



## UK Creativity Researchers' Annual Conference 2026

Welcome to this year's conference **Book of Abstracts**, which brings together a diverse and inspiring collection of work from our contributors. This volume showcases the breadth and depth of current research, practice and innovation within the field, highlighting both established perspectives and emerging ideas. We hope it provides a valuable guide to the programme, encourages meaningful discussion, and inspires new connections throughout the conference.

Abstracts are listed in order of presentation appearance.

## Creativity Research in Action

**Dr Mark Batey, Manchester Metropolitan University**



Our 2026 keynote will be in the form of a Masterclass with Dr Mark Batey, Manchester Metropolitan University!

Mark Batey is a leading thinker & practitioner in creativity & innovation. As a researcher he has investigated creativity and innovation in individuals, teams, cities and cultures. As a practitioner he has worked with organisations and governments all over the world.

Mark combines leading-edge academic insight and expertise, with international practitioner experience as a speaker, consultant, coach and facilitator. Delivering workshops, training and more. We're thrilled to have him open our 2026 conference!

# SpreadPy: A Python tool for modelling spreading activation and RAT difficulty in cognitive multiplex networks

**Edith Haim**, Trento University

with Salvatore Citraro, Alessandra Carini, Cynthia S.Q. Siew, Giulio Rossetti, Massimo Stella

**Focus and Purpose:** In our rapidly changing world, the ability to solve complex problems depends on how effectively our minds can navigate vast amounts of information to find hidden connections. While spreading activation is a fundamental tenet of associative theories of creativity, researchers often lack the tools to see this process in action. We introduce SpreadPy, an open-source tool designed to bridge this gap by simulating how activation travels between ideas through the mind, influencing cognitive search and lexical access.

**Methods:** The tool allows researchers to move beyond static network metrics by performing simulations of signal flow. We demonstrate the library's utility by simulating activation trajectories on associative networks during the Remote Associates Test (RAT). We measure maximum activation level and time of peak activation at the RAT solution word. We then compare these activation patterns across RAT items marked as easy, medium or difficult.

**Key Findings:** Our results reveal that activation patterns vary significantly with RAT task difficulty. Easy items reach peak activation fastest, while hard items take longest. Furthermore, the maximum activation accumulating at the solution node is higher for easy items than for medium and hard items. This provides a mechanistic explanation for how cognitive load, activation flow and network navigability modulate creative insight.

**Relevance and Contribution:** By linking network topology to dynamic activation, SpreadPy moves creativity research from static observation into actionable computational modeling. It provides the research community with a functional, open-source toolkit to simulate cognitive search in creative tasks, allowing researchers to explore the individual differences underpinning cognitive flexibility and creative thought.

**Keywords:** spreading activation, creativity research, multiplex networks, cognitive modelling, open source tool

# Designing an Incubation Window: How Dim Daylight Supports Creative Readiness

**Anthony Chen, University of Cambridge**

Creativity research often centres on task performance, yet creative success may depend just as much on what happens immediately before a task begins. This study tests whether a brief “incubation window” in a shadow-rich, dim daylight setting can shift people into a preparatory cognitive mode that supports subsequent idea generation.

Using a controlled immersive virtual environment, participants experienced three calibrated daylight atmospheres (dim, moderate, bright) in a within-subject design. Each condition separated two pre-task phases: (1) free exploration (unstructured immersion) and (2) a structured task-readiness baseline, followed by a verbal divergent-thinking task while EEG was recorded. Creative output was assessed via idea fluency. Neural dynamics were examined using EEG microstate measures as indicators of internally directed cognition

Behaviourally, participants generated more distinct ideas following dim daylight than following moderate or bright daylight. At the neural level, patterns in microstate dynamics were most consistent with an increase in internally directed processing during the unstructured exploration period, with less evidence of the same pattern during the structured baseline. Within participants, stronger expression of this internally directed neural dynamic during exploration was associated with higher subsequent idea fluency, whereas the association was minimal during baseline.

The key takeaway is stage-specific: dim, shadow-rich daylight appears to support creative readiness during an unpressured incubation window, rather than improving creativity through sustained task engagement or general arousal. The work offers a practical pathway for translating creativity theory into environmental design decisions, especially where daylight atmosphere can be deliberately shaped.

**Keywords:** Creative incubation, Daylight environment, Divergent thinking, Environmental psychology, Cognitive readiness

# The Impact of AI On Creative Foresight

**Dr Megan Crawford**, Edinburgh Napier University

with Nicholas Rowland, Luciana Blaha, Elena Fitkov-Norris, Taner Doğan, Miguel A. Moreno

**Context:** Foresight (i.e. prospection) is a quality of thinking where we gain insight by visualising future options: both probable and improbable. Traditionally, foresight has relied on human cognition, judgment, and reasoning (Faiella & Corazza, 2025). The popularity of AI across industries is bolstering an interest in using AI-generated insights to support or even replace human foresight (Saura & Bužinskienė, 2025). The Extended Mind Thesis (EMT) proposes that we offload cognition as a way of scaffolding human thinking externally to create a hybrid thinking system (Clark & Chalmers, 1998). With tools such as generative AI, the risk is not from cognitive extension but substitution (Clark, 2023, 2025). According to EMT, successful offloading of cognitive functions requires trust in the external resource (e.g. chatbot).

**Focus:** This project is investigating whether offloading future-oriented decision-making to generative AI models diminishes human creativity.

**Method:** All participants perform a foresight creativity task (divergent v convergent x individual v pairs), and complete a self-efficacy scale (Chen, et al, 2001), AI trust game (Berg, et al, 1995), Meta AI literacy scale (Carolus, et al, 2023), and confidence scale. The experimental groups are paired with a generative AI model to complete the foresight creativity task.

**H1:** Foresight ability (human creativity) will mediate offloading to the AI model (higher creativity,

**H2:** Trust in AI will moderate offloading to the AI model (higher trust, higher offloading).

**H3:** Self-efficacy (SE) will moderate offloading to the AI model (higher SE, lower offloading).

**H4:** AI literacy will moderate offloading to the AI model (higher literacy, lower offloading).

**Contributions:** Pilots are currently underway, with early indicators revealing stronger relationships between trust in AI and foresight offloading, and self-efficacy and AI literacy. Insights are valuable to strategy management, planning, and education.

**Keywords:** foresight, prospection, artificial intelligence, divergent thinking, metascience

# Creator to Editor: GenAI-Driven Role Displacement and its Impact on Psychological Ownership in Creative Professional Practice

**Claudio Freita, King's College London**

The rapid integration of generative artificial intelligence (GenAI) into creative practice has displaced some professionals from creator to editor role. The psychological dimension of this transformation remains comparatively under-examined, particularly its impact on creative professionals' relationship to the work they produce.

This review investigates the impact of potential displacement of creative roles on psychological ownership, drawing on Pierce et al. (2001, 2003) as its primary theoretical framework, answering how does the GenAI-driven displacement from creator to editor affect psychological ownership of creative work in creative knowledge professionals?

A narrative synthesis was used following the framework of Popay et al. (2006). Searches were conducted across four databases: Scopus, EBSCO Psychology and Behavioural Sciences, ACM Digital Library, and Web of Science. This resulted in 18 studies covering empirical, experimental, qualitative, and organisational designs.

GenAI usage may attenuate the three experiential routes through which psychological ownership forms: controlling the target, developing intimate knowledge of it, and investing the self into it (Pierce et al., 2001, 2003). Such disruption across multiple routes may compound the risk of diminished ownership, with potential implications for professional efficacy, identity, and psychological grounding. However, professionals maintaining control over the creator role may preserve motivational engagement.

This review proposes a control-centred model to preserve ownership under GenAI usage conditions. This proposition remains theoretically motivated.

Keywords: psychological ownership, GenAI, creative professionals, role displacement

## **Panel Discussion: The implications of AI for the science and research ecosystem**

Dr Megan Crawford (Chair), Edinburgh Napier University

Prof. Nicholas Rowland, Pennsylvania State University

Dr Elena Fitkov-Norris, Kingston University

Dr Taner Doğan, Queen Margaret University

This panel session will explore the question, how is AI impacting the science and research ecosystem? We will discuss the pragmatics, philosophy, business, and governance of science in the age of AI plurality. In 2025, the UK prioritized their AI blueprint to become a "global leader in AI". However, there are practical and technical challenges to address before society has fully-fledged autonomous 'AI scientists'. Nevertheless, public and private R&D funders are making significant investments both to diffuse and adopt AI technologies, and to solve technical challenges, in the direction of a more heavily AI-mediated science. AI is rapidly transforming how research is conducted, influencing everything from hypothesis generation, to data analysis, to long-term strategic planning. This is challenging serious questions about what it even means to become "more scientific". This panel will include an interdisciplinary group of researchers working at the forefront of human-AI collaboration. The panel includes researchers in technological epistemology, AI-cognitive scaffolding, automation, foresight and strategy. We aim for a lively discussion with the audience on this topic, because only broad mix of insights and experiences can truly address such a future together.

Keywords: metascience, artificial intelligence, epistemology, technology, governance

# Imagination Under Constraint: Psychological and Institutional Factors Shaping Generative Futures Thinking in Research Contexts

**Emily Shipp**, Futures Thinking and Prof Sarah Kettley, Edinburgh College of Art

Imagination is considered the seed of creative thought and action, enabling individuals to generate possibilities beyond present constraints (Gotlieb et al., 2019). In parallel, futures literacy has been described as a key competence for navigating uncertainty in the 21st century, emphasising the role of imagination in anticipating and ‘using’ possible futures for present decision-making (Miller, 2024; UNESCO). For researchers and academic staff, the ability to imagine alternative futures is central to activities including designing new research agendas, identifying emerging questions, and articulating compelling visions in funding proposals. Yet despite its importance, little empirical research has examined the psychological and organisational conditions under which individuals are able to engage in imaginative futures thinking within research environments.

This paper draws on qualitative data from the CoGIF (Creating the Generative Conditions for Imaginative Futures) project at the University of Edinburgh, which investigates how academic and research-enabling staff engage with futures thinking within research cultures. The study addresses the question: what psychological and organisational factors enable or constrain individuals’ ability to imagine alternative futures for their work and fields?

Using semi-structured interviews and reflexive thematic analysis, the research examines how participants experience attempts to engage in future-oriented thinking. Preliminary findings suggest that generative futures thinking is often constrained by contextual conditions including time scarcity, short-term contracts and career precarity, as well as the social and relational conditions within which futures thinking is practiced.

The paper argues that future-oriented imagination can be understood as a form of creative cognition that is highly sensitive to its psychological and institutional environment. By identifying conditions that support or inhibit imaginative engagement with possible futures, the study contributes to creativity research by highlighting the importance of situational and organisational factors in shaping prospective imagination.

**Keywords:** Imagination, Creativity, Futures Thinking, Prospecation, Research Cultures

# Does Your Environment Think with You? The Impact of Personalised Virtual Environment on Creativity and Cognitive Flexibility

**Iyad Sawaftah, Edinburgh Napier University**

This study examined how personalised environments impact creativity and cognitive flexibility in virtual reality (VR). It explored three types of virtual environments: a basic lab, a decorated lab, and a personalised lab where participants actively designed the space according to their preferences (such as adding windows, changing colours, texture, furniture, adding plants, etc...). Participants completed the alternative uses task and verbal fluency task in all three environments, followed by self-reports on perceived creativity and cognitive flexibility.

Results indicated that objective creativity performance was higher in the personalised lab than in both the decorated and basic labs, particularly in creative fluency and originality, though not in creative flexibility or elaboration. Participants also produced more switches during semantic fluency in the personalised lab than in the other two. They also displayed more environmentally linked responses in creativity and phonemic fluency. Additionally, they reported greater feelings of creativity and increased cognitive flexibility than in both personalised and decorated labs.

This research suggests personalisation has an impact on both aspects of creative performance and perceived creativity. This study contributes to ongoing discussions on user-centred design and the role of individual preference in shaping cognitive experience by making environmental users an important dimension in decision-making during the design phase. The results raise important questions about designing spaces that not only serve functional purposes but also enhance creative potential.

Keywords: Creativity, Environment, Design, and Virtual Reality.

# Teens Solving Global Problems

## Dr Tony McCaffrey, Eagle Hill School

High school students at Eagle Hill School have solved three of the five global problems they have attempted this school year. Based on adult expert feedback, they have 1) designed a device that will remove orbital space debris (as confirmed by an aerospace engineer), 2) crafted a way to completely protect a home from massive, flowing floodwaters (as confirmed by a civil engineer), and 3) created a new social media app that addresses all of the harmful effects on youth from current social media apps (as confirmed by concerned parents with high-tech expertise). Leveraging the superior originality of teenagers over adult experts and tempering this originality of ideas with concern for plausibility exhibited by adult experts results in a synergy that is sufficiently potent to solve global problems. The result is a new innovation model, in which teenagers innovate and adult experts refine and implement the innovations. This model uses teenager imaginations, some AI that amplifies creativity, select creativity techniques, BrainSwarming (a visual group problem solving tool), and teenager motivation to fix the many global problems they are inheriting from older generations. The initial results of this combination are powerful and impressive. We look to spread this innovation model to schools and industry leaders worldwide.

Keywords: teen, creativity, innovation, real-world problems

# Creativity and L2 Semantic Fluency in EFL Adolescents: Evidence Across Taxonomic and Experiential Semantic Categories

**Dr Almudena Fernandez-Fontecha and Arsema Pérez-Hernández,**  
Universidad de La Rioja

Creativity has been increasingly recognized as a cognitive resource that may enhance lexical access in second language (L2) learning. Creative individuals exhibit richer, more interconnected semantic networks and broader associative search processes (Benedek et al., 2020; Kenett et al., 2014), advantages that have been linked to enhanced L2 semantic fluency (Fernández-Fontecha, 2021; Fernández-Fontecha & Kenett, 2022). However, the extent to which this advantage generalizes across semantic categories of varying cognitive and taxonomic demands and L2 learners of different ages remains underexplored. This study examined the relationship between creativity and L2 English semantic fluency in 72 secondary school Spanish students (10th grade) classified into high-creativity (HC,  $n = 36$ ) and low-creativity (LC,  $n = 36$ ) groups using the PIC-J (Artola et al., 2008), a divergent thinking test grounded in Guilford's (1967) alternative uses paradigm and the Torrance Tests of Creative Thinking (Torrance, 1990), which assesses verbal fluency, flexibility, and originality, alongside figural creativity. Replicating previous work with older learners (e.g., 12th-grade EFL students in Fernández-Fontecha, 2021; 2026), this study extends inquiry to younger learners across both more taxonomically structured (Animals) and experientially grounded categories (Love, Food and Drink, Festivities and Celebrations, Daily Activities). Productive vocabulary was measured with the PVLT (Laufer & Nation, 1999). Independent-samples t-tests revealed significant group differences in five out of six categories, favouring HC learners. The exception was Animals, where shared lexical consolidation at this proficiency level may have levelled group performance, leaving insufficient room for creativity to operate, a result consistent with the view that vocabulary provides the necessary substrate for creativity to emerge (Fernández-Fontecha, 2026). These findings extend the creativity–L2 semantic fluency link to younger learners and suggest that both category type and learners' lexical development stage moderate creativity's contribution, with implications for individual-differences research and vocabulary pedagogy.

**Keywords:** L2 semantic fluency, Creativity, Divergent thinking, EFL, Semantic categories

# What Counts as a Creative Act? Introducing a Five-Facet Model of Creative Experience

Dr Jennifer Lynch, University College London

with Greg Fetzner

Creativity research has predominantly adopted an instrumental outcome-based definition — the production of ideas that are both novel and useful (Amabile, 1996) — valued for its measurability and organizational relevance. Yet this explicit definition sits in tension with the diverse implicit theories individuals hold about what kinds of activities and experiences actually count as creative. These lay conceptions are consequential: they shape whether people recognize themselves as creative, how they evaluate creative experiences, and what conditions leave them feeling creatively fulfilled or frustrated.

Drawing on research about implicit theories of creativity (e.g., Runco & Bahleda, 1986), personal creativity (e.g., Beghetto & Kaufman, 2007) and creative experience (e.g., Glăveanu & Beghetto, 2021) we propose a five-facet model in which individuals anchor their personal definition of creativity around one or more of the following: ideation (creativity as generative thinking), self-expression (creativity as the infusion of personal identity), spontaneity (creativity as emergent, improvisational aliveness), making (creativity as the act of bringing something tangible into existence), and disruption (creativity as a meaningful challenge to the status quo).

We argue that these facets are not merely descriptive categories but psychologically active orientations that function as evaluative schemas. When lived experience aligns with a person's dominant facet(s), creative satisfaction follows; when it does not, a distinct form of frustration emerges depending on which facet is being thwarted. We further hypothesize that misalignment between the implicit creativity theories of employees and their organisations' can generate systematic and largely avoidable creative frustration in the workplace.

This framework contributes a theoretically grounded, phenomenologically sensitive account of creative experience that complements outcome-focused approaches, with implications for individual self-awareness, team dynamics, and organizational practice.

Keywords: implicit theories of creativity, creative experience, creative frustration, everyday creativity, lay conceptions of creativity

# Holding Uncertainty: Care, Capacity, and Entering Arts-Based Practice Together

**Beth McManus, University of East London**

Creativity research often celebrates the generative and expressive possibilities of creative practice. Less often do we pause to consider what it asks of people before creative work begins, particularly in collective settings where uncertainty, exposure, and difference are part of the experience. This presentation explores how ethical and methodological preparation shapes how creative practice is encountered, especially by those stepping into arts-based work for the first time.

Drawing on phenomenological perspectives and reflective professional practice, the presentation approaches creativity as something that unfolds relationally rather than as an individual capacity or trait. Arts-based group supervision is offered as an illustrative context, with particular attention to the development of a reflective orientation paper designed to support people as they consider joining an arts-based group practice.

The session invites reflection on three interrelated forms of readiness that shape how creative work is lived: personal capacity (resourcing and sustainability), relational capacity (safety, witnessing, and difference), and reflective capacity (the ability to pause, notice, and stay with ethical and relational complexity). This three-capacity framework is explored as a methodological and ethical artefact, shaping consent, participation, and the conditions under which creative inquiry can be entered with care.

A particular focus is given to reflective capacity as a potentially fragile or under-supported dimension of creative participation. While people may feel personally resourced or relationally drawn to group creative work, their capacity to stay with ambiguity, uncertainty, and ethical complexity may be less developed. Attending to this gap raises important questions about how collective creative practices are designed, oriented, and held.

The presentation is conceptual and exploratory and does not report empirical findings. It situates this three-capacity framework as a blueprint for a forthcoming qualitative PhD study examining lived experiences of arts-based group practices across differing creative backgrounds. By foregrounding preparation, capacity, and care, the session invites creativity researchers to consider how creative inquiry becomes possible, and sustainable, for those who enter it.

# Waves of Colour: A Systematic Review of Synaesthesia and Creativity

**Melissa McMullan, Edinburgh Napier University**

There is a significant gap in research where Synaesthesia, a condition in which stimulation of one sense automatically triggers the perception of another (for example, seeing specific colours when viewing letters or numbers), and its relationship with creativity have not yet been examined through a systematic review process. Following PRISMA (Page et al., 2021) and the (NIRO-SR) checklists (Topor et al., 2023), this research synthesised literature on synaesthesia and creativity, aiming to answer the question: What are the relationships between synaesthesia and creativity as measured by empirical research? The final nine articles included examined how the phenomenon of synaesthesia relates to different measures of creativity: divergent thinking (the ability to produce multiple answers), convergent thinking (the generation of one solution), and engagements or achievements involving creativity. The findings suggest that synaesthetes perform better in convergent thinking tasks and exhibit a greater general involvement in creativity, but the links between divergent thinking and synaesthesia are more complex and inconclusive. This study indicates some limitations of current creativity measures employed in the studies exploring relationships between synaesthesia and creativity. It is recommended that future research consider how creativity tests that rely on associative processes may be influenced by synaesthesia, given that synaesthesia itself is an associative condition. Findings suggest that there may be complex or mediating cognitive relationships between creativity and synaesthesia as opposed to a direct link. This review was preregistered under the name 'A Systematic Review On The Relationships Between Synaesthesia and Creativity', on the Open Science Framework on the 20th of September 2025.

Keywords: Synaesthesia, Perception, Creativity

# The Roles of Memory and Imagination in Creative Evaluation

**Dr William Orwig and Prof Daniel Schacter, Harvard University**

Creative thinking involves more than generating novel ideas, it requires the ability to judge whether an idea is effective, feasible, or valuable. Episodic retrieval processes that support reconstructing past experiences and imagining future experiences have been linked to creative idea generation; however, relatively less is known about the possible role of such episodic processes in the evaluation of creative ideas. Across two independent samples, participants rated the effectiveness of pre-generated object-use pairs and subsequently reported the extent to which they relied on memory or imagination during their evaluations. Using ordinal logistic mixed-effects models, we found consistent patterns: typical uses were associated with greater reliance on memory, while novel uses prompted greater reliance on imagination. These effects were robust across both the Prolific sample (n=50) and the Harvard Digital Lab sample (n=623), with large effect sizes in both studies. These findings support the idea that distinct types of episodic processes are recruited depending on the familiarity and novelty of the stimuli, suggesting a functional dissociation between memory and imagination in evaluative processes.

Keywords: Idea Evaluation; Episodic Memory; Future Simulation