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Research Interests

I am primarily geared towards understanding visual representation and allocation in ecologically valid environments. At the time of writing (October, 2009) I am questioning one of the fundamental tenets of top-down control of vision; namely the role of task-relevancy in endogenous visual allocation. In a more general sense, I am re-examining the concept of visual representation in order to effectively incorporate the role that other people have to play in this process – both in terms of subtle social variables (e.g. ingroup/outgroup identification) and in terms of more general joint action and perception scenarios.

I also hold an avid interest in vision when employed for action, cognitive processes of experts (particularly in comparison to novices), "group action" (to mean the ability of a large number of collaborators to combine complex tasks and act in coordination towards a single goal, rather than just one or two individuals) and nonverbal deception. I tend to find interest in many different fields, this is just a brief list of some of those that I am currently most interested by.

Research Experience

2008-09 **"The Inflexibility of Experts' Perceptual Encoding is Impervious to the Influence of Social Facilitation-Inhibition"**
Active Vision Laboratory, University of Dundee, UK
UG Dissertation supervised by Dr. Ben Tatler

Past research has restricted studies of expertise to situations devoid of social engagement. It was aimed to show that the supposed automatic, inflexible perceptual encoding strategies employed by experts are in fact demonstrably flexible when considered in a situated real-world environment consisting of social identities. The task-relevant social identity manipulated in this study was the belief of the participant regarding his/her opponent's ability (as an expert or novice). Interestingly, whilst beliefs regarding another's ability did modulate participants' performance on a computer game, beliefs did not modulate overt measures of perceptual encoding. It was concluded that whilst experts' perceptual encoding strategies are typically rigidly adhered to, there are likely to be situations where this is not so: specifically when contemplating covert mechanisms of expertise, and when the pace of the task is not controlled by the participant.

2008-08 **“Vision for Action: Towards an Ecologically Valid Account of Plausibility and Congruence in Eye Guidance”**
Active Vision Laboratory, University of Dundee, UK
Collaborative research with Dr. Ben Tatler

Using Ballard and colleagues’ block-copying task, this research produced critical extensions to the findings of Ballard *et al.*’s (1997) ‘just in time’ account of vision-for-action by studying vision in its natural environment. Specifically, we demonstrated that in real-world situations, participants also fixate objects whilst orienting them before final placement and often perform a check to ensure that the placed object matches the model object (see work by Ballard for details of the block-copying task). We hypothesise that these checking looks are present in this task because participants are manipulating object in three-dimensional space where cues for relative distance from other objects can be utilised. A further suggestion is that orienting fixations also occur due to the nature of three-dimensional manipulation of objects.

Furthermore, for the first time it was possible to conclude that the effects of plausibility and congruence information do not impact upon fixation allocation in ecologically valid settings. That is, unlike any research exploring the issue of congruence and plausibility, the participant was able to physically manipulate the scene.

2007-07 **“Oculomotor Central Tendency in Photographic Scenes”**
Active Vision Laboratory, University of Dundee, UK
Research Assistant to Dr. Ben Tatler

By rotating photographs of natural scenes it was discovered that eye guidance can partially be explained in terms of a preference for lateral and vertical eye rotations with respect to gravity rather than with respect to the visual scene. However, a potential confound of the monitor screen may have prompted this bias which sparked future research ideas.

Publications & Awards

Street, C. (2009). **The inflexibility of experts’ perceptual encoding is impervious to the influence of social facilitation-inhibition**, *The British Psychological Society, Undergraduate Student Conference 11 March 2009, held at Glasgow Caledonian University Glasgow*.

Street, C. (2009). **The inflexibility of experts’ perceptual encoding is impervious to the influence of social facilitation-inhibition**; Reginald Laville Memorial Prize for Research of Outstanding Merit, £180

Street, C. (2008). **Vision for action: Towards an ecologically valid account of plausibility and congruence in eye guidance;** The Rank Prize Fund, £1,500.

Talks Given

2009 **The Inflexibility of Experts' Perceptual Encoding Strategies is Impervious to the Influence of Social Facilitation-Inhibition**, *Undergraduate Visual Psychology, School of Psychology, University of Dundee, Dundee, UK*

2009 **How to beat your opponent: beliefs of expertise and presence affect vision?** *The British Psychological Society, Undergraduate Conference, Department of Psychology, Glasgow Caledonian University, Glasgow, UK*

2008 **Vision for action: Towards an ecologically valid account of plausibility and congruence in eye guidance**. *School of Psychology Open Day, School of Psychology, University of Dundee, Dundee, UK*

Education

2009 First Class MA (Hons) in Psychology, University of Dundee

2005 A-Level in Psychology and AS-Level in Sociology, Coleg Morgannwg

2005 A-Level in Business Studies and Information Communication Technology, Ferndale Community School