

RESEARCH DIRECTIONS

Dance, cognition and creativity: What can the physical tell us about the mental?

Choreographers and contemporary dancers create art collaboratively. This process provides a wealth of information to neuroscientists and psychologists. Professor Catherine Stevens and an international team* have received funding from the Australian Research Council and the Australian Dance Theatre to help bridge the gap between art and science. The project aims to highlight the role of memory and distributed cognition in improvising, and what this means for models of human cognition.

Research in cognitive neuroscience using dancers has mainly examined perception and action rather than improvisation, memory and learning. 'When creating new material, dancers communicate with their bodies – but we know little about how these non-verbal and creative cognition processes work, particularly in a group setting,' Professor Stevens says. 'This aspect is important for nurturing innovation in arts as well as education and business settings; creativity that has been shown to have individual and wider cultural-economic benefits.'

Professor Stevens and her team, in collaboration with the Australian Dance Theatre in South Australia and the MARCS institute for Brain, Behaviour and Development at UWS, will examine "distributed cognition" – where thinking and memory capabilities are not confined to a single individual, but can be shared by multiple people working together. Using the dance studios as real world laboratories, they will compare solo and collaborative dance environments, analyse group recollection, and investigate whether dancers have a heightened sense space and time.



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Insights into collaborative creativity and non-verbal communication will greatly benefit not only the performing arts, but could provide strategies for fields that use group innovation and problem solving, such as education, IT, business, and marketing

Project Title: Thinking brains and bodies: distributed cognition and dynamic memory in Australian Dance Theatre

Funding has been set at: \$195,000

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