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Cognitive Futures in the Humanities

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Book of Abstracts

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PANEL SESSION A

A1: INTERDISCIPLINARITY

Anna Pleshakova (U of Oxford): Metaparody in Contemporary Russia

In this paper I use the case of Dmitry Bykov's "Заразное" (Infectious) to explore metaparody (Morson, 1989), the genre which has received very little attention in literary studies, and has not been explored from the cognitive linguistic perspective so far. I demonstrate that Bykov's performance of metaparody can be seen as a tool related to the process of Russian nation-building as well as the corresponding discourse. Adopting the principles of cognitive poetics and Steen's (2011) approach to the interdisciplinary exploration of genre, I utilize conceptual integration/blending (Fauconnier and Turner, 2002; Turner, forthcoming) as the core analytical tool to reveal: 1) the linguistic, conceptual and socio-cultural aspects of the metaparody's creation and understanding; 2) the important aspects in the construction of the post-Soviet Russian national identity; and 3) the relations between the two as realised in Bykov's work. I argue that all these important aspects and relations would have not otherwise been evident, and that the conceptual blending analysis of metaparody creates a model for analysis of parody in Bykov's work as part of the critical discourse of national identity in today's Russia.

Andrei Ionescu (U of Padua): Can Literature Make Us Better Cognitive Scientists? Towards a Pragmatics of Reading and Interpretation

In the last two decades, literary scholars have become increasingly interested in work done in the cognitive sciences. In their view, a proper understanding of the nature of the mind and its evolutionary history is crucial for a better grasp of literary phenomena. Furthermore, a dialogue with the cognitive sciences is thought by many literary scholars to be a first step out of the perennial 'crisis in the humanities.' Unfortunately, until now, we mainly witnessed a unidirectional transfer of knowledge – from the cognitive sciences to the literary studies. My claim in this paper is that there could be other possibilities for dialogue between the two fields. I will show that literature's function in de-habituating our mundane experience and in significantly transforming our cognitive make-up - as discussed by Victor Skhlovsky through his concept of *ostranenie* or, more recently, from a hermeneutic/phenomenological perspective by Paul Ricoeur or Richard Kearney, as well as by Ellen Dissanayake or David Miall from a cognitive/evolutionary perspective - could turn reading and interpretation into powerful tools for increasing attention and (self-) awareness. Training in literature would thus be functionally similar with training in phenomenological reduction, a skill which already proved crucial in neurophenomenology, a recent sub-field of the cognitive sciences initiated by Francesco Varela.

Marina Grishakova (U of Tartu): Naturally Complex Narrative Minds: 'Hybridity' and 'Complexity' as Nomadic Concepts

While drawing on the notion of "vague concepts" and two types of vagueness – vagueness of meaning and vagueness of application (see Putnam 1975, Margolin 1981, Williamson 1994), the paper explores routes and modes of interdisciplinary transfer and translation between the sciences of mind and the humanities by focusing on the concepts of hybridity and complexity. "Hybridity", increasingly popular in media and culture studies, is a recent coinage in the philosophy of mind, the "hybrid mind" (Donald 2001, Menary 2007) being used interchangeably with or additionally to the "extended mind" (cf.: "emergent cognitive/ neural processes and structures extend throughout the body and loop through cultural and material environments" Thompson, *Mind in Life*, 2007). The hypothesis of hybridity throws new light on the fact that two or more kinds of functionality and logic are involved in cognition – e.g. the neuropsychological, bodily-grounded and interactional, social functionality that are dynamically entwined and, in a sense, brought to extreme in complex dynamic processes, yet never fully synthesized. From this perspective, hybridity appears to be a form of complexity and an urge for differentiation. This paper discusses how and in what respects the usage of the concepts, such as "hybridity" and "complexity", in the humanities and cognitive science could be mutually enlightening and heuristically interesting: how e.g. the study of narrative as a hybrid structure, as a leap from observable behavior to unobservable mental states and, thus, an experience of alterity and transgression may foster new understandings of mind's functioning.

A2: EMBODIED & EXTENDED MIND

Ben Morgan (U of Oxford): Cultures of Mindreading: Why the Messiness of Novels Makes for Better Phenomenology

Using examples from 19th-century English fiction (Dickens, Eliot, Thackeray) the paper will show the interesting plurality of views contained not just across authors but in individual works when it comes to portraying human emotional interaction or what the neuroscientific literature calls variously "mindreading," "emotional contagion" or "social cognition." Novels operate with different and often competing models simultaneously. One approach to this tension would be to say the novels are theoretically inconsistent. But the pluralism may in fact be a better index than conceptual uniformity of how people relate to each other in their everyday lives. This raises a number of questions: is the plurality an example of 'folk psychological' confusion which hard science could reduce to a single model, or is the pluralism actually a better model of interaction, and if better: according to which criteria? The paper will argue that these nineteenth-century, realist novels are not just a quarry of examples of fictional interaction, but an invaluable theoretical resource for thinking about the way human interaction is managed in modern societies. The paper aims to help shift the focus of research on narrative away from the inside perspective ("the feeling of what happens" in Damasio's phrase drawn on by Kay Young in her *Imagining Minds* [2010]),

and to look instead at the way the novel, particularly in the period from the 1840s to the 1920s, acts as a social space for reflecting on, coming to terms with and even transforming shared habits of interaction.

Brook Miller (U of Minnesota, Morris): Embodied Cognition and Psychological Realism

This presentation focuses upon the potential of recent theories of embodied cognition (and enactivism) to supplement analyses of psychological realism. Psychological realism, especially stream of consciousness technique, describes prose writing in which motivation, subjective perception, emotion, and other features of consciousness are emphasized in relation to external action. Embodied cognition stresses the irreducibility of consciousness to mental activity. Instead, consciousness is understood as an integrated, continuous network of environmental and neural processing. This approach permits new analyses of literary prose. If older approaches to stream of consciousness tend to emphasize parallel processing, new approaches informed by embodied cognition favor integrated processing. This manifests in several conceptual novelties that, I believe, have much to offer scholars of literary fiction:

1. self is conceived as a situational, iterative fiction that is generated in multiple temporal frameworks, as a locus of the processing of experience;
2. patterns in mental processing, such as flashback, are understood as strategies for coping with (and processing) experience, rather than as reactions;
3. reflexive thought, that is, thought about thought, emerges both situationally and over the lifespan as a form of processing experience, rather than as a construct of language.

To develop these ideas, I'll consider the recent work of Daniel Hutto, Erik Myin, and Alva Noë in relation to theories of psychological realism. I'll draw upon a limited selection of passages from John Banville's *The Book of Evidence* (1989) to illustrate how these three concepts help explain some forms of psychological realism in prose fiction.

Doreen Triebel (Friedrich Schiller U, Jena): The Obscured Fictional Mind: Readers' Mentalizing and Empathic Responses to Opaque Characters

It is by now well-known that our Theory of Mind — the capacity to attribute mental states to other individuals — is not only an important mental faculty that helps us to navigate the social world but also a significant aspect in the process of reading fiction. In our everyday social interactions we use several kinds of information, including body language or extralinguistic and paralinguistic elements of communication, to draw inferences about the mental states of real people, but we can never be certain about the accuracy of these conjectures. In literature, on the other hand, authors employ different narrative techniques by which characters can be represented on a continuum from transparency to opacity, i.e. literary texts can allow readers privileged insights into a character's mental workings or obscure his/her beliefs, desires or intentions in a way that renders the character's mind virtually unreadable. This paper will demonstrate that, since the two concepts of Theory of Mind and empathy are closely interrelated, the level of transparency with regard to the fictional personnel is an important factor influencing the reader's empathic responses towards different kinds of characters. Furthermore, I propose to show that the reduction of insights into characters' mental states has a significant bearing on the reader's moral judgements and that it is an important element in the creation of villainous characters or in othering, the process that establishes individuals who differ from ourselves as the Other and that is frequently associated with the reinforcement and reproduction of positions of domination and subordination.

A3: PERFORMANCE

Vanille Roche-Fogli (U of Paris III): Presence on Stage, Embodied Mind or Mindful Body: An Interdisciplinary Approach to Acting and Neuroscience

In her book, *The actor, image and action: acting and cognitive neuroscience*, Rhonda Blair says, speaking about the impact of cognitive sciences in the theatre studies: "what we are learning about (...) the way emotion, reason and physicality are ultimately inseparable in the brain structure and function, has significant implications for how we understand what happens when we act". Here, we propose to focus on the question of presence and present on stage: we usually use this word to describe the power of an actor to catch the audience's attention. Theatre is also seen in the same time as an art of ephemeral and of repetition: the situation lived on stage by the artists is supposed to be new for the characters every time. In what ways actors' sensori-motor training can enhance their abilities to be present on stage and present in the moment they act without anticipation, and in what ways neurosciences studies can help us to understand it? This paper will focus on three French and Italian acting teachers in France: Delphine Eliet, director of her own school, Alexandre Del Perugia ex-director of the National Centre for Circus Arts, and Daria Lippi, teacher in one of the nine national theatre school. They are all authors of organic training methods. In an epistemological perspective, I will try to determine how, through their method, the concept of embodied cognition can highlight the learning process of their students in terms of physical action, attention and implicit memory.

Christopher de Selincourt (Cardiff Metropolitan U): Intermediaries' Knowledge of Cinematic Heuristics

Rather than assume that all mental processes take place exclusively in the brain, the Extended Mind thesis [Clark and Chalmers, 1998] considers cognition as also being constituted by extra-neural processes occurring in our environment. This opens up an exciting line of enquiry that is particularly relevant to cinema, specifically the process of editing, where cognitive solutions are found not just in the imaginations of filmmakers but are often consecrated during the edit. In a direct response to recorded audiovisual material we find the editor working between the constraints and contingencies of the cinematic apparatus, attempting to bring continuity and cohesion to what might otherwise be a chaotic, meaningless assortment of events. Considering the nature of this practice it is perhaps surprising to find that the editors experience is often overlooked in both cinema studies and cognitive science. In the past there has been little attempt to analyse the

perceptual demands of working with audiovisual material or particular editing tools, or even the particular sense making capabilities of the editor. To truly appreciate the process of transformation occurring between a natural event and its appearance on the screen we need to examine how editors think using audiovisual materials and editing technologies. This paper will analyse the experience of editors and their role as intermediaries between technology and the cinematic experience.

Pil Hansen (U of Toronto): Memory, Skill, and Effort in Performance Generating Systems

This paper reports on results from the SSHRC-funded project *Acts of Memory* (University of Toronto 2009-12). *Acts of Memory* asked how and to what extent autobiographical memories that performers' invest in systems of instant dance and devising creation are altered. These questions were asked in the context of two *performance generating systems* that use autobiographical memory as source material, "futuring memory" and "lie-lining," and they were pursued in controlled behavioral experiments with Ame Henderson of Public Recordings (Toronto and Amsterdam) and James Long of Theatre Replacement (Vancouver). Before, after, and control tests of autobiographical memories were compared to answer the question of extent; Dynamical Systems Theory (Thelen and Smith) was used to analyze the interactions and parameters leading to the observed changes. Significant changes were documented and control parameters such as discipline-specific training of certain perceptual modalities, memorization techniques, empathy, competition, and fatigue were identified and linked to the attracted behavior in the systems' different phases. These findings contribute new insights to and can become further enriched through Gerald Edelman's neurobiological theory of reconstructive memory, studies of Mirror Neuron System and cross-modal perception within the cognitive sciences, Kirsh and May et al.'s interdisciplinary work on imaging and memorization in dance, and a broad spectrum of perspectives on dance and devising dramaturgy within performance studies. When reapplied to performance practice, the results of *Acts of Memory* have been used strategically to match the performers' gradual skill acquisition with increased complexity in order to keep their effort alive in the work while ensuring that they remain capable of performing within the system.

A4: GENERAL SESSION

Ronald Hünneken (U of Groningen): Does Reading Undermine Mind-Reading?

Over the past decade multiple researchers have established a positive link between people reading fiction and their empathetic ability, their ability to read other people's mind. This link is invariably recognized with tests like the FEEST or derivations thereof, which revolve around the assumption that the cognitive process of recognizing mediated (on photo or video) expressions is similar to that of recognizing facial expressions in everyday life. Our sensomotoric relation with representations in visual media is, however, very different from the relations we entertain with real (unrepresented, unmediated) faces. In everyday encounters we can use facial expressions or bodily movements of our own to interact with the faces we encounter. In other words, an enactivist approach implies that everyday detections of facial expression hinge upon a two-way process of probing, poking and peeking. So tests like the FEEST, rather than testing the subjects' ability to recognize facial expressions, test the subjects' abilities to handle mediated representations of expressions. In this light the small positive effect of reading on empathy seems almost trivial. Or even worse, the act of reading might conceivably undermine real-world mind-reading, because it promotes a more passive analytical rather than an active investigational attitude. When we adopt an enactivist, extended or embodied approach, the role of the arts (including literature) within a human society becomes more multifaceted and multilayered without being simply either good or bad. At the same time, precisely in this approach, the arts logically take on a role central to our detached, metacognitive view of the world.

Paul Armstrong (Brown U): How Historical is Reading? What Book History Can Learn from Neuroscience

It is a commonplace of our contextualist age that reading is radically historical and that it is consequently a mistake to make inferences about how readers in the past processed texts on the basis of our lived experiences as readers today. Eminent book historian Robert Darnton complains, for example, that many reader-response theorists "seem to assume that texts have always worked on the sensibilities of readers in the same way. But a seventeenth-century London burgher inhabited a different mental universe from that of a twentieth-century American professor." Contemporary neuroscientific research suggests, however, that there are deep, fundamental continuities in how the brain reads that extend across the several thousand year span during which our species has interpreted written texts. The basic anatomical features and fundamental cognitive processes of the brain have not changed significantly between our origins in Africa and the twenty-first century English Department. Instead, its long-enduring natural capacities have adapted themselves to the unnatural act of reading written signs through what neuroscientist Stanislas Dehaene calls "neuronal recycling." Phenomenological descriptions of the reading experience, often wrongly dismissed as universalist and essentialist, are correlated to these long-term cortical and neuronal processes. A neuro-phenomenological model of reading, drawing on the theories of Edmund Husserl, Francisco Varela, Evan Thompson, Maurice Merleau-Ponty, Roman Ingarden, and Wolfgang Iser, provides a link between how we process texts today and how our forebears construed them—a link that demonstrates how meaning-now is related to meaning-then, a crucial (but too often neglected) dimension of reading's historicity.

Franziska Hartung (Max Planck Institute, Nijmegen): Getting Under Your Skin: The Role of Perspective in Narrative Comprehension

When we read literature, we often become immersed and dive into fictional worlds. The way we perceive those worlds is the result of skillful arrangement of linguistic features by story writers in order to create certain mental representations in the reader. Narrative perspective, or focalization, is an important tool for storywriters to manipulate reader's perception of a story. Despite the fact that narrative perspective is generally considered a fundamental element in narrative comprehension, the cognitive effects on story reading remain unclear. In previous research, various methodologies were employed to

investigate the cognitive processes underlying narrative comprehension. However, studies used either self-report procedures or behavioral tests to investigate reader's reactions and refrained from combined methodologies. In the present study we combined skin conductance measurements and questionnaires while participants read short stories in 1st and 3rd person perspective. The results show that immersion, imagery and appreciation are higher when participants read stories in 1st person perspective. To our surprise, we found higher arousal for reading 3rd person perspective compared to 1st person perspective narratives. We find evidence, that individual difference in arousal between the two conditions is related to how much readers empathize with the fictional characters. The combination of methodologies allows us a more differentiated understanding of the underlying mechanisms of immersion. In my talk, I want to highlight how we can gain more from interdisciplinary research and combinations from various methodologies to investigate cognitive processes underlying narrative comprehension under natural conditions.

A5: GENERAL SESSION

Lars Bernaerts (Ghent U): Experience, Comprehension, Interpretation: Levels of Reading in Cognitive Literary Studies

In the conclusion of his essay on “‘Literary Interpretation’ and Cognitive Literary Studies’ (2003), Tony Jackson asks: ‘how can cognitive science be blended with the study of literature in such a way as to preserve the dialectical meaning of *literary interpretation*?’ Today, the jury is still out, even though the question is a pivotal one. Against the backdrop of Jackson’s question, my paper wants to discuss the potential and the limitations of neurocognitive ways of conceptualizing literary reading. First, the paper explores how cognitive literary studies has dealt with Jackson’s question. Many scholars have namely broached the question as to how the nature of the literary object as well as the literary dimension of the act of interpreting can be acknowledged in a neurocognitive approach. ‘Early’ studies (Turner 1991, Spolsky 1993) as well as recent ones (Easterlin 2012) reflect upon the potential value of integrating insights from the neurocognitive sciences. Second, the paper examines how cognitive approaches differentiate between levels of literary reading. A striking feature of cognitive literary studies (insofar as we can consider it as a whole) is its commitment to explain various mental procedures in reading literary fiction: a basic level of experience and feeling (see e.g. Miall), a level of narrative comprehension (see e.g. Emmott), and a level of literary interpretation (see e.g. Easterlin). The paper will consider these research projects as mutually enriching and, potentially, as parts of a comprehensive neurocognitive theory of literary reading.

Matt Owen (U of British Columbia): Authorship, Biography and Reading

This paper argues for a cognitively informed understanding of the role of authorship in processing literary texts. It uses Fauconnier and Turner's cognitive theory of conceptual blending to propose an understanding of how readers navigate the boundary between an author's work and their biography, and how they balance spheres of authorial and readerly authority. Building upon work by Dancygier (2012), Rohrer (2005) and others, and engaging closely with the American author David Foster Wallace's short story, “Good Old Neon”, this paper proposes that, upon engaging with a text, readers enter into a situationally and temporally unique conceptual blend, governed by three mental spaces: the text, the reality, and the reader space. Examination of the function of these spaces reveals the rich interplay between what the reader and the text bring to the moment of reading; how the textual and extra-textual worlds collaborate in the generation of meaning. Featuring both academic and popular criticism of the work as part of its analysis, the paper develops an understanding of different interpretations of the story as different blended readings, and shows how subtle changes to an input space can radically alter received meaning. Further, I spell out the ways in which literary analysis needs to better account for the differing cognitive processes through which readers engage with a text. I propose further investigation into the position of agency within the reading blend, and suggest a “sliding scale” of biographical proximity via which critics might better understand the reader's relation to authorial influence.

Nathalie Schwering (Johannes Gutenberg U, Mainz): Author, Text, and Reader: An Interactive Moral Relationship

Assigning intentionality by employing Theory of Mind is a fundamentally human activity and without it, engaging with fictional (or real) minds would not be possible. Analysing the relationship between the reader and fictional minds, I focus on shifts in readerly interest from the mimetic to the synthetic which often occur when there is a source tag-related problem in the text such as the sudden revelation of a narrator's unreliability. Using an interdisciplinary approach integrating evolutionary psychology and narratology, I argue that morality is embedded in human nature, enabling readers to engage with a text's morality and making narrative judgements about both its form and content. In the interactive relationship among author, text, and reader human nature acts as a common denominator for a successful moral communication among the three. Specifically, I am interested in how the author can manipulate the reader into shifting moral positions by using textual devices, in how the (changing) readerly position is constructed throughout the act of reading a morally challenging text. This includes focusing on a re-definition of reader response in light of evolutionary psychology's stance on human nature: subjective responses are grounded in our common human nature and as such are never 'just' subjective but also potentially part of a species-typical response. Ian McEwan's fiction, brimming with unreliable narrators and moral dilemmas, requires a continuous moral judging of the text on the reader's part. In several novels such as *Atonement* and *Sweet Tooth*, McEwan extends the morality debate beyond morality within fiction to the moral issues of writing and storytelling. I will demonstrate instances of shifts in readerly position and narrative judgement using select works of McEwan as textual examples.

PANEL SESSION B

B1: PERFORMANCE

Dee Reynolds (U of Manchester), Matthew Reason (York St John U) & Corinne Jola (Abertay U): Spectators' Aesthetic Experiences of Sound and Movement in Dance Performance

In this paper we present a study of spectators' aesthetic experiences of sound and movement in live dance performance. A multidisciplinary team comprising a choreographer, neuroscientists and qualitative researchers investigated the effects of different sound scores on dance spectators. What would be the impact of auditory stimulation on kinesthetic experience and/or aesthetic appreciation of the dance? What would be the effect of removing music altogether, so that spectators watched dance while hearing only the performers' breathing and footfalls? We investigated audience experience through qualitative research, using post-performance focus groups, while a separately conducted functional brain imaging (fMRI) study measured the synchrony in brain activity across spectators when they watched dance with sound or breathing only. When audiences watched dance accompanied by music the fMRI data revealed evidence of greater intersubject synchronisation in a brain region consistent with complex auditory processing. The audience research found that some spectators derived pleasure from finding convergences between two complex stimuli (dance and music). The removal of music and the resulting audibility of the performers' breathing had a significant impact on spectators' aesthetic experience. The fMRI analysis showed increased synchronisation among observers, suggesting greater influence of the body when interpreting the dance stimuli. The audience research found evidence of similar corporeally focused experience. The paper discusses possible connections between the findings of our different approaches, and considers the implications of this study for interdisciplinary research collaborations between arts and sciences.

Cécile Guédon (U of Groningen): Kinesthetic Empathy and (Quiet Dance) Steps: Towards a Relational Aesthetics in Dance

In this paper, I would like to suggest that British choreographer Jonathan Burrows' pieces 'Both Sitting Duets' (2002) and 'Quiet Dance' (2005) rely on a communication scheme that fosters on the one hand reciprocity between the two performers and reversibility between performers and audience on the other. My goal is to bring to light some of the formal qualities of Burrows' *ars kinesthetica* which uniquely pertain to a 'relational aesthetics' in choreographic terms. First, the duet performance between Matteo Fargion and Jonathan Burrows is quite explicitly modeled on a call-and-response template, making a subtle use of the counterpoint in kinesthetic terms—and thus constantly playing around the notion of gestural 'reciprocity'. Second, I am arguing that this scheme has a strong didactic value for the audience and calls for a distinct kind of spectatorship, therefore providing the audience members with a 'user's guidelines' of sorts and inviting them to 'join in' the kinesthetic game—if only silently, empathically and proprio-ceptively. Finally, the spectator is effectively 'invited, included and nudged into thought' (Burrows, 2010, 159) because Burrows' authority as choreographer is managed 'ecologically' with respect to Fargion; so is Burrows' authorship as performer in relation with the audience. This last point suggests that the duet between Burrows and Fargion could be seen as an apt representation of a pre-verbal embodiment of thought, as it assumes a plastic and dialogic quality, mirroring in kinesthetic ways the ecological process of interaction between the human mind and its environment.

Carla Fernandes (New U of Lisbon): Performing Arts and Mental Spaces: Digging into a Contemporary Choreographer's Creative Universe

The work presented here has been developed in the framework of the TKB project and is grounded on the convergence of theories and methodologies of multimodal communication, gesture studies, cognitive semiotics and new media. We will claim that two original software applications we have recently developed can generate critical case-studies to help understanding the human mind when engaged in cultural production processes: a video annotator designed as a digital notebook for real time composition processes (designated as *Creation-Tool*); and a collaborative web-based platform working as an "archive of processes" (the *TKB*). These tools will allow us to show how video annotation practices (using natural language, touch-pen drawings or customizable marks) can contribute significantly to analytical processes of performance composition and human creativity, therefore providing a novel way of understanding and documenting the most ephemeral performing arts, as is the case of contemporary theatrical dance. Based on the analysis of video footage recorded during rehearsals of choreographer Rui Horta for his pieces *SetUp* (2005), *Lágrimas de Saladino* (2010) and *Local Geographic* (2010), we will focus essentially on multimodal metaphors, full body movements, emotions and the design of performing spaces. Agreeing that cognition goes beyond the brain and the individual body (Spivey 2007; Anderson 2012), we would like to build on the idea of choreography as "collective thinking in motion", where the artists' mental spaces are metaphorically translated into interacting bodies moving in space as "plural subjects" of action.

B2: STORYWORLDS

Adam Glaz (Maria Curie-Skłodowska U, Lublin): Though This Be Virtual, Yet There is Meaning In't: Virtuality, Language, and Science Fiction

Surprisingly, cognitive linguistics' affair with virtuality has not progressed beyond the flirting stage, the only major model that makes systemic use of the notion being Ronald Langacker's Cognitive Grammar (CG). However, Langacker promises but largely fails to deliver: the internal inconsistencies of his account ultimately lead to more general problems. A major question concerns the role played by *imagination*, a process apparently responsible for three kinds of the conceptualizer's mental transfer: into the realm of (i) elaborated reality, (ii) virtuality, or (iii) a derivative world, where (i) is embedded within (ii) and (ii) within (iii). In CG, elaborated reality arises through our capacity to *imagine* objects and occurrences and

contemplate their epistemic status (e.g. as future, possible, unrealized, etc.). Virtual instances (*a house*) are *imagined* for some purpose within the relevant mental space (e.g. Jill's "need" space in *Jill needs a house*). Finally, a derivative world is an *imagined* world of a myth, legend or novel. It is proposed here that a way out of this conundrum be sought in making a broader and a bolder claim that language is *inherently* virtual. Support comes from three sides: (1) the philosophy of the virtual as real (Gilles Deleuze, Slavoj Žižek); (2) the notion of the efficiency of the virtual (Charles Peirce); and (3) the notion of the linguistic sign as inherently metonymic *qua* virtual (derived from Günter Radden and Zoltán Kövecses's notion of sign metonymy). Here, a fourth argument will be added: the process of metaphorization (interpreted as virtualization) in China Miéville (*Embassytown*, 2011) intellectually provocative portrayal of human *language* through a warped mirror of alien *Language*.

Louise Nuttall (U of Nottingham): Alternative Minds in Science Fiction

In science fiction the types of questions addressed by cognitive science are explored through the medium of alternative or alien worlds, languages, bodies and minds. In some of the best works of the genre a transformed reality is paired with a conception of the kinds of minds that might be found in such changed conditions of embodiment. The sub-category of science fiction termed 'inner space fiction' invites readers to interpret a speculative landscape as a direct reflection of the psyche of its character, narrator or author. In the futuristic reality of *The Drowned World* (J.G. Ballard, 1962), the catastrophic flooding of the Earth triggers a new psychology within its surviving inhabitants, which is reflected in the narrative representation of its transformed environment. Applying surrealistic and imagistic techniques in his writing, Ballard has argued explicitly for the scientific significance of such art in the revelation of the contents and processes of the unconscious mind. In this paper, I draw on insights from Langacker's Cognitive Grammar (Langacker, 2008) and the cognitive linguistic account of conceptual metaphor, in order to explore Ballard's polemical assertion from a cognitive poetic perspective. Significant to this discussion is a consideration of the ways in which representations of fictional minds interact with the minds of readers. The paper presents an analysis of Ballard's novel, and discusses the extent to which an alternative mind is simulated by readers as part of their immersive experience of its fictional world.

Arwa Hasan (U of Nottingham): Unrealized Utopian Textworlds in Dystopian Narratives

Text-World Theory (TWT) emerged as part of the 'cognitive turn' (Steen 1994) in the arts and humanities. A cognitive stylistic framework first created by Werth (1999), and then expanded upon in the works of Gavins (2007), and others, TWT provides a systematic method of tracing the different worlds that are created by the text and experienced by the reader. Readers create a version of the 'text-world' in which they experience texts as fully formed worlds, using the text as a guide for forming and shaping this fictional world in their minds. There has been recent interest in the worlds that are not mentioned in the text, but are created simultaneous 'unrealized' text-worlds; worlds in which the main narrative does not occur but are evoked temporarily, for example, through the use of negations (Hidalgo-Downing 2000; McLoughlin 2013), ambiguity (Al-Mansoor 2006) and dreams (Giovannelli 2013). Due to the systematic nature of TWT, it is possible to shed light on how a 'utopian impulse' is found in dystopian narratives, which typically depict 'nightmare worlds' of oppression (Baccolini 2011). In particular, this paper looks at how narrated character perception which is preceded by counterfactuals can also create 'unrealized' text-worlds through uncertainty, and thus help create this elusive Utopia in a classical dystopian text: George Orwell's *Nineteen Eighty-Four*. If there is hope to be found in a dystopian narrative, it is created through these 'unrealized' text-worlds, which offer an alternate possibility to the main text-world of the narrative.

B3: CULTURE & PATHOLOGY

Elena Semino (Lancaster U): Language and the Phenomenology of Psychosis in an Autobiographical Narrative

In this paper we present a linguistic and narratological analysis of the first-person account of psychosis included in *Henry's Demons* (2011, Simon & Schuster). The book was co-written by Patrick and Henry Cockburn, respectively father and son, and relates the events surrounding Henry's diagnosis of schizophrenia. The sections of the book narrated by Henry were written shortly after his most severe psychotic phase, and have been widely praised for providing an unusually vivid and moving account of his 'lived experience'. We discuss the most distinctive features of Henry's narrative, including: the presentation of the voices of inanimate or disembodied entities, or of absent human beings; the use of the verb 'to feel' to introduce utterances attributed to these voices; a strong focus on the self, a narrowed perspective and a relative lack of attention for others' mental and emotional states; and problems with tellability and coherence in story-telling. These features can be linked to some of the symptoms associated with schizophrenia, notably auditory verbal hallucinations, theory of mind problems and 'disordered' thought and speech. In addition, these distinctive characteristics allow readers to experience the workings of Henry's mind, thereby providing insights into the motivations behind his often disconcerting behaviour. As such, we suggest, they account for readers' overwhelmingly empathetic responses, and for the role that the book has played in giving the public access to the mental life of someone who suffers from an often stigmatised condition.

Rachel Gunn (U of Birmingham): On the Difficulty of Defining Delusion

Delusions are a significant feature of mental illnesses and can occur in more than 75 clinical conditions yet there is disagreement in psychiatric, psychological and philosophical circles about the definition of delusion. When diagnostic texts are consulted (such as DSM 5 and ICD 10) it becomes clear that the definitions given may not be sufficient to differentiate between clinical and non-clinical delusions and between delusions and other abnormal beliefs. (American Psychiatric Association. DSM-5 Task Force, 2013; World Health Organization, 1993). Much of the literature states that elements such as bizarreness of content and incorrigibility of belief are defining factors of delusion. However, I suspect that delusions are far more complex than this – that they are multi-dimensional and lie on a continuum with normal beliefs and perhaps the

difference between clinically significant and non-clinically significant delusions lies in a much narrower place in the phenomenology. This is not a new problem and, as Jaspers puts it: “If incorrigible wrong judgements are termed ‘delusion’, who will there be without delusion, since we are all capable of having convictions and it is a universal human characteristic to hold on to our own mistaken judgements. Nor can the prolific illusions of entire peoples and persons be give the title of ‘delusion’, since this would mean treating a basic human characteristic as if it were an illness.” (Jaspers, 1963, p. 63) If we are to take the experience of subjects with delusions seriously we have to look at the whole phenomenology and understand what makes a pathological delusion problematic as the ‘problematic’ element provides the point of intervention for treatments. With this in mind, I examine some of the philosophical, psychological and psychiatric literature with regard to the definition of delusion as well as my own experience (of myself) and my therapeutic work.

Ilona Roth (Open U): Imagining Differently: The Cognitive Style in Autism

Autism is defined in terms of two key symptom clusters: difficulty in social communication, and a restricted and repetitive range of behaviours and activities. Problems of imagination are integral to both these areas of difficulty. People on the autism spectrum have difficulty with ‘social imagination’, for instance in imagining what other people are thinking and feeling, and with ‘non-social imagination’, for instance preferring rigid, unchanging routines and narrow, oddly focused interests. Yet this profile poses a conundrum: some individuals on the spectrum are gifted in fields such as art, music and writing, which are typically associated with creative imagination; other individuals engage in activities and interests which, albeit narrow and repetitive, are markedly unusual or original. This raises intriguing questions about how imagination and creativity are defined and evaluated from a neurotypical (non-autistic) perspective.

B4: GENERAL SESSION

Janet Blatter (Independent): Visual Discourse And Cognition In Collaborative Storyboarding: An Interdisciplinary Approach To Real-World Design Problem Solving

This presentation describes cognitive research into the design process, specifically the collaborative design of time-based media such as animation, live-action film and video game design. I study visual discourse in storyboarding, how filmmakers use drawings, gestures, and speech to communicate, think, and transform spatial, visual, and temporal ideas while planning their projects. Storyboarding is the fundamental planning tool in time-based arts, where problems are found and solved typically in teams, before committing money and talent. Design problem-solving has been famously termed as “wicked” (Rittel & Webber, 1973). Cognitive research in real-world problem-solving means exploring “wicked” problems in the “wild” (Hutchins, 1995), and within a growing paradigm that views cognition as being embodied (Clark, 1999) and situated (Gibson, 1979). An interdisciplinary framework incorporating third-generation activity theory (Engeström, 2008), cognitive/psycholinguistics (Fauconnier & Turner, 2008) and cognitive models of perception-as-action (Noë & O’Regan, 2002) and the design process (Goel, 1995) was developed in order to make a principled descent into distinct yet interrelated levels of cognition. This framework allows for a rich description of the phenomenon of visual discourse, and a view into how filmmakers use visual discourse strategically to solve logical, spatial, visual, and temporal problems. I report on key findings in two studies of collaborative storyboarding using this framework, and reveal the different roles and characteristics of visual discourse in supporting the filmmakers multiple, and often conflicting, design goals.

Nathan Heuer & BA Harrington (Indiana U of Pennsylvania): Beyond Intuition: Cognitive Software in Studio Art Instruction

We are becoming increasingly comfortable with the notion that the brain is remarkably similar to a computer. In this analogy the raw material of the brain is the “hardware” that makes possible mental functions, and our learned behaviors could be likened to the “software” we install to perform specific routines and activities. But how does this notion of learning apply in creative disciplines that are commonly understood to rely on “instinct” and “intuition”? Further complicating this issue is the backlash against skill-based, methodical modes of art training in contemporary academic art programs. This presentation will explore the practices of two university art educators who make use of methodical, skill-based artistic training in introductory studio courses with the understanding that such traditional modes of instruction effectively fit the contemporary view of learned behaviors as “software” for the brain. We will discuss content presented in drawing and woodworking courses, where a central component is the learning of non “intuitive” systems that do not come naturally to beginning art students. Examples of student work will be shown to explain how this “software” significantly enhances the student’s skill set and ultimately lays the foundation for the creation of increasingly sophisticated art and design work.

Teemu Ikonen (U of Tampere): The Temporality of Writing and Reading in Experimental Film: A Cognitive Approach

The film-makers working in the structuralist tradition have long explored the ways sound, text and image can be translated into each other; they have developed tactics for seducing the recipient into seeing unity under cinematic languages if only to frustrate the aim at synthesis in the end. Yet the challenge these practices present has largely been missed in the history of film, in semiotics of film, as well as in literary theory. My paper suggests that only an approach focusing on the cognitive-constructive processes available in the viewing experience can sufficiently come into terms with the complexities in the uses of text in experimental film. Printed text is dominantly permanent, pseudo-temporal and randomly accessible. The works chosen here for closer look demonstrate the variety in the means and ends of manipulating the real time of reading of a transient and animated text. How, then, could we accurately characterize the available internal processes and decisions helping us to confront, e.g., the excess of information in the *Word Movie* by Paul Sharits; the aesthetics of the subliminal in *SpiritMatters* by Peter Rose, the interaction of languages and textual motion in *URA AÏU* by Gary Hill, or the

deconstruction of syntactic structure in *So Is This* by Michael Snow? The results of the study not only sharpen the image of what is decisive in the (post)structuralist reflection of the cinematic medium; they also show that the most valuable questions concerning the event of writing and reading may not be presentable in terms of established theories of film or literature.

Anne Carruthers (Newcastle U): The Frame of the Uterus as Premises for Perception in *Maria Full of Grace* and *Juno*

The cinematic screen and the foetal ultrasound present frames that must be negotiated by the spectator both visually and somatically. This complex process involves mapping feeling and thinking around a narrative space; this narrative space, I argue, is the uterus. In order to explore the nature of this narrative space I bring together the work of film theorist Vivian Sobchack (1992) and social scientist Julie Roberts (2011, 2012) to investigate how the language of cinematic narrative theory and the language of the ultrasound can offer new ways of analysing the internal space of the uterus in cinema. Sobchack considers the cinematic frame as *premises for perception* where film spectatorship operates in an interpretative space based on perception and the senses. One of the most compelling arguments is that narrative information is not dependent on the geometric limits of the frame. Roberts argues that *collaborative coding* makes sense of visual information by relying on broader narratives around the frame of the ultrasound to provide perceptual glue that places images in a narrative context for the spectator. Through close textual analysis of *Maria Full of Grace* and *Juno*, I investigate how the phenomenological nature of these two visual technologies can provide a distinct cinematic language that challenges narrativity around the reproductive body.

B5: GENERAL SESSION

Tiina Onikki-Rantajaasko & Minna Jaakola (U of Helsinki): The Construed Reader and Cognitive Text Analysis

The paper develops cognitive linguistic's methods for text analysis. Main focus is on the notion of Construed Reader, an image of a reader the text is written to. The analysis is based on Cognitive Grammar theory and its concept of Dimensions of Construal (Langacker 2008, Verhagen 2007, Stockwell 2009). The case study data comes from a Finnish third sector magazine. The dimensions of construal are means to study the appropriate and reasonable options for coherent understandings and interpretations of a given text. In cognitive grammar, the linguistic meaning is based on construal: organization of conceptual content is included inextricably in the meaning of an expression. The dimensions of construal are context-sensitive characterizations of the conceptual structure of a linguistic expression. In the paper, three main dimensions are applied on the textual level. *Specificity* and *focusing* include a methodology for analysing in detail how different knowledge frames are utilized in texts. *Perspective* with its two sub-dimensions *semantic roles* and *objective vs. subjective construal* pay specific attention to the position of the construed reader in relation to the values and ideologies of the magazine. The dimensions provide means to analyse how different readers with different expertise may be able to interpret texts.

Billy Clark (Middlesex U): Reading, Writing and Positioning: Inferring and Implying Influence

This paper considers how ideas developed within linguistic pragmatics, particularly ideas developed within relevance theory (Sperber and Wilson 1986/1995), can be applied in accounting for literary influence. The approach aims to account for a number of aspects of literary influence, including:

- how evidence of influence can be more or less consciously intended by writers
- how evidence of influence can be more or less strongly evidenced by the texts writers produce
- techniques writers use to distance their writing from particular potential sources of influence
- variation in the perception of influence by readers

Relevance theory assumes that communicators can provide more or less evidence for particular conclusions inferred by their addressees, i.e. that implicatures can be more or less 'strongly' communicated. It also assumes that there is no sharp distinction between implicatures which are weakly communicated and implications which are not intentionally communicated at all. The paper considers how these ideas shed light on the nature of influences running through a range of writers including Chekhov, Hemingway, Welty and Carver. It also builds on recent work on the inferences made by writers (Owtram 2010; Clark and Owtram 2012) and outlines ways of exploring more fully variations in the perception of influence by readers.

Mark Bruhn (Regis U): Blends are Ends, Ends are Means: Intention as Systemic Constraint in Conceptual Blending

Powerful as the conceptual blending model has proven heuristically, it is still bedeviled by the misleading implications of its constituent metaphors, especially as rendered in the familiar circles-and-arrows diagram of input "spaces" "mapping" to one another and "projecting" selected contents to a blended "space" of emergent meaning. So articulated, the model assumes but doesn't explain a multi-step process of a) input space construction (from where and determined by what?), b) selection from the inputs through cross-space mapping (determined how?), c) extraction or "projection" of the selected elements to a blended space (by what means?), and d) composition, completion, and/or elaboration of the selected elements in the blended space (according to what parameters?). The questions indicate gaps or absences in the model that represent the *intentional* dimensions of the blending process. Critically, these unspecified intentional dimensions must be constitutive of and determinative for the specified dimensions. This paper will therefore propose a reconfiguration of the blending model according to Terrence Deacon's (2012) theory of "ententional" or end-directed phenomena of all kinds, which are characterized precisely in terms of constitutive absences, or constraints. A constraint-based account of blending dispenses with separate input spaces—all information is recruited immediately to the projected blended workspace—and thus

eliminates the need for separate steps of selection and projection from the inputs through cross-space mapping. Explicit match to target is the one and only principle of selection, so the constituents of the blend come not only preselected but, as it were, “pre-mapped,” “pre-projected,” and “pre-composed.”

Katie Hoemann (Bangor U): A Comparative Application of the Principled Polysemy Model

Even when different languages have lexical items with similar meanings, variations in encoding occur. To acquire the semantic spatial categories of another language is not only to learn words; the language user must make adjustments to the catalog of implicit and entrenched conceptual and perceptual relationships provided by his native language. This endeavor is no less challenging when closely-related languages are involved; even actual cognates can belie subtle or even patent differences in meaning. Despite shared genetic history and similar source cultures, semantic categories from related languages are not necessarily isomorphic – especially true of polysemous function words. This paper explores the variation in polysemy networks for similar prepositions in English and Dutch. Can (even slight) differences between these networks help explain the contrasting nuances and usage patterns of each language? Examining English *with* and Dutch *met*, this study provides an in-depth analysis of the polysemy network associated with each. Strongly linked through their etymology, these prepositions are often – but not always – translational equivalents of each other. Applying Tyler and Evans’ (2001, 2003) Principled Polysemy Model to corpus data from both languages, I present a comparative diagram of their respective conceptual categories. I further discuss how this approach can contribute to our understanding of semantic and conceptual categorization, and review the implications for further cross-linguistic investigation of spatial language. In this regard, I hope to strengthen evidence for the universality of the Principled Polysemy Model by demonstrating its applicability and utility in contrastive studies, as well as illuminate its weaknesses.

PANEL SESSION C

C1: EMBODIED & EXTENDED MIND

John Haworth (U of Bolton): Well-being, Enjoyment, and Creativity

The presentation draws on my research into well-being, funded by the ESRC www.wellbeing-esrc.com and my practice-led research into creativity and embodied mind, funded by the AHRC www.creativity-embodiedmind.com and my participation in research in aesthetics and the embodied mind [www.eucognition.org/eucog-wiki/Embodied Aesthetics](http://www.eucognition.org/eucog-wiki/Embodied_Aesthetics). Well-being has been viewed as happiness, satisfaction, enjoyment, contentment, engagement, fulfilment and flourishing, or a combination of these, and other, hedonic and eudaimonic features. It is complex and multi-faceted, and is both a state and a process, seen as sense making, something we do together. It is now being investigated in the UK by the Office for National Statistics www.ons.gov.uk/ drawing on national and local surveys using questions comparable with research in other countries. After briefly outlining the concept of well-being, the paper will discuss the role of enjoyment in linking personal factors (e.g. locus of control) and situational factors (e.g. Principal environmental influences) in well-being. The importance for personal well-being of both ‘cognitive enhancement behaviours’, and situated cognition and embodied mind will be highlighted. The relevance for well-being of research on creativity and the aesthetics of daily life will be noted. Current interdisciplinary research by the author and colleagues, using multi-methods, on life and well-being in ‘Worktown’ will be cited, www.bolton.ac.uk/worktown.

Monika Jaeckel (Independent): Touching Upon the World in Jumping – Jumping to Touch the World

This interdisciplinary approach belongs to a wider concept that attempts research and performative actions along and around K. Barad’s term of *intra-action* in diffractive readings. In this case research focuses on touch, habit, and connects them through the sensory and temporal present as defining ability and necessity for change. The central question concerns the *relation touch has to cognition and knowing*. Touch reassures about being in the world, and vice versa of the world around. Being touched or touching upon something affects the direction we turn towards or away from, it defines our orientation in this world. In this regard I connect to M. Rowlands understanding of *extended cognition* not as an external environmental structure, but a *process-oriented* account. Applying the example of Parkour runners, who base their movements on the insight that only improved habits and inscribed moves, allow the immediate action of a new move I argue that real change is initiated in an instantaneous moment that defines further direction. In this sense change can only happen on affective impulse that as tiny as it might be, defines the new orientation on the background of a known ‘extension’. The trained move enlarges according to E.Grosz the field of possibilities, and in the sense of Parkour it allows to be in the moment as the best premise to adapt to the unknowable within the jump

Lizzie Stewart (U of Nottingham): Embodiment in Yoga Nidra

It is becoming increasingly accepted that human beings are embodied agents; that is, their conceptualisation of the world is formed by mind and body together. Past research on embodiment in linguistics focuses on conceptual metaphor, image schema, and prototypes. Using this linguistic research as a starting point, this paper aims to further develop the study of embodiment by exploring the linguistic indices found in yogic discourse. Embodiment is one of the key principles of yogic practices—the mind and body are inextricably linked and one of the goals of practising yoga is to become aware of this connection. In the tradition of Satyananda Yoga, there is a meditative practice called yoga nidra, which is an ‘online’ guided meditation drawing attention to the mind/body connection. Grounded in corporeality, this practice requires participants to listen to a narrative-like meditation which guides them through a sensation-evoking ‘rotation of consciousness’ that focuses on each body part in turn. When done effectively, this practice may result in a lucid dreamlike state of consciousness. The practice of yoga nidra lends itself to the study of embodiment on multiple levels—emotional, physical, and social. The work

of Andy Clark and Michael Wheeler emphasises the transformative role of cultural and environmental structures, with which the body and mind interact. This extended view of human cognition is useful for investigating the effects of yoga nidra on the participant. Drawing on Clark and Wheeler's theory of extended embodiment, this paper focuses on the language used in a yoga nidra script.

C2: STORYWORLDS

Dorin Smith (Brown U): On the Gothic Feeling: The Importance of Erasmus Darwin for Charles Brockden Brown

The promising trend emerging out of cognitive literary studies is, from a historicist perspective, the number of distinct discourses that have been helpfully brought into communication through nearly forgotten figures. This tendency to cross disciplinary boundaries and revive the forgotten should be nowhere more present than in early Americanist and Gothic studies; two disciplines with highly porous borders. But with a few notable exceptions, such as the suggested importance of the Gothic novel in direct access accounts of characters' minds by Alan Palmer at the end of *Fictional Minds* and the relatively recent essay by David Vallins in the anthology *The Emergence of Mind*, the gothic remains—perhaps characteristically—unmapped. This paper begins with the seminal American novelist, Charles Brockden Brown and the influence of Erasmus Darwin's *Zoönomia* on his representation of feelings in his first extant gothic novel, *Wieland* (1798). As a gothic novelist, Brown was the culmination of a transatlantic gothic novel tradition that begins with Walpole and Schiller, but he was also a stylistic bridge to later gothic novelists like Mary Shelley, whose writing was heavily influenced by his work. This paper reveals how Brown used *Zoönomia*, in order to create a representational model for gothic feeling, which is at once deeply introspective but also firmly entrenched in the body. This feeling is fundamentally distinct from the popularly touted influence of Burke on the early gothic novel, such that this paper shows how Darwin's embodied-mind theory became integral to representations of mind in this popular genre.

*Fernanda Mota Alves (U of Lisbon): Reading the Silences: Meaning(s) of the Unsaid in W. G. Sebald's *The Emigrants**

Academic studies on W. G. Sebald's prose often stress the fact that his narrators are elusive characters. But his texts also offer the readers other challenges, such as scarcely described or unidentified affective states and atmospheres, unexpressed motivations or the unexplained insertion of photos; all these imply, in fact, various modes of silence or absence. This is particularly evident in *The Emigrants*: this book makes use of all the above mentioned strategies and is composed of four different stories which seem to have the same narrator. Notwithstanding the possibility of finding an explanation for information gaps or ambiguities, one may still ask what the readers will have to accomplish in order to construct meaning precisely from those restrictive features in the narrative economy of the text. According to Keith Opdahl, readers construct the fictional world of the text by means of ideas and images but also by the use of an emotional reading competence related to what he calls the "emotional code". This paper will focus on the textual strategies of *The Emigrants* that may elicit that competence, pondering on the historical conditions that contribute to its functioning. The attitude of emotional restraint that has given shape to the most significant aesthetic pattern of modern and contemporary culture also occurs in trauma fiction as a specific genre – but a reading that will do justice to this text will be based on empathy and make the silenced emotions explicit.

Shao-Hua Wang (U of Oxford): Phenomenological City: Perceiving, Embodying, and Writing in Charles Baudelaire

My research investigates how urban experiences are interpreted in modernist literature. It utilises Maurice Merleau-Ponty's phenomenology to combine sociological and geographical understanding of the city with Charles Baudelaire's literary works. While urban space witnesses the advent of modernity, which I define as experiences of spatiotemporal gaps, Baudelaire is one of the most important writers that attempt to reveal some 'symptoms of modernity' in his writing. Such symptoms, resulted from urban developments in various levels, cause the dominance of vision, the decentering of the self, and a temporal dislocation. Phenomenology becomes a key to acknowledge how perception of architecture and space may enhance such an urban sense of self. Pallasmaa asserts that the experience of architecture emphasise a verb-essence rather than a noun, as architecture suggests action and encounter. Similarly, literature also offers an imaginary space to refocus on the perceiving body and its movement. Baudelaire's literary landscape provides a paradigm of the movements in the poems and in the city. It also shows how poetry reacts against an ocularcentric culture predominant in the city. Such a particular focus on Baudelaire's 'translation' of urban space could thus demonstrate the perceptive chasm of modernity. In a phenomenological term, it highlights the embodiment of the writer in the language. Such a focus would reveal how contemporary urbanite may still share similar symptoms of modernity, and how modernist literature may offer a new sense of the self.

C3: GENERAL SESSION

Olivier Couder (Free U of Brussels): Cognitive Poetics and the Literary Absurd

In his seminal study *The Theatre of the Absurd* (1961) Martin Esslin writes that absurdist drama cannot be qualified as a unified literary movement. Nevertheless, he asserts that the work of certain playwrights shares a set of characteristics which express the senselessness of the human existence. Esslin's focus, however, was exclusively on drama. Since then, literary scholars such as Neil Cornwell (*The Absurd in Literature* 2006) and Joanna Gavins have taken on the challenge of examining the absurd in prose fiction. In *Reading the Absurd* (2013), Gavins uses the analytical tools that Cognitive Poetics offers to examine the stylistic features of the absurd. And although Gavins does take into account readers' responses to

absurdist literature, the impact of the reading experience itself on the interpretation of a text as absurd is not explored. I believe this to be an important oversight as the reading experience of absurdist literature is crucial to its interpretation as such. I therefore propose to use schema-theory, another of Cognitive Poetics analytical instruments, as means of describing the significance of the reading experience. This will allow me to reconceptualise and possibly redefine the literary absurd in terms of the reader-text-interaction by looking at how absurd texts activate familiar schemata in the minds of readers only to subsequently subvert or frustrate their successful realisation. This, in turn, will enhance our understanding of how the interpretation of literature as absurd is realised.

Gábor Simon (Eötvös Loránd U, Budapest): On Anaphoric Functioning of Rhyme – The Case of Sloppy Identity

The presentation aims at modelling rhyme as a structure and process of figurative meaning creation, from a cognitive poetic point of view. In my proposal, rhyme is described as non-canonical anaphoric semantic structure, i.e. a specific reference-point configuration (van Hoek 1997, 2007, Langacker 1996, Simon 2013). The second member of the rhyming relation serves as a reference-point during the meaning generation process, from which another entity of the text world can be accessed and conceptualized. Consequently rhyme increases the coherence of the text (Givón 2007 [1995]), enriching however in the same time the referential complexity of the discourse. The poetic nature of rhyme conceived as linguistic structure follows in the proposed approach from its twofold semantic functioning, in that it contributes to develop the substantial implicitness and referential complexity of lyric discourses. The presentation demonstrates the anaphoric model of rhyme with the terms of cognitive grammar. Moreover, it investigates rhyme as a coherence relation in text representation, from a cognitive text linguistic perspective. The interpretive productivity of the suggested cognitive poetic conception of rhyme is demonstrated through analysing the problem of sloppy identity, i.e. the complex identification process of the subject/trajector in the clause by means of processing rhyme. This phenomenon is investigated in the presentation through detailed interpretation of poetic texts from modern Hungarian poetry.

Anne Päivärinta (U of Tampere): Negative Embodiment and the Rhetoric of Distancing in Dylan Thomas's War Elegies

In his so called war elegies, Dylan Thomas explores the devastating effects of World War II by zooming in on anonymous victims from a self-reflexive poetic distance. These three poems – “Among those killed in the dawn raid was a man aged hundred”, “Ceremony after a fire-raid” and “A refusal to mourn the death, by fire, of a child in London” (1946) – are different in terms of their rhetoric, but they all build on a series of 'shattered' body metaphors. The paper argues that *embodiment creates both stylistic and emotional estrangement* in the poems. Rather than just invoking embodied reader involvement with a negative twist, the poems foreground active figurative negotiation, focusing on the building of a scene and its immediate tearing down in a very strongly felt manner, which can be seen as a parallel to the destruction of war. Furthermore, the reader is made very aware of the thematic significance of the figuration taking place due to elaborate sound patterning and explicit breaching of elegiac conventions. The paper then sets out to investigate how the 'unnaturalness' of embodied projections of this kind relates to the resonance said to be induced in the reader when identifying conceptual metaphors, and how the negative forms of embodiment might affect the immersion supposedly created by literary patterns of experience and emotion.

Aleksandra Hernandez (U of Notre Dame): Cognitive Ecology in Wallace Stevens's Poetry

In this paper, I am interested in using a cognitive ecological framework for articulating Stevens' understanding of the mind, not as separate from the world, but as emerging from our interactions with it. As Brendan Mohany writes, in order to grasp the poetic epistemology in Stevens' later lyrics, “we need to attempt to read those works without the basic assumptions about the mind in the epistemological framework—i.e., that 1) the mind is distinct or separate from the external world, and 2) the only valid form of knowledge is propositional knowledge” (226). Cognitive ecology is a useful way of further exploring the mind-world collapse to which Mohany refers—one which I argue is located in readers' interactions with the medium of poetry. More specifically, I intend to apply this framework for thinking about the work that the lyric mode accomplishes in Stevens' later poems. Going along with Rachel Cole's most recent work about Stevens' lyrics, I too take issue with Agamben's claim that “the lyric solipsistically excludes, preempts, or subsumes difference or otherness,” for such a view assumes that the lyric subject is fully knowable. More problematically, however, Agamben's understanding of the lyric assumes that the mind is separate and distinct from the world. What I would like to argue is that the way in which Stevens' lyrics function is not to assert the mastery of the conscious self but to decenter it, revealing, in the words of Gregory Bateson, an experience of the “total mind” that includes the foreground and background, the conscious self and the unconscious self, the mind within and the mind without, the text and its con-text. The lyric mode for Stevens thus reveals both that which is known and that which is unknown, interrupting our habitual ways of experiencing and interacting with the world and the objects around us.

C4: GENERAL SESSION

Rachel Ramsey (Northumbria U): Individual Variation of the Senses of Polysemous Spatial Words

What meaning distinctions do speakers make when presented with polysemous words? A sentence-sorting task was used to answer this question, with the aim of isolating an empirically-validated set of senses of the polysemous words *over*, *under*, and *below*, to be used in an investigation of their prototypical sense(s). The results reveal variation in the meaning distinctions made by these speakers; further, they indicate that the degree of agreement itself varies between the target words. *Over* was subject to the weakest agreement ($\kappa = 0.48$), while *below* showed strongest agreement ($\kappa = 0.75$). Subjects' agreement with the author's distinctions also varied, and kappas ranged from .31 to .75 (mean = 0.6) for *over*, .42 to .75 (mean = .56) for *under* and .58 to .94 (mean = .77) for *below*. While it is acknowledged that sense distinctions are

subjective (Rice, 2003), this degree of variation is not predicted in the literature. Further, the author knows of no research predicting differences in extent of agreement. The immediate implication for the remainder of the project is that, in the absence of a set of senses accepted with substantial uniformity across a sample of speakers, it is difficult to test their relative prototypicality. The wider implication is that the distinctions made in polysemy literature (for example, by Tyler & Evans, 2001) do not always coincide with distinctions made by other speakers. The study is being extended, but the results as they stand offer an alternative perspective on polysemy, one in which different speakers attend to different aspects of a word's meaning when deciding whether two examples are equivalent or distinct.

Thora Tenbrink (Bangor U): Cognitive Discourse Analysis: A Method for Addressing Cognitive Processes and Concepts

Cognitive Discourse Analysis is a method that uses linguistic insights to analyse verbal data collected in relation to cognitively challenging tasks. When asked to verbalise their thoughts, speakers draw in systematic ways from their general repertory of language to express their current thoughts. Their choices in relation to a cognitively demanding situation can reveal crucial aspects of their underlying conceptualisations, shedding light on how people *solve* complex problem solving tasks, as well as how they *describe* complex problems or scenes. For instance, in a route description context, the utterance 'Turn right at the shopping mall' shows that the speaker has a concept of a unique shopping mall that distinguishes it from other buildings in the environment, and can therefore be referred to by a definite article and used as a landmark to anchor a direction change. The formulation 'turn right' also reveals the underlying perspective (egocentric as perceived by the traveller, rather than allocentric as if seen from above). In these and other ways, linguistic choices can reflect crucial aspects about the speakers' conceptualisations. This provides a useful pathway to access cognition, drawing on knowledge about relevant features of language supported by grammatical theory, cognitive linguistic semantics, and other linguistic findings. In this talk I will briefly present the main ideas of this methodology and illustrate it using examples from our projects, ranging from scene descriptions to more complex problem solving tasks.

Olga Yokoyama (UCLA): Dangling Participles

Linguistic evidence of pragmatic factors affecting ostensibly grammatical phenomena has been adduced for over half a century. The argumentation, when presented, has relied on behavioral methods, e.g. native informants' introspective judgments. Given the relative subtlety of pragmatic effects in language, these judgments tend to vary, leading to contested conclusions. I argue for resorting, instead, to electrophysiological methods in language processing with the goal of establishing relatively objective results. Experimental in nature, this method can also provide evidence that extends beyond the distributional methods employed in the developing corpus linguistics. The specific phenomenon examined here is "dangling participles". I suggest that their normative proscription is an oversimplification, which ignores the role of Theme (as opposed to Subject) in syntax. I hypothesize that there should be a difference between the brain correlates of (1) the clearly ungrammatical (unoccurring) "true" dangling participles, (2) the frequently occurring Theme-controlled "dangling" participles, and (3) the Subject-controlled normative participles. Brain responses associated with two electrophysiological components LAN and P600 should reveal a measurable difference among these three types of participial constructions. Since these components have been shown to react to both syntactic and pragmatic (including Point of View) factors, it is particularly interesting to test their occurrence with participial clauses, which are controlled by both of these factors. Testing syntax-discourse interface phenomena in this radically novel and objective way establishes new possibilities for linguistic analysis that are far more reliable than the traditional behavioral methods. Testing our hypotheses and either confirming or disproving them through these experiments will increase our understanding of various linguistic categories.

Josko Zanic (U of Zadar): The Cognitive Network Behind a Proper Name

The paper proposes that the cognitive structure underlying the use of a proper name comprises three layers. The first layer is a schematic conceptualization that is activated by any name: it is a schema of an unspecified single entity (prototypically: a physical object) picked out as distinctive in its class for a variety of reasons. The second layer is the background domain or domain matrix that encodes the conceptualization of the kind of entity that the name names. It will be shown how a name can shift its reference from the named entity as a whole to certain aspects of it in accordance with the structure of the domain or domain-matrix. Some aspects of an entity are usually conceived of as more essential to it than others, and this is exhibited in the behavior of the name. Discourse-level manifestations, having to do with pronouns and tenses in sequences of sentences, will also be considered as support of the claims about the relation of names to background domains. The third layer is the mental file containing information specific to the entity named. Several kinds of information that the file contains will be adduced, and it will be shown that the content of the file is responsive to the structure of the background domain or domain matrix. The information in the file will also be shown to be explanatory of shifts from names to general terms and vice versa based on metaphor and metonymy.

C5: GENERAL SESSION

David Miall (U of Alberta) 'Annihilation of Self': The Cognitive Challenge of the Sublime

Literary expressions of the sublime put unusual stresses on language—witness Shelley's letter when he first sees Mont Blanc with its examples of defamiliarization: disrupted or unusual syntax, the senses being under pressure, and figures that suggest a merging of mind and nature. Other contexts in which such linguistic phenomena can be found include descriptions of passionate love, meditative and mystic states, various natural scenes such as a stormy sea, or encounters with other media such as music or sculpture. In challenging the reader with experiences of the poetic sublime language demonstrates capacities which in other contexts are likely to be hard to detect, and that may rarely gain expression. I discuss one example

of a sublime text, Helen Maria Williams seeing the Rhine Falls as recorded in her *Tour of Switzerland* (1798): this captures both her description of the Falls and her comments on how it strikes her. I show that her response is articulated in three phases: first she is overwhelmed, then she senses herself as transformed, and lastly she claims some novel insights. Interleaved with these phases are comments on the organs of perception, on the body, on time, and on nature. Given that each of these phases and her comments on specific aspects have cognitive and emotional implications, I consider the psychological and neuropsychological evidence for such processes, and review several empirical studies that help investigate the validity of the kind of claims made by Williams on the impact of the sublime.

Tania Vivera (St Teresa's College, Kerala): Touch and Tell: Cognitive Empirical Study of Tactile Reading Experience

The sense of touch and the embodied experience of reading a tactile book make it an enterprising multimodal expedition for the reader. In Nick Bantock's *The Gryphon: In Which the Extraordinary Correspondence of Griffin & Sabine Is Rediscovered* the character relations are instigated and reinforced through correspondence in the form of post cards and letters and they involve a tangible reading experience of extracting, opening and reading each letter. The reader is privy to the lives of the characters through the personal nature of the letters and can 'touch' and 'feel' their lives through several multimodal artifacts. The appended artistic post cards embellish the multimodal experience. This paper presents the results of empirical studies on how real readers of varied age groups experience the multimodality of tactile texts, how their multisensory reading experience differs from ordinary reading of a literary text and also documents their fascination with the private lives of the fictional characters. The research investigates the cognitive effects of multimodal signifiers on the reading experience chiefly the tactile and visual aesthetics of the narrative. It employs cognitive poetic empirical research extending on the empirical work of literary texts by David Miall and cognitive poetic study of multimodal fiction by Allison Gibbons. Think Aloud Protocol is employed to document the implicit cognitive processes which the readers engage in while interacting with tactile fiction. It also records the enactment of mind and body in comprehending and navigating the fictional world.

Daniel Irving (Stony Brook U): Reading-in-the-Body, Reading-in-the-World: A Dynamic Systems Approach to Narrative Theory

This paper will support and build on the shift from representational to enactive theories of imagination by considering a dynamic systems approach to the reader's imagination. Dynamic systems are open, non-linear, and self-organizing – that is, systems that do not reach homeostasis. Excitations, primarily perceptions and proprioceptions, are ever-present due to our status as embodied agents, and keep the brain in a state of disequilibrium; it is because of this non-linear, circular causality that we are able to adapt to the ever-changing cultural and environmental dynamics that influence not only lower-level cognitive processes but also, as I will argue, creative and imaginative processes such as reading literature. I will further claim that, while we do clearly read in a linear (that is, page-by-page) manner, our imaginations *do not* work the same way; dynamic systems theory is centrally concerned with the temporal dynamics involved in cognition which, I will argue, are paramount to a proper understanding of reading as a truly embodied, embedded activity. I will take as a case study Nicholson Baker's 1988 novel *The Mezzanine*, a novel that chronicles the thoughts of a man during a trip up an escalator on his lunch break. Baker's brand of maximalism, I will argue, shows how, through an intense focus on the dynamic nature of cognition (both of the protagonist and the reader's experience of jumping between the main narrative and explanatory footnotes), the reader's imagination is disposed to enact the storyworld of the novel in the manner of a dynamic system.

Friday, 25 April

PANEL SESSION D

D1: EMBODIED & EXTENDED MIND

Iris Fischer (U of Kansas): Charles Peirce and Antonio Damasio: Two Views of Embodied Cognition

This paper addresses the potential of pragmatist semiotics, developed by Charles Peirce (1839-1914) and others, for current science-based inquiry in the humanities. Sebeok notes that cognitive science, with its concern for the "constitution of living entities, comprehending the physiological and psychological makeup of each in their interaction" continues semiotic interest in "mediating structures, [or] signs, intervening between stimuli and responses." Hayles casts such mediating structures in semiotic terms by arguing that cognition "depend[s] for its specificities on the embodied form enacting it." Semiotics as a method of inquiry emerged when Peirce perceived the mediating operations of performance in cognition. A crucial aspect of embodied cognition is the role of intuition in the sociality of thought. Both Peirce, on "the genius of the mind," and Antonio Damasio, in his recent work on "map-making minds," treat intuition as a theatrical scene involving a double-sided act of creation. Damasio sketches body's mediating role between brain and world. His "as-if body loop" demonstrates the mapping of body in consciousness. Representation of the self's body-state leads to simulation of others', creating the possibility for empathy. The mapping effected by mirror neurons goes beyond the "autobiographical self" to an embodied sociality of thought. How might Peirce respond? Damasio treats intuition as a purely representational activity introduced into "mind process" as information. By contrast, Peirce describes mapping as an activity producing a diagram—a sign compelled by realities not situated exclusively within brain or external world. Peirce's as-if is engaged by a community of inquirers through double-sided acts of intuition.

Laura Cariola (Lancaster U): Embodied Cognition in Barrier Personalities

Psychodynamic-informed content analyses of body boundaries provide an empirical method to provide an in-depth interpretation of cognitive influences that motivate linguistic constructions of political texts, autobiographies and memories and other forms of literary text. Consistent with cognitive linguistics, psychological, psychodynamic views that perceive semiotic processes and a coherent bodily self to be acquired in early socialization experiences (Fisher & Cleveland, 1958; Winnicott, 1971; Violi, 2012), this study provide further insights how individuals that vary in their body boundary finiteness boundaries differ in narrating everyday events. A corpus-based analysis using the USAS tool (Rayson et al., 2004) identified salient semantic domains in written narratives of autobiographical narratives of High and Low Barrier personalities. As predicted, High Barrier personalities used more semantic domains representing CONTAINER-schematic imagery (Johnson, 1987) and primordial mental activity (e.g., bodily, sensory, motion and spatial references) that represent structural elements of embodied image schemata (Bergen & Chang, 2007) (i.e., TRAJECTORY-LANDMARK, SOURCE-PATH-GOAL) as well as PART-WHOLE schemas, compared to the semantic domains related to conceptual thought (e.g., knowledge and emotion references) in Low Barrier personalities. Whereas Low Barrier personalities communicate their thoughts and emotions directly, High Barrier personalities expressed their emotions figuratively by mapping emotions onto bodily parts and processes. Such an indirect expression of emotions relates to an increased inhibitory control to minimize the threat of negative social evaluations (cf. O'Keefe & Nadel, 1978). In summary, the results indicate that the inflation of motion image schemata and embodiment of emotions in High Barrier personalities symbolize the Freudian (creative) mode of primordial functioning in relation to the external bodily functions, whereas Low Barrier personalities align with conceptual cognitive functioning. The discussion relates these findings to the interpretation of historical and political texts, as well as its implication within the wider empirical realm of cognitive linguistics as a science of developmental socialization process, such as proposed by psychodynamic theories.

Barbara Dancygier (U of British Columbia): Embodiment and Viewpoint in Visual and Textual Imagery

The concept of embodiment has driven many theoretical developments in cognitive linguistics and poetics. Embodied concepts participate in construals at all levels of conceptual and linguistic structure (Gibbs 2005, Pecher and Zwaan 2010, Sanford and Emmott 2013). At the same time, viewpoint is now seen as a cognitive phenomenon underlying many communicative modalities (Bergen 2012, Dancygier and Sweetser 2012, 2014). This paper shows how reliance on both embodiment and viewpoint helps explain responses to visual artifacts and uncovers correlations in processing visual and textual imagery. First, I discuss a range of visual examples showing how embodiment and viewpoint correlate in contemporary representations of events, objects, and people. The examples, which include film, street art, and contemporary photography, show how visual representation manipulates our conceptualizations through profiling, shifting, and blending of embodied viewpoints. In the second part of the talk, I consider textual examples where embodiment and viewpoint configurations parallel the visual cases and yield similar interpretive effects. Considering the visual and textual artifacts side-by-side reveals salient mechanisms of interpretation. For example, both textual and visual artifacts can prompt the interpreter to align herself with an embodied viewpoint of a represented participant (vision, hearing, spatial alignment, etc.); in other instances, the basic experience of embodiment is altered in the context of reconstrual of familiar physical objects. The varying interpretive effects can be explained through interactions between viewpoint and embodiment; this yields a renewed understanding of the concept of 'imagery', applicable across different modalities.

D2: STORYWORLDS

Renata Gambino & Grazia Pulvirenti (U of Catania): Figuring Consciousness: Shadows and Zombies in German Literature

Actual researches about consciousness very often deal with the problem of its representation through brain imaging or mathematical algorithms while art, particularly literature, surprisingly often offers a different way to experience consciousness: through representations produced by imagination. Our hypothesis is that the fascinating world of shadows and zombies, haunting particularly the European literary tradition during the 19th century, reveals the attempt of figuring the immaterial invisible processes related to the presence or absence of a conscious mind. The use of extraordinary figurative artefacts to represent human mind, starts its tradition with the animated shadow invented by Adelbert von Chamisso in his novel *Peter Schlemihl's wundersame Geschichte*. The interest for shadows as marks of non-material features of the subject soon mixed with similar or opposite representations, doubles, animated pictures or statues, mirror-reflection and living creatures without consciousness. In fact shadows or mirror images perfectly represent the physical peculiarities of a human being, his subjectivity and the energetic non-material components of a subjective conscious mind. Our aim is to show how literary texts, as works of art, are the result of a peculiar creative process of cognition. A process transcending the perceptive system and the rules of reason, proposing an alternative way of experiencing and transmitting cognition through the "cartooning" of abstract concepts, which exceed human perceptual system, into emergent figurations. This highly creative process is driven by imagination and relies on a form of abstract synthesis ruled by laws similar to that of dreams.

*Jaya Shrivastava (Indian Institute of Technology, Indore) 'New Life in the Midst of Devastation': Natural and Unnatural Narrative of Colson Whitehead's *Zone One**

African American novelist Colson Whitehead's novel, *Zone One* (2011) chronicles a post-apocalyptic world where civilian units are deployed by the United States government to clear off the walking dead, called "skels", from lower Manhattan. This paper uses concepts such as unnatural narratology (Jan Alber and Brian Richardson) and cognitive estrangement (Darko Suvin) to study the novel's unnatural elements so as to critique gruesome scenes of flesh eating and the savior unit's encounter with a subset of zombies called "stragglers" who do not attack or kill but have become statues trapped in routine activities of their former consumer driven lives. This theoretical framework at the same time interacts with the concept of

natural narratology (Monika Fludernik) embracing the cognitive parameter of “prototypical human experience” emanating from the novel’s storyworld in the sense that the savior unit including the protagonist, intermittently engage, not only in nostalgic brooding over their past lives but also entertain optimism for a zombie-free future. Thus, the paper aims to bring out the function of the juxtaposition of the novel’s natural and unnatural elements giving rise to irony which is skillfully used by the author to satirize corporate capitalism, mindless consumerism and the government’s effort to reconstruct civilization by the very means which brought about cultural decay in the pre-apocalyptic phase. The paper helps to reevaluate the blurring boundaries of the natural and the unnatural through the novel which conventionalizes its unnatural elements, bringing them in contrast with something as natural (but made unconventional) as fear and hope by processing a storyworld where familiar cognitive frames of references have been rendered estranged.

Michaela Schrage-Frueh (U of Limerick): Dreaming Minds and Their Relevance for Cognitive Literary Studies

In my proposed paper I would like to argue that cognitive literary studies could benefit from taking into account the findings gleaned from current dream and sleep research. After all, both dreams and waking fictions are manifestations of the same “literary mind” and the vast majority of dream researchers today stress not only the cross-cultural universality but also the creative and imaginative qualities of the dream experience. If dreams are narrative, as Richard Walsh (2010, 2012) and others have convincingly argued, it follows that insights from sleep and dream research may help us shed some light on the processes at work in both the creation of and imaginative immersion in storyworlds. Accordingly, in my paper I propose to briefly discuss recent developments and findings in neuroscientific sleep and dream research corroborating the view that dreaming and immersion in waking fictions may be viewed as altered states of consciousness involving similar (pre-) cognitive processes. Studying them in terms of each other may thus help us better understand the workings of our literary minds. Secondly I will briefly sketch some similarities and differences at work in dreaming, hybrid states such as lucid dreaming and hypnagogia as well as daydreaming and writerly / readerly immersion, suggesting ways in which these insights might feed into cognitive reader response criticism in particular.

D3: PERFORMANCE

Robert Shaughnessy (U of Kent): In Time with Shakespeare: Actors, Audiences, and Entrainment

This paper offers an overview of the developing University of Kent research project In Time with Shakespeare, which uses the embodied experience of actors and audiences of the rhythms of Shakespeare in performance to investigate its unique status and enduring appeal. A collaboration between researchers in the Schools of Arts and Psychology at the University of Kent, Shakespeare’s Globe, and The Royal Shakespeare Company, the project investigates Shakespearean performance in relation to the phenomenon of entrainment. Describing the systematic co-occurrence of movements or internal states over time, and hence the process whereby independent rhythmic systems interact and synchronize, entrainment is a fundamental concept in behavioral science, underpinning movement and communication in social settings, and acting as a key mechanism for fostering rapport, group identification, and affiliation. The paper reports on a pilot project conducted during February-March 2013. Focusing upon Shakespeare’s Globe’s Playing Shakespeare production of *Romeo and Juliet*, this involved audience observation conducted with measures designed to establish whether indeed entrainment was taking place. The pilot study found indeed patterns of phased synchrony in the audience’s arousal levels. Importantly, the study enabled the researchers to test the relative efficacy of quantitative measures intended to capture externalized, collective and distributed audience response, and of established techniques of self-reported, retrospective and introspective practitioner and spectator research.

Laura Seymour (King’s College London): Doth Not Brutus Bootless Kneel?: Cognitive Kinaesthetics and Secular Authority

Kneeling is one of the few prayer gestures that survived the Reformation; simultaneously the meaning of this gesture was hotly contested from the twelfth to beyond the seventeenth century. Kneeling in prayer was central to early modern debates over the location of the Real in church. For Catholics, kneeling to the sacrament constituted acknowledgement of Christ’s Real Presence in the communion wafer. For reformers (as the seventeenth-century bishop Thomas Morton eloquently explained), kneeling at the sacrament was an adiaphoric (neither morally absolutely necessary nor absolutely forbidden) gesture: merely a symbolic recognition of Christ’s sacrifice, it did not imply belief in transubstantiation. My proposed paper deploys cognitive theories of kinaesthetics (especially Guillemette Bolens’ and Amy Cook’s) to re-examine the significance of kneeling in early modern literature. Kinaesthetic theory suggests that we learn through observing others’ gestures, grounding our observations within our own body, and using our bodies to replicate these gestures. The earliest prayer manual to deal substantively with kneeling, Peter Cantor’s twelfth century *De Oratione*, applies an overtly kinaesthetic theory of ecclesiastical pedagogy. Cantor argues that by copying priests’ kneeling gestures, lay illiterate worshippers will experience the penitent mindset necessary for salvation, an idea which I feel is reflected in Cook’s discussion of kneeling in *Shakespearean Neuroplay*. My database of all gestures in all editions of Shakespeare’s plays from the earliest quartos to the fourth folio shows that kneeling is the third most common gesture in Shakespeare’s works. My talk would use the conspirators kneeling to Caesar before killing him in *Julius Caesar* as a case study for examining how cognitive theory can create illuminating new readings of this play’s overlapping themes of social mobility, secular authority, and idolatry.

Naomi Rokotnitz (Tel Aviv U): 'A Woman Whose True Self is Screaming with Despair': Passion Play and Affective Truth

Peter Nichols's *Passion Play* (1981) precedes the advent of the "embodied cognition" hypothesis, yet his treatment of the cognitive and emotional impact of preconscious affective content accords with recent findings (Damasio 1999; Gallese 2001; Vandekerckhove & Panksepp 2011). At the same time, his skillful theatrical presentation of the experience of betrayal, despair and self-governance, both extend and complicate current research regarding identity and autonomy. In this paper, I explore the relationship between passion, despair, and bodily knowledge, as presented in Nichols's play and its dialogue with Søren Kierkegaard's *Either/Or* (1843). Approaching the play from this philosophical perspective suggests as yet untapped interpretations of its action. Analyzing these in light of recent developments in embodiment and affect theory, exposes the extent to which effective comprehension is dependent upon affective receptiveness: attempting to ignore bodily registers of experience, or to sever these from conscious decision-making, may prove pernicious, whereas "attentive attunement" (Bower and Gallagher 2013: 122) to the self-direction of perception, may allow one to foster an integrated self.

D4: GENERAL SESSION

Ana Abrantes (Catholic U of Portugal): Literature, Cognition, and the Experience of Empathy

The starting point for this presentation is the work by German author and criminalist Ferdinand von Schirach, which will provide the basis for the discussion of the concept of empathy and how this experience of "feeling with" (*Mitgefühl*, as one of the possible German renderings of the word) is elicited by the narrative construction of experiential and mental worlds. The concept of empathy will be approached from the perspective of cognitive science, along with the neighboring concepts of cooperation (Tomasello, 2009) and theory of mind (Rizzolatti & Sinigaglia, 2008; Gallese, 2001), as well as from the perspective of culture studies (Breithaupt, 2009, 2012), where it is closely brought together with narrative. The protagonists in Schirach's work are unexpected targets of empathy: once-in-a-lifetime or recurrent criminals, these figures meander in the grey zones between right and wrong, justice and injustice, revenge and forgiveness. Their literary rendering invites for an empathetic reconfiguration of these categories. Just how literature does it, is what we intend to study.

Renata Brosch (U of Stuttgart): Counterfocalization and Empathy: The Example of Emma Donoghue's Room

Using the example of this contemporary novel, I want to investigate what triggers empathy on the part of readers. Many scholars have argued or at least implied that the subjective and necessarily limited point of view of a character is more likely to elicit sympathy and affective involvement. This is certainly the case in *Room* (2010) with its innocent and 'unworldly' child-narrator, but the reason is not necessarily that an interior perspective automatically engenders identification. In fact, recent experiments have shown that the more personalized a focalizer is, the less readers identify with his/her perspective. In the case of this novel, Jack is distinctly individualized and his mindset vastly different from the readers'. He is a classic case of an unreliable narrator, his extraordinarily limited viewpoint demands of readers not only to supplement his narrative but to counterfocalize. Employing Theory of Mind and "continuing consciousness" as well as decoding protective lies, readers gradually develop affective response to the mother, whose consciousness is never shown. I want to argue that the narrative strategies appeal to two different kinds of empathy. One depends on physical and sensual cues to trigger an automatic embodied response on the level of 'natural' reception which produces a "mirroring empathy". A more complex response which emerges at a later stage depends on the cultural schemata and scripts which the narrative alludes to ("reflective empathy"). Hence, the production of empathy corresponds to the dual process of meaning-making: embodied and cultural. Both are semi-automatic, overlapping and interacting processes that can only be separated for the sake of analysis. Embodied reading draws us close to the fictional experiences while cultural reading helps us make sense of them by recalling extratextual information. Embodied responses disclose mental and corporeal states of the characters, while cultural reading brings knowledge from a variety of fields and areas to bear on these.

Adam Lively (Royal Holloway): Writing Consciousness

Fludernik (1996) has proposed that "experientiality" is essential to narrative fiction. This paper extends that proposal by positing a relationship between consciousness and narrative fiction that is interactive rather than merely representational. In the first place, I argue for a congruence between, on the one hand, the notion of a narratorless *écriture* (Benveniste, Kuroda, Banfield), and, on the other hand, the proposition from cognitive psychology (David Olson, Merlin Donald) that interaction with cultural technologies such as writing restructures cognition and consciousness by bringing to awareness immanent and previously "hidden" features of consciousness. The "representation" of consciousness in modern fiction, through techniques such as Free Indirect Discourse and "Stream of Consciousness", brings to awareness a differentiation between "levels" of consciousness – between, for example, non-reflective and reflective consciousness. But further, I argue that this "third-person" perspective on the interaction of reader and narrative text – a perspective that sees the interaction as a disambiguation of various forms of "representation" – should be correlated with a "first-person", phenomenological perspective that sees the process of interaction as a dynamic *disclosure* by the reader of that which transcends any particular "level" of representation. The "involvement" of the reader takes the form of a continuous disclosure whereby that which was "inner" becomes "outer", and *vice versa*. The dynamic topologies of invagination and dehiscence manifested by narrative fiction, I argue, bring to conscious awareness the mechanisms of disclosure (above all, disclosure of a "world") that underlie phenomenological experience.

D5: GENERAL SESSION

Julia Dominguez (Iowa State U): Mental Time Travel in Don Quixote: Memory and Imagination in Cervantes

Recent research in cognitive neuroscience demonstrates that there is very little difference between remembering the past and imagining the future. Indeed, according to new scholarship on memory, past recollection and future prospection are in fact closely related functions within the same single cognitive system. This has come to be known as the “Janus hypothesis,” so named for the notion of two faces, one looking toward the past and simultaneously looking to the future. In short, since the 1980s, cognitive neuroscience has come to treat retrospection and prospection as essentially the same functions, and it is closely related to episodic memory—in our ability to imagine nonexistent events and simulate future happenings. Such theories regarding what some researchers have called “mental time travel,” however, have been around since ancient times. Such figures as Aristotle, Galen and their medieval commentators were quite aware that memory played a role in the ethical virtue of prudence—the ability to make wise and just judgments and plan future action effectively. The term these scholars used was “phantasms” (“imagines,” in Latin) which also described how memory was an active player in prophetic writing. Memories therefore function in the creative process as materials for future expression, not just as signatory traces of the past. For Aristotle, a past action is an interior object that is not absent but rather one that is imprinted upon us forever and has the power to resurface in future creation or imagination. One notable literary work where memory plays such a vital role in the future conception of narrative is Miguel de Cervantes’ *Don Quixote*. *Don Quixote* goes mad from reading too many chivalric romances. But the source of his problem is embedded in imagination, a memory-bound construct rooted in the past but available for future recall. My presentation will discuss early theories of memory and imagination, and their role as a motivating factor in *Don Quixote*’s actions as well as Cervantes’ conception of narrative.

Sowon Park (U of Oxford): The Cognitive Future of Unconscious Memory

On the topic of the unconscious, science and literature have been divided. In literature, processes of the mind that are not conscious have always been of central value, while, based upon the foundation of rationality, modern science has rendered the unconscious irrelevant. Most notably, Freud’s idea of the unconscious was eschewed by behaviourist psychology because it could not be empirically verified and, in this context, Popper famously claimed that psychoanalysis was a pseudo-science. However, new discoveries in cognitive neuroscience during the last twenty-five years demonstrate that very little of what goes on in the brain is actually conscious, making it possible not only to re-examine earlier models of the unconscious but also to see the role of the unconscious in the human mind as the new scientific frontier. This paper will examine the intensively researched area of human memory in neuroscience, and within this, the field of unconscious memory. The idea of an unconscious memory was proposed in the early 1990s, and subsequent research in cognitive psychology, neuropsychology and neuroscience has converged on the idea that human memory involves two separate systems – the conscious and the unconscious, or in the language of neuroscience, declarative memory and non-declarative memory. The empirical discovery of unconscious memory and its mechanism has important implications for the humanist study of the unconscious because it overturns the standard view that the unconscious is something that the conscious mind cannot know. This paper will examine the role of unconscious memory in literature with reference to recent neurobiological studies and discuss how it bears on cognitive futures.

Vera Tobin (Case Western Reserve U): The Case of the Cursed Clue: On Recognition, Unreliability, and Elements of Surprise

Fundamental limitations in our conceptual resources and cognitive processes force us to rely on a variety of quick heuristics to make decisions. Those strategies help us to deal efficiently with complex, ambiguous situations—but they often also lead to predictably flawed judgments: cognitive biases. This talk introduces the argument that these biases, especially one known as the “curse of knowledge,” can be a central motivating factor in many of the most impressive feats of structure and aesthetics in narrative. In particular, the curse of knowledge (which makes it difficult for us to imagine, once we know something, what it is like not to know it) plays a pervasive and crucial role in ensuring that narratives persuade and satisfy their audiences. How can clues qualify as clues without cluing readers in? What makes a story hang together, surprise us without seeming incoherent? Why do we feel so put out when it doesn’t? Critical discussions of narrative unreliability have generally concentrated on existential questions of what unreliability is and where it comes from. In this talk, I consider a different puzzle: how it manages to take people by surprise, not just once, but over and over again, across genres and media. I discuss a handful of illustrative examples from classic detective fiction and late 20th century Hollywood film, and explore the implications of their reliance on cognitive bias for our understanding both of the construct of the “clue” and of the relationship between reader and implied author involved in unreliable narration.

PANEL SESSION E

E1: INTERDISCIPLINARITY

James Carney (U of Oxford): The Experimental Paradigm in Cognitive Humanities: Assessing the Role of Theory of Mind in Genre Fiction

Theory of Mind (ToM) has played a divisive role in cognitivist discussions of literature. On the one hand, it has been offered basis for understanding the nature and effects of fictional representation (Zunshine 2006; Kidd and Castano 2013); on the other, it has been dismissed as an overly-intellectual construction that ignores both the phenomenological forms of intersubjectivity and their representational cognates (Gallagher 2001; Hutto 2011). However, though both sides of this debate reference empirical work, neither has subjected the question to experimental assessment. This paper discusses an attempt to do just this. Citing linguistic complexity, intentionality level and genre as independent variables, our experiment

assesses reader responses to a selection of eight texts. Each reader is assessed with respect to innate mentalising ability and verbal ability using standard tests; after this, they are presented with texts from two genres: espionage fiction and relationship fiction. Each of these texts can be written in simple or complex language, and can exhibit an intentionality level of either three or five. (The permutation a given reader receives is decided randomly.) The reader is then polled with a transport scale to determine their response. At the time of writing, data analysis has just commenced. However, provisional results indicate that, while ToM has a significant impact on reader assessments, its effects co-vary with distance from pre-reflectively familiar scenarios and narratives.

William Fear (Birkbeck): Narrative as Process and Artefact and Some Implications

Narrative is typically conflated with story with an attendant lack of consideration for what might be important distinctions between the two. Similarly, narrative is typically considered as an object but the recognition of the object as an artefact - a cultural tool - is disregarded. Rarely is narrative considered as a process and even less so as both a process and an artefact. In this paper we draw on the work of scholars from both Psychology and Humanities in an attempt to demonstrate that narrative is both a process and an artefact and consider some of the implications for this understanding. In particular, we present an understanding of the role of motif. Motif, we suggest, is a powerful tool used to both build and represent shared meanings and to recognise recurring patterns. Of course, the former understanding is widely acknowledged in literary studies, but less so in other disciplinary studies of narrative. Our current work demonstrates how a linguistic motif is both used to influence policy in a global field (healthcare) and by recognising and identifying the motive we can draw insights into the functions of 'the system'. This parallels work in neuroscience and cognitive science where motifs are recognised as an important artefact for understand complex chemical interactions in the brain. We argue that work is required to de-conflate narrative and story, and to distinguish between the role of narrative as process and the forms of narrative as artefacts (e.g. story, account, chronology, anecdote, motif, &c. &c.)

Pascal Niklas (University Medical Centre, Mainz): Cognitive Poetical Reductionism and Empirical Aesthetics

One of the major problems in breaking down poetical language to the level of experimental design is the loss of context in which the phrase is used. The reduction necessary for achieving a testable specimen makes it hard for subjects to recognize a piece of poetic language as such without context information. There have been suggestions (Menninghaus and Jacobs 2012) how the formalist concept of "defamiliarization" (остранение) may be successfully be distinterred for the purposes of empirical aesthetics. In this talk, we wish to discuss neo-formalism as a possible avenue to making poetical language quantifiable and thereby testable in terms of empirical aesthetics and neuroaesthetics. The theories of Shklovsky and Jakobson are stuff for courses in the introduction to literary studies, but they may also be revisited for experimental purposes though there will also be need for pragmatic and contextualist theorizing. This exercise is rather rooted in literary theory than in linguistics and aims at identifying qualities of poetic diction in order to achieve testability in fMRI or EEG.

E2: STORYWORLDS

Nigel McLoughlin (U of Gloucestershire): Towards a Cognitive Poetic Framework for the Analysis of Ambiguity

Lexical and structural ambiguities occur widely in literary texts. Psycholinguistics has suggested several models for how such ambiguities are resolved in real time (Rayner, Carlson & Frazier, 1983; Duffy, Morris & Rayner, 1988; Kawamoto 1993; Trueswell, Tanenhaus & Garnsey, 1994). Text world theory (Werth 1999; Gavins 2007) may be fruitfully combined with Stockwell's (2009, 2011) model of literary resonance to afford an explanatory cognitive stylistic framework, informed by psycholinguistic theory, in order to analyse the cognitive processes by which different meanings are generated and enriched in literary texts. In Stockwell's model ambiguity may be thought of as a 'newness' attractor, because it creates a cognitive divergence in the dominant text world. This is because the reader must create, however fleetingly, a different text world for each of the meanings resulting from the ambiguity. These imagined worlds, having been activated, may be kept in focus through resonance, using contextual and linguistic cues, before being finally resolved, through the decay or occlusion of all but the dominant meaning, or they may resist such resolution. This paper is intended to outline the cognitive stylistic framework described above, and to use it to analyse the occurrence, maintenance and resolution of lexical and structural ambiguities in published poems. It is envisaged that these example analyses will illustrate the model's potential to tease out mechanisms by which ambiguity can draw different meanings into metaphoric relation, or create indeterminacies in poems thereby opening them to multiple readings.

Andrea Macrae (Oxford Brookes U): Cognitive Processing of Perspective in Fiction

This paper reports the findings of an experiment investigating the cognitive processing of perspective in fiction. Specifically, the experiment explores the effects of deictic cues upon readers' perspective-taking and conceptual deictic shifting into and around the storyworlds of fictional narrative. Readers of a set of narrative texts identify the perspectival loci they conceptually adopt within the storyworld via selection from computer generated images of the scene, each image designating a particular viewpoint. The texts manipulate narrative person ('I', 'you', 'he' and 'she'), tense and priming to explore questions such as:

1. Does use of third person narrative commonly elicit a distal conceptual viewpoint within the storyworld, and if so, which is the most common viewpoint of, for example, the rear, side or front, and horizontal or aerial viewpoints?
2. Do readers adopt the conceptual position of the focaliser more consistently if that focaliser is designated through the second person or the first person pronoun?

3. Are common patterns of deictic shifting discernible when a primary (narratorial) and secondary (character) focaliser are in play (e.g., when a first person narrator describes the actions of a past enactor of that same character partially from the past enactor's perspective)?

And, more broadly,

4. How far does deictic language determine conceptual positioning?

The experiment employs, re-investigates and builds upon insights from preceding psycholinguistic, pragmatic and cognitive poetic empirical and theoretic research, aiming to enhance understanding of aspects of the processing of fiction and, more generally, the conceptual imagination of scenes in real or fictional worlds as cued by deictic language.

Melba Cuddy-Keane (U of Toronto): Narrative Description, Deictic Shifts, and Projected Allocentric Seeing

The cognitive neurosciences are currently divided on the question of our ability to experience outside our own embodiment. While some researchers assert that “the way the organism is embodied constrains the options available to it” and that “an organism’s particular view of the world is a direct result of its functioning sensorimotor experiences” (Coward 2005), others, like philosopher Dan Zahavi, argue for “our ability to access the life of the mind of others in their bodily and behavioral expressions” without resorting to “theoretical inferences, internal simulations or imaginative projections,” proposing further that this ability “can improve with familiarity, learning, and salience” (Zahavi 2008). While at issue is the vast problem of the ontological status of first, second, and third person perspectives, my paper will concentrate on the one element of narrative description, and the way it can both represent, and possibly enact, deictic shifts. Drawing on neuroscientific work on the role of the hippocampus in navigation and scene construction (Maguire 2012), and the supposition that “a core brain network supports multiple forms of self-projection” (Buckner and Carroll 2006), I will examine the cognitive implications of Virginia Woolf’s embodied description from the deixis of a snail and Gertrude Stein’s resituating in the body of a lizard, as well as the shift from topographical mapping to storyworld mapping in Alison Bechdel’s *Fun Home*. Between egocentric (subjective, viewer-related) perspectives and allocentric (topographical, other-centered) mapping is, I will argue, a third state that I will call projected allocentric seeing, involving the mind’s ability to leap into a perceptual frame beyond the self’s immediate environment, whether that be a landscape or another mind. Attentive reading of narrative description, I propose, can develop our abilities for pluralist scene construction through the enaction of deictic shifts, enhancing the perspectival range of our embodied minds.

E3: PERFORMANCE

Rhonda Blair (Southern Methodist U): Inner Image/Outer Action: Cognitive Science and Michael Chekhov’s Approach to Acting

Michael Chekhov (1891–1955) was one of the most important acting teachers of the last century; his influence has only grown in recent decades. Grounded in the actor’s use of inner images and movement to guide embodiment and action, Chekhov employed techniques and terms such as “psychological gesture,” “imaginary center,” “imaginary body,” and “atmosphere.” Applying his intuitions to acting technique and practice, he was prescient in sensing things about acting that are now being borne out by research in embodied and situated cognition and in cognitive linguistics. Acting is about manipulating things within conscious awareness to create optimal conditions for self-use, creativity, and dynamic collaboration with other actors – skills to “reach the unconscious by conscious means,” to quote Chekhov’s mentor Stanislavsky. The task is to set up circumstances – “internal” and “external” – to help image and action arise, and to use those images and actions to nurture fruitful conditions for creativity. Situated cognition’s ecological view of mind as embodied, embedded, and extended, embodied cognition’s dynamic view of perception and action as being in some ways inseparable, and cognitive linguistics’ principles of metaphor and conceptual blending are all apposite and resonant with many of Chekhov’s fundamentals. This paper will consider Chekhov’s approach in light of work being done in the cognitive sciences by William Clancy, Antonio Damasio, Gilles Fauconnier, Shaun Gallagher, Vittorio Gallese, George Lakoff, Mark Johnson, Alva Noë, Evan Thompson, and Mark Turner, and in acting and cognitive science by Rhonda Blair, Amy Cook, John Lutterbie, and Rick Kemp, among others.

Sebastian Rimehaug (Case Western Reserve U): Displaced Voices: Relevance and Frame Blending in Brecht’s The Caucasian Chalk Circle

In his later work *The Caucasian Chalk Circle (Der Kaukasische Kreidekreis, 1999|1948)*, Brecht includes a set of theatrical characters—a singer and his troupe of musicians—who, like a Greek chorus, comment on and narrate the story but also have instances of direct contact with characters in the story frame. Such instances include: being overheard by dramatic characters, possessing individual attitudes towards them, and, at one point, even using the first person to describe another character’s affective states. This last move allows the play to depict strong emotions somewhat firsthand, yet retains Brecht’s commitment to anti-realist distance between characters and their emotions that in the past discouraged him from such making such depictions at all (See Brecht, 1964a; 1964b). The above examples portray epistemic and causal states that do not conventionally fit the role frames of either *narrator* or *character* by themselves, albeit not haphazardly or nonsensically. Rather, such innovations reflect emergent properties stemming from the joint activation of the two frames by the same characters over the course of the play. Conceptual blending theory (CBT) provides a framework for illustrating just how the singer and his musicians fit into the conceptual structure of *The Caucasian Chalk Circle*. First, we first propose a mental spaces model adapted from Brandt and Brandt (2005) for how different speaker-addressee configurations on stage prime different *role* frames (e.g. *narrator*, *character*, etc.) for those speakers. We then demonstrate how frame blending (Turner and Fauconnier, 2002) prompts the on-line allowances audiences make for nonstandard roles in order to maintain overall coherence.

Angeliki Varakis-Martin (U of Kent): Positive Emotion and Cognition in the Spectating of Aristophanic Comedy

What can positive psychology tell us about the ancient audience's experience of Aristophanic comedy in its original context of performance? Was the performance of comedy an event that was largely controlled by the poet and the Athenian state, or did it, in fact, broaden the mind of its spectators enhancing their ability to process information in a creative and individual way? Informed by the criticism of Bakhtin many scholars in the field of classics have sought to understand Aristophanic comedy's political orientation in its nexus of conflicting forces and unstable interactions. These are expressed in the festive performance of the comedy, the discontinuous narrative of the play, but also in each audience member's engagement with the comic. Drawing on research in the field of cognitive science which has shown that 'thinking' is not detached from emotion, this paper will consider the audience's engagement with the comic world taking into account the wider festive environment of the performance. B. Fredrickson's broaden-and-build theory of positive emotions and A. Isen's experiments on the effect of positive affect on cognition have linked positive affect with an increased capacity for creativity, integration of diverse information and novel thinking. The presence of positive emotions (e.g. joy) in the ancient audience triggered through particular celebratory elements of the festive comic performance (music, dance, song) could have enhanced the spectators' creative engagement with the performance turning them into active participants of the creative process. This active engagement would have been in tune with the 'openness' of Aristophanic comedy and reflective of the participatory nature of Athenian democracy.

E4: GENERAL SESSION

Marco Caracciolo (U of Groningen): The Kinesthetics of Narrative Temporality

In Monika Fludernik's words, "[the] relationship between narrative and temporality has been one of the most popular research areas in narrative theory" (2005, 608). Despite this, surprisingly few scholars have reflected on how the double temporality of narrative is actually experienced by recipients. Even if we know that emotional responses such as Meir Sternberg's (1978) suspense, curiosity, and surprise may arise in construing narrative time, narrative theory has tended to define plot (*qua* the orchestration of narrative time) in either purely textual or relatively abstract, conceptual, and disembodied terms. Could it be that, on the contrary, perceptual image schemata (Johnson 1987) and kinesthetic experience (see Reynolds and Reason 2012) play a role in how we make sense of narrative time? Embodied, and specifically kinesthetic, metaphors such as plot "twists" and "turns" seem highly suggestive in this connection. Building on neo-phenomenological approaches within contemporary cognitive science (see Gallagher and Zahavi 2008), this paper explores two situations in which bodily experience can become implicated in the understanding of plot: first, when narrative temporality is blended with a character's bodily movements; second, when a text involves a back-and-forth "movement" between different plot strands. Using as case study Don DeLillo's novel *Underworld* (1999), which intertwines several plot lines, this paper argues that kinesthetic imagery can function as a heuristic tool in keeping track of narrative progression. Readers can therefore "feel" narrative patterns in a way that is at least partially similar to how we respond kinesthetically to music (see Carroll 2003).

Peter Walters (U of Sheffield): Comprehension and Tracking: Moves Towards Personal Grammars of Narrative

In the processes of the production of sustained texts, and within the practice of Creative Writing teaching, questions of narrative structure (of how a text is structured; of how a text can be structured in production) are often paramount. In broad terms, the success of a text in communicating its intended meanings and effects may hinge directly on the competence of its structure in providing a discourse 'route' that provides adequate access to its elements. The natures of smaller structures – the sentence, the paragraph, the short story – may be relatively easy to comprehend in their entirety; more sustained structures might present a bigger challenge. This paper seeks to examine whether there are tools available for producers of text and teachers of Creative Writing to enable practitioners to examine texts to better understand their structural components, through, for example, segmentation, synopsis and tracking of narrative information at boundaries, and whether these tools, with use, may help to develop more generalised schemata of the possibilities and variations of structure in the minds of such practitioners. Where generic grammars of narrative have proved elusive, is there the possibility of developing 'personal grammars' of narrative that can aid the production of effective texts? If so, are there, then, teaching strategies that might economically and efficiently optimise the conditions whereby these personal grammars might be developed, and, which cognitive methodologies may best be deployed to effect these outcomes?

*Siiim Sorokin (U of Tartu): Finding the Ties, Minding the Minds: Collaborative Sense-Making Complexities of *Lost* and *Breaking Bad**

This paper focuses on the user-generated content in weekly commentary sections of U.S. TV criticism blogs covering serial narratives like *Lost* and *Breaking Bad*. I will observe how commenters incrementally construct coherent meanings given discrepancies in plot and character. These narratives enhance socially distributed intelligence through interactive problem-solving. Commenters are confronted with half-answers and ultimately unsolved gaps (*Lost*) and unsatisfactory yet determined conclusions and character motivations (*Breaking Bad*). They maintain coherences by narrativizing their guesses and inferences and blending prior contextual data and real-life knowledge with incoming narrative inputs (*motifs*). The intentions and reasons of the characters are narrativized by imagining *them* thinking about other characters. This construction of inferential intermental minds grounds itself on characters' transference onto a joint creative space, hence emphasizing them as intentional systems. Such construction intersects with the claim of perceived narrative realism insofar as characters' inadmissible actions are deemed to undermine its plausibility and effectively undercut characters' realness. These new emergent meanings, external to and resisting, yet contextually conditioned by, narrative proper, merge into two kinds of constitutive and collaborative constructions or *beacons*, focusing on specificity in plot and character. Definition of

beacon emphasizes its guiding principle insofar as it being an echo signal (*beacon as a convergence is self-reflexive towards the various meanings converging into it*). During the lengthy period of the serial experience, user-generated meaning constructions may get modified, complemented or entirely overwritten. Hence, *beacon*, too, is fluid, persistently re-evaluating the incremental alterations and re-organizing itself accordingly.

PANEL SESSION F

F1: AESTHETICS & SPECTATORSHIP: COGNITION IN TIME AND SPACE

Amy Cook (*Indiana U*): Building Character: The Aesthetic Experience and Cognitive Casting

Walking through the city, the people around me flock and flow; we are a murmur of starlings: though multi-colored and multi-shaped, we are more clearly identifiable as a mass than as individuals. So how is it that we come to identify so many different people in our lives? My doctor, my co-worker, and my senator look more alike than different and yet I do not confuse them because they are *characters* in my life, not data. How do we build characters from stimuli? The theatre provides us with a character building work out, one that improves our functioning outside the theatre, when it is necessary to make quick judgments about the characters in our lives. For the purposes of this talk, I will start with a discussion of Mark Rylance's performance as Olivia in *12th Night* and as Richard in *Richard III*. I will discuss the compressions necessary to compose these characters with the same actor's body as input. I will then argue that once built, characters offer us a way to offload cognitive tasks. Finally, I will suggest that the research on face blindness points out what happens when one of the mechanisms of this process is broken. This paper braids together areas in the cognitive sciences, from the theoretical to the neurological--conceptual blending theory, distributed cognition, and research on prosopagnosia and Capgras Syndrome--with theatrical theories about characters and casting to argue that the cognitive process that turns Meryl Streep into Margaret Thatcher is the same one that turns Margaret Thatcher into the Prime Minister or the people murmuring with me on 57th Street into villain, victim, witness.

John Lutterbie (*Stony Brook U*): Time-Based Aesthetics: Castellucci and Smithson

This paper continues the ideas presented in "Dynamic Systems and the Aesthetic Experience" delivered at Bangor. This presentation looks at Brecht's concept of *verfremdungseffekt* through the lens of Reber's theory of fluency, and its binary opposite disfluency. Rolf Reber defines the aesthetic experience of fluency: "if people process information about an object *easily*, they feel positive affect, especially if ease of processing is unexpected" (Reber in *Aesthetic Science*, 2012: 224). Hyejeung Cho and Norbert Schwartz see "disfluency" as a break in fluency, giving the perception of novelty because of the difficulty, rather than ease, of processing (Cho and Schwartz, *Advances in Consumer Research*, 33: 319-20). Fluency enhances the aesthetic process over time through the accretion of experience, while disfluency disrupts the flow of experience. Moving away from the idea of aesthetics as "positive affect" or the pleasure of beauty, I argue that the experience of art is most powerful when meaning is deferred, perhaps long after the experience with the art object, and that fluency and disfluency are useful metaphors for understanding the processes that give rise to feelings of the aesthetic. Case studies include Romeo Castellucci's *Concept of the Face: Regarding the Son of God* and *L.#09 London* (parts 2-4), and Robert Smithson's *Mirrors and Shelly Sand*. In all three, although very different, the derivation of meaning arises over time (pace Ramachandran's moment of "Aha!") because, I argue, of the ambiguity of the unexpected and the (active and passive) assertiveness of the works of art.

Nicola Shaughnessy (*U of Kent*): Beautiful Otherness and Conceptual Neuroaesthetics: Materializing Atypical Imaginations Through Experiments in Performance

This paper explores the potential of cross-cultural exchanges between arts and science through the multimodalities of contemporary performance as a creative practice and as a research methodology. Performance offers a means of accessing hard to reach areas of human experience, drawing out the life of the mind and exploring perception, imagination, emotion and empathy through the felt, fleshy and material spaces of theatre, dance and music. I consider how experiments in participatory performance can enhance understanding of atypical cognitive processes in neuropsychiatric conditions with particular reference to autism and dementia. Practice-based methods facilitate insights into the perceptual and imaginative experiences and differences of affected individuals and the implications for their well-being. The research is leading to new directions in aesthetics through the extraordinary qualities of 'outsiders art' and new understandings of the imagination in neuro-divergent conditions. My paper makes reference to 'Imagining Autism' an interdisciplinary project using contemporary theatre techniques, puppetry and interactive media as a means of facilitating communication, social interaction, empathy and imagination for autistic children. Cognitive changes in dementia also impact upon social interaction and empathy, affecting communication and altering perceptions of time and space. In some forms of dementia, however, the neurological processes enhance creative drive, leading to new artistic capacities with outputs described as 'unorthodox' and highly original, indicating 'unique perception.' I explore connections between this phenomenon and autism, whilst demonstrating the potential of practice based arts research as a methodology for neuroscience.

F2: STORYWORLDS

Merja Polvinen (*U of Helsinki*): Formative Fictions and Cognitive Science

This paper examines the idea put forth by Joshua Landy (2012), that the cognitive value of a certain group of fictional narratives is to train the mind in adopting a state of "lucid self-delusion", or simultaneous conviction and distrust. Landy's discussion, which draws on literary analysis, hermeneutics and the philosophy of narrative fiction, is in this paper connected

to the discussion of the human imagination within the cognitive sciences, where the meaning of terms such as imagining, simulating, and engaging in hypothetical thinking are still in flux. The aim is to show how considering the complex amalgam of “detached credulity” involved in the experience of fiction might move cognitive literary studies away from a current overemphasis on naturalisation. This theoretical discussion is reflected on an analysis of Christopher Priest’s 1995 novel *The Prestige*, a meditation on the 19th century and its tension between spiritual and materialist sensibilities. The central conflict within the story, embodied in two competing stage magicians, is between two conceptions of magic: either as naturalised craft or as actual supernatural power. Similarly, the novel itself is built on a conflict between naturalised narrative puzzles and fantastical story events. The novel finally presents for its readers its own “prestige”—the object that results from the magic act. In the case of this fiction the prestige is not a rabbit or a chain of handkerchiefs, but a cognitive state of lucid self-delusion engendered in readers.

Marco Bernini (U of Durham): Transparent Minds? A Cognitive Defence of the Exceptionality of Fiction

In narrative theory, the concept of the “transparency” of the mind has been limited to the influential view supporting the idea that fictional narratives allow direct access to multiple minds *from within*, in so doing making these minds “transparent” to the reader (Cohn 1978). This kind of omniscience is cognitively precluded in real-world encounters, and this is why David Herman labelled this view about fiction as the “Exceptionality Thesis” (2011), which says that fiction allows unnatural accessibility to individual minds. Countering this thesis, cognitive literary critics say that in fiction, as in the real world, other people’s minds can be “transparent” *from the outside*, because we can read them by exploiting our mindreading skills (Palmer 2004; Zunshine 2012) through which ascribing intentions and motivations for actions and behaviours. According to these objections, there is nothing exceptional about fictional access to multiple minds because “transparency” intended as “readability” can be extended outside the inward territories that fiction can disclose. However, focusing on the transparency of literary minds in terms of their accessibility to the reader meant overlooking another, more fundamental, privilege that fictional narrations afford: i.e., *a transparent access to the opacity of cognition*. The problem of transparency as debated by the new sciences of the mind can illuminate why literary narratives are unique in this respect. By drawing on contemporary cognitive studies on the “transparency of experience” (Carruthers 2011), and in particular on cognitive research on introspection (Hurlburt and Schwitzgebel 2007), my paper aims at a cognitive defense of the exceptionality of fiction.

Richard Walsh (U of York): Literary Narratology as an Interdiscipline

The trend in narratological research over the last two decades has been to diversify into a range of contextual narratologies, whilst consolidating the sense of narrative as a foundational cognitive concept; but contextualist narratologies have rarely moved beyond formalism without also subordinating theory to interpretation, while cognitive narratology has tended to invoke the sciences of the mind as a source of new concepts and terms with which to describe the experience of the literary text, and the value of that encounter. This paper is concerned to affirm the value of literary narrative study, but suggests that such affirmation is not to be found in the broad idea that such study is vindicated by the evident importance and ubiquity of narrative as a mode of sense-making. Rather, it argues for the theoretical role of narratology as a highly tuned analytical perspective upon that ubiquity, in reciprocal dialogue with the various disciplinary discourses in which it is now recognized, whether as an opportunity or a problem. Narrative theory is hence a crucial interdiscipline able both to demonstrate the value of narrative and to critique its limitations throughout the range of its current relevance as a means and object of study. As an illustrative limit case, the essay considers the relation between narrative theory and complexity science, both as an exemplary dialogue across the “two cultures” divide, and as the basis for a renewed concept of the distinctive contribution of literary narrative studies within such an enlarged sphere of academic and social relevance.

F3: CULTURE & PATHOLOGY

Emily Troscianko (St John’s College, Oxford): Bodies, Brains, and the Literature of Hunger

Brains are part of bodies, and when bodies go wrong, so do brains. Eating disorders are a prime example of how, in a continuous decentralised feedback loop, mental pathology arises from bodily dysfunction and vice versa. The dangerous metaphorical associations that help sustain eating disorders like anorexia – equations, for example, of hunger and thinness with self-denial, strength, power, purity, specialness, etc. – are cognitively potent and are also widespread in literature, literary studies, and culture at large. Reading literature from a cognitive perspective which is both second-generation (informed by cognitive science that takes into account the embodied, embedded, enactive, and extended nature of human cognition) and first-person (acknowledging and drawing on individual real-world embodiment and its psychological consequences) may help us understand better how embodied cognition becomes pathological and what this means for literary structures, readers’ responses, and academic practices. In this talk I focus on Modernist literature that deals with hunger and disordered eating, including works by Hamsun, Hemingway, Kafka, and Rimbaud. I argue for a cognitive approach that takes seriously the linguistic content of literary texts and their evocation of the fictional characters’ embodied experiences, exploring those experiences and their potential counterparts in real readers in a scientifically informed and sensitive manner rather than leaping immediately to a derivation of thematic (metaphorical/symbolic) meaning. I indicate how this methodology can make common literary-critical concerns such as paradox and thematic interpretation more tractable, as well as how it relates to the emerging field of cognitive literary science and may have moral as well as academic benefits.

Davide Caputo (U of Kent): Watching the Life of the Mind: Creative Endeavour and Psychopathology in Barton Fink and The Shining

Frequently represented in art is the figure of the tormented artist, an individual for whom psychological crises are bound with creative endeavour. The main question such depictions raise is that of the possibly causal link between mental illness and creativity in the real world; this question is not only fuelled by popular discussion and trite adages, but is also the subject of a great deal of psychological research that has sought both to establish and clarify this putative connection - research that has served to shed light on the nature of both creativity and certain forms psychopathology. This paper presents an overview of the research and polemics surrounding the study of the (possible) interrelatedness of creativity and mental illness; it then addresses the manner in which this clinical discourse has been represented cinematically, as well as the ability of cinema to inform public perception of this issue. The films *Barton Fink* (Coen, E. & Coen, J., 1991) and *The Shining* (Kubrick, 1980) serve as exemplars, and are compared in terms of the way each film deals with the creative struggles of its protagonist, the manner in which the ensuing psychological crisis is suggested, and how these elements reflect or contradict research findings and established theories regarding the co-occurrence of creative endeavour and behaviours symptomatic of psychopathology.

F4: GENERAL SESSION

Michael Burke (Utrecht U): Cognitive Rhetoric in the Age of Neuroscience

Rhetoric is a key field in the humanities. In the past, it made up the very academic core of humanities scholarship, together with her sister disciplines of grammar and logic. Today, it underpins a significant amount of scholarship that goes on in literary and linguistics departments, including work in the sub-fields of discourse studies, pragmatics, stylistics and narratology. If any humanities subject can respond adequately to concepts developed in the sciences of mind and brain – and indeed, in turn, influence those neuroscientific disciplines – then it is rhetoric, for rhetoric is unavoidably cognitive and cognition unavoidably rhetorical. For this reason, rhetoric should be at the heart of a ‘cognitive futures in the humanities’ programme. In recent decades, work has been done on different kinds of cognitive rhetoric (for example, Flower & Hayes 1981, Turner 1991, Hamilton 2005). Arguably, none of these has had rhetoric, in its most default sense of the word, as its main focus of attention. This has changed recently, especially in the work of Fahnestock (2005) and Jack and Appelbaum (2010), where rhetoric has taken centre stage. Taking the cognitive rhetorical work of Fahnestock as a point of departure, I will set out how I see cognitive rhetoric developing in the age of cognitive neuroscience. In this presentation, I will first briefly survey past work on cognitive rhetoric. I will then formulate a coherent contemporary definition of cognitive rhetoric. Thereafter, I will point to the kinds of research lines that should be taken up in cognitive futures in the rhetorical humanities. Here, I will also discuss some of my ongoing research, in particular my developing work on style figures and rhetorical *memoria* on the one hand and the cognition and neuroscience of vision and memory on the other.

Douglas Guilbeault (U of British Columbia): The Role of Gesture in Viewpoint Persuasion

The expression of viewpoint, whereby a speaker aligns herself with a particular perspective, is routinely exploited in political discourse for rhetorical ends. Politicians will, for instance, use words that reflect their own judgments while quoting or reporting on the viewpoint of their adversaries (Coulson 2008). Linguistic choices are not, however, the only means of representing viewpoint in discourse. Gestures make substantial and independent contributions to the construction of viewpoint, alongside speech. Not only can they reveal the speaker’s narrative stance – i.e. whether or not she is speaking as a character within the scene or as an observer outside the scene (Parrill 2012; Stec 2013) – but they can also express multiple viewpoints simultaneously (Sweetser 2013). Most importantly, though, gestures have the unique ability to influence people’s responses, below their conscious radar (Kendon 2003; Wu & Coulson 2007). In this paper, I examine cases of reporting in political discourse wherein gestures are crucial to the rhetorical imitation of viewpoint. Specifically, I show how politicians often report on the views of their opponents as if they were faithfully reproducing the source, while gesturally expressing epistemic and emotional stances that implicitly insert the speaker’s perspective. If the audience then takes this impersonation to be accurate, they have, in effect, accepted a combined viewpoint that implicitly contains the speaker’s interpretation, thus achieving her rhetorical aim. In studying rhetorical behaviour, the cognitive humanities have the potential to use scientific data to enhance our critical and ethical awareness of the dominant discourses that shape society.

Massimo Salgaro (U of Verona): The Effects of Rhetorical Figures in Literary Reading

Rhetorical figures have since ever been considered as typical linguistic features of literary language. Since the classical times of rhetoric, rhetorical figures have been classified on the basis of their textual form (schemes) and their unusual meaning (tropes). More recently, rhetorical figures have been defined as “foregrounded” since they stand out against a background of common usage of everyday language. In our research we would like to take more into account their impact on the literary reader and the cognitive elaboration they demand. Our experiment has examined whether particular rhetorical figures are processed differently depending on the genre of the text they belong to. Participants were induced to think that the sentences containing literary figures they would read were drawn either from literary texts (literary group) or from newspaper articles (news group). The results have shown that the news group read the final parts of the sentences slower when they were following a rhetorical figure than when they were not. Apparently, exposure to different linguistic genres appears to affect people’s sensitivity to rhetorical figures. In addition, we have noticed that reading time was shorter for oxymora than for synesthesiae and personifications. A follow-up test of the different rhetorical figures used in the experiment has shown that the reading time differences for oxymora are likely due to the level of semantic association between the elements of the rhetorical figures. Other recent experiments have proved that different rhetorical figures elicit different ERPs effects (N400, P600). All these results show the necessity to distinguish better the impact of rhetorical figures on the reader.

F5: GENERAL SESSION

Anthony Koth (Rice U): 'I'm Not Gay, I'm Homosexual. There is a Difference': A Semantic Analysis of Synonymy

The title quote demonstrates that *gay* and *homosexual* are not simply synonyms that can be used interchangeably. The speaker created a message with a specific meaning using the semantic resources available. As a rough gloss, the speaker focuses on his behaviors related to choice of sexual partner while denying connection to the social and political aspects of the group of people who typically engage in that behavior. "In cognitive semantics, meaning is identified as the conceptualization associated with linguistic expressions" (Langacker 2008:4). This analysis examines the nature of this conceptualization in relation to the lexemes GAY and HOMOSEXUAL in American English discourse. The semantic value of a lexeme is defined as the imposition of a profile on a matrix of domains, including encyclopedic knowledge of lived experience and the conventional paths of access into and through those domains. Metaphor analysis, conceptual blending and collocation analyses are employed to untangle the matrices in order to define which domains underlie each lexeme: those which are shared - allowing synonymy; those which differ - allowing connotative distinctions; and the relative prominence afforded to each - delineating certain grammatical and collocation tendencies. The conventional paths of access include collocations, such as *gay pride parade* or *homosexual behavior*, and conceptual metaphors, such as HOMOSEXUALITY IS A DISEASE, which structure political discourse. The tendency that GAY occurs in subject position while HOMOSEXUAL occurs in object position emerges because the domain of personhood is more prominent in GAY than in HOMOSEXUAL.

Irina Ubozhenko (National Research U, Moscow): The Cognitive Research of Language Creativity: The Case of Accountability Concept in Bilingual Political Discourse

The performed cognitive comparative analysis of the concept of accountability in the English and Russian political discourse has been proved to serve as a trigger-tool of creative language decisions search while comprehending and translating academic texts. The functional cognitive comparison analysis of the linguistic units that require adequate interpretation demands the profound knowledge of both political terminology in the Russian and English languages and the current world political situation. In its turn, the individual as well as conventional perception of the accountability concept including its representation and interpretation in the bilingual academic corpora influences the process of "constructing" the reality of politics and the actual political environment. In the course of the research an integrated parallel associative bilingual thesaurus is being created comprising some definite representative cases of the examined subject fields of linguistic (political) realities units usage (such notions in the world politics as "governance", "accountability", "state", "power", etc.). The analysis performed has shown that the steady associative links regarding the important but still elusive notion of accountability comprise such core semantic fields as "holding people accountable", "responsibility", "liability" and others. The accountability concept also covers such outcome notions as "the accountability holder" and "the accountability holder" meaning government officials, government bureaucracies, managers, donors and a number of other stakeholders each of whom may be investigated as an independent push-notion. Of high scientific interest may also be such associative derivatives of "accountability" as "the accountability environment" and a very resourceful and controversial weak associative meaning of "punishment" (never mentioned in any dictionary regarding the word "accountability") leading to such a disputable associative link as "the public humiliation for wrongdoing". Thus, the interdisciplinary research is being carried out by the example of the discourse analysis of modern political terminology and other non-equivalent vocabulary within the bounds of political contexts while interpreting the reality constructed in and by foreign academic and scientific texts.

Giusy Gallo (U of Calabria): Embodied Simulation, Intentional Attunement and Linguistic Practice

The aim of this paper is to investigate the role of the embodied simulation in linguistic practice. Starting from the researches on mirror neurons, the notion of embodied simulation is the peculiar feature of the human brain which allows our human intersubjective experience, therefore embodied simulation highlights the neurophysiological perspective on social cognition. To understand the significance of embodied simulation, the concept of intentional attunement has to be taken into account. First, we will explain what mirror neurons, embodied simulation and intentional attunement are. Then, we will focus on the features of linguistic practice, in particular on its social and interpersonal nature. The basic dyadic status of linguistic practice is warranted by the intentions of the speaker and the way in which the receiver understands the meaning of an utterance. In our opinion, the notion of intentional attunement represents, on one hand, the key of human intersubjective experience, and on the other hand, an earlier kind of the intentions which fill the linguistic exchanges and make linguistic practice a very creative practice which calls not only the people who are involved in this practice, but also their bodies and their capacity to stay together. We will evaluate if embodied simulation is a necessary condition for the development of linguistic practice, or it is necessary to different kind of practices like the making of tools.

Saturday, 26 April

PANEL SESSION G

G1: KINESIS AND LITERATURE

This panel is intended to explore the ways in which 'kinesic intelligence' (Spolsky, Bolens) can illuminate the function and representation of movement in literature. Each paper will probe kinesic intelligence in a particular literary text, demonstrating how it enables us to revisit in innovative and revealing ways the central questions which have been asked of

particular texts. Questions to be examined might also include the following. How can kinesic intelligence be marshalled in the development of tools for close reading? Do we employ it differently in relation to particular texts or genres or periods of literature? What does it tell us about movement in literature? To varying degrees, the papers will also set kinesic intelligence within a broader cognitive framework for looking at literature. The presenters will be Kathryn Banks, Guillemette Bolens, Terence Cave, and Timothy Chesters. The papers will focus on Rabelais, Flaubert, and Conrad. The panel stems from research developed during our participation in the Balzan project 'Literature as an Object of Knowledge', directed by Terence Cave at the St John's College Research Centre, Oxford.

Terence Cave (St John's College, Oxford): The Posture of Reading: Kinesic Intelligence in Lord Jim

Kathryn Banks (U of Durham) & Tim Chesters (U of Cambridge): Kinesis and Inference in Rabelais' Fourth Book

Guillemette Bolens (U of Geneva): Kinesis and Perceptual Simulations in Flaubert's Madame Bovary

G2: EMBODIED & EXTENDED MIND

Miranda Anderson (U of Edinburgh): Fission-fusion Cognition in the Renaissance

This paper examines notions of the mind and subject as varying between containing multiple agencies and conversely of many individuals acting cooperatively as one agent: individual and social units form, separate and reunite in flexible and shifting ways. The physics' term 'fission-fusion', which has been adopted by ethology to describe dynamic social networks that periodically merge and divide as 'fission-fusion societies', can more specifically be reapplied to capture the nature of human cognition. This paper opens by exploring recent notions of the mind as socially extended in cognitive scientific research and in literary theory. Then it considers evidence for parallel (and contrasting) notions in Renaissance texts, through examining a range of works, including medical treatises, essays and sermons. These works depict cognition as fluctuating dynamically between a constrained (or infinite) individual span and a radius that extends fertily (or fatally) into the world, via various factors including social means. Finally, this paper will examine in more detail Shakespeare's imaginative exploration of the fission and fusion involved in human cognition.

Victor Loughlin (U of Antwerp): First-Wave Extended Mind

In recent work, Sutton (2010) has set out to "defend the conceptual priority and fruitfulness of the second wave [extended mind]". As Sutton makes clear, his case is one of emphasis and not one of exclusion. That is, he does not wish to exclude first wave approaches to extended mind but rather to emphasize the methodological potential of a second wave, complementarity based view. In this talk, I will defend a first wave approach. Like Sutton, my defense will be one of emphasis and not exclusion. That is, I will defend first wave, not in order to undermine the efforts of second wavers, but rather to remind them there is still much to be gained by retaining a first wave approach. I will do this in two ways. First, I will claim that second wave is vulnerable to the coupling-constitution fallacy (Adams and Aizawa, 2008, 2010). However, I shall argue that if second wavers were to endorse a Clarkian extended functionalism, then they could retain what is significant about second wave while limiting their exposure to this fallacy. Second, I will discuss Sprevak's (2009) attack on the type of functionalism that arguably underpins extended mind. I will claim that the functionalism first wave endorses is not vulnerable in the way Sprevak suggests. Moreover, I will argue that an extended functionalist approach can avoid cognitive bloat.

Tom Roberts (U of Exeter): Extended Affectivity

Recent work in defense of the Extended Mind hypothesis has restricted its attention to states and processes of a cognitive nature; for instance standing beliefs, memories, and activities of planning and calculation. In cases of extended cognition, it is proposed that non-neural representational materials can be suitably integrated into the activity of the cognitive system such as to play an ineliminable - and partially constitutive - role in the machinery of intelligent problem solving. The question of whether arguments in support of the Extended Mind can be applied to the *affective* domain, in addition to the cognitive, remain largely unexplored, and it is the purpose of this paper to address the extent to which affective phenomena can be underpinned by extra-biological resources. I argue that once we attend to the multiplicity of affective phenomena that persons undergo, and demarcate their essential features, we can see that the functionalist considerations that motivate claims of extended cognition also implicate varieties of extended emotion, extended sentiment, and even extended character traits. Affective states and processes can, in large part at least, be given a functionalist treatment: standing emotions, for example, are systematically related to patterns of behaviour, thought and motivation; while character traits underpin an agent's long-term characteristics. As such, we can devise cases in which the role of a material object in a subject's closely-coupled interaction with the environment is suitably described as partially constitutive of - and not as merely causally influential on - an affective state or process. This is significant not only from a philosophical perspective, but also in widening the subject matter of affective science.

Dirk Van Hulle (U of Antwerp): Genetic Criticism and the Extended/Extensive Mind

Twenty years ago, Louis Hay warned against the idea of 'reading in someone's soul' ('lire dans les âmes') or 'reliving the writer's interior experience'; instead, genetic criticism ('critique génétique') was to limit itself to studying the material traces of the writing process (Hay 1994: 19). The question, however, is whether such a cognitive interest concerns a strictly 'inner' experience. As sites of enactive cognition, writers' notebooks are privileged spaces to study the extended mind at work. In their foundational article 'The Extended Mind', Andy Clark and David Chalmers took a notebook as an example (the

notebook of 'Otto', an Alzheimer's patient); and in 'Writing as Thinking' Richard Menary applied the idea of enactive cognition to writing in general (Menary 2007: 621). In 2013, Daniel Hutto and Erik Myin coined the term 'extensive mind', arguing that extensiveness is not an exception (as in Otto's notebook), but the rule. The proposed paper argues for a combination of genetic criticism and cognitive narratology (1) to examine this notion of the 'extensive mind' and the role of hesitations and cancellations in enactive cognition on the basis of notebooks and drafts; (2) to explore the ways in which (and to what extent) this process of cognition can be made accessible to students and researchers in the form of a digital genetic edition (case study: the genesis of Samuel Beckett's *L'Innommable* and *Krapp's Last Tape*); and (3) to investigate to what extent the knowledge of the genesis may inform cognitive narratology, notably the study of evocations of fictional minds.

G3: GENERAL SESSION

(A) AMBIGUITY

Laurie Maguire, Felix Budelman & Ben Teasdale (U of Oxford): Ambiguity and Audience Response

This paper analyses the results of an experiment on audiences about how they respond to ambiguity in drama. We used film extracts from two ancient Greek and two Shakespeare plays: Aeschylus' *Libation Bearers*, Sophocles' *Ajax*, Shakespeare's *Othello* and *Winter's Tale*. Our hypothesis was simple: in real life we disambiguate, in the theatre we keep multiple options open. Not only was our hypothesis proved wrong, our experiment showed four different types of audience response—types which make us question our Empsonian assumptions about how to define ambiguity.

(B) BAYESIANISM

Karin Kukkonen (U of Turku): Tangled in Bayes's Nets: Embodiment and Emotions in the Bayesian Brain

The so-called 'Bayesian revolution' in the cognitive sciences has reconsidered human cognition in terms of a probabilistic calculus which gives the mind a continually developing, predictive grasp of the natural, linguistic and cultural environment (see Dehaene 2012; 2013 for introductions). The attraction of this supple, flexible model for the study of literature (and other forms of cultural expression) is obvious, but literary study poses a number of challenges for the probabilistic computation of the Bayesian brain: Does literature not often misguide, defamiliarise and slow down Bayesian operations? How do emotional appraisals, gut feelings and embodied responses, which have come to prominence in cognitive approaches to literature recently, affect the seemingly rational Bayesian model? The proposed paper will address these issues with reference to seduction scenes from novels by Eliza Haywood, where the emotional investments of readers are often at odds with their probabilistic assessment of how the story is likely to turn out. I shall review existing approaches which combine embodied cognition with a Bayesian calculus (see Friston 2012) or reject the Bayesian model in favour of stressing the fallibility of human cognition (see Kahneman 2011; Tversky and Kahneman 1981; 1974; Kahneman et al. 1996), before proposing an updated version of the notion of Bayes' nets (Gopnik et al. 2004; Gopnik and Tenenbaum 2007). On this account, not only what readers believe likely to happen, but also what they want to happen feeds into the literary experience of the Bayesian reader.

Richard Hill (Johannes Gutenberg U, Mainz): Why Be Bayesian?

Recent scholarship from both the humanities and the neurosciences have argued that the Bayesian inference model offers a promising basis for explaining the phenomenology of experiences that both disciplines have been unable to account for adequately, such as consciousness and attention. The Bayesian model of causal inference has been shown to dovetail with Hume's famous problem of induction, both of which provide essential theoretical support for predictive coding accounts of neural networks specifically and human psychology generally. What has been lacking in the literature, however, is a serious discussion on the basic theoretical assumptions that underpin predictive coding and what such assumptions amount to in terms of accounting for human experience. In this presentation, I take issue with what I believe to be highly problematic aspects of this essentially Humeian endeavour towards accounting for human experience, employing attention to visual art and literary texts as case studies. In addition, I suggest an alternative model that explores potentially fruitful intersections between the hitherto disparate disciplines of phenomenology and cognitive science.

G4: INTERDISCIPLINARITY

Freya Vass-Rhee (U of Kent): Disconcerted Senses, Or One Way to Make the Cognitive Humanities More Difficult

In a 2003 book chapter titled "Ten Ways to Make Visual Studies More Difficult," art historian James Elkins recommends a productive disciplinary problematisation in which the field's innovative approach to subject matter is balanced by a denser, more innovative engagement with theories and ideologies. In this paper, I advocate a similar complication within the cognitive humanities in the form of multisensory studies. Though both cognitive and humanistic research employ sophisticated methods for visual, aural, and more recently tactile, olfactory, and gustatory analysis, both disciplines overwhelmingly consider the senses in isolation rather than in concert. In doing so, both disciplines effect a reductive division that is fundamentally at odds with human perceptual experience. Further, as I argue, the current dynamics of interdisciplinary engagement between humanistic approaches and cognitive research efface these reductions, rendering them largely invisible. Though sensory reductionism is an inherited factor in both disciplines, multimodal approaches, though far from easy, offer potential to refine research practices in both knowledge cultures.

Matt Hayler (U of Exeter): Another Way of Looking: Digital Technologies and How They Change the World

The term 'technology' has proved perennially hard to pin down. This paper will argue that part of our definition of technology might well be those artefacts which change our conception of the world and how we are able to act within it. Drawing on examples of increasingly mundane visual media, once exotic techniques that have now become fundamental to our visual grammar in film and photography, I will argue that visual representations can have a profound impact on the ways in which viewers see the world outside of the cinema or gallery and on the ways in which practitioners of heavily embodied activities, such as dance or skateboarding, assume their expectations for beginner and expert levels of skill. This idea can be drawn more widely than these case studies however; hammers, cars, and telephones, as technologies, each have this same effect, expanding our minds and refining our skilful practices far beyond their initial environment of use.

Krista Leškēviča (U of Latvia): Collaborative Recall and Extended Identity in Twitter Communication

The aims of the current study are; (a) to analyze research evidence of the ways in which collective recall exhibits extended social identity effects within the framework of distributed cognition (Barnier et al., 2008, Sutton, 2008, Sutton et al. 2010) and (b) to explore social identity generation (Brewer, 1991, Saribay & Andersen, 2006) and collaborative recall effects in Twitter communication. Our core hypothesis was that the use of Twitter as a recall tool significantly contributes to social identity generation in general and self-categorization in particular. Based on a study of a representative sample of Latvian-language Twittersphere, we argue that a social network serves a two-fold role: (a) it extends the individual self as part of a distributed social reality and (b) it extends the self as part of a distributed on-line social network. Our research has significant consequences for the extended mind hypothesis in the cognitive sciences and contributes to the understanding of social identity and hybrid community identity (that which merges physical and digital communication). It also touches on the concept of the context-dependent self, including significant others as self-aspects (McConnell, 2011). Our empirical data consists of a harvested set of tweets in Latvian. To interpret collective recall effects, we have analyzed a large set of tweets, explored word co-occurrence identified using the Pointwise Mutual Information algorithm, and performed an extensive manual content analysis. The core results of our study show that Twitter functions as an extended distributive linguistic cognitive system supporting different kinds of recall tasks while at the same time exhibiting strong categorization effects through eliminating redundant information and reducing the descriptive complexity of the environment in recall.

Segolene Tarte (U of Oxford): Cognition and the Digital: Embodied Digital Interactions in the Study of Ancient Textual Artefacts

One of the main activities of the Humanities consists of making sense of events, documents, objects, ephemera, corpora - data, for short. With the rise of Big Data and algorithmic approaches in the Digital Humanities, there is a tendency to approach the Humanities as an evidence-based field. Considering the Humanities solely under this perspective however tends to limit the data-transformation flow to a conversion of data into information, when the much sought after grail of the Humanities actually consists of knowledge and meaning. The Humanities are intrinsically interpretative and it is through interpretation that knowledge and meaning are created, discovered. The cognitive processes at play in creating and discovering both knowledge and meaning are hence the essence of the Humanities, so that identifying these cognitive approaches and supporting them digitally has the potential to inform and enrich the Digital Humanities. Working on these premises, I will present how, by adopting a methodology that attempts to cross the divide between ethnography and the cognitive sciences, I have identified a number of specific perceptual processes, which are mobilised by scholars studying ancient textual artefacts. By observing the cognitive power of these perceptual processes, it is then possible to transpose real-world interactions with the textual artefacts into cognitively empowered virtual interactions with digital avatars of the artefacts. Examples comprise: Reflectance Transformation Imaging (RTI) as a digitization strategy allowing 3D perception through monocular parallax motion; kinaesthetic approaches to reading artefacts (e.g. proto-Elamite tablets ~3200-2700 BC; Roman wax tablets ~1st century AD), where tracing the text allows to connect text-as-shape and text-as-meaning.