the connection between musical improvisation and poetry has been a longstanding topic of scholarly inquiry, especially in jazz, few studies have explored these improvisational processes from a perceptual perspective. Here, we employ a novel music production paradigm exploring these analogies between music and speech prosody. In Experiment 1, 17 professional pianists heard two different recitations of the same poem: a slower, softer version (reading A), and a faster, louder one (reading B). The pianists then improvised along each recitation. We hypothesized that improvisations based on the two recitations would systematically differ in ways reflecting prosodic differences between these readings. Indeed, the improvisations significantly differed in a number of acoustic features (including mean intensity, spectral brightness, and duration) reflecting comparable differences between the two readings. These acoustical contrasts suggest that musicians recreate affective and structural dimensions of speech both by emulating prosodic features and through exclusively musical means, an interpretation supported by a qualitative analysis of interviews conducted with the pianists. In Experiment 2, we tested whether 49 naive listeners would respond differently, in terms of felt emotions, to the pianists' improvisations based on readings A or B. Results showed that listeners rated improvisations based on reading A as significantly less arousing than those based on reading B. Taken together, our results provide fresh, multi-faceted insights on the close link between the emotional effect of speech prosody and music. More importantly, our study offers a detailed analysis of the strategies used by musicians to identify salient prosodic features and to efficiently convey their affective content to naive listeners through their improvisations.

Individual Differences in the Preference for Musical Harmony: Investigating the Role of Sensitivity to Processing Fluency*Edward Smith* and Ronald Friedman*** University at Albany, SUNY*

Prior research has demonstrated that some individuals show a stronger preference for harmonious combinations of musical tones than do others. We hypothesized that such preference for harmony (PfH) may be related to an enhanced affective sensitivity to the fluency of stimulus processing not only with respect to music but across aesthetic domains. To assess this possibility, we conducted a study examining (1) whether PfH is associated with a general intensification of feelings of processing fluency in response to stimuli that are objectively easier to perceive; and, (2) whether these intensified feelings are in turn associated with a heightened preference for both easy-to-process musical and visual stimuli. Across two large-scale experiments using both musical and visual manipulations of objective processing fluency, our results showed that PfH indeed magnifies the impact of objective fluency on ratings of “felt” fluency for both melodies and visual images. However, contrary to predictions, this intensified subjective fluency signal was not associated with an analogous effect on preferences for either musical or visual stimuli. Discussion focuses on how these results might be accommodated within the framework of the processing fluency theory of aesthetic pleasure (Reber, Schwarz, & Winkielman, 2004) and their bearing on the proposition that PfH—and individual differences in aesthetic preference more broadly—reflect personal variation in the tendency to respond positively to easier-to-process stimuli.

Musical sophistication is linked to sexual behaviour and mating success*Manuela Marin****University of Vienna*

Musicality is a cognitive trait which has been present in Homo Sapiens for at least 35 000 years. It refers to humans' ability to produce and enjoy music in diverse forms, encompassing song, instrumental music, dance and social synchronization. In spite of musicality's wide range of functions observed in people's daily lives, the origins of musicality are hotly debated, comprising adaptationist and non-adaptationist theories. The idea that sexual selection may play a role in the evolution of musicality dates back to Darwin, who argued that music, like birdsong, acts as a courtship display in reproductive mate-choice. Miller revived Darwin's theory and deems musicality as a fitness indicator and thus as an honest signal. Empirical evidence for the sexual selection hypothesis of music has slowly accumulated from several research fields. For instance, behavioural studies focusing on intersexual competition have recently reported that music listening has positive effects on sexual attraction and mate-choice. However, results regarding reproductive success of musicians have been inconsistent. Here, I studied whether musical sophistication is associated with sexual behaviour and mating success in the general population. In an online study involving 661 participants (327 females, mean age 30.7 yrs.), I employed the Gold-MSI as a measure of musical sophistication, as well as several standardized scales assessing mating effort, sexual behaviour, and the number of lifetime sexual partners. By controlling for a wide range of socio-demographic variables and personality traits, linear regression models showed that a higher degree of musical sophistication is associated with a larger number of sexual partners, a more diverse sex life, and enhanced mating effort. These results are in line with the idea that musicality is an attractive trait in mate choice, spurring the discussion about the socio-biological roots of musicality.

SESSION: MULTISENSORY EXPERIENCES AND MULTIMODAL STIMULI

Friday 8th May | 16:00 – 17:15 | Raum Siegfried Czapski

The element of surprise distinguishes beauty from pleasure and interest in visuo-tactile art experiences: Neural signatures of aesthetic ‘aha’*Eleftheria Pistolas* and Johan Wagemans*** Laboratory of Experimental Psychology, Department of Brain and Cognition, University of Leuven*

The rewarding aspect of gaining insight and the influence these ‘aha’ experiences may have on art appreciation remains an area of increasing interest. In the present study, we investigated how tactile exploration of visually similar but materially different artwork pairs influences aesthetic appreciation. We collaborated with an artist who made artwork pairs consisting of a congruent artwork, whose tactile properties matched its visual appearance, and an incongruent artwork, whose tactile properties violated visual expectations. We investigated how prediction errors during incongruent trials, quantified through EEG mismatch negativity (MMN), relates to participants’ ratings of beauty, pleasure, and interest. Sixty-six participants explored eight artwork pairs while EEG was recorded. After exploring each artwork, participants rated the artworks on beauty, pleasure, interest, and several experiential dimensions such as intimacy and embodiment. Congruent artworks received significantly higher ratings across beauty, pleasure, and interest. These results support the idea that sensory harmony enhances the aesthetic experience. The neural data revealed an additional layer. Stronger MMN amplitudes were linked to higher beauty ratings, indicating that perceptual surprise may enhance aesthetic appreciation under certain conditions. Pleasure moderated this relation. Stronger MMN-beauty associations were found when pleasure ratings were lower. This suggests that lower immediate pleasure may result in increased cognitive engagement, which may in turn foster a more reflective aesthetic experience, captured through beauty. These findings show that MMN can serve as a neural marker of prediction error in tactile art perception and more importantly, these results indicate that beauty may reflect metacognitive appraisal processes arising when viewers resolve unexpected visuo-tactile discrepancies, corresponding to an aesthetic “aha” experience of insight. Overall, the findings of this study contribute to a broader understanding of how multisensory interactions and neural prediction errors influence aesthetic experiences.

Body involvement in aesthetics: The influence of time coherence in action simulation on aesthetic perception for body movements*Wanyue Li* and Xianyou He*** Ningbo University*

Observing others’ actions constitutes a fundamental aspect of human activity. The embodied simulation theory of aesthetics proposes that aesthetic experiences are grounded in the observer’s motor representation system. When individuals observe others’ movements, their motor systems are spontaneously activated, forming rapid and automatic internal real-time simulations of the observed actions. This action simulation aids in understanding others’ behaviors and further shapes the aesthetic perception of body movements.

This study aimed to investigate the time coherence of action simulation and its role in aesthetic perception. The occluder paradigm was employed to manipulate the time coherence of action simulation: point-light actions (PLAs) were briefly occluded during presentation, and PLA reappearing after occlusion were either a continuation of the previous action, or an earlier or later phase of the action in the time course. Through three experiments, we employed upright, inverted, and scrambled PLAs as experimental stimuli to measure the effects of time coherence on aesthetic perception and the moderating role of action configuration.

The results revealed that under conditions of intact (upright) and partially preserved (inverted) action configuration, aesthetic ratings for the time-later condition were significantly lower than those for the time-matched and time-earlier conditions. For scrambled PLAs, no significant

differences in aesthetic ratings were observed among the three conditions. In terms of RT of aesthetic ratings, all three experiments showed longer RT in the time-earlier condition than in the other two conditions.

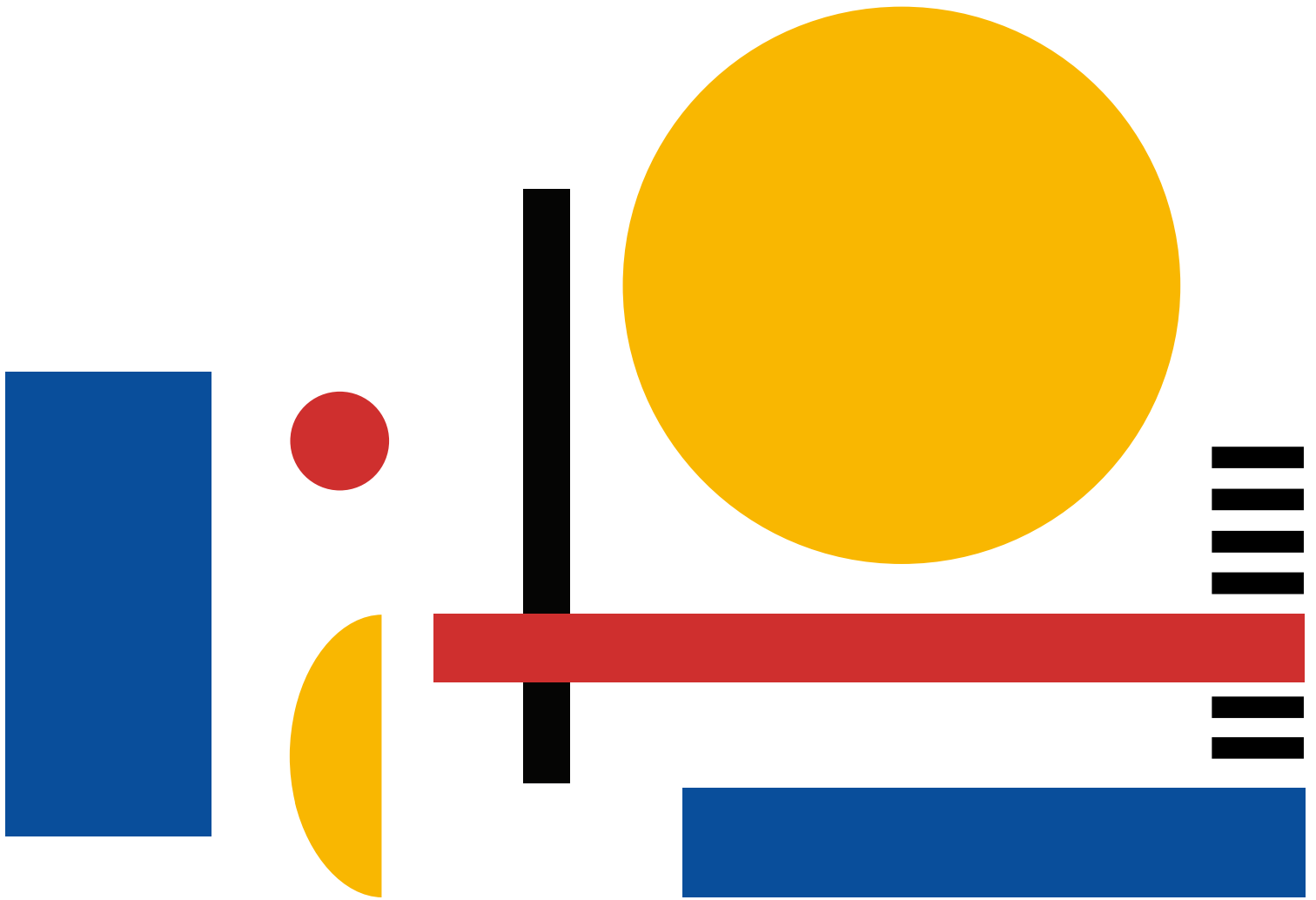
These results suggest that individuals spontaneously generate action simulation when observing PLAs, and this simulation process exhibits high temporal precision, directly influencing aesthetic evaluations. Furthermore, action configuration information is necessary for the generation of action simulation. This study provides empirical support for the embodied simulation theory of aesthetic from a temporal dynamics perspective, demonstrating that action simulation not only contributes to action understanding but also directly shapes aesthetic perception.

The Rythm of Complexity: effects on crossmodal aesthetic preferences

Funda Yilmaz, Umut Güçlü, Yağmur Güçlütürk and Rob van Lier*

** Donders Institute for Brain, Cognition and Behaviour*

The relationship between stimulus complexity and liking has been widely studied unimodally, while crossmodal influences on this relationship remain less well understood. In this study, we investigate the complexity and liking relationship crossmodally within the auditory and visual domains. Specifically, we focus on how congruency in the complexity dimension of the crossmodally presented stimuli influences liking of these presentations across the two sensory domains. We hypothesize that congruent audiovisual pairs may receive higher liking ratings compared to incongruent pairs. We tested 35 participants while they viewed the crossmodal presentations and responded with liking and complexity ratings. Additionally, participants were asked how well the auditory and visual stimuli fit together. We created a novel stimulus set that included audio clips of drum patterns with regularly spaced Kolmogorov complexity levels and visualizations that were generated to match each drum pattern. The audio and visual stimuli were paired during stimulus presentation to either have matching complexity levels, i.e., the congruent pairs, or non-matching complexity levels, i.e., the incongruent pairs. As expected, congruent pairs were rated as significantly more fitting than incongruent pairs ($p = 0.000$), confirming the validity of our stimulus set for assessing audiovisual congruency in the complexity dimension. Furthermore, congruent pairs received significantly higher liking ratings ($p = 0.029$). We have also collected several individual-difference measures, including personality traits, creativity, and curiosity. Our findings suggest that extraversion and agreeableness may be associated with a preference for congruent aesthetics, whereas openness and cognitive flexibility appear to be related to a preference for incongruent aesthetics. As a follow-up, we will collect a new dataset with rhythm (in)congruency on a broader range of complexity and delve into individual differences to understand the audiovisual liking-complexity relationship using cluster analyses.



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