

PROGRAM 19.–23.06.2019

# COGNITIVE FUTURES IN THE ARTS AND THE HUMANITIES

PARADIGMS OF UNDERSTANDING – SHARING COGNITIVE WORLDS

## FOCAL AREAS OF THE CONFERENCE:

### AESTHETICS: EXPERIENCE AND COGNITION

- *Neuro-aesthetics and empirical aesthetics*
- *Paradigms and methods of empirical research*

### EVOLUTIONARY LITERARY STUDIES

- *Bottom-up aesthetics*
- *Modalities of reading*

### ARTIFICIAL INTELLIGENCE / MACHINE LEARNING

- *Sentiment and semantics*
- *Values of artificial intelligence*

### PERFORMING THE MIND

- *Who shares?*
- *Audience and experience*

## KEYNOTES:

**PROF. GREGORY HICKOK**  
*UCA Irvine*

**DR. KATJA MELLMANN**  
*University of München*

**DR. ILONA ROTH**  
*The Open University*

**PROF. PHILIPP CIMIANO**  
*Semalytix GmbH, University of Bielefeld*



**Cognitive Futures**  
University Mainz

## ORGANIZERS:

PD Dr. Pascal Nicklas  
Prof. Dr. Anja Müller-Wood  
Dipl. psych. Marion Behrens  
Dr. Nathalie Schwering

Tim Domke, BA  
[info@cognitive-futures.com](mailto:info@cognitive-futures.com)



# Welcome

A very warm welcome to the seventh annual conference of the Cognitive Futures in the Arts and Humanities, hosted this year by the Johannes Gutenberg-University Mainz and the University Medical Center, and supported by the Rhine Main Neuroscience Network as well as the German Research Foundation (DFG). This conference took place for the first time in Bangor in 2013 and was repeated in Durham in the following year. It was organized by colleagues from Bangor and Durham as a networking event and has taken off from there to become a regular meeting for a very diverse research community. Over the years, it has taken place in Oxford, Helsinki, Stony Brook, Canterbury and has now, in 2019, moved to Mainz. These places each provided a different perspective and style: this year, we wish to emphasize questions of method and sharing. We are also happy to co-operate with the Max Planck Institute for Empirical Aesthetics in Frankfurt who will welcome a large group of us to visit their labs and have an introduction to their research concerns and methodology. While there is a lot to do in our still-emerging research field, we believe that it is also important to pay critical attention to the interdisciplinary potential and limitations which are implicit in the concept of Cognitive Humanities, and which are underlying a lot of the research done or planned in the field represented at this series of conferences.

The event at Mainz is trying to provide a platform for the discussion of existing projects and for the planning of future research: allowing for refreshing existing ties and finding new partners for co-operations. There are quite a large number of new faces at the conference while some of the established figures will not be present. This reflects the dynamics of the field which is still attracting attention and will continue to evolve and see innovation. The keynotes try to represent more mainstream aspects of the field as well as introduce research which has been hovering on the margins or is entirely new to the concerns of Cognitive Humanities as we know it. This is paying tribute to the ever-evolving nature of the interdisciplinary research conducted and discussed by the participants of the conference.

In order to provide a lot of time and attention for the individual presentations and detailed debates we have kept the number of parallel sessions down to three and allowed copious time for the excursions and other social events. We are particularly excited about the Books & Beverages event on Friday evening which will offer a little overview of the latest research and the resulting publications. We are grateful to everyone who is contributing to this event!

For financial support we are very grateful to the University of Mainz who paid for essentials at an early stage. The German Research Foundation generously supports our conference in order to keep the international research community going – no matter how nationalistically political winds are blowing. We are also grateful to the Department of English and Linguistics and particularly the chair for English Literature and Culture for helping financially and in administration. Without the original chair of the Institute for Microscopic Anatomy and Neurobiology, however, there would be no conference at Mainz at all.

We wish all participants at the conference an academically successful and satisfying event and also a chance to see and experience some of the ancient city of Mainz and its culturally, historically and agriculturally fertile region.

Marion Behrens  
Tim Domke  
Anja Müller-Wood  
Pascal Nicklas  
Nathalie Schwering

The conference hashtag is  
#cogfutures2019

In case you do not wish to have others share your image or slides from your presentation, kindly let your panel chair know before your session.



**Cognitive Futures**  
University Mainz

# Program Overview

A more detailed program can be found on page 1

Clock	Wednesday June 19	Thursday June 20	Friday June 21	Saturday June 22	Sunday June 23
09:00		Registration			Keynote Katja Meimann
30		Welcome & Keynote Gregory Hickock			Coffee Break
10:00		Coffee Break		Panels 6.1-6.3	40
30		Panels 1.1 - 1.2	MPI Excursion / Tour of Mainz	Coffee Break	Panels 9.1-9.3
11:00		Lunch Break		Panels 7.1-7.2	20
30	10		Lunch Break	Lunch Break	Change
12:00		Panels 2.1-2.3		Keynote Ilona Roth	Plenary
30	10	Coffee Break		Coffee Break	Lunch Break
13:00		Panels 3.1-3.3			
30		Change			
14:00		Keynote Philipp Cimiano			
30	50				
15:00		Registration			
30		Conference warming			
16:00					
30					
17:00					
30					
18:00					
30					
19:00					
30					
			Books & Beverages	Wine Reception	
			Change		
			Conference Dinner Kupferbergterrassen		

## CONTENTS

<b>SCHEDULE</b>	<b>1</b>
<b>KEYNOTES</b>	<b>9</b>
<b>ABSTRACTS</b>	<b>12</b>
<b>EXCURSIONS</b>	<b>51</b>
<b>ALPHABETICAL INDEX</b>	<b>53</b>

## SCHEDULE

Wednesday 19<sup>th</sup> June 2019 17:30

Registration and Conference Warming at **Alte Mensa**

Thursday 20<sup>th</sup> June 2019 9:30 – 11:00

**Welcome**

**Keynote Gregory Hickok: “The Myth of Mirror Neurons”**

Thursday 20<sup>th</sup> June 2019 11:30 – 13:10

### 1.1 Methods in the Cognitive Humanities

Room: LA

Chair: Nathalie Schwering

- 1.1.1. Wyatt Moss-Wellington – “What Can Cognitive Science Bring to Humanist Hermeneutics?”
- 1.1.2. Ina-Alexandra Machura & Nadja Sennewald – “The Think-Aloud Method as a Research Tool in Cognitive Humanities”
- 1.1.3. Patricia Kolaiti – “Towards a Novel Theory of Literature and Art as a Cognitive Object: Two-Way Interdisciplinarity Between the Humanities and the Cognitive Sciences in the 21st Century”
- 1.1.4. Brad Jackson – “The Act of Seeing What isn’t There: A Methodological Approach to Multimodality and Offstage Narrative Spaces in Theatre”

### 1.2 Cognitive Archeologies

Room: RA

Chair: Michael Wheeler

- 1.2.1 Amy Cook – “Performing the Mind: Towards a Cognitive Archaeology of Theatre”
- 1.2.2 Lisa Zunshine – “How Communities Reward and Punish Intention-Seeking”
- 1.2.3 Denis Akhapiin – “Can You See What I See”
- 1.2.4 Ellen Spolsky – “Is Art an Error Message”

## Thursday 20<sup>th</sup> June 2019 14:10 – 15:30

### 2.1 Performing 4E Cognition

Room: LA

Chair: Pascal Nicklas

- 2.1.1 Naomi Rokotnitz – “Personification and Make-Believe Play as Aids to Relational Authenticity”
- 2.1.2 Michael Wheeler – “Embodying Cognition: A Lesson from Beckett”
- 2.1.3 Christina (Xristina) Penna – “To You <-> To Me. Generating Non-Egocentric Habits of Embodied, Embedded, Enactive and Extended Spectating”

### 2.2 Reading Health

Room: AM

Chair: Amy Cook

- 2.2.1 Richard Ruppel – “Two Tales Told by an Idiot: William Faulkner’s Distorted Refashioning of Joseph Conrad’s Holy Fool”
- 2.2.2 Line Maria Simonsen – “Investigating Distributed Cognitive Processes in the Study of E-Consultations’ Hybrid Ontology: Discussing Methodological Implications”
- 2.2.3 Bettina Brockerhoff-Macdonald – “How Does Reading Support Resilience: An Interdisciplinary Narrative Study With Children and Adults”

### 2.3 Performance and the Brain

Room: RA

Chair: Nicola Shaughnessy

- 2.3.1 John Lutterbie – “Time and Event”
- 2.3.2 Ioannis Sidiropoulos – “Sound, Motion, and the Brain: How Familiar and Unfamiliar Music Affect Movement Improvisation and Creativity”
- 2.3.3 David Gruber – “Living Mirror Neurons: Articulating Strategies for Performative Evaluations”

## Thursday 20<sup>th</sup> June 2019 16:00 – 17:20

### 3.1 Learning via Visualization

Room: LA

Chair: Nathalie Schwering

- 3.1.1 Ingmar Drewing – “Re-Enabling Cognition in the Software Industry”
- 3.1.2 Janet Blatter – “Moving Targets: Spatio-Temporal Problem Solving in Creating Animation”

### 3.2 Changing Minds through Performance

Room: AM

Chair: Edward Warburton

- 3.2.1 Nicola Shaughnessy – “Re:creating Psychiatry Through Participatory Performance: Who Shares and Who Cares?”
- 3.2.2 Robert Shaughnessy – “‘The Wind and the Rain’: Facing Dementia in Lear/Cordelia and The Garden”
- 3.2.3 Hannah Newmann – “Re-Imagining Autism: How Drama Environments Can Aid the Diagnosis and Understanding of Autism”

### 3.3 Cognitive Practice of Theatre-Making

Room: LA

Chair: Matt Hayler

- 3.3.1 Maiya Murphy – “Provenance: A Cognitive Study of Practice-as-Research in Theatre-Making”
- 3.3.2 Sabina Omerhodzic & Barbara König – “Kafka and #metoo: A Feminist Performance Solving a Male Problem”
- 3.3.3 Rhonda Blair – “‘Serf,’ ‘Slave,’ Culture, Translation, and Embodied Cognition”

**Thursday 20<sup>th</sup> June 2019 17:40 – 18:50**

**Keynote Philipp Cimiano: “Machine Reading: Text Understanding at Scale”**

**Friday 21<sup>st</sup> June 2019 14:00 – 15:40**

### 4.1 Audience Expectations of Films

Room: LA

Chair: Lingfei Luan

- 4.1.1 Catalin Brylla – “Schematic Expectations Discrepancy Between Paratext and Film Text”
- 4.1.2 Julien Simon – “The Mind’s Creative Process on Screen: The Literary Biopic”
- 4.1.3 John Sutton & Karen Pearlman – “Creative Editing: Svilova and Vertov’s Distributed Cognition”
- 4.1.4 Nan Zhao – “How To Make an Attractive Film Trailer”

### 4.2 Cognition and Culture: A Time Travel

Room: AM

Chair: Alexander Bergs

- 4.2.1 Penelope Scott – “The Construction of the Sacred in Old English: A Cognitive Account”
- 4.2.2 Elizabeth Shively – “Applying a Multidimensional Cognitive Model to Gospel Genre”
- 4.2.3 Neva Klanjscek – “Mechanical and Mental Piano Practice. A Historical and Psychological Research”

- 4.2.4 Wayne Christensen – “What Can Mountain Biking Teach Philosophers and Psychologists About Affordance?”

#### 4.3 Narrative Voices in Cognition

Room: RA

Chair: Ilona Roth

- 4.3.1 Isabel Jaén Portillo – “Fictions of Human Development: Renaissance Cognitive Philosophy, the Romance, and the Quixote”
- 4.3.2 Francesca Arnavas – “A Cognitive Approach to Lewis Carroll’s Alice Books: Methods and Results”
- 4.3.3 Magdalena Rembowska-Pluciennik – “Can ‘Second-Person Neuroscience’ Be Useful for Second-Person Narrative Studies?”
- 4.3.4 Gábor Simon – “Narrative Voice and Moral Evaluation”

**Friday 21<sup>st</sup> June 2019 16:10 – 17:50**

#### 5.1 Modalities of Reading

Room: LA

Chair: Pascal Nicklas

- 5.1.1 Gabriela Tucan – “Offline Simulation in Reading Short Fiction”
- 5.1.2 Vanessa Frahnert – “When Reading Extraordinarily – An Empirical Take on the Reception of Multimodal Novels”
- 5.1.3 Saskia Schabio – “‘To Set a Quiet Drama Going’ – Embodied Reading as Performance”
- 5.1.4 Ben Morgan – “Ethical Enactivism: Dynamic Interaction with the Environment in Marx’s German Ideology (1845/46) “

#### 5.2 Dancing Humans

Room: AM

Chair: Naomi Rokotnitz

- 5.2.1 Olli Aho – “Are We Dancing the same Dance? – Joint Action and Affordance”
- 5.2.2 Aska Sakuta – “Methodologies for Dance Cognition: Integrating Phenomenology and Cognitive Science”
- 5.2.3 Edward Warburton – “Metonymy in Dance: ‘Ballet Bunheads’ Take a Cognitive Turn”

#### 5.3 Imagination and Insight: New Perspectives on Reading-Related Experiences

Room: RA

Chair: Christine Knoop

- 5.3.1 Nicholas Bulot – “Elements of a Psychohistorical Model of Imagination in Literature and Narrative Cognition”
- 5.3.2 Olivia Fialho – “Transformative Reading: Gaining Insight into the Story, the Self and the Other”
- 5.3.3 Rolf Reber – “The Aha-Experience: Phenomenology, Context, and Personality”
- 5.3.4 Alexander Bergs – “The Cognitive Benefits of Language”

Friday 21<sup>st</sup> June 2019 17:50 – 18:50

**Books and Beverages**

**Conference Dinner (19:30)**

Saturday 22<sup>nd</sup> June 2019 10:00 – 11:40

### 6.1 The Cognitive Poetics of Reading and Writing

Room: LA

Chair: Saskia Schabio

- 6.1.1 Erika Unterpertinger, Frano Rismondo & Brigitte Römmer-Nossek – “Knowledge is...’: A Study on the Role of Conceptions of Knowledge in Novice Academic Writers”
- 6.1.2 Madeleine Gross & Daniel Martini – “The Cognitive Affordance of Lettrisme”
- 6.1.3 Víctor Bermúdez – “Cognitive Study of the Poetic Imagination”
- 6.1.4 Jeremy Scott – “The Lifetime of a Memory of a Story”

### 6.2 Cognitive Theories and Film Analysis

Room: AM

Chair: Catalin Brylla

- 6.2.1 Chongbi Li – “Interpretation Mechanisms in Chinese Martial Arts Films”
- 6.2.2 Lingfei Luan – “And Lee’s Secret on Filmmaking: A Cognitive Approach to Understand Narrative in Film”
- 6.2.3 Wei Liu & Qi Meng – “The Perceptive and Cognitive Principles in Animation”
- 6.2.4 Yi Zhao & Zhaoli Feng – “The Application of Cognitive Theories in Desktop Movies”

### 6.3 Viewer Engagement in Visual Media

Room: RA

Chair: Julien Simon

- 6.3.1 Javid Sadr – “Empirical Aesthetics of Screen Acting Performance: Challenges and Resolutions in an Interdisciplinary Methodology”
- 6.3.2 Steven Willemsen & Kirill Fayn – “Losing the Plot: Dynamic Relations Between Interest and Confusion During Complex Film Narratives”
- 6.3.3 Oliver Kroener – “Is Nathan For You? – Schadenfreude and Humanity in One of TV’s Most Controversial Programmes”
- 6.3.4 Robert Lang – “The Dynamics of Wishful Believing: Traveling Through Trump Country in Alexander Payne’s Nebraska (2013)”

## Saturday 22<sup>nd</sup> June 2019 12:10 – 13:30

### 7.1 Experiencing Art and Architecture

Room: LA

Chair: Richard Ruppel

- 7.1.1 James Hamilton – “Atmospheres in Architecture and Scenography”
- 7.1.2 Ancuta Mortu – “Art Forms in the Realm of the Mind: a Kublerian Approach to Modeling Art Appreciation”
- 7.1.3 Bohdan Nebesio – “What Can Complex Systems Do for the Study of the Arts?”

### 7.2 The Trauma of Theory of Mind

Room: AM

Chair: Lisa Zunshine

- 7.2.1 Ana Margarida Abrantes – “Literature and the Experience of Dark Empathy”
- 7.2.2 Yongchao Wen – “Cee’s Education in Theory of Mind in Home”
- 7.2.3 Robert Blanchet – “In Defense of the Direct Response Theory of Spectator Disgust”

### 7.3 Cognitive Models in Poetry

Room: RA

Chair: Don Kuiken

- 7.3.1 Candela Salgado Ivanich – “Behind the Foot and Eye: Motion and Effects in Claudio Rodriguez’s Poetry”
- 7.3.2 Stefan Blohm – “Advances in the Empirical Study of Poetic Rhyme”
- 7.3.3 Amelia McConville – “The Potential of Visual Poetry and Working Memory: A Neurohumanities Approach”

## Saturday 22<sup>nd</sup> June 2019 14:20 – 15:30

**Keynote Ilona Roth: “Understanding Autism: Models, Methods, Meanings”**

## Saturday 22<sup>nd</sup> June 2019 16:00 – 17:40

### 8.1 Shaping Experience with Metaphors

Room: LA

Chair: Stefan Blohm

- 8.1.1 Christina A. Knoop – “From Literary Studies to Cognitive Science and Back Again: Exploring the Scope of Empirical Research on Metaphor”
- 8.1.2 Sarka Havlickova Kysova – “Fall of Evil, Fall of Good: Towards Cognitive Analysis of Performances of Verdi’s Shakespearean Operas”

8.1.3 Saara Moisio – “Making Sense of the Spectators’ Experiences of a Contemporary Dance Performance”

8.2 Absorption and other Dimensions of Experientiality – Theoretical and Empirical Approaches to Engaged Fiction Reading

Room: AM

Chair: Tim Domke

8.2.1 Don Kuiken – “How Expressive Enactment Supports Access to the ‘Depth’ of Literary Metaphors”

8.2.2 Caroline Kutsch – “It’s Fun Escaping into a Different World and Having Your own Experiences’ – A Qualitative Study on the Dimensions of Experientiality During Reading”

8.2.3 Moniek Kuijpers – “The Absorption Metaphor in Reader Reviews and Empirical Literary Studies”

8.2.4 Shawn Douglas – “Narrating Identity: The Impact of Absorbed Literary Reading on Storied Autobiographical Memory Development”

**Saturday 22<sup>nd</sup> June 2019 18:00**

**Wine Reception**

**Sunday 23<sup>rd</sup> June 2019 09:00 – 10:10**

**Keynote Katja Mellmann: “Evolutionary Proto-Forms of Verbal Art: On Behavioural Dispositions for Poetry”**

**Sunday 23<sup>rd</sup> June 2019 10:40 – 12:00**

9.1 Externalizing the Internal

Room: LA

Chair: Wayne Christensen

9.1.1 Yuexi Liu – “The Anxiety of Influence: Reading the Exterior Modernist Mind and Feeling”

9.1.2 Kath Bicknell – “Facilitating Embodied Skills under Pressure: Two Anxious Moments on the Trapeze”

9.1.3 Daria Baryshnikova – “Minding the Gap: Cognitive Modelling of the Fragmentary Mind in Cut-ups”

9.2 Phenomenology, Time, and the Event at the Intersection of Art and Science

Room: AM

Chair: Marion Behrens

- 9.2.1 Sarah Klein – “Writing with Brains: A Situated Analysis of Event-Related-Potentials Research”
- 9.2.2 Yelena Gluzman – “The Phenomenological Refraction: Staging First-person Neuroscience as a Two-Hander”

9.3 Feeling Weird: The Aesthetics and Implications of the Difficult, Unspeakable, Tangled, Bottomless and Unpredictable

Room: RA

Chair: Ben Morgen

- 9.3.1 Matt Hayler – “Being Beautifully Weird: Entangled Cognition, Sublime Fear, and Beautiful Wonder”
- 9.3.2 Karin Kukkonen – “The Existential Weird: Minimal Estrangement, Literary Form and Reminders”
- 9.3.3 Merja Polvinen – “Speculative Fiction and the Difficulty of Form”

Sunday 23<sup>rd</sup> June 2019 12:20 – 13:30

**Plenary**

## KEYNOTES

We are proud to announce our keynote speakers for the 2019 conference in Mainz.

### **Professor Gregory Hickok, UCA**



Gregory Hickok is a professor of cognitive sciences at the University of California, Irvine, where he also holds a position as the director of both the Center of Language Science and the Auditory and Language Neuroscience Lab. His research focus lies in decoding the neural mechanisms elemental to our ability to temporally organise memories. His work with rats utilises a multi-technique approach to observe them while they perform complex memory tasks. Amongst other topics, he has published extensively on the mirror neuron theory, the cortical organization of speech processing, and speech processing.

Keynote: **The Myth of Mirror Neurons**

### **PD Dr Katja Mellmann, University of München**



Katja Mellmann is a professor of New German Literature at the University of Göttingen. Her research focus lies in the history of social, medial, and cultural communication in German literature from the 18th to the 20th century, reception psychology with a focus on the emotional impact of literature and narratology. She has published on intentionality, emotionalising, and empiricism in literary studies.

#### **Evolutionary Proto-Forms of Verbal Art: On Behavioral Dispositionions for Poetry**

What prompts us to produce lyrical sounds, to wrap up information in the form of stories, or to gather for theatrical events? If there is no such thing as a general "art instinct," art emerges from a multitude of different behavioral dispositions. Exploring the dispositions involved in verbal art in terms of their evolutionary origin discloses some of the bizarre characteristics of poetry and literature.

## Dr Ilona Roth, The Open University



Ilona Roth is a senior lecturer of psychology at The Open University, Faculty of STEM (Science, Technology, Engineering and Math). In addition, she has a BA (Hons) in Humanities and Romance Languages. She has recently been awarded the Open University Research Excellence Award for Outstanding Impact of Research on OU Learning and Teaching, Curriculum and Students. She has, furthermore, recently been awarded the Herald Higher Education Lifetime Achievement Award for her work in Scotland. Her research focus lies in the neurodiverse styles of cognition in autism,

poetry by autistic writers, and imagination, creativity and aesthetics. Her most recent monograph explores the autism spectrum of the 21st century. She has also published on creativity and aesthetics in relation to autism, phenomena of awareness in dementia, and imagination.

### **Understanding Autism: Models, Methods, Meanings.**

In the decades since autism was first formally identified, the construct has acquired prominent but diverse meanings besides that of a neurodevelopmental condition calling for diagnosis and intervention. For many psychologists and neuroscientists, autism invites exploration of causes, often with the ultimate aim of enhancing autistic people's well-being, but equally for theoretical insights into neurotypical development. Arts and humanities scholars may approach autistic cognition as a test bed of ideas about how mind-reading and imagination function in literary and artistic endeavours. Public interest in autism has been heightened by media and popular cultural representations, albeit tending to promote the stereotype of eccentric genius or exploiting quirky personality traits as a dramatic device.

For autistic people and their families, the meaning and lived experience of autism is markedly varied: for some it is a neurodiversity – a natural human variation in how people engage with the world and one another; for others it is a disability.

Underlying this range of meanings are different core assumptions about autism, and correspondingly, different methods for achieving understanding. In this talk I will consider the challenges of juxtaposing and transcending such different paradigms, drawing upon my own efforts to work across disciplinary boundaries.

## Professor Philipp Cimiano, Semalytix GmbH, University of Bielefeld



Philipp Cimiano is co-founder of Semalytix GmbH and Professor for Semantic Computing at Bielefeld University. He has more than 20 years of experience in academia in areas such as Natural Language Processing, Computational Semantics, Knowledge Representation and Artificial Intelligence. He has published more than 200 papers in these fields and has over 12.000 citations. He was selected as one of top 10 scientists to watch for the future of AI by the IEEE Intelligent Systems Magazine in 2008. Semalytix GmbH has been founded in 2015 and has grown since to become a world-leading

provider of machine reading solutions for the Pharma industry in order to generate action-ready insights from unstructured text in real time. Their AI-driven intelligence platform extracts and transparently summarizes trends in value perception with human accuracy at machine scale.

### **Machine Reading: Text Understanding at Scale**

In the digital era, large-scale text understanding needs abound across disciplines and domains. While problems in business or scientific contexts typically focus on knowledge discovery or generation of actionable insights from textual sources such as web pages, scientific articles or social media, humanities often address questions of text comprehension in a hermeneutical procedure. As a fundamental commonality, all these scenarios require capabilities of understanding natural language text at volumes that are virtually impossible to manage by human analysts or interpreters. In this keynote presentation, we introduce machine reading as a sub-field of artificial intelligence that aims at training automated systems for large-scale text understanding tasks such that inspection of large amounts of text for relevant patterns of meaning becomes feasible at a glance. Insights into the methodological and technical foundations of machine reading systems will be provided alongside practical real-world examples from scientific and business cases. In addition, we demonstrate the potential to unlock aspects of meaning in text to human analysts or interpreters in a highly natural and intuitive manner by means of question answering technology. At the current state-of-the-art, machine reading is not confined to objective language use; hence, we will also provide examples of how sentiment and emotionality detection in text can serve as proxies to subjectivity and human perception.

## ABSTRACTS

### 1.1 Methods in the Cognitive Humanities

Room: LA  
Chair: Nathalie Schwering

#### 1.1.1 What Can Cognitive Science Bring to Humanist Hermeneutics?

Wyatt Moss-Wellington

This paper describes the aims of humanist hermeneutics, and the role that cognitive media theory and social science might play in the acts of interpreting and evaluating specific narrative texts. Humanist hermeneutics is interested in the ethics, politics and psychology of attempts to represent human social complexity in stories; it is a method for listening to and evaluating the capacity of texts to complicate our understanding of others. "Close reading" methods for evaluative textual study have endured in the humanities, and yet are decentred in cognitive media theory which tends to descriptive rather than prescriptive goals. This paper asks how cognitive media theories can inform our reading practices – not treating texts simply as reflections or examples of phenomena described in psychological sciences, but as communicative acts that might have something of their own to say about the world we live in.

I propose a new hermeneutic method: that we begin by listening to others with generosity, which means approaching storied communication from a position of potential unknowing, as we may have something to learn from the storyteller; that thereafter, as evaluation needs a backbone in some sense of the real, we ought to elevate science over unbridled intuition, or the specialised knowledge of others beyond ourselves; and that we can then evaluate how well a text, a cluster of texts, a cultural movement or phenomenon opens us up to complex human otherness, causal plurality, and the vastness of the human unknown.

#### 1.1.2 The Think-Aloud Method as a Research Tool in Cognitive Humanities

Ina-Alexandra Machura & Nadja Sennewald

The Think-aloud Method as a Research Tool in Cognitive Humanities:

The presentation aims to discuss the think-aloud method as a research tool in the arts and the humanities. Since the introduction of the method in cognitive psychology (Ericsson & Simon 1993), there have been many preconceptions about what the method can – or cannot – do. So far, the method has been deployed in a range of domains, e.g. in composition studies, translation studies, creativity studies or usability testing (see Bowles 2010). Its applicability in the arts and the humanities might be even broader. Also, the think-aloud method might be more accessible to researchers in the arts and the humanities than other methods from cognitive psychology, since the resulting think-aloud protocols lend themselves to qualitative as well as to quantitative approaches to data analysis.

To discuss the applicability of the method in the field of aesthetic experience, first results from a pilot study will be presented. Participants in the study receive a written description of an artefact and are asked to draw the artefact as they imagine it based on the written indications. The participants thus transfer textual information into visual information. They are asked to "think aloud" while performing the task. Several cognitive and metacognitive processes might be at work here, e.g. reading comprehension or problem solving, with respective sub-processes. We will discuss which categories of actions are observable in the data and which cognitive (sub-)processes can be inferred from the think-aloud protocols.

### **1.1.3 Towards a Novel Theory of Literature and Art as a Cognitive Object: Two-Way Interdisciplinarity Between the Humanities and the Cognitive Sciences in the 21st Century**

Patricia Kolaiti

This talk will use as its starting point the novel theoretical account of literature and art as a cognitive object I am currently developing as part of a European Commission funded research project. In this account, I put the case for an epistemologically robust Arts and Humanities and for genuine, two-way interdisciplinary practices in literary and art study, which suggests that theory-formation in empirical and cognitive domains should not only influence but also be influenced by the investigation of literary and other art forms. Literature/ art is not an autonomous object and, indeed, this is the case for most – if not all – objects of enquiry in the Arts and Humanities. It therefore follows that any theoretical domain hoping to take on literature/ art as its object of enquiry can be nothing but inter-disciplinary.

But how should genuine interdisciplinarity be conceived in the 21st century? Through claims for psychological plausibility, empirical tractability and explanatory adequacy, I offer a hands-on example of how 'naturalized' theory development in the Arts and Humanities, itself resulting from interdisciplinary interaction with the methodological paradigm of the empirical and cognitive sciences, has retroactive effects on theories produced in the full range of empirical and cognitive inter-disciplines with which it interacts. Using my developing account as a case study, the talk will highlight the effects that a two-way cognitive program in the study of literature and art in the 21st century could have for current debates in the empirical and cognitive sciences.

### **1.1.4 The Act of Seeing What isn't There: A Methodological Approach to Multimodality and Offstage Narrative Spaces in Theatre**

Brad Jackson

The development of meaning within literary texts relies heavily on the human cognitive capacity to imaginatively construct storyworlds as one reads. However, meaning arises in multimodal art forms through methods that are not accessible by textual or verbal means alone. This raises questions about the cognitive aspects required to envision offstage narrative spaces during theatrical productions. What are the inherent features of theatre that allow spectators to envision, or imagine narrative elements of the story that exist offstage and out of view? And, how do these features give rise to story elements that are there (apparent to our minds) but not shown? In the absence of a narrator, theatrical narratives must be performed by actors who speak to one another as well as material objects onstage to construct what we typically refer to as a narrative (Dancygier 2012, 2016). Likewise, sounds, smells, and images give audiences access to offstage information that is not visually represented: for example, the recurrent sounds of thunder, the sight of fog, and the smell of 'filthy air' in productions of Macbeth evoke the supernatural. These multimodal representations drastically engage our senses and guide our attention forming multiple aspects of what could be referred to as a 'staged narratology.' Building upon the foundations of conceptual integration theory (Fauconnier and Turner 2002) and material anchors (Hutchins 2005), I will argue that multimodal anchors allow for mental space constructions that blend salient information from onstage and offstage sources allowing audiences to imaginatively construct storyworlds that exist beyond the boundaries of the stage.

## 1.2 Cognitive Archaeologies: Theories and Evidence

Room: RA  
Chair: Michael Wheeler

This panel takes its name from its first presentation, by Amy Cook, who introduces the concept of humanities research as cognitive archaeology. Focusing on ancient Greek theater, she renders visible the method of approaching personification and agons as cognitive artefacts. What can be said, asks Cook, about the minds that engaged with this theatre if these were two of the tools they used to think with? What counts as evidence and what might a replication of this work look like? The second speaker, Lisa Zunshine, focuses on cultural “rewards” and “punishments” associated with different kinds of intention-seeking and discusses challenges faced by the literary scholar who resists reflexive mindreading in a comparativist context. The third speaker, Denis Akhapiin, brings together research in theory of mind and deixis to deal with the under-researched problem of how authors explicitly point to some lacking information in the text to address a reader who fits a certain background knowledge requirement. Finally, Ellen Spolsky builds on the predictive processing hypothesis to explore the concept of art as an error message, using examples from the graphics of Andy Warhol and of Barbara Kruger, with a look also at the photography of Diane Arbus.

### 1.2.1 Performing the Mind: A Cognitive Archaeology of Theatre

Amy Cook

Greek theatre history tells the tale of Thespis, the first actor. There were performances before Thespis, a chorus told a story for an audience. This is how I imagine it: Thespis stood out from the rest of the chorus and said: “I’ll stand in for Agamemnon.” Taking on a character, pretending to be that which you are not, is like personification: a conceptual integration network that allows for social and cultural experimentation. To play Agamemnon is to highlight similarities and differences and produces a thought experiment about history and the present. After Thespis, men could hold the space of characters and ideas and pass them back and forth in agons, allowing complicated ideas to be staged by the city elite and comprehended by the citizens. In this paper, I want to think about how to do humanities research as cognitive archaeology. I will render visible the method of approaching personification and agons in Greek theatre as cognitive artefacts. What can be said about the minds that engaged with this theatre if these were two of the tools they used to think with? What counts as evidence and what might a replication of this work look like? What is the measure of good interdisciplinary scholarship? People have come together to tell stories for longer than they have harnessed horses or written down language; it must be an important cognitive tool.

### 1.2.2 How Communities Reward and Punish Intention-Seeking

Lisa Zunshine

To quote Webb Keane, an anthropologist who writes on religion and ethics, while “theory of mind and intention-seeking are common to all humans,” they are “elaborated in some communities [and] suppressed in others.” In my talk I will focus on cultural “rewards” and “punishments” associated with different kinds of intention-seeking and discuss challenges faced by the literary scholar who resists reflexive mindreading in a comparativist context.

### 1.2.3 Can You See What I See

Denis Akhapiin

My presentation brings together research in theory of mind and deixis to explore the under-researched problem of how authors explicitly point to some lacking information in the text to address a reader who fits a certain background knowledge requirement. Using short stories by Vladimir Nabokov, Ivan Bunin, and Victor Pelevin and drawing on studies by Reuven Tsur and Mikhail Gronas, I show how fiction experiments with a reader's capacity to construct a picture of a situation with pointedly missing cues.

### 1.2.4 Is Art an Error Message

Ellen Spolsky

Last year in this group, I discussed what I called an irresistible analogy between the error messages that drive successful action according to the predictive processing hypothesis and the surprise of a creative text, picture, or performance. Art for art's sake – out the window. Art is back to being an error message, as in these rule-breaking artists who refuse to be relegated to the category of aesthetics. Examples of Andy Warhol's Brillo Box (1964) and Hans Holbein's The Ambassadors (1533).

## 2.1 Performing 4E Cognition

Room: LA  
Chair: Pascal Nicklas

### 2.1.1 Personification and Make-Believe Play as Aids to Relational Authenticity

Naomi Rokotnitz

For some years now I have been investigating routes by which individuals may understand and inhabit a sense of authentic selfhood. In this paper, I examine personification, testing the hypothesis that various forms of personification can contribute in significant ways to formations of the self and that self's relations to others, and suggest practical criteria by which to define authentic being-in-the-world and, in particular, "relational authenticity" (Gallagher, Morgan, Rokotnitz 2018).

Personification renders an idea tangible in ways that aid comprehension and analysis. Giving human form to an abstract idea imbues it with attributes we recognize from our daily lives. Personification can thus intervene in the productive interchange between a subject and his or her social environment.

Testing this notion in three realms -- "real-life" encounters, make-believe games, and fictional works – and drawing upon current research in developmental psychology, neurology, and cognitive philosophy, I propose an approach to selfhood that is rooted in the existential tradition in philosophy, and stretches beyond it to account for a 4E approach to subjectivity as embodied, embedded, enactive and extended.

### 2.1.2 Embodying Cognition: A Lesson from Beckett

Michael Wheeler

Within cognitive science, two competing approaches to embodied cognition are deadlocked. According to the first view, dubbed 'new-wave body-centrism' (Clark) or the 'vital materiality' account (Wheeler), bodily factors, including non-neural ones, make a non-substitutable contribution to cognition; so different kinds of bodies must possess different kinds of minds. According to the second view, dubbed the 'larger

mechanism story' (Clark) or the 'implementational materiality' account (Wheeler), bodily factors, including non-neural ones, constitute part of the material substrate for functionally (e.g. computationally) specified psychological processes; so the same kind of mind may be implemented in different material systems that include different kinds of bodies. To address the deadlock between these rival views, I'll appeal to literature. I'll argue that both forms of embodied cognition are present in the works of Samuel Beckett, and that reflecting on how they are present moves us beyond the stalemate. For although the implementational materiality of Molloy's body (and of his coat – part of the larger cognitive mechanism in play) in the 'problem-solving' escapade with the 'sucking-stones' in 'Molloy' is in striking contrast with the vital materiality of the embodiment-specific consciousnesses that inhabit pieces such as 'Not I' and 'Film', this is, in Beckett's hands, a contrast not between two irreconcilable approaches to embodied cognition, but between two compatible manifestations of it, between experiencing the world through the body and experiencing embodiment as an aspect of being world-ed. This dual-manifestation depiction of embodiment is, I'll argue, precisely what cognitive science needs.

### **2.1.3 To You <-> To Me: Generating Non-Egocentric Habits of Embodied, Embedded, Enactive and Extended Spectating**

Christina (Xristina) Penna

My practice-research tests how participatory theatre processes can be informed by 4E cognition in order to generate new approaches and habits of embodied and ecological audiencing and spectating.

In the project 'To You, To You, To You: Love Letters to a (Post)Europe' (2018)

(<https://www.toyoutoyoutoyou.com/>), curator-researcher Lisa Alexander invited artists to gather and to respond with the action, idea or form of a love letter. My action-response: 'To You <-> To Me' used cord, fabric, and trust, inviting the audience to perform an unconditional act of love towards me, the performer on stage. I acknowledged my need to be lifted and supported as a European citizen living in the UK during this precarious historical moment.

I will repeat this performance-action at the conference in June. I will use a handmade bizarre object, inefficient aesthetics and audience participation to create a collaborative performance-action using my method of the 'scenographic contraption' (Penna, 2013). The revealing nature of the contraption does not attempt to hide or disguise its malfunctions, its precarious nature and exposes in turn the artist-scenographer-inventor who made it; this exposure is an invitation to the audience to contribute critically, to judge, observe, participate, collaborate, conspire, make their own stories, and allow themselves to be exposed.

My invitation stresses the political importance of a non-egocentric responsiveness to this precarious historical moment following Varela et al.'s enactivist call of 'acknowledging the other with whom we dependently cooriginate' (Varela et al. 1991: 254).

## **2.2 Reading and Health**

Room: AM  
Chair: Amy Cook

### **2.2.1 Two Tales Told by an Idiot: William Faulkner's Distorted Refashioning of Joseph Conrad's Holy Fool**

Richard Ruppel

I propose to do a close analysis of two mentally damaged characters: Stevie, from Conrad's *The Secret Agent*, and Benjy, from Faulkner's *The Sound and the Fury*. The paper will demonstrate, first, that Benjy,

the first narrator of *The Sound and the Fury*, is modelled after Stevie, the mentally disabled holy fool in *The Secret Agent*. Second, that both characters may be diagnosed with autism. This contested claim has already been made by others. I hope to provide a more definitive diagnosis by researching the current understanding of the illness and by a close reading of the texts.

Third, I will suggest that Faulkner's Benjy was not the "idiot" Faulkner himself thought he had created, drawing on contemporary understanding of "idiocy" as well as Faulkner's presumed model for the character and his subsequent descriptions of him.

## **2.2.2 Investigating Distributed Cognitive Processes in the Study of E-Consultations' Hybrid Ontology: Discussing Methodological Implications**

Line Maria Simonsen

When investigating how a cognitive ecosystem (Hutchins, 2014) yields output, it is argued that one can advance knowledge about the configuration of cognitive processes when employing methods within an interactivity-based approach (e.g., Pedersen, 2015; Pedersen & Steffensen, 2014; Steffensen, 2013; 2016). Therefore, the aim with this presentation is to introduce and discuss the method Cognitive Event Analysis (CEA) (e.g., Steffensen, 2016; Steffensen, Vallée-Tourangeau & Vallée-Tourangeau, 2016) which is rooted in both cognitive anthropology and distributed cognition (Hutchins, 1995; 2014) as well as within a Distributed Language Perspective (e.g., Cowley, 2011). CEA provides a methodological and analytical approach to the investigation of how agents enact and embody cognitive trajectories that configure cognitive results (Järvilehto, 2009), when coordinating multi-scale resources. In this way, CEA contributes to the identification of how multitemporal scales and sociocultural dynamics saturate the coordinative properties of the system that conditions the organisation of the cognitive processes, thus, adding to our understanding of the overall behavior of a cognitive ecosystem. Specifically, I employ and discuss the method related to an investigation of how healthcare practitioners and patients configure multi-scalar cognitive processes (e.g., related to treatment) when they engage in e-consultations\* hybrid ontology. This ontological premise is characterized by hybridity (e.g., Clark, 2008; Sutton, 2010) since the cognitive processes are configured by situated inter-agentive movements (e.g., physical consultations), but also through ecology-extending sociotechnical systems (e.g., the e-consultations), and thus, calls for methodological advancement within cognitive research, as proposed with CEA.

\*E-consultations entail: Writing short messages, prescription renewal and consultation booking

## **2.2.3 How Does Reading Support Resilience: An Interdisciplinary Narrative Study with Children and Adults**

Bettina Brockerhoff-Macdonald

This paper will examine the effect that reading books and stories can have to support resilience strategies and centers on the following research question: How does the reading of text-based narratives (in children's literature) support the development of resilience in children (ages 10 – 13 years)? In this question, reading refers to recreational reading; narrative refers to a textual story; and resilience refers to the ability of the reader to adapt to situations. In viewing disciplinary insights from the fields of psychology, sociology, education and reader-response theory in relation to each other there is a noticeable chasm in the research literature. On the one hand, there exists a plethora of secondary literature within the realm of education and reader-response theory claiming that specific books of children's literature could help to strengthen resilience in children because of either the story or the character(s) and their described actions. This interdisciplinary paper combines key concepts about how readers engage with narratives and the act of reading particularly from the fields of education, literary theory, reader-response theory, bibliotherapy, human development and library science. Fifteen children between the ages of 10 and 13

years and sixteen adults between the ages of 18 and 91 years were interviewed using the same questionnaire. The paper will present how the data was analyzed using both intra- and interthematic coding. Analysis of the data indicates that both the act of reading for pleasure and the narrative being read support positive coping strategies (such as self-regulation).

## 2.3 Performance and the Brain

Room: RA  
Chair: Nicola Shaughnessy

### 2.3.1 Time and Event

John Lutterbie

This paper utilizes cognitive phenomenology to explore the concept of the event, as defined by Gilles Deleuze, to approach a redefinition of the aesthetic experience. I argue that the event is a more satisfactory way of figuring time than incremental definitions, particularly from a phenomenological point of view. This approach to temporality runs against the grain of normative time keeping, which is useful in limiting the time of this talk but less so for understanding aesthetic experience. The event is understood to be a delimited experience that occurs at the nexus of several time vectors. This complexity is explored using Henri Bergson's concepts of simultaneity and *durée*, perception and memory. The cognitive underpinnings focus on the default mode network, or base line brain activity, in a more nuanced version than in my earlier work. Other sources will include Andy Clark's theory of prediction and prediction error, and Alva Noë's *Strange Tools*. After outlining the theory of the event, it will be illustrated using a segment of Virginia Woolf's *To the Lighthouse*.

### 2.3.2 Sound, Motion, and the Brain: How Familiar And Unfamiliar Music Affect Movement Improvisation and Creativity

Ioannis Sidiropoulos

This paper explores the response to sound as expressed through movement, and how this may be used in analysing movements influenced by familiar and unfamiliar sounds, and to develop choreographic processes in dance and physical theatre. It questions how sounds affect the creation of improvised bodily movements in performing arts, exploring the coupling of perception-action in the context of understanding creativity influenced by sounds. The sounds for this experimental process are recorded sounds divided into two categories: familiar music chosen by the performer, and unfamiliar music chosen by two different people.

The research question tested by capturing the motion of one performer while listening and responding to the different music tracks. The performer, with a physical theatre and contemporary dance background, improvised, in three sessions, each for every music track, while paying specific and primary attention to the music and not his movements.

In the analysis of the data, the focus is only on body movements, not considering the possible meaning or interpretation of each movement, using Laban Movement Analysis system (LMA). The movements are captured via the Microsoft Kinect System and digital cameras (DSLR). The captured data will then be parsed for similarities between the different music categories and the movement responses of the performer. This experiment constitutes the first collection and analysis of behavioural data for my research project. Next step is the collection of data from five different performers to form the final

movement vocabulary. Finally, the last experimental procedure incorporates brain signal detection and analysis based on the same sounds. This is an ongoing exploration, and early-stage results will be presented.

### **2.3.3 Living Mirror Neurons: Articulating Strategies for Performative Evaluations**

David Gruber

Rhetorical Articulation (RA) is a method of mapping material and discursive arrangements enabling an entity to be upheld as such (Stormer, 2004). Using RA, I investigate the so-called “mirror neuron” (MN), charting differences and on-going contestation about them. MNs have been theorised as “mirrors” in our brains, simulation mechanisms that help us to understand others, side-effects of more complex brain systems, awareness indicators of other people’s action goals, and prediction engines that guess what others are about to do (Hickok, 2014). Each proposal will be discussed as I examine how these brainy Things are articulated—and articulated differently over time—through many human and nonhuman interrelations.

In RA, the critic works from relevant material-discursive discriminations. In this case, I detail: 1) the central metaphor informing the finding; 2) institutional investments; 3) broader discourses where MNs participate; 4) techno-scientific practices used to see MNs; and 5) material lives of neurons themselves. I track how interpretations shift over environments. In so doing, I focus specifically on the role of bodies and mirroring experiences as encouraging the more simplistic versions of MNs. The analysis then leads to a methodological offering: two strategies for questioning articulations and opening discussion, namely, “Living Thought Experiments” and “Performative Re-acting.” The first applies phenomenological reflection on lived experiences to the case at hand to stage a new encounter that can test interpretations. The second uses the body to perform the interpretations under criticism; where the performances succeed or fall flat guide alternative approaches to the case.

## **3.1 Learning via Visualization**

Room: LA  
Chair: Nathalie Schwering

### **3.1.1 Re-Enabling Cognition in the Software Industry**

Ingmar Drawing

Re-enabling cognition in the software industry: Inspired by the problems, which have arisen from growing IT systems within corporations and institutions, the people in the field developed a variety of methods to re-enable the human mind to work effectively within an extremely fast changing and highly complex environment.

These methodological shifts, cultural restructurings and aesthetic solutions that proved to work in the software industry encompass the following aspects:

- From classical project management, involving a plethora of roles, to the lean development of agile methods (Scrum, Kanban)
- Shifts in corporate culture, from a strictly hierarchical order to an (almost) equal rights structure
- Opening up the “need to know” basis to a transparent corporate culture enabling its employees to decide for themselves, since they get all the data required for their decisions
- The migration from fine granular textual planning methods to spatial clustering, diagramming and “fuzzy” requirements engineering

- From centralised decision making by an elite few to democratised decision finding processes based on team structures - including salaries and corporate strategy
- Data visualising and aesthetic means to keep the mental cost of perception low in order to preserve the psychic energy for the actual tasks of each team member

### **3.1.2 Moving Targets: Spatio-Temporal Problem Solving in Creating Animation**

Janet Blatter

Drawings and diagrams have long been researched as supporting visual thinking in the arts and design. The emerging graphical display use distinct notational systems (Peirce, 1933), serve as a persistent external memory, and support the “language” of thought. Most cognitive research in display-based reasoning is experimental, controlling for variables. Typically, there is a view of the unwavering durability of the notation’s characteristics; unless there is a morph, a word is comprehended linguistically. However, authentic visual production is messier, bringing constraints, risks, and possibilities beyond the lab (Simon, 1972). My research focuses on real-world design that deals with, in, and about time as part of the task. How do animators override persistent, static drawings to identify problems about time in different frames of reference? With a view of situated, mediated cognition developed in Cultural Historical Activity Theory (Engestrom, 1987), I present a longitudinal case study of an expert animator at the National Film Board of Canada, highlighting his use of the static, persistent display in finding temporal problems in his drawings for a narrative animation. The study suggests that the icons forming the basis of his drawings are used strategically, as indices to his design process, the fictive motion, and the sequence and duration of actions to be seen at 24 frames per second. This observation touches on cognitive shifts, raises questions about the language-of-thought hypothesis, and invokes observations made by Wittgenstein (1993) and Wollheim (1980) on “seeing-in” and “seeing-as”.

## **3.2 Changing Minds Through Performance**

Room: AM  
Chair: Edward Warburton

This panel will address the conference theme of ‘performing the mind’ engaging with the questions of ‘who shares?’, ‘audience and experience’ and ‘what makes good interdisciplinarity.’ It features practice-based research, working in three different contexts: a project with mental health service users and clinicians (focussing on who shares), performance pieces engaging with dementia (audience and experience) and an interdisciplinary research study on the potential of drama to enhance understanding and diagnosis of autism. The final paper (understanding autism through performance) features pioneering PhD research co-supervised by experts in drama, psychology and a consultant paediatrician and examined by a cross-disciplinary panel.

### **3.2.1 Re:Creating Psychiatry Through Participatory Performance: Who Shares and Who Cares?**

Nicola Shaughnessy

This paper examines issues of ethics, aesthetics and evaluation in discussion of a pioneering interdisciplinary project between clinicians, mental health service users and a theatre company. The case study is the Playing On Theatre Company and a programme of work which started in two London psychiatric hospitals. This led to the production of *Hearing Things*, directed by Jim Pope and written by Philip Osment as well as a programme of workshops and performances: *Mental Health Acts*. Funded by a UK Health Service Trust, the project engaged psychiatrists, patients and practitioners (director, playwright and actors) in participatory performance practices that changed the relations between health professionals and service users (in both locked wards and theatre settings). One of the distinctive features of the work was the engagement of a group of psychiatrists, committed to transforming training through approaches that recognize the importance of empathy and the engagement of first and third-person perspectives. This is in the context of criticisms of diagnostic criteria, use of medication and concerns about a decline in empathy in medical training and practice. The practice emerging from the *Mental Health Acts* project is conceptualised in the context of 4E cognition, with particularly attention to empathy and ethics as a 5th E.

### **3.2.2 'The Wind and the Rain': Facing Dementia in *Lear/Cordelia* and the Garden**

Robert Shaughnessy

Addressing two recent dementia-centred theatre pieces, this essay draws upon the work of Jens Brockmeier who critiques the medical model of dementia and 'the dominant understanding of memory', exploring a 'postautobiographical perspective' and challenging 'the traditional conception of autobiographical memory [which] excludes a view that conceives of person, their identities, and their sense of time in an embodied and socially embedded way. That is, it excludes a view of one's identity or sense of self as grounded in practices of meaning-making.' It considers Spare Tyre's *The Garden* alongside a work in development by 1623 Theatre Company, *Lear/Cordelia*, which borrows from Shakespeare to explore the father-daughter relationship in the dementia context. In particular, the link is that piece's use of the Fool's song ('The wind and the rain'), which is sung by Lear in a series of repetitions and which ultimately becomes a (perhaps the final) means of connection between them. It's not only the musicality that I want to explore but also the song lyric's preoccupation with the cyclical and inevitable nature of the seasons, which resonates with the iterative, non-narrative (as I registered it) quality of Spare Tyre's show.

### **3.2.3 Re-Imagining Autism: How Drama Environments Can Aid the Diagnosis and Understanding of Autism**

Hannah Newman

The idea of "good" interdisciplinary research will be explored in relation to the author's own interdisciplinary research conducted for their PhD: *Re-Imagining Autism: How drama environments can aid the diagnosis and understanding of autism*. This study was situated between drama and psychology, and investigated the role that the arts can have in the diagnostic process for autistic children, offering alternative models of behaviour. The work was supervised by both drama and psychology academics, as well as an NHS consultant. The research and thesis attempted to reach the standard expectations in both academic fields, whilst also striving for the idea of 'true' interdisciplinary work. This paper will explore the concept of "good" interdisciplinary work and how this may be achieved in practice, including the compromises that need to be made by each discipline in striving for it, particularly when existing research into the topic is predominantly framed within one discipline. The challenges of creating this kind of work will also be discussed.

## **3.3 Cognitive Practice of Theatre-Making**

### **3.3.1 Provenance: A Cognitive Study of Practice-as-Research in Theatre-Making**

Maiya Murphy

This paper presents an account of how I navigated the methodologies of Practice-as-Research and interdisciplinary inquiry to investigate the cognitive aspects of a 2018 production, *Provenance*, created and performed by my theatre collective, *Autopoetics*. This presentation centers on the successes and failures of a set of intertwined strategies before, during, and after each stage of the creative process. I analyze how the triple goal of mounting a quality production, setting up the process to be comprehended within a Practice-as-Research framework, and designing the collaboration to more easily reveal certain cognitive processes proceeded as a dance between paradigms, priorities, and participants. On the cognitive side, this project includes investigations of participatory sense-making, enactive cognition, distributed cognition, conceptual blending, and predictive processing. On the artistic side, this project maneuvered between images, movement, objects, texts, and experiments in authorship. Informed by the creators' backgrounds in Lecoq pedagogy and Suzuki training, this devised project jostled approaches and traditions against one another, giving rise to a bare stage and a mountain of trash. As a participant at the center of both the research and creative processes, I outline how I negotiated my roles and research questions and how the project provided lessons for future Practice-as-Research based investigations into cognition.

### **3.3.2 Kafka and #metoo: A Feminist Performance Solving a Male Problem**

Sabina Omerhodzic and Barbara König

"Someone must have slandered Josef K., for one morning, without having done anything wrong, he was arrested." The puzzle of Josef K.'s guilt with which Franz Kafka left us in his unfinished novel *The Trial* (1914-15) is a gift to literary scholars. K. does not receive one conclusive answer to all his questions about his arrest and eventual sentencing which leaves endless opportunity for interpretation.

In an ambitious project, we took on the task of adapting *The Trial* for the stage and included the inevitable struggle with the story's meaning into our creative process. Who is this person, K.? What has he done? Experimenting with the whole ecosystem of the story, our actors made every parameter change work – until we swapped genders. Now students gasped, paused, and laughed hysterically because now the very same lines sounded "too much," "too far-fetched," and "too crass." Suddenly we realized why K.'s defensive, self-righteous behavior felt so familiar. K. is guilty. K. is Weinstein, Trump, and Kavanaugh. And all it took was a little strategic miscasting.

Inspired by last year's conference contributions on gender and performance, we decided to turn this daring production of *The Trial* into a project in line with the objectives of this conference. Our aim is to make people angry and uncomfortable because what we are after is the moral reasoning of the outraged spectator. How does our biased perception of gender change our sense of justice? Can we even accept K.'s guilt when this often unpalatable character is cast into a beautiful male body with a gentle face? Does an all-female court of composed, reasonable women bolster the hard-wired sentiment of 'boys will be boys'? And how angry are male spectators going to be on a scale from zero to Gillette ad?

### 3.3.3 “Serf,” “Slave,” Culture, Translation, and Embodied Cognition

Rhonda Blair

Last fall I translated and directed Chekhov’s *The Cherry Orchard*. The Russian words for “serf” (*krepostnoi*) and “slave” (*rabinya*) are both found in Chekhov’s original, used seemingly interchangeably in this initial context. Within the larger contexts of U.S. history and the specific moment in which we find ourselves, choices about how to translate these words understandably presented issues for us, perhaps most pressingly because our company included white, African American, latinx, and Asian American actors. I will use this production to discuss ways that a translation for performance must be conditioned by its cognitive ecologies, particularly in terms of aspects of cognitive linguistics and culture. I will consider culture in/and translation (Bernardéz); meaning and embodiment (Mark Johnson); cognitive commitment, i.e., the inseparability of language from cognition (Lakoff); ways in which the body shapes the mind/language (Gallagher); how linguistic usage shapes language (Barlow and Kemmer); semantic differences grounded in culture and history; the relationship among experience, imagination, and meaning (Fauconnier and Turner); the association between phonological and semantic representation in translation choice; and political aspects of cognitive linguistics and translation (Muñoz Martin). Choices in words for translation, even when technically “accurate,” can profoundly affect meaning and affective response. I will consider the translator-director as an intercultural mediator not only between source and target texts, but also between source text and present-day embodiments (actors) and recipients (audience members). How can cognitive sciences help us in moving from the original to an embodiment in translation that is most effective for today?

## 4.1 Audience Expectations of Films

Room: LA  
Chair: Lingfei Luan

### 4.1.1 Schematic Expectations Discrepancy Between Paratext and Film Text

Catalin Brylla

Tversky and Kahneman (1971) note that decision-making is significantly dependent on initial information we acquire, which becomes an ‘anchor’ steering our subsequent thought processes. This is, essentially, the function of promotional film paratexts (e.g. posters and trailers). The brevity of paratexts with regards to their form and consumption requires the deployment of popular schemas that meet the mainstream viewer’s schematic expectations, aiming to prompt their decision-making towards viewing the actual film. But, what happens if there is a significant discrepancy between the schematic expectations being met through the paratexts, and the same expectations being undermined through the actual film text? This has been the case in my own documentary film practice, which aims to reconfigure stereotypical schemas of disability in order to deconstruct the ableist-hegemonic binary of abled vs. disabled.

The use of disability stereotypes in film texts and paratexts has ensured a wide appeal with mainstream audiences. After all, popular narrative formulas are informed by folk-psychological schemas shared by filmmakers and audiences (Plantinga, 2011, p. 30), which is predominantly achieved through categorisation and simplification, i.e. stereotyping, of particular demographics. Attempting to reconfigure disability stereotypes has created a genuine conundrum for me as a scholar-filmmaker, because, whilst the film’s narrative indeed avoids such stereotypes (Brylla, 2017), the main objective is a wide dissemination amongst mainstream audiences in order to enable a corresponding reconfiguration in the first place. This assumes that promotional paratexts, contrary to the film text, do use stereotypes in order to establish an initial mainstream appeal and ‘anchor’ potential viewers. This procedure raises important questions of authorship and spectatorship in terms of conception, reception, ethics and aesthetics.

#### 4.1.2 The Mind's Creative Process on Screen: The Literary Biopic

Julien Simon

In standard forms of biographical films (biopics), the authors' lives and their vicissitudes constitute the driving force of the plot. However, in recent decades the filmmaking strategies of the literary biopic have shifted their focus to the cinematic exploration of the writer's creative mind. In this shift towards the author's creative process, two trends can be observed: In the first trend, the focus is on the creative process of writing in relation to the life of the artist; that is, the mind that inspired the literary work in its socio-cultural context. In the second, it is the intersection of cognition, affect, and aesthetics that gets investigated; the aural and visual dimensions of the cinematic medium help delve into the authors' mind and their emotions when inspiration strikes. In this paper, I will discuss two films focusing on Spanish writers: Andrucha Waddington's *Lope* (2010) on Lope de Vega and Ray Loriga's *Teresa, el cuerpo de Cristo* (2007) on Saint Theresa of Avila. This comparative study will show how these two films illustrate the two tendencies: the more "standard" tendency focused on the author's life (*Lope*) and the other that seeks to venture more into the author's emotions (*Teresa*). Following this comparison, I will argue that centering on the author's mind and affects can be a way for filmmakers to innovate and move away from the standard formula of the literary biopic, to tweak its conventions.

#### 4.1.3 Creative Editing: Svilova and Vertov's Distributed Cognition

John Sutton & Karen Pearlman

**Abstract** The film editor Elizaveta Svilova (1900-1975), wife, and lifelong collaborator of the filmmaker Dziga Vertov (1896-1954), lingers to the side of scholarship on her famous husband's films, hidden behind the historical neglect of both of women and of editors. This article addresses the silence surrounding Svilova by applying research in cognitive philosophy, film history, and creative practice to her montage filmmaking collaboration with Vertov. We aim to recuperate Svilova's position as creative contributor to what are known as Vertov's works of genius by showing that editing processes are the expert work of a distributed cognitive system. Using the distributed cognition framework, which understands the work of mind to be the integrated work of brains, bodies and the world (Clark and Chalmers 1998), we analyse a particular instance of Svilova at work. This framework for analysis reveals her editing as an embodied form of expertise. The intended outcome of this approach is to ground a fresh model of creativity in film in empirical evidence that is uniquely available in the works and documents of the Svilova-Vertov collaboration. We propose that understanding editing as an instance of distributed cognition provides insight into editing expertise and its creative contribution to films. We conclude that this understanding of editing as the work of distributed cognitive systems may have profound implications for the re-evaluation of the work of otherwise invisible women and editors.

#### 4.1.4 How to Make an Attractive Film Trailer

Nan Zhao

A trailer builds an important link between a film and a perspective audience. It is not only an abbreviated version of the film but also a specific artistic expression in its own right. The way in which a trailer is presented influences an audiences' expectation for the film. The trailer must present certain key information about the film without telling the audience the whole story and still meet the expectations of the audience by reorganizing the audio-visual materials to promote curiosity. Balancing making a trailer both attractive and informative can make the process more complex than just crafting the film. For filmmakers, the biggest challenge of making a trailer is making it understandable for an unpredictable audience which may not have clear preferences

We selected 39 films from 2016 to 2018 which had a North American box office of more than \$200 million. We parsed those movies' trailers by measuring filmic factors such as shot number, characters, and titles.

We also integrated view preference data such as the number of viewings, favorability, and affective responses in their reviews on the YouTube link. According to cognitive theories, we found common narrative and film-making principles of good trailers.

## 4.2 Cognition and Culture: A Time Travel

Room: AM  
Chair: Alexander Bergs

### 4.2.1 The Construction of the Sacred in Old English: A Cognitive Account

Penelope Scott

The designation of certain spaces, objects, and people as sacred is a cross-cultural phenomenon, though the conceptual category of the sacred differs across cultures in terms of how it is constructed and how it interacts with other cultural models. This paper examines the construction of the sacred in Anglo-Saxon hagiographies from a cognitive perspective. The paper methodologically brings together close-reading of Ælfric's *Lives of Saints* with corpus-based concordance readings from across the whole corpus of Old English and is theoretically informed by Cognitive Linguistics and Cognitive approaches to religion (e.g. Anttonen 1999, 2002). Paden (1996) notes that for much of the history of comparative religious studies, the mana model has prevailed in descriptions of the concept of sacrality. While he concedes that this model is representative of the sacred in many cultures, he contends that another is at least as important, which he terms the 'sacred order' model. The sacred, in this second model, stands not in opposition to the mundane but to that which breaks the boundaries between the sacred and the profane. This paper details the construction of the sacred in terms of image schemas, conceptual metaphors and cultural schemas (Lakoff and Johnson 1980; Quinn 1987; Sharifian 2011) and argues that while the 'mana' and 'sacred order' models of sacrality exist in Old English the two models are interconnected and form part of a larger complex cultural model.

### 4.2.2 Applying a Multidimensional Cognitive Model to Gospel Genre

Elizabeth Shively

This presentation offers an interdisciplinary approach to gospel genre studies, using the Gospel of Mark as a test case. The current consensus in gospel genre research is that Mark (and the other canonical gospels) belongs to the Greco-Roman biography genre, largely based on outdated literary theories. I argue that instead of looking for "the" genre of the gospels, we should shift the focus to their "genre structure." And instead of accounting for Mark's genre largely in light of formal literary features, we should account for it in light of its earliest producers and users in their social contexts. My chief argument is that the earliest evangelist invented the gospel genre by recruiting contemporaneous literary genres in order to address a certain situation and for particular communicative and pragmatic aims. Crucially, my approach shifts the focus of genre studies from textual properties alone to the cognition and contexts involved in hearing or reading. My strategy is to integrate insights from rhetorical (New Rhetoric), cognitive, and literary genre theories in order to produce a multidimensional analytical model for understanding and explaining gospel genre. Yet an overarching cognitive model provides the conceptual glue for this model (M. Sinding; G. Steen). In particular, I employ conceptual blending to account for the generic mixture and change that generated the Gospel of Mark (and its imitators) in the dimensions of its action, rhetorical situation, and discourse; and for how its producers and users make meaning.

### **4.2.3 Mechanical and Mental Piano Practice. A Historical and Psychological Research**

Neva Klanjscek

In the literature on piano pedagogy, piano playing is generally regarded as either a mechanical or a mental matter: on the one hand, finger exercises and scale practice are an unavoidable part of daily practice; and on the other, mental training (without the instrument) plays an important role in the development of a musician.

The aim of my dissertation is to answer the following question: Do the mechanical and mental exercises indeed represent two separate aspects of piano playing? A historical and a psychological perspective will be taken in order to answer this question. The first part of my dissertation is centred on the analysis of the pedagogical literature, with the purpose of historically examining this dichotomy. The second part presents an empirical experiment in which the effects of different piano practice methods will be measured and compared: one group of musicians will play a piece of music on the piano, another will listen to a recording, and the third group will mentally read the piece of music. The hypothesis is that there will be no significant difference between the three groups because the results of mechanical, mental and listening practice are basically equivalent.

The theory of embodiment provides an interesting perspective on piano pedagogy: the idea is that the mind is embedded or situated in the body. According to this point of view, piano playing could be seen as a process in which the mechanical—that is, the physical—and the mental aspects of piano playing are two sides of the same coin.

### **4.2.4 What Can Mountain Biking Teach Philosophers and Psychologists About Affordances?**

Wayne Christensen

In this paper, we combine methodological and theoretical perspectives from performance studies, philosophy and psychology to investigate affordances out of the office and in the field. Specifically, we discuss the context-sensitive nature of affordance perception and selection that became particularly apparent as part of this joint, interdisciplinary approach. We discuss a case study from a mountain bike ride, informed by Kath's immersion in mountain biking subculture and Wayne's immersion in philosophical psychology literature, for thinking through the relationship between abstract notions of affordance perception and embodied experiences in real-world scenarios. In doing so, we critique the predominant focus of affordance research on relatively simple skills and simplified experimental examples. We suggest that serious consideration of complex cases of skilled action raises issues that don't appear as pressing or as salient in simple cases.

We highlight five areas where affordance theories need further development. These include: that affordances can be highly variable; the rapid speed at which some affordances can be updated; the contribution of affordance perception to higher-order strategic control; that instruction can alter affordance perception; and that affordance awareness can include awareness of when a particular action is beyond an individual's skill level. These aspects of affordance awareness suggest that affordance theory should be integrated with models of higher-order cognitive processes and exhibit sensitivity to social and cultural practices. Illustrating this, we discuss caretaking practices within the mountain biking subculture that deliberately shape affordance awareness for reasons such as safety, efficiency, and riding at high speeds with control.

## 4.3 Narrative Voices in Cognition

Room: RA  
Chair: Ilona Roth:

### 4.3.1 Fictions of Human Development: Renaissance Cognitive Philosophy, the Romance, and the Quixote

Isabel Jaén Portillo

Fictions of human development are stories that both explore and portray the evolution of the human mind in relation to its physical, social, and historical context. They emerge at a time when the understanding and the representation of consciousness are evolving and becoming increasingly complex, regarding both subjectivity and intersubjectivity. Taking Cervantes's *Don Quixote* as a prototype, this paper explores how the notion of human cognitive development is comprehended and expressed through fictional discourses in the Renaissance, discussing 1) the generic affiliation of these fictions, 2) the early modern philosophical ideas that relate to them and to the work of Cervantes, and 3) how Cervantes portrays human development through his character Sancho Panza.

### 4.3.2 A Cognitive Approach to Lewis Carroll's Alice Books: Methods and Results

Francesca Arnavas

This paper is based on my PhD thesis, which offers a cognitive narratological analysis of Lewis Carroll's Alice books. I aim to show how this approach has led to two theoretical outputs, on the one hand new insights into the construction and meaning of the Alice books, on the other hand a contribution to the field of cognitive narratology, furnishing a complete practical example of the application of cognitive narratology's tools to a relevant literary work. A useful theoretical concept to give a general understanding of my methodology as the tying together of different overlapping approaches, is the idea of the Alice books as a cognitive playground, a huge mental landscape where different intellectual suggestions and speculations coexist with experientiality and affections. Wonderland and the Looking-Glass land are thus presented as fantastical cognitive playgrounds where different minds interact with each other creating the big and complex aesthetic space of the literary text. This paper is divided into four sections, which highlight different connections established between specific cognitive narratology's concepts and the Alices; these are: the cognitive access to the virtual world of the text, the figure of the mirror and its conceptual ramifications in terms of cognitive experience, the inextricable link between emotions and thoughts, and the cognitive grasping of impossible fictional scenarios. I show how the Alice books can function as a case study in order to illuminate the working of cognitive narratology as an interdisciplinary field, drawing upon both classical narrative studies and concepts taken from the cognitive sciences.

### 4.3.3 Can 'Second-Person Neuroscience' Be Useful for Second-Person Narrative Studies?

Magdalena Rembowska-Płuciennik

I am interested in storytelling about the specificity of 'your' cognitive, emotional, sensual situation experienced from 'your' point of view. The core semantic and ontological problem posed by second-person narration is that it does not fit the stable models of narrative agency. There is no agreement among narratologists which subject should be considered anterior: the speaking or acting narrator or protagonist, or the speaking or hearing narrator or narratee? Second-person perspective is neither studied in the mainstream of narrative perspective research (Chatman, van Peer 2001) nor included at the greater scale in the current multimodal (Page 2010) or multimedial narratology (Heinen, Sommer 2009).

My hypothesis is that the second-person narration stimulates a unique mode of reader involvement, rooted in participation rather than immersion only (Gerrig 1993, Ryan 2001). I found some possible explanations of this narrative effect in recent studies on second-person neuroscience (Schilbach 2013) and the enactive theory of cognition (Tomasello 2014, Gallagher 2017). A direct interaction between 'me' and 'you' rather than a mere observation of 'him' or a distanced self-reflection entail a real nature of human social cognition. Empirical research has shown that the narrative 'you' may directly influence the reader's perspective and perspective understanding (Brunyé et. al. 2011). Thus, this mode of narration should be regarded as a social interaction and this is a challenge for narratological discussions on second-person narration. I treat the case of second-person studies as a perfect match of cognitive sciences and literary research.

#### **4.3.4 Narrative Voice and Moral Evaluation**

Gábor Simon

The paper aims at investigating the possible effects of 1st, 2nd, and 3rd person singular narration on the moral evaluation of the narrator/protagonist of a story. According to Schwering (2018), a pseudo-confessional narrative stance results in a positive bias toward the narrator. The first question of the paper is how we can test this claim empirically.

As Haidt (2007) describes the process of moral evaluation, it consists of two subprocesses: a moral intuition and moral reasoning. The second research question of the study is whether an effect of narrative voice on evaluation emerges in the intuitive or in the reasoning phase.

First I demonstrate the results of a previous questionnaire study on the topic. I asked 28 participants to evaluate the narrator/protagonist of three short text samples (fictive and non-fictive) all narrating a crime but with different severity and in different narrative voice. The data indicate that there is no direct relation between narrative stance and moral judgments, though the results confirm a qualitative effect (taking the details of the situation into consideration) on moral judgements.

In the second part of the paper try to make further steps in the field: I attempt to refine my previous findings with a small-scale think aloud experiment using full short stories instead of samples. The other main objective of the experimentation is to differentiate intuition from reasoning through sectioned reading and employing qualitative protocol analysis (Andringa 1990).

## 5.1 Modalities of Reading

Room: LA  
Chair: Pascal Nicklas

### 5.1.1 Offline Simulation in Reading Short Fiction

Gabriela Tucan

This paper investigates the nature of reading short fiction. It argues that in the short story, regarded as a brief and condensed fictional experience, narrative gaps and intentional deletions are not only generic formal properties but are cognitively rich stimulants for our general conceptual apparatus. During moments of narrative silence and restraint, the reader does not recuperate the story that is unfolding but they focus on hypothetical plot developments. It may be a story that is not fully told, a wish that something might have happened in the past, an unrealized hypothesis that something else may yet happen, an alternative to a present situation, etc. In order to understand, readers create hypothetical 'simulations' of these occurrences. Faced with the fragmentary nature of the short story and its textual density, the reader undertakes intensive cognitive work which simulates authentic responses to concepts of alternativity and counterfactuality. According to the theory of offline cognition, deep thought is more powerful when people imagine things happening while being decoupled from the external environment. I argue that in the case of short fiction, the reader is generally decoupled from the 'reality' of the fictional world while being intensely involved in offline simulation, which helps them reason abstractly, operate mentally on the unreal, and run mental scenarios that are unrelated to the other immediate narrative actions.

### 5.1.2 When Reading Extraordinarily – An Empirical Take on the Reception of Multimodal Novels

Vanessa Frahnert

Multimodality, i.e. the combination of a number of modes in one document, is an omnipresent cultural phenomenon. In the literary realm, it has gained increasing importance throughout the last decade. While human communication has always drawn on diverse modes of meaning-making (e.g. speech, mimics, gestures etc.), traditional literary reading is solely determined by the written word. However, multimodal novels which, by definition, incorporate various modes beside the linguistic one (e.g. puzzles, photographs, maps etc.) and present all of them as equally important, curiously question this apparent matter of course.

While scholars offer a number of theoretical takes on the genre of multimodal novels, empirical research is scarce. As a matter of fact, hermeneutic text-based rather than experience-based approaches constitute the standard procedure in the field of literary studies. Taking into account authentic reception processes can, however, fruitfully complement the theory-centered disciplinary perspective since it includes a readership outside academia.

The proposed paper - situating itself within the envisaged conference section *Paradigms and Methods of Empirical Research* - thus examines how one can study the ways in which recipients handle and make sense of the combination of various modes in novels. Literary techniques and functions, as established by scholars, will be compared with data generated by the observation of and interviews with 'ordinary' readers reflecting upon their individual reading experience. Exploratory qualitative content analysis will be employed in this process in order to elucidate what non-professional recipients do when confronted with pictorial representations in a literary text which are on equal footing with the written word.

### 5.1.3 “To Set a Quiet Drama Going” – Embodied Reading as Performance

Saskia Schabio

“To speak her name was to call up pictures of people and places”, the frame narrator in *My Antonia* (1918) remarks, remembering Antonia Shimerda, the heroine of Cather’s novel, “and to set a quiet drama going on in one’s brain”. We may take this as Cather’s elaboration of W. James’s notion of the “specious present” (P.K. Dooley), and her interest in tracing how the past is present in the consciousness of her characters. At the same time, Cather offers a statement of purpose by which she sets the frame for her own art – narrative is conceived as a performing art, capable of bridging the gap between the silence of the written word and the embodied experience that her fiction is meant to create. Cather had learned her craft through an intense dialogue with late-nineteenth-century experimental psychology, which resonates with recent cognitivist theorization of embodied consciousness as performance. In this paper, I trace and evaluate these convergences. In particular, I will engage with an experimental setup which measures embodiment in a multisensory experience of reading, and inquire how such research may help us further comprehend the distinct modes of thinking narrative fiction affords.

### 5.1.4 Ethical Enactivism: Dynamic Interaction with the Environment in Marx’s German Ideology (1845/46)

Ben Morgan

Shaun Gallagher has suggested that enactivist approaches to cognition contribute to a holistic philosophy of nature that, without itself being empirical science, “can offer clarifications relevant to doing science and [...] inform empirical investigations” (Gallagher 2017: p. 23). To play this role, an enactivist account of cognition needs to reflect on its own assumptions even as it critically interrogates those informing empirical investigations. In this spirit, my paper will return to a figure not frequently invoked as a precursor of enactivist approaches to see how his conceptualization of the dynamic interactions between human beings and their environment assists the on-going dialogue between enactivist and empirical accounts of culture. Where Heidegger and Merleau-Ponty are often presented as prefiguring enactivist approaches (Gallagher, 2005; Colombetti, 2014), it is less usual to cite Marx. The recent publication of a critical edition of *The German Ideology* (2017/2018) offers a new incentive to see how, at a transitional point in his career, Marx radically reappraised the material underpinnings of human activity. Terry Eagleton reads Marx as a philosopher of distributed cognition *avant la lettre*, suggesting that, for Marx, “The whole of civilisation, from senates to submarines, is simply an extension of our bodily power” (Eagleton, 2018: p. 230). I will argue that Marx’s socially-critical approach distinguishes between better and worse ways in which humans can be coupled with their environment, offering tools for analysing the ethical underpinnings of our dynamic involvement with the world.

## 5.2 Dancing Humans

Room: AM  
Chair: Naomi Rokotnitz

### 5.2.1 Are We Dancing the same Dance? – Joint Action and Affordances

Olli Aho

What is shared in acting together with someone? Or in other words, how people coordinate and plan their actions together as “we” instead of acting as two individual agents (Pacherie, 2013)? In this talk I want to

focus on a very special question of action oriented theories of perception: how can two people perceive similar action possibilities. This question has its role in phenomenological tradition (Sheets-Johnstone 1981) dance research (Foster 2011) and recent empirical evidence of mirror neuron system (Rizzolatti & Sinigaglia 2007). The starting point thus is union of action and perception where perception works in relation to action possibilities afforded by the environment. For example a cup affords grasping, a lion affords danger, a dance improvisation partner affords leaning towards him. However these affordances are not identical with every perceiver, they require some sort of technical and physical requirements as well as experience. In the case of joint action this question can be put in this way: is there two individuals performing learned techniques and movement patterns or are they able to share the sphere of possible actions in some manner, i.e. can they adopt their technique according to the interaction possibilities. By analyzing the affordances, possibilities for action, this talk focuses not only in sharing a common goal with the other but helps clarifying how dancer's own embodied technique has a crucial role in whether improvisers can share a similar sphere of action possibilities.

## **5.2.2 Methodologies for Dance Cognition: Integrating Phenomenology and Cognitive Science**

Aska Sakuta

Cognitive research has become increasingly present in the field of performing arts. Particularly in the field of dance, themes such as imagery, creativity, and attentional focus have attracted the interest of both practitioners and scientists who strive to elucidate the nature of embodied cognition. Currently, this area is dominated by questionnaire-based methods, which gives quantitative measurements on dancers' mental states. However, there are debates surrounding this approach, as the act of dancing involves heavily embodied phenomena, aesthetic meanings, and fluidly evolving contexts, which are difficult to capture through pre-existing measures.

Dance research, an inherently practice-based (or practice-dependent) field, holds its strengths in phenomenological methodologies. Ignited by scholars such as Maxine Sheets-Johnstone (1966), phenomenological research in dance has continuously provided rich discourses on the experience of moving and 'being' in the world. With its wealth of knowledge and expertise in exploring the first-person perspective, dance phenomenology can play a crucial role in discovering the essences of our embodied mind. Scholars have recognised the cross-disciplinary relevance of this field, proposing that dance phenomenology could contribute to, and benefit from, the field of cognitive science. Such claims have led to collaborative projects exploring dance and movement cognition, which incorporates both phenomenological and scientific methodologies.

Reflecting on these existing studies, the current presentation identifies some of the main challenges that arise within this interdisciplinary field. The presentation will then introduce a set of methodological principles which may overcome issues of disciplinary differences, focusing on the roles of epistemology, education tradition, and open collaboration.

## **5.2.3 Metonymy in Dance: 'Ballet Bunheads' Take a Cognitive Turn**

Edward Warburton

This paper considers metonymy in dance from the perspective of cognitive science. The goal is to unpack its role in dance thought and action: how does it arise, how is it understood, how is it to be explained, and in what ways does it determine a person's doing of dance? My premise is that language matters at the cultural level and can be determinative at the individual level. Metonymic labels, like 'ballet bunhead', can not only discourage but dehumanize young dancers, treating them not as subjects who dance but as objects to be danced. To initiate this cognitive turn in dance, I adopt a philosophical stance. The term 'cognitive science' implies that the study of mind is in itself a worthy pursuit. The core fields include Philosophy, which is widely considered the first contributor to the so-called 'new science'. To make my case, I draw inferences from the scientific literature to identify psychological factors for processing figures

of speech. However, the central positive arguments that support my view rely on personal anecdotes. Clearly, anecdotes are not arguments. But there are many moves in philosophy that do not involve arguments, like theory construction. As long as theories are internally coherent and do not contradict current knowledge, most philosophers view theory construction as worthwhile. I maintain that, as a methodological principle, first person reports of what goes on in one's own mind should be accepted as (defeasible) evidence for the truth of a report unless one has good reason to question them.

## 5.3 Imagination and Insight: New Perspectives on Reading-Related Experiences

Room: RA  
Chair: Christine Knoop

### 5.3.1 Elements of a Psychohistorical Model of Imagination in Literature and Narrative Cognition

Nicholas Bulot

Several programs of research in the cognitive sciences and philosophy have investigated literary imagination and narrative cognition from the standpoint of an individualistic perspective. Individualistic models seek to describe core universal mechanisms of imagination, which are assumed to be internal to all typical human heads and brains. Such models have not investigated the functions of historical cognition in our literary and narrative imaginings. I argue that this omission of historical cognition limits our understanding of the functions of imaginings in literature and, more generally, narrative cognition. I explore an argument based on two general premises. The first holds that historical cognition is necessary to cultural learning and enculturation. The second states that cultural learning guided by historical cognition supports the development of creative imagination in both literature and narrative cognition. To account for the historicity of artistic and literary imagination, I outline a contextualist model of artistic imagination, which expands on Bulot and Reber's (2013) psychohistorical model of art appreciation.

### 5.3.2 Transformative Reading: Gaining Insight into the Story, the Self and the Other

Olivia Fialho

Reading literary texts can have far reaching implications for one's insights into oneself and others, a process called 'Transformative Reading' (TR). Here, a 'rich description' of TR is offered, by articulating its nature and structure in two studies. Study 1 (N=30) aimed to gain access to how readers describe their subjective experiences of TR and explored the moments in which changes in self and self-and-other constructs occurred. Thirty thematic semi-structured in-depth interviews were conducted with native speakers of English. As a result, a typology of TR showed different forms of enacting the text. Study 2 (N=401) aimed to (1) articulate the underlying dimensions of TR and (2) to find out the relationship among them. To this purpose, experiences during and after reading were measured and the relations between them, chartered. In order to assess the robustness of the findings, two literary texts were read by large and heterogeneous samples. Results indicated that (1) self-other insight was predicted by (2) enactment-imagery, (3) the extent to which the story events resonated with personal experiences and (4) to which the participants felt sympathetic toward the characters. Independent of demographic variables, these findings demonstrate the contribution of phenomenological studies of reading to the design of explanatory models.

### **5.3.3 The Aha-Experience: Phenomenology, Context, and Personality**

Rolf Reber

The Aha-experience is the hallmark of sudden insight. An integrative fluency account of the phenomenology of insight connects the four defining features of the Aha-experience (Topolinski and Reber, 2010): (a) a sudden insight leads to change in (b) processing fluency that increase (c) positive affect and (d) certainty that the insight is true. We briefly review experimental evidence for the interrelationships among these components and then present studies on the Aha-experience. Participants had to write down a specific Aha-experience and then to respond to a questionnaire that examined (1) the phenomenology of Aha-experiences, as outlined in the integrative fluency account; (2) the context of Aha-experiences, and especially gender differences in being alone versus with others; (3) finally, the relationship of openness to experience to the frequency of Aha-experiences. The findings (1) supported the integrative fluency account, (2) showed that men were more likely to have Aha-experiences alone and women together with others, and (3) revealed that openness of experience was related to higher frequency of Aha-experiences. In the end, we discuss potential implications of this research on Aha-experiences for the study of literary writing and transformative reading practices.

### **5.3.4 The Cognitive Benefits of Language**

Alexander Bergs

This paper investigates the relationship between language and cognition, or linguistics and cognitive science. It focuses on core cognitive functions (such as memory and learning, cognitive control and flexibility, analogical reasoning, cross-domain transfer) and how these relate to language. Language is seen a system which is essentially characterized by rules and labels. These two notions are understood as abstract, i.e. rules provide the syntagmatic links and relations between elements, while labels provide paradigmatic categories at different levels of granularity. Rules may apply in phonology just as in conversation, while labels can help to categorize and group together inflectional morphemes just as well as abstract concepts. The nature of these rules and labels are based on core cognitive capacities; at the same time, rules and labels enhance and improve these core capacities. This idea will be illustrated on the basis of rules and rule-breaking. In contrast to other systems, linguistic rules are breakable: speakers may modify or even ignore them. This can be observed in everyday language (e.g. in type-shifting) as well as in special registers, such as literature. Rule modifications breaking usually do not leave utterances uninterpretable, but trigger interpretative efforts. On the basis of empirical data from a study on idiom variability, we show that the willingness to break rules, and the capacity to process unruly linguistic data can be correlated with core cognitive capacities, such as cognitive control. In turn, these capacities are improved by frequent exposition to unruly data.

## 6.1 The Cognitive Poetics of Reading and Writing

Room: LA  
Chair: Saskia Schabio

### 6.1.1 “Knowledge is...”: A Study on the Role of Conceptions of Knowledge in Novice Academic Writers

Erika Unterpertinger, Frano Rismondo  
and Brigitte Römmer-Nosseck

Academic writing is a variety of professional writing or “knowledge crafting” (Kellogg, 2008). This does not only involve tailoring a text to fit a particular audience, it is also a means of knowledge production. In learning to write academically development of students’ texts reflects their development from knowledge recipients towards knowledge producers (Römmer-Nosseck, 2017). But how do students themselves reflect the connection between knowledge and their writing?

During writing workshops in Ljubljana in March 2018 and February 2019, students of different disciplinary backgrounds studying an interdisciplinary MA-programme were invited to participate in focus groups. The aim of these was to get an insight of students’ perception of knowledge and its relations to their writing. The participants were invited to share their understanding of knowledge, notions connected to it, and how it relates to their experience of writing.

In our presentation we will argue for a connection between personal epistemology and how writing is experienced and understood. In the interviews we found that the personal epistemological stances taken as well as the understanding of academic writing processes reflected in the metaphors chosen.

The preliminary analysis, conducted with the qualitative NCT-data analysis method by Friese (2012), shows that the relation between students’ personal epistemology and academic writing differs depending on the students’ individual concepts of knowledge.

In our presentation, we present our preliminary findings and reflect our methodology. With this, we aim to contribute to Writing Studies as well as Cognitive Humanities by showing that a focus on metaphors may be useful to understand novice academic writers’ cognitive and developmental processes, ultimately with the aim to develop materials and methods for student support.

### 6.1.2 The Cognitive Affordance of Lettrisme

Madeleine Gross and Daniel Martini

Post-structuralism critiques passive identification with hegemonic philosophical, artistic and linguistic conventions. Deleuze and Guattari (1972) employed the term shizoanalysis as a construct for the unlimited possible ways to ground human life. The Lettrist movement (1946-) attacked phonocentrism. Their poetic vocabulary employed signs (“letters”) for corporeal expressions and their films were an asynchronous merger of sound and image. Yet there is a precarious balance between the cognitively intangible (“the schizoid”) and the generation of meaning. We report findings investigating the degree to which individual differences in schizotypy and related personality traits (creativity, openness to experience, and curiosity) predict the ability of Lettrist art to afford meaning-making and the disintegration of reliance on linguistic concepts. In this study, participants complete personality assessments and creativity tasks before being exposed to a series of Lettrist stimuli. After exposure, participants rate the perceived meaning on a Likert scale. Subsequently, a word-color Stroop task is performed which measures the ability to make a correct color-discrimination response while overcoming reflexive tendencies to read a distractor word. Given that the theoretical effect of Lettrisme is to break down reliance on linguistic structures, we investigate whether individuals’ performance on the Stroop task is affected by exposure to the art. We

report the findings from this study which marks one of the first empirical investigations of non-linguistic affordance of the avant-garde with possible implications for post-structuralism. We further report the results of moderation analyses which seek to determine whether the effects are influenced by schizotypy and/or related personality traits.

### **6.1.3 Cognitive Study of Poetic Imagination**

Víctor Bermúdez

The presentation proposal approaches the ways in which it is possible to use literature to understand associative mechanisms of the abstraction that imagination entails. Imagination is central to life itself, and it operates along with perceptions, emotions and memory processes that involve a “set of mental capacities and activities concerned with modelling entities and events that are not immediately present to perception and that may or may not have counterparts in the lived world” (Alan Richardson). Therefore, notions such as proprioception, simulation, mirror neurons or empathy can help to describe embodied understandings (Mark Johnson), or biofunctional understandings (Iran Nejad) in literary representations. The communication will focus on a specific phenomenon of imagination, taking as theoretical background insights by neuroscientists Francisco Varela, Antonio Damasio, and Semir Zeki in order to propose a system of interpretation of literary texts. It consists of a hermeneutical approach based on the theoretical background of the so-called cognitive poetics (Reuven Tsur) discipline.

This presentation is part of a broader research project entitled Cognitive Processes of Poetic Imagination, which aims to develop strategies for both the analytical study of poetic texts and the interdisciplinary dialogue with cognitive scientists interested in the literary expression. Such analytical instruments should elucidate how poetic discourse can be considered as human consciousness data, and what kind of literary knowledge can be offered to cognitive scientists for the study of imagination.

### **6.1.4 The Lifetime of The Memory of a Story**

Jeremy Scott

In a world increasing mediated by textual representations which blur the line between fiction, opinion and fact, it is becoming vital to understand how individuals construct mental representations of texts, and how these persist and evolve in memory. This paper focusses on the reading of fiction as way of examining these processes in detail. Fiction reading, by definition, requires the building of worlds which differ in various ways from the actual world, and this paper will report on an on-going research project which models the cognitive processes underlying the construction of mental fictional worlds. We are investigating experimentally three facets of the reader’s experience during an encounter with a fictional text: (1) levels of emotional engagement. (2) depth of processing and (3) motivations. By tracking the lifespan of these mental representations and probing the processes underpinning their construction, we can better understand what features of a text and the experience of reading it create lasting impact, as well as accounting for the ways in which individual representations of a text deviate and evolve over time. More nuanced understanding of how readers create, navigate and recall fictional worlds should enable us subsequently to explore questions such as what underlies susceptibility to ‘fake news’, and what skills children must develop in order to be able to critically evaluate the varied narratives about the world that they will encounter.

## 6.2 Cognitive Theories and Film Analysis

Room: AM  
Chair: Catalin Brylla

Developing and implementing cognitive theories of film can provide enormous benefits for movie production and marketing. However, designing experiments to test these theories is not easy or inexpensive and cognitive theories could not replace traditional film studies. Instead, film scholars and industry insiders could use these scientific methods of analyzing film to make the process more cost-effective. This panel's goal is to start a discussion on possible techniques and methods to facilitate the application of cognitive theories into shooting movies and studying film. This panel includes five papers from applied film perception and cognitive theory to case studies including studying the interpretation mechanism in Chinese Martial Art film, analyzing the narrative secret in Ang Lee's films, exploring the importance of cognitive theories in animation, investigating the desktop movies based on cognitive theories, and studying how to make an attractive film trailer.

### 6.2.1 Interpretation Mechanism in Chinese Martial Arts Films

Chongbi Li

Martial Arts film is a unique genre which most distinctively represents Chinese martial arts culture through characterization of the remarkable fights between good and evil. Previous qualitative research on Chinese martial arts films historically have dealt with the aesthetic or philosophical significance of a film. But there is almost no perceptual research about martial arts films. Our empirical study is based on cognitive theories and attempts to demonstrate the difference of filmic narrative construction between successful and unsuccessful Chinese martial arts films to help filmmakers produce particularly well-designed films which are commercially successful. This study selected and analyzed 20 Chinese martial arts films. 60 participants were recruited. Event segmentation and casual connections were used to parse a viewer's interpretation of how a story unfolded. At the same time, brain activity was monitored to help measure a participant's engagement and immersion. This study aimed to find a relationship between viewers' causal connection construction and degree of understanding. This study provided a concrete launching off point for researching martial arts film as well as helping both filmmakers and film scholars obtain a better understanding of the fundamental perceptual and conceptual mechanism underlying film interpretation.

### 6.2.2 Ang Lee's Secret on Filmmaking: A Cognitive Approach to Understand Narrative in Film

Lingfei Luan

In this work, we conducted an experiment to test Ang Lee's unique filmic expressions regarding event perception and cognition, as well as casual chains of narrative in five of his films: *Crouching Tiger, Hidden Dragon* (2000), *Hulk* (2003), *Brokeback Mountain* (2005), *Life of Pi* (2012), and *Billy Lynn's Long Halftime Walk* (2016). These five films were selected based on having a Gross profit. The purpose of this study is to explore how low-feature film construction techniques impact people's high-level conceptual activities and guide audiences' interpretations and preferences. Both event segmentation theory and causality in event-indexing models were tested by requiring participants to segment film events and recall shots one week after the first viewing. The experiment was designed based on the assumption that a film's narrative should tell a comprehensible story with reasonably constructed plot cues. The shots' positions and lengths were considered film expression techniques used by a filmmaker to try to construct a story's plot. The experiment's results support the hypothesis that each shot in Ang Lee's successful works was designed and filmed in a way to match a viewers' perception of a story's causal links. The empirical analysis

presented in this paper offers an innovative approach to analyzing films by applying cognitive theories into film practice.

### **6.2.3 The Perceptive and Cognitive Principles in Animation**

Wei Liu and Qi Meng

Animation long followed a painting tradition. However, technology offered creators various ways to express an idea apart from 2D painting. Modern animation is similar to the art of film. This project integrates cognitive theory on narrative form and analyzes plot arcs, shot numbers, and shot length for 15 famous animated films including Kung Fu Panda (2008), Tangled (2010), Ice Age 4 (2012), Brave (2012), Frozen (2013), and Zootopia (2016). In this work, we discuss the similarities of successful animations' format and narrative strategies. Based on James Cutting's film evolution theories on film expression skills, we applied low-feature film techniques to study how directors attract a viewer's attention over more than 90 minutes. Finally, we concluded based on our analysis that human beings' interpretative mechanisms.

### **6.2.4 The Application of Cognitive Theories in Desktop Movies**

Yi Zhao and Zhaoli Feng

This study explores how desktop movies, especially thriller and horror genre, creates remarkable filmmaking and showing formats by adapting a unique audience's understanding principle to construct dramatic narrative conflicts. We also analyze how filmmakers guide the viewers' attention with the specific film constructive and expressional ways. The purpose of this study is to apply cognitive theories to this type of film and explore how the filmmakers introduce the way to assist the viewers emerging into the film through visual and audio details, and finally to have the sense of "feeling the truth." This study takes film *Unfriended: Dark Web* (2018) as a case to investigate the film expression which is against the traditional way of filmmaking principle with different shot scales and shot lens. We also explore the reading format in the film, and how it guides the audience's attention to perceive and interpret the visual and audio content. Finally, we propose that film should be a way that releases viewers' observation angles by representing filmmakers' ideas from a different perspective and create more filmic expressions. We also hope our study could inspire future scholars to apply cognitive theories to film analysis regarding on the relationship between filmmaking and audience's reaction.

## **6.3 Viewer Engagement in Visual Media**

Room: RA  
Chair: Julien Simon

### **6.3.1 Empirical Aesthetics of Screen Acting Performance: Challenges and Resolutions in an Interdisciplinary Methodology**

Javid Sadr

Screen acting performance is virtually defined by the disciplined, exacting practice of sharing the cognitive, emotional, physical, epistemological world of one person, the actor, with an audience utterly removed -- the viewer. More, as arts, humanities, and social-science

researchers eager to characterize the performative and perceptual aspects of this remarkable phenomenon, we are one step removed from the viewer's experience, not to mention the actor's performative endeavour, and must embrace the challenge of developing unique and innovative methods of inquiry, experiment, and analysis equal to the task.

Here we describe a novel and powerful integration of approaches and inquiries within a multi-year, multi-phase, and deeply multi-disciplinary research program we -- as colleagues spanning the fields of New Media, Drama, Psychology, and Neuroscience -- have developed to examine precisely such questions of screen performance, viewer reception, and self-reflective evaluation. In this talk, we bring explicitly to the foreground the multitude of methodological and conceptual challenges faced in this collaborative-interdisciplinary undertaking -- along with the successful integrative resolution of each in turn, from producing a unique, standardized corpus of mutually comparable recorded performances by professional actors, to the design and execution of experimental paradigms for obtaining viewers' responses as well as actors' self-evaluations, to the analysis of these outcomes and of the methodology itself. Indeed, as a key element we will screen the actors' brief performances and invite colleagues to share the viewer's evaluative experience, to gain direct insight into the methodological intricacies of this exciting new approach to empirical aesthetics.

### **6.3.2 'Losing the Plot: Dynamic Relations Between Interest and Confusion During Complex Film Narratives**

Steven Willemsen and Kirill Fayn

Complex and confusing story structures pervade film and literary history. But why are some people attracted to confusing and ambiguous stories? This proposal tests the central hypothesis that the aesthetic enjoyment of complex stories is not dependent on fluent processing or successful narrative comprehension, but occurs as a result of a stimulus causing cognitive disequilibrium or processing challenges, while also signalling a potential gain in knowledge, insight, or meaningfulness (Armstrong & Detweiler-Bedell 2008). The occurrence of this aesthetic effect, we expect, is mediated by both narrative properties as well as various individual differences in spectators.

Our presentation focuses on one key indicator of this cognitive-affective process: the relation between interest and confusion. While appraisal models suggests that interest and confusion are commonly negatively related (e.g., as confusion goes up, interest decreases), we predict that for complex narratives, they may be less negatively or even positively related (Fayn, Silvia, Dejonckheere, Verdonck & Kuppens, under review). We expect this to be moderated by several individual differences and motivations - including openness/intellect, promotion/prevention-focus, and aesthetic fluency in film. To test our hypotheses, we propose a method that continuously tracks interest and confusion in participants watching several short films that feature various kinds of narrative complexity. By studying how both interest and confusion develop dynamically during the viewing, the findings can be correlated not only to individual differences in viewers, but also to specific points in time in the film narratives, allowing investigation of how their interplay shapes aesthetic appreciation.

### **6.3.3 Is Nathan For You? – Schadenfreude and Humanity in One of TV's Most Controversial Programmes**

Oliver Kroener

Over the course of its four-season run, *Nathan For You* (Comedy Central, 2013-2017) has elicited a wide range of viewer responses. Some viewers have disregarded the show as mean-spirited cringe-comedy while others—among them documentary filmmaker Errol Morris—have praised it for its humanity. This paper, which is primarily rooted in cognitive media theory and television studies, investigates the broad

spectrum of emotional responses to Nathan For You. The show is based around the idea that Nathan Fielder, creator of the programme and self-proclaimed business expert, offers life-changing advice to small business owners. Yet, in contrast to the reality programmes Nathan For You spoofs, Fielder's advice is completely absurd. In one of the show's most famous episodes, Nathan suggests that a struggling realtor rebrand herself as 'The Ghost Realtor' to attract more customers whereas, in another episode, Nathan convinces the owners of an independent coffee shop to reinvent themselves as 'Dumb Starbucks'. Examining viewer responses to specific scenes from the show, I argue that while Nathan For You might generate Schadenfreude, discomfort, and vicarious embarrassment in casual viewers, it encourages long-time viewers to question Nathan's behaviour and empathise/sympathise with the characters he interacts with. Furthermore, I argue that Nathan For You challenges the viewer's emotional engagement by gradually revealing that it is not primarily concerned with embarrassing the people who are featured on the show, but rather employs the artifice of reality TV to encourage them to reveal more about themselves.

#### **6.3.4 The Dynamics of Wishful Believing: Traveling Through Trump Country in Alexander Payne's Nebraska (2013)**

Robert Lang

The film *Nebraska*, made only three years before Donald Trump was elected President of the United States, explores the phenomenon in cognitive psychology known as *belief perseverance*, a form of cognitive bias that describes the way in which individuals who receive unwelcome information may resist challenges to their views. The post-election viewer draws parallels between the fanatical attachment of the film's protagonist Woody Grant to the patently erroneous notion that he has won a million dollars and the perseverance of Trump supporters in their equally false belief—and despite ample evidence of the mendacity and real indifference of their candidate (and later president) toward their concerns and interests—that Trump would “Make America Great Again.” When the wife and sons of *Nebraska*'s protagonist explain to him that the Mega Sweepstakes letter he has received is just a marketing scam to get people to buy magazines, he exclaims: “Well, they can't say it if it's not true!"; and he will insist, to the end: “It says I won!” This paper will examine how Woody Grant's misperception about his winnings—a “fact” supported neither by evidence nor expert opinion—rests on a combination of false and unsubstantiated beliefs he has about the world, which, like the beliefs of a majority of Trump's supporters both before and after his election to the presidency, will become reinforced by a “backfire effect” in which, when his conviction is refuted, he comes to support his original (false) belief even more strongly.

## 7.1 Experiencing Art and Architecture

Room: LA  
Chair: Richard Ruppel

### 7.1.1 Atmospheres in Architecture and Scenography

James Hamilton

We should be literal in adopting “the atmosphere” – the atmosphere of the planet – as the referent of the term for the medium of architecture and scenography. This should not be seen as a way of conceiving space that is alternative to a basic geometric conception, but as a supplement to it that is driven by what we are interested in achieving in design, construction, and (especially) appreciation. In order to do this, we should make use of empirical work on peripheral vision and its role in generating affective responses; for it is largely by means of the peripheral vision system that we gain access to the features that trigger our affective responses to the environment (both the natural and the built environments). And we should make use of the distinction, now common in philosophical aesthetics in the analytic tradition, between vehicular and artistic media to explain how we ought to describe aspects of the atmosphere created in works of architecture or a scenic design. Finally, the relation between our sense of ‘the atmosphere’ – yielded by peripheral systems – and our cognitive grasp of a work of architecture or scenic design – yielded by focal systems – is counterfactual; for that is the only way to distinguish between affective responses that are genuinely of the actual achievement in a work of architecture or scenography from those that are largely idiosyncratic and indications the spectator or appreciator has failed to comprehend the work.

### 7.1.2 Art Forms in the Realm of the Mind: A Kublerian Approach to Modeling Art Appreciation

Ancuta Mortu

Art Forms in the Realm of the Mind: A Kublerian Approach to Modeling Art Appreciation While musing whether there is any place left for the mind in a coherent world of forms, Focillon maintained that the proper of art forms is to reveal the ‘very technique of the mind, [giving] us a kind of mold or cast that we can both see and touch’ (Focillon, 2002, p. 119). What would it mean for art forms to mold or model human cognition?

In this presentation I aim to provide an insight into systematic attempts, both ahistorical and historical, at modeling our engagement with art. In terms of ahistorical representational devices, flowcharts are used to portray the cognitive structure of art appreciation by weaving mental phenomena together in complex hierarchical constructions. A recent example is Pelowski et al.’s information-theoretical model, called The Vienna Integrated Model of Art Perception (VIMAP), which aims at ‘resolving the multifarious processes that can occur when we perceive and interact with visual art’ (Pelowski et al., 2017, p. 80). The model charts several cognitive processes in terms of their relation to brain areas and networks, and, most importantly, in their dynamics (p. 82). Such charts provide a comprehensive tool of art appreciation while resisting historical meaning.

Yet, historical awareness does figure in attempts to answer psychological questions, which are articulated in a number of empirically oriented art historiographies. Like the neuroscientific flow charts, art historiographies also depend upon schemes and conventions of representation (Kubler, 1967, p. 849); only that the matrix of relationships which is created encompasses broader timescales and concerns the appreciation of formal sequences rather than works of art in isolation (Focillon, p. 60-62; Kubler, 1962, p. 40-41). It is the purpose of this presentation to integrate the informational and historical modeling of art appreciation and draw the methodological consequences from this integration.

### 7.1.3 What Can Complex Systems Do for the Study of the Arts?

Bohdan Nebesio

“Complex system” is a concept used in engineering, biology, economics and ecology, to name just a few. “Complexity” is a field of science studying how parts and their relationships give rise to collective behaviours of the system and how the system interrelates with its environment. For example, a flock of birds, the brain, immune system, microeconomic and social systems, as well as ecological systems, are all examples of complex systems.

My paper explores “complex systems” as a tool of studying the arts capable of accounting for the complexity of both, the human brain (natural system) and the arts (artificial systems) as well as their interactions. It is an introductory study outlining the scientific principles of complexity and postulating that uncoordinated interactions between a large number of components are neither random nor completely ordered and thus need to be seen as a whole system.

Complex systems are open systems characterized by non-linear relationships between components. They are also history dependent, which means that they utilize past experience and memory. Components of the system have fuzzy boundaries and are difficult to define by themselves and need to be defined through their relationships with other components as well as through their place in the whole system. Such systems are also self-organized and complicated by the presence of amplifying-damping feedback loops. The non-linearity of a complex system abandons, or at least suspends, the traditional thinking stemming from the Aristotelian “cause and effect.” In a non-linear system effects are not directly proportional to cause which means that small perturbations may cause large effects or no effects at all.

## 7.2 The Trauma of Theory of Mind

Room: Am  
Chair: Lisa Zunshine

### 7.2.1 Literature and the Experience of Dark Empathy

Ana Margarida Abrantes

In the field of cognitive literary studies (Cave 2016, Burke 2017, Baumbach 2017) empathy has deserved close attention. Fiction is considered to enhance theory of mind (Zunshine 2006, Kidd and Castano 2013) and to be a privileged set for experiencing cognitive and affective empathy (Mar & Oatley 2008, Wojciehowski & Gallese 2011), not least related to fiction’s reliance on worldmaking (Goodman 1978), and the narrative construction of experience (Bruner 1991, Breithaupt 2009). One problem arises in this context, namely how fiction may lead a reader to empathize with an ethically dubious character, in what Fritz Breithaupt (2017) termed the “dark side of empathy”. How does empathy work under such conditions, when we are led into sharing a worldview with a person we would hesitate to address in real life? We approach this problem based on two works by German writer (and criminal defense lawyer) Ferdinand von Schirach: *Strafe* (“Punishment”, 2018) and *Die Würde ist antastbar* (“Dignity is vulnerable”, 2016). Starting from a distinction between empathy and identification we outline a view of empathy as the possibility of sense-making, which is distinct from judgment. We argue that literature provides privileged access to the subjective experience of empathy. On a par with recent insights from interdisciplinary research on empathy, a return to the text and the close analysis of its form and meaning and its contextual situativity allows a view of empathy from within, which is ultimately how we engage with this human experience.

### 7.2.2 Cee's Education in Theory of Mind in Home

Yongchao Wen

My paper, taking Toni Morrison's novel *Home* as an example, will argue that her traumatic homelessness and the resulting place alienation render the female character, Cee, deficient in Theory of Mind capability. She thus falls victim, to a cruel white doctor's illicit medical experiment. Through an active interaction with her physical environment and social environment, she improves her social skill of mind-reading and finds her true selfhood, indispensable to her survival in a gendered and racialized world.

### 7.2.3 In Defense of The Direct Response Theory of Spectator Disgust

Robert Blanchet

Plantinga (2006) and Carroll (2011) characterize spectator disgust as a direct emotional response. Thus, if the spectator feels disgusted when watching a character who feels disgusted by a monster, this is because the spectator directly appraises the monster as disgusting from his point of view on the situation. However, as Hanich (2009; 2011) shows, there are many disgust-eliciting scenes where this theory appears to be false. E.g., when we feel disgusted by the scene from *Apocalypto* where a man eats animal testicles, the intensity of this response can hardly be explained by the spectator's response to the mere sight of the testicles. Hence, in Hanich's view, spectator disgust can also be triggered by empathically putting ourselves in the character's shoes. Drawing on the cognitive model of emotions by Ortony et al. (1988), I argue that Hanich's challenge to the direct response theory is unconvincing and defend a modified version of the direct response theory that overcomes the shortcomings of Plantinga's and Carroll's view. My main argument is that the widespread assumption that disgust is triggered by unappealing objects—and intensified when we touch or ingest such an object—is mistaken. Instead, I argue that our preferences in taste are better understood as general principles, such as "eating insects is unappealing" that we endorse with various strengths. Accordingly, when another person's action corresponds to such a principle when she eats an insect, my disgust about this fact is still an instance of ordinary first-personal disgust that per se involves no empathy.

## 7.3 Cognitive Models in Poetry

Room: RA  
Chair: Don Kuiken

### 7.3.1 Behind the Foot and the Eye: Motion and Effects in Claudio Rodríguez's Poetry

Candela Salgado Ivanich

The cognitive turn which was experimented by literary studies at the present has allowed critics, readers and writers to speak about knowledge in literature in a very different way than tradition did. This communication begins with the understanding of literature as a discipline imbued with cognitive processes and its principal objective is to study the role of action and sensory-motor system in poetic imagination.

For that purpose, this study analyses a selection of poems written by the Spanish poet Claudio Rodríguez, translated into English in 2008 by Michael Smith and Luis Ingelmo. Poems with an external context and a lyrical subject that walks and explores it (as the poet himself did in his life) are some of the distinctive features of this author. The interest of these poems comes from the fact that a direct expression of movement is sufficient limited, while the references to perception (specially to the light) are numerous. By integrating the recent considerations between action and perception (where action underlies perception) of Alain Berthoz or Jean-Luc Petit, we will examine the postural and situational variant of the

sensory-motor system and its interactions with the environment. It will permit us to explore the motor organisation of the space in a poem (the space is a structure assimilated and transformed by the body and how kinesthetics (motor sensation) can appear even without references to kinesia by other procedures. In this way, we will conclude by emphasising the significance of virtuality (imagination of potential actions or our possible body) in poetry and in cognition itself.

### 7.3.2 Advances in the Empirical Study of Poetic Rhyme

Stefan Blohm

Systematic end rhyme is employed in many literary traditions as a key element and perceptually salient feature of poetic structure. But whereas most of its formal aspects are well-described, many of its cognitive and aesthetic effects remain poorly understood. I present behavioral evidence from a series of experiments (self-paced reading; speeded rhyme judgments) that shed light on the nature and cognitive effects of systematic end rhyme. Specifically, the results (a) elucidate how end rhyme affects lexical processing and memory, and (b) demonstrate the importance of the verse context (and other factors) for the acceptability of imperfect rhymes. To shed light on the aesthetic qualities of rhyme schemes, I use diachronic corpus data (Haider & Kuhn, 2018; Sonderegger, 2011) as the basis for an optimality-theoretic (Prince & Smolensky, 2004) comparison of rhyme-scheme preferences in the English and German poetic traditions. Building on earlier work in constraint-based metrics (Martin, 2002), this comparison decomposes preferences for the schemes themselves (e.g., *ABAB is more popular than AABB*) into several harmony- and *Gestalt* principles that are (a) observed across aesthetic domains and (b) more or less transparently related to incremental processing (e.g., *prefer tension-resolution over immediate resolution*). The resulting models successfully account for the observed corpus frequencies in terms of a small set of interacting constraints on the variables of rhyme schemes. Taken together, these investigations illustrate how we can derive testable hypotheses about cognitive and aesthetic effects of poetic forms both from a processing perspective and from a structural perspective supplemented with corpus data.

### 7.3.3 The Potential of Visual Poetry and Working Memory: A Neurohumanities Approach

Amelia McConville

My presentation will examine the capacity that an interdisciplinary cognitive approach has to contribute to our understanding of experimental visual and concrete poetry.

The intermedial aspect of poetry as an art form that engages simultaneously with the faculties of both ear and eye is one that proves especially interesting from an interdisciplinary standpoint. I will examine how some contemporary poets deliberately engage with or usurp their poetry's own linguistic and aesthetic dynamics to produce various effects, using some selected examples of concrete poetry as well as other experimental examples. I will assess the potential that different models of cognition – eg, models of working memory or imagery – have to aid understanding of how this kind of poetry achieves its effects. In keeping with the central themes of this year's conference, there will also be a reflective component to my presentation, as I assess some of the methodological and ideological obstacles that arise when approaching poetry studies in this way. I will assess the merits and shortcomings of integrating selected models of cognition with the predominantly literary study of contemporary poetry. I will touch on the specific areas of cognitive poetics and Neuroaesthetics in relation to my chosen examples, assessing whether the central tenets of these fields can contribute to an understanding of experimental poetry. Ultimately, I aim to demonstrate that there is strong potential for a multidisciplinary method of examining and interpreting the different meanings and effects generated by experimental poetry.

## 8.1 Shaping Experience with Metaphors

Room: LA  
Chair: Stefan Blohm

### 8.1.1 From Literary Studies to Cognitive Science and Back Again: Exploring the Scope of Empirical Research on Metaphor

Christine A. Knoop

In the light of a recent EEG study on metaphor processing that we conducted at the Max Planck Institute for Empirical Aesthetics, this paper will discuss how and to what extent current neurophysiological studies on metaphor are influenced by aesthetic theory and literary studies, and how and to what extent their findings may serve to refine, discuss, and add to their traditionally theoretical approach.

To accomplish this, we will first give a brief overview of the study in question, as well as of previous seminal findings in the field of neurocognitive research on metaphor. In a second step, we will take a closer look at the assumptions, hypotheses and postulates from metaphor theory, and the extent to which they have informed the aforementioned neurocognitive studies. In a third step, we will discuss possible implications of the neurocognitive research for the theoretical study of metaphor and its uses in literary studies. (How) Can findings obtained in highly controlled experimental settings and pertaining to fine-grained physiological response measures be made fruitful for theory development in the arts?

### 8.1.2 Fall of Evil, Fall of Good: Towards Cognitive Analysis of Performances of Verdi's Shakespearean Operas

Sarka Havlickova Kysova

Fall of evil, fall of good: Towards Cognitive Analysis of Performances of Verdi's Shakespearean Operas In my paper I present the results of analysis of various productions of Verdi's operas Macbeth and Otello. Special attention is given to scenography of the productions as an evidence of key audio-visual metaphors (see e.g. Fahlenbrach 2010; 2016) incorporated in the directors' concept. I focus on particular metaphors included in Shakespeare's play that enter the stage via Verdi's opera. Scenography – which I understand both as visual and audial means of expression – reflects the guidance of human senses for the purpose of emphasising and expressing the key concepts of Shakespeare's and Verdi's work. I analyse dynamics / kinetics of scenography which is used to guide viewer's senses through appeal to concepts of evil, and good.

### 8.1.3 Making Sense of the Spectators' Experiences of a Contemporary Dance Performance

Saara Moisio

In this presentation, I discuss an empirical method of collecting material on spectators' experiences of contemporary dance and how to analyze the material rigorously. My method of qualitative interviewing and analysis is informed by interpretative phenomenological analysis (Smith, Flowers & Larkin 2009) and metaphor analysis (Lakoff & Johnson 2003; Cameron 2010). Additionally, I employ creative workshops for gaining a deeper insight in spectators' reflective process of meaning-making. An important notion throughout the collection and analysis of the material is that as a researcher I am trying to make sense of how the research participants make sense of their experiences.

Adopting Lakoff and Johnson's (2003) ideas about the metaphors of language and their bodily and emotional basis, I believe that spectators try to make sense of their abstract experiences of performances by using physical metaphors which illustrate how the experience affects and impacts them. This vividly appears in an interview material of spectators' experiences of a contemporary dance performance, Breath,

by Tero Saarinen Company, performed in Helsinki in May - June 2018. Drawing examples from the interview material I show how the spectators conceptualize their experience of the performance through their body and mind, in a particular time and culture. Additionally, I discuss what kind of challenges this poses for the collection and analysis of the material.

## 8.2 Absorption and Other Dimensions of Experientiality – Theoretical and Empirical Approaches to Engaged Fiction Reading

Room: AM  
Chair: Tim Domke

### 8.2.1 How Expressive Enactment Supports Access to the “Depth” of Literary Metaphors

Don Kuiken

While various studies have examined moments of “depth” during literary reading, what gives such moments their significance requires conceptual and empirical clarification. To that end, we have identified a form of engaged reading that follows a path from (1) discerning metaphoric resonance across a series of discontinuous passages (inexpressible realizations) to (2) explicating the pre-reflective sense of those resonant passages (expressive enactment) and then (3) feeling moved toward poignantly altered conceptions of the world of the text and, simultaneously, the reader’s lived world (Kuiken & Douglas, 2017, 2018). Being moved toward such poignantly altered understandings (sublime disquietude) depends upon disclosure of the emergent meaning of these extended metaphoric structures. Such structures are exemplified by the following lines from an essay by Borges (1946):

Time is a river that carries me along, and I am the river;  
It is a tiger that devours me, and I am the tiger;  
It is a fire that consumes me, and I am the fire.

We have begun to examine empirically how altered understanding emerges from the kind of extended metaphoric structures that include simple nominal metaphors (e.g., Time is a river); enactive metaphors (e.g., ...and I am the river); and metaphor-elaborating clauses (e.g., ...that carries me along). We have begun to clarify how these metaphoric structures afford access to meanings that are not reducible to the unidirectional relations between metaphoric vehicles and topics but rather derive from their bidirectional relations (e.g., not only “Time is a river” but also “A river is time”).

### 8.2.2 "It's Fun Escaping into a Different World and Having Your own Experiences" – A Qualitative Interview Study on the Dimensions of Experientiality During Reading

Caroline Kutsch

What is it that readers actually experience when they read fictional narratives? Caracciolo (2014) posits that through the interplay of several factors (text, readers’ experiential background, consciousness attribution and enactment) story-driven experiences – and thus experientiality as the sum of them – are created for the reader. However, Caracciolo does not go into much detail regarding the kinds of story-driven experiences that readers undergo.

In this paper, I present the methodology (adapted from Bálint et al. 2016) and results of a qualitative study aiming to shed light on the different dimensions of experientiality evoked in the reading process. By conducting twenty semi-structured interviews with avid readers, I investigated what readers actually consider to be story-driven experiences. The participants were first asked about their general reading preferences and about a story that they had had the most intense reading experience with in the past. They were then given another two short stories to read so that they could report on more immediate reading experiences. Through underlinings, participants also pointed out where in the text these occurred.

The study found that readers reported frequently on experiences of absorption (e.g. Gerrig 1993, Green & Brock 2000, Kuijpers et al. 2014), and on the ways in which the stories activated and restructured their experiential backgrounds. Thus, I provide a detailed account of the interview procedure and the categories found in the analysis of the collected data, i.e. the dimensions of experientiality that readers described. Finally, I incorporate these empirical findings into my revised model of experientiality.

### **8.2.3 The Absorption Metaphor in Reader Reviews and Empirical Literary Studies**

Moniek Kuijpers

Social media platforms like Goodreads are online environments where millions of people come to share their love for the written word. It is important to study these online social reading phenomena, as they are becoming exceedingly popular and provide new ways for people of all ages to acquire storytelling and literacy skills.

In our current research project, we are analyzing reader reviews on Goodreads using textual entailment and text reuse detection (methods from computational linguistics) and comparing them to statements on the Story World Absorption Scale (SWAS; Kuijpers, Hakemulder, Tan & Doicaru, 2014). The SWAS is an instrument commonly used in empirical literary studies to investigate the experience of being absorbed in a story.

Absorption has mostly been investigated in lab settings and thus we do not know in how far the data we gather during experiments is related to how people experience absorption in daily life. Since absorption is a term often used by readers as a positive appraisal of a book, the reader reviews on Goodreads are a potentially rich qualitative data source on “daily life absorption during reading”.

In this contribution we will discuss the annotation work we are currently involved in to classify instances of absorption in online reader reviews and compare them to instruments used to capture absorption in experimental studies. We will also present preliminary results of genre comparisons, to see whether the absorption metaphors used by reviewers on Goodreads differ between the genres they read.

### **8.2.4 Narrating Identity: The Impact of Absorbed Literary Reading on Storied Autobiographical Memory Development**

Shawn Douglas

Absorbed literary reading is impactful, especially those aspects that involve metaphor comprehension. Absorbed reading of this kind has been characterized in two distinct ways; one that is expressive (expressive enactment), and another that is integrative (integrative comprehension). Expressive enactment during absorbed literary reading involves metaphors and aesthetic outcomes that can transform feelings and self-perceptions (Kuiken & Douglas, 2017; Kuiken & Douglas, 2018; Kuiken, Miall & Sikora, 2004b). Alternatively, integrative comprehension involves conventional metaphors and pragmatic outcomes that can lead to a deeper comprehension of world knowledge and the mental states of others (Johnson, 2012; Kidd & Castano, 2013; Bowes and Katz, 2015; Mar et al., 2006). However, previous research has yet to capture the impact of these contrasting forms of absorption on storied autobiographical memory development (Goldie, 2012). Utilizing three studies, we develop and validate a new questionnaire (Narrating Identity Questionnaire - NIQ). The NIQ articulates a framework for understanding the narrating of identity through the interplay between expressive narrating (primarily self-implicating – based in personal knowledge) and integrative narrating (primarily world-identifying – based in world knowledge). The results indicate that while an expressive approach to narrating identity directly supports a form of self-understanding, an integrative approach to narrating identity may simultaneously support this self-understanding by “inoculating” against rumination. Results are discussed first in terms of a new synthesis

in mental simulation research that includes an expressive form of mental simulation, and second, in terms of future directions for the NIQ.

## 9.1 Externalizing the Internal

Room: LA  
Chair: Wayne Christensen

### 9.1.1 The Anxiety of Influence: Reading the Exterior Modernist Mind and Feeling

Yuexi Liu

The feeling that marks the exterior modernists, not least Ernest Hemingway, Evelyn Waugh, and Anthony Powell, in the troubled relationship with their high modernist precursors is anxiety, more precisely the anxiety of influence as expounded by Harold Bloom in his influential 1973 study. This anxiety can be read in their early work, more clearly in the manuscripts than in the published versions. The autograph of *The Sun Also Rises* (1926), which records the young Hemingway's apprenticeship, is an exemplar. The creation of their distinct version of modernism manifests a conscious outward turn that departs from the intense interiority of the previous literary generation. If the exterior modernists' interwar fiction – *The Sun Also Rises*, *Vile Bodies* (1930), and *Afternoon Men* (1931), for example – betrays a sense of 'askesis', defined by Bloom as 'a movement of self-purgation which intends the attainment of a state of solitude', their mid-century work – particularly *For Whom the Bell Tolls* (1940), *Brideshead Revisited* (1945), *A Dance to the Music of Time* (1951-1975) – can be viewed as attempts at apophrades, 'or the return of the dead', by revisiting high modernism. Notably, the anxiety of influence is also evident among the exterior modernists themselves. Intertextuality in Powell's all-encompassing *Dance*, a final word on his generation, might be regarded as an act of collective remembering, which is predicated on the understanding of memory as extended not only beyond one single mind to other minds but also incorporating the world of objects.

### 9.1.2 Facilitating Embodied Skills under Pressure: Two Anxious Moments on the Trapeze

Kath Bicknell

How do experts guide their minds and bodies to perform skilful tasks under pressure? How do they draw on internal, external and interactive features of the performance environment to do so? And how do we begin to describe, conceptualise or search for these processes in the lived complexity of the real-world environments they are uniquely matched to?

In this paper, I present findings from a three-year autoethnographic study investigating the ways cognitive strategies developed in high-performance sport in one domain (mountain biking) may influence developmental experiences in another (the trapeze). In doing so, I describe the value of phenomenological and ethnographic methods as one avenue for responding to the questions above, methods which are frequently called for in studies of skill and cognition in philosophy and psychology. Focusing on emotion regulation, my analysis highlights the distributed, idiosyncratic and context-specific ways in which strategies honed on the bike, and in a physiotherapy context, fundamentally shaped experiences of lowering and raising anxiety, and sharpening focus, before attempting complex tricks for the first time on the trapeze. These observations raise questions about the collaborative development and cross-domain transfer of cognitive and embodied skills, the dynamic nature of agency and affordances, and highlight the value of experientially-grounded research methods to interdisciplinary debates on skilled action and cognition. By rendering implicit strategies explicit, these findings demonstrate the reciprocal benefits of interdisciplinary study in actively shaping new paradigms for ongoing research.

### 9.1.3 Minding the Gap: Cognitive Modelling of the Fragmentary Mind in Cut-ups

Daria Baryshnikova

My paper sets theoretical grounds for the study of cut-up prose reappeared in multiple forms in the 1960s in the works of Bryon Gysin, W.S. Burroughs and others. At that time cut-ups started the trend for representation suitable for mapping the simultaneity of conscious and unconscious processes. I proceed from the premise that cut-ups represent how thinking, perceiving, acting and feeling are experienced in a permanent exchange between agents and their environments. Then, the question is: What is that mind which is represented in cut-ups and how these representations are related to the ideas of cognitive studies?

Instead of object-based descriptions of minds contemporary cognitive approaches paves the way for the contextualized and on-processes-oriented understanding of minds. I suggest correlating the idea of cognition without content (Hutto and Myin 2012, 2017) with the fact that cut-up narratives also do not have content if by content to understand a plot derived from the literary work. How readers are to construct mental states in such cases? How does the fact that these minds are coupled with the environments enrich our understanding of the montage prose? I will suggest that the reader of cut-ups can interact with them directly, without intervening mediation of mental representations.

## 9.2 Phenomenology, Time, and the Event at the Intersection of Art and Science

Room: AM

Chair: Marion Behrens

These three papers explore how to share the cognitive worlds of time, event, and interaction through theoretical and methodological perspectives informed by event theory, ethnomethodology, and neurophenomenology. Case studies from the arts and sciences are used to ground discussions of temporality and phenomenology to ask questions about experience, analysis, generalization, reporting, and aesthetics.

### 9.2.1 Writing With Brains: A Situated Analysis of Event-Related-Potentials Research

Sarah Klein

4E cognition expanded the boundaries of cognition beyond the brain, opening up new domains, objects, and practices that can be shared between the sciences and the arts and humanities. Yet, these expanded territories seldom include the embedded, enactive work of researchers themselves. In this paper, I explore an alternative way to 'share cognitive worlds', by considering the cognitivist paradigm itself as an enacted achievement. Adopting approaches from ethnomethodological studies of scientific practice, I ask how cognition research is performed, and in particular, how cognition is materialized in the brain by those studying it. Working from ethnographic research in a cognition lab that studies perception, language, and meaning, I engage closely with electroencephalography, or EEG, and one of its inscriptions, the Event-Related-Potential (ERP). The ERP technique is an experimental and analytic method by which cognitive scientists use EEG to evoke and interpret averaged recordings of subjects' brain activity in order to answer questions about when and how certain cognitive actions unfold in the brain. I describe how scientists use EEG/ERP to write with brains, enacting complex, embedded composite inscriptions they call ERPs. I argue that ERPs are situated temporal objects that, in order to mean, refuse to be reduced or divorced from the performative systems of activity which produce them. My analysis of the ERP locates the implicit reproduction of dualistic premises in the research apparatus itself, thus opening it to intervention, offering paths to new configurations between the arts, humanities, and cognitive sciences.

## 9.2.2 The Phenomenological Refraction: Staging First-Person Neuroscience as a Two-Hander

Yelena Gluzman

Since Francisco Varela's adoption and specification of the term neurophenomenology (1996), there has been growing discussion about the (im)possibilities of a "first-person neuroscience" that would take phenomenal experience as its research object. As Varela aptly identified, the major problem in advancing a robust neurophenomenology is methodological. Here, I take up Varela's important proposal of the phenomenological reduction—in its stages of reduction, intuition, description, and training—as providing "a clear methodological ground leading to a communal validation and shared knowledge." While I agree with Varela on a number of points, I question his premise that the first stage of such a method (the attitude of reduction) necessarily occurs in and is performed by an individual, and that intersubjectivity (along with the possibility of validation and shared knowledge) subsequently emerges when the resulting experiences are described through "invariants" and shared with a neurophenomenological community of practice. In tension with this view are various frameworks that understand phenomenal experience and its apperception to emerge squarely in the realm of lived interaction (e.g., Garfinkel's ethnomethodology, Hutchins' distributed cognition, Vygotsky's cultural-historical activity theory, Conquergood's performance studies). Here, building on methodological insights from the theorists cited above, and using the example of an arts-based, reflexive, multi-layered collaboration with a cognitive neuroscientist, I would like to consider whether Varela's methodology for a first-person neuroscience can be approached through a refractive dramaturgy with multiple actors and competing contexts for action and reflection.

## 9.3 Feeling Weird: The Aesthetics and Implications of the Difficult, Unspeakable, Tangled, Bottomless and Unpredictable

Room: RA  
Chair: Ben Morgan

This panel is interested in the relationship between the challenges of reading a text or event, or dealing with its implications, and the aesthetic experience of "weirdness." The speakers will work with fictional texts which we identify as "weird," or as producing weird effects, in order to analyse why and how such effects are produced and what they have to tell us about our cognition, particularly in acts of reading. The question of how we investigate the phenomenon of weird experiences requires that we have a working definition of the weird and an expansion of the disciplinary discourses that can be brought to bear on its analysis – this panel aims to make contributions in each of these areas by demonstrating how the cognitive humanities is uniquely poised to unite arts, humanities, and scientific work in understanding weirdness.

### 9.3.1 Being Beautifully Weird: Entangled Cognition, Sublime Fear, and Beautiful Wonder

Matt Hayler

Weirdness is pressing at the walls. Weird fiction (Lovecraft) and new weird fiction (Mieville; Vandermeer), the weird and the eerie as aesthetic categories (Fisher 2016), and the philosophies of weird realism (Harman 2012), each address our relationship with a feeling which is more than frightening or uncanny. Weirdness is a kind of vertigo, a realisation of unfathomable size, age, implication, or strangeness that is often unsayable, its effects felt only as frictions, glimpses, and subtle determinations. For Lovecraft, the only way the vast, alien Old Ones (such as Cthulu) make themselves known is through the sudden madness of people who come too close.

This paper will argue that we can further refine what might be understood by weirdness and show how a feeling of the weird can be produced by artworks, as has already been established, but also how the

entanglement of humans, non-human animals, artefacts, and our environments is also profoundly weird in a definable aesthetic and philosophical sense that is closely allied to contemporary work in cognitive science, posthumanism, and new materialism. The paper will discuss two kinds of weirdness, sublime weirdness and beautiful weirdness, and how the latter can be beneficially cultivated at the expense of the former with implications for both research and daily politics. When it comes to a richer sense of cognition, sublime fears of a loss of agency can interrupt a beautiful realisation of interconnection.

### 9.3.2 The Existential Weird: Minimal Estrangement, Literary Form and Reminders

Karin Kukkonen

“Aujourd’hui maman est morte”, begins Albert Camus’ *L’Étranger* (1942). The opening sentence creates a minimal prediction error, which can be resolved grammatically, but retains a strange sense of temporal suspension between *passé composé*, *passé simple* and present tense. The present paper is going to make the argument that besides the fantastic and sublime incarnations of the weird, there is also a tradition of the existential weird arising from an interplay of the banal and the bottomless, with respect to predictive processing (Hohwy 2013; Clark 2016; Kukkonen forthcoming). I will work out different kinds of minimal prediction errors from the fictions of Camus, Franz Kafka, Ottessa Moshfegh and Camille Laurence, and discuss how they constitute a less dramatic kind of estrangement. Nevertheless, I argue that also such narratives of the existential weird can do important epistemic and conceptual work, by drawing attention to the ways in which they affect readers’ perception of inner bodily states (Garfinkel 2015) and reminders in autobiographical memory (Miles and Berntsen 2015). The concept of the existential weird thereby fine-tunes the grasp of 4E approaches to cognition on the personal relevance of literature (Kuzmičová and Bálint 2018) and its relation to the phenomenological tradition, on which existentialism built in philosophy.

### 9.3.3 Speculative Fiction and The Difficulty Of Form

Merja Polvinen

Speculative fiction has had a long history with the concept of estrangement. On the one hand, the term is used to describe a situation where a speculative narrative estranges us from our own reality – makes us see it anew. On the other hand, SF typically creates future societies and alien realities which it aims to make as believable as possible. This interplay has been approached by Darko Suvin (1979) in his definition of “cognitive estrangement” as an SF effect that defamiliarises reality by offering alternatives to it, and that consequently generates in readers new knowledge of that reality.

However, some of speculative fiction has specifically aimed to question the cognitive value of estrangement – if cognitive is understood in the restricted sense of knowledge generation. In the works of these authors, estrangement resembles more Shklovsky’s original sense of a difficulty that halts perception. One recent example of such works is Catherynne M. Valente’s *Radiance* (2015), a novel that thematises our vision of reality, the variety of ways to represent that seen reality, and the creation of different realities. To do so, the novel takes an explicitly self-reflective stance, and mixes together literary conventions from science fiction, fantasy and realism in order to prolong and make difficult the perception of those very conventions.

By combining my discussion of Valente’s novel and Shklovskyan estrangement with theories of enactive cognition, I will argue that difficult form and self-reflective techniques can be read as inviting readers to enact abstract cognitive environments where the literary qualities are as concretely present as characters and setting.

## Excursions

We have multiple Excursions planned for you, to show you some informative and cultural things our region has to offer.

### Max Planck Institute for Empirical Aesthetics – Frankfurt



©MPIEA / Felix Bernouilly

The Max Planck Society for the Advancement of Science is one of the leading societies for modern scientific research worldwide. With its over 80 research institutes, it supports research in the natural, life and social sciences as well as the arts and humanities.

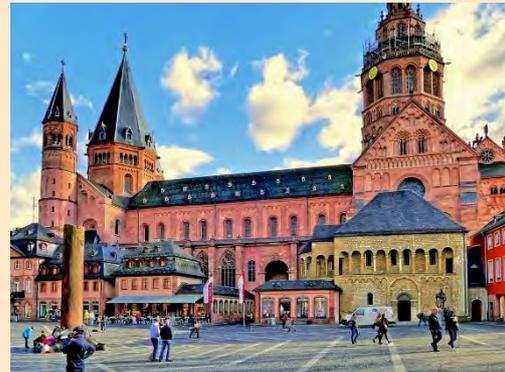
The objective of the Max Planck Institute for Empirical Aesthetics is “to arrive at a deeper understanding of the mechanisms, elicitors and functions of aesthetic liking and aesthetic preferences: Who appreciates what and why and under which conditions? And what functions do aesthetic practices and preferences serve for individuals, social groups and societies?” The Max Planck Institute has its very own ArtLab, which is a performance hall and recording studio, allowing the researchers to gain real-time data on how audiences experience music and other performances.

For more information on the institute please visit: <https://www.aesthetics.mpg.de/en.html>

We have arranged a tour of the institute for 50 delegates who will be taken to Frankfurt and back by a bus provided by us. The bus will pick up the delegates **at 8:30 am on Friday 21<sup>st</sup> June at the B&B Hotel Mainz.**

### The City of Mainz

With its 2,000-year history, Mainz is a historical and cultural hotspot in the Rhine-Main Metropolitan Area. Many remains of buildings from the Roman age can be found throughout the city and its surroundings. Mainz’s over 1,000-year-old cathedral lies in the centre of the oldest part of the city. Furthermore, Mainz is the birthplace of the invention that sparked the scientific revolution of the 15th century – the printing press (whose moveable type you find in our design for the conference). We have arranged a tour of the city for our delegates so that they can learn more about the rich history behind the city where Johannes Gutenberg invented the printing press, the reason we can conduct the research that has brought us all together.



For more information on the city of Mainz, visit: <http://mainz.de/en/index.php>

The delegates will **meet Tim Domke at the Main Station at 9:00 am on Friday 21<sup>st</sup> June** and from there walk together to the starting point of the guided tour.

## Conference Dinner

The conference dinner of the 2019 Cognitive Futures in the Arts and Humanities conference will take place at the Kupferbergterrassen in Mainz. Founded in 1850, it has become one of the best sparkling wine press houses. Located on a hill at the centre of Mainz, it allows for a spectacular view across the city. The restaurant has a long tradition of regional cuisine and offers a menu compiled of the best ingredients of the season.

The drinks will not be included at the dinner.

For more information on the restaurant, visit: <https://www.hochzeiten-kupferbergterrassen.de/restaurant-kupferberg/> (German only)



## How to get to the restaurant

To get to the restaurant take the tram 51 towards Finthen Poststraße or 53 towards Hechtsheim Bürgerhaus and alight at Hauptbahnhof West. You will see the Intercity Hotel Mainz behind you. Cross the street to get to the sidewalk where the hotel is and turn left. After 400 meters you will have crossed a bridge over the train lines and arrive at a big crossing. Cross the street and turn right uphill (Alicenstraße). Follow this street until you are at a big intersection with four streets. Turn left here (Kupferbergterasse). After 100 meters the restaurant is on your right (Kupferbergterasse 17-19, 55116 Mainz).

## ALPHABETICAL INDEX

Name	Panel	Page
Abrantes, Ana Margarida	7.2	41
Aho, Olli	5.2	30
Akhapkin, Denis	1.2	15
Arnavas, Francesca	4.3	27
Baryshnikova, Daria	9.1	48
Bergs, Alexander	5.3	33
Bermúdez, Victor	6.1	35
Bicknell, Kath	9.1	47
Blair, Rhonda	3.3	23
Blanchet, Robert	7.2	42
Blatter, Janet	3.1	20
Blohm, Stefan	7.3	42
Brockerhoff-Macdonald, Bettina	2.2	17
Brylla, Catalin	4.1	23
Bulot, Nicolas	5.3	32
Christensen, Wayne	4.2	26
Cook, Amy	1.2	14
Diem, Christof		
Douglas, Shawn	8.2	46
Drewing, Ingmar	3.1	19
Fayn, Kirill	6.3	38
Fialho, Olivia	5.3	32
Frahnert, Vanessa	5.1	29
Gluzman, Yelena	9.2	49
Gross, Madeleine	6.1	34
Gruber, David	2.3	19
Hamilton, James	7.1	40
Havlickova Kysova, Sarka	8.1	44
Hayler, Matt	9.3	49
Jackson, Brad	1.1	13
Jaén Portillo, Isabel	4.3	27
Klanjscek, Neva	4.2	26
Klein, Sarah	9.2	48
Knoop, Christine A.	8.1	44
König, Barbara	3.3	22
Kolaiti, Patricia	1.1	13
Kroener, Oliver	6.3	38
Kuijpers, Moniek	8.2	46
Kuiken, Don	8.2	45
Kukkonen, Karin	9.3	50

Kutsch, Caroline	8.2	45
Lang, Robert	6.3	39
Li, Chongbi	6.2	36
Liu, Wie	6.2	37
Liu, Yuexi	9.1	47
Luan, Lingfei	6.2	36
Lutterbie, John	2.3	18
Martini, Daniel	6.1	34
McConville, Amelia	7.3	43
Meng, Qi	6.2	37
Moisio, Saara	8.1	44
Morgan, Ben	5.4	30
Mortu, Ancuta	7.1	40
Moss-Wellington, Wyatt	1.1	12
Murphy, Maiya	3.3	22
Nebesio, Bohdan	7.1	41
Newman, Hannah	3.2	21
Omerhodzic, Sabina	3.3	22
Pearlman, Karen	4.1	24
Penna, Christina (Xristina)	2.1	16
Polvinen, Merja	9.3	50
Reber, Rolf	5.3	33
Rembowska-Płuciennik, Magdalena	4.3	27
Rismondo, Frano	6.1	34
Römmer-Nosseck, Brigitte	6.1	34
Rokotnitz, Naomi	2.1	15
Ruppel, Richard	2.2	16
Sadr, Javid	6.3	37
Sakuta, Aska	5.2	31
Salgado Ivanich, Candela	7.3	42
Schabio, Saskia	5.1	30
Scott, Jeremy	6.1	35
Scott, Penelope	4.2	25
Sennewald, Nadja	1.1	12
Shaughnessy, Nicola	3.2	21
Shaughnessy, Robert	3.2	21
Shively, Elizabeth	4.2	25
Sidiropoulos, Ioannis	2.3	18
Simon, Gábor	4.3	28
Simon, Julien	4.1	24
Simonsen, Line Maria	2.2	17
Spolsky, Ellen	1.2	15
Tucan, Gabriela	5.1	29
Unterpertinger, Erika	6.1	34

Warburton, Edward	5.2	31
Wen, Yongchao	7.2	42
Wheeler, Michael	2.1	15
Willemsen, Steven	6.3	38
Zhao, Nan	4.1	24
Zhao, Yi	6.2	37
Zhaoli, Feng	6.2	37
Zunshine, Lisa	1.2	14

