

directed to the identity of a potential change. In the absence of directed attention, this “change deafness” was greater for objects arising from a common location in space than for objects separated in azimuth. Our findings indicate that directed attention is required for detection of changes in complex auditory scenes, and that spatial separation of sounds is an important cue to change detection.

Cueing effects in a face change detection task

FAVELLE, SK. (University of Wollongong)*, BURKE, D. (Macquarie University), & MALONEY, R.*
simone_favelle@uow.edu.au

Previous research using the change detection paradigm has found that first- and second-order changes to faces are better detected than feature shape changes and that the inversion effect is greater for second-order than for first-order or shape changes. However, these results could be attributed to either perceptual or attentional difficulties (Davies & Hoffman, 2002). We used neutral, valid and invalid cues to the location of change in a one-shot change detection task to investigate the role of attention in processing faces. We found that while there was a significant benefit to change detection when valid location cues were present, there was no cost to performance when the cue to location was invalid. Valid cues increased the accuracy of change detection in the shape of features and in inverted faces suggesting that focussed attention is beneficial for the processing of local information but not configural information.

Binocular summation of colour and luminance contrast

FORTE, J. (University of Melbourne)
jforte@optometry.unimelb.edu.au

Binocular luminance contrast thresholds are lower than monocular thresholds when stimuli presented to the two eyes have the same spatial configuration. We investigated whether colour contrast thresholds follow a similar pattern. Monocular and binocular detection thresholds were measured for contrast reversed (2 Hz) 1 cycle per degree sinewave grating targets. Thresholds for three observers were determined for horizontal gratings with the same spatial phase in the two eyes, with opposite spatial phase in the two eyes, and for orthogonal (crossed orientation) gratings in the two eyes. Binocular thresholds for in-phase luminance and colour gratings were much lower than monocular thresholds. Orthogonal grating thresholds were similar to monocular thresholds. Thresholds for luminance out-of-phase gratings were similar to monocular thresholds, but thresholds for coloured out-of-phase gratings were lower than monocular thresholds. The results are consistent with a cortical

binocular colour mechanism that sums cone signals differently to binocular cortical luminance mechanisms.

False memories disappear during sibling discussion

FRENCH, L., SUTHERLAND, R., & GARRY, M.
(Victoria University of Wellington)
frenchlaur@student.vuw.ac.nz

“Memory implantation” studies show people can develop memories of experiences they have never had. In these studies, subjects are asked not to talk to anyone about the events during participation. We wondered what would happen if subjects discussed a false childhood event with a family member who they believed was at the event. Would people pass their false memories on to each other? Pairs of siblings participated in our study over the Internet, trying to recall a false event three times independently before discussing it together. Despite the decreased social pressure relative to other implantation studies, our rate of pre-discussion false memories was comparable (25%). However, instead of passing their false memories on to each other, the rate of false memories decreased significantly following discussion. Having the opportunity to discuss a false event led many of the siblings in our study to become more sceptical that the event had occurred.

An account of memory dissociations in the Recommendation Architecture Cognitive Model

GEDEON, T., & COWARD, A. (Australian National University)
tom.gedeon@anu.edu.au

In the *recommendation architecture* cognitive model, information can only be recorded in two ways: by permanent recording of information conditions or by a change to the recommendation weight of a condition in favour of a behaviour. Information can only be accessed in four ways: activation of conditions which occur within sensory inputs; activation of conditions which have often been active in the past at the same time as currently active conditions; activation of conditions which were recorded in the past at the same time as currently active conditions, and selection of a behaviour by comparison of the recommendation weights. These limited ways provide a natural account of semantic, episodic and procedural memory and of the observed dissociations between them. Activation on the basis of frequent past simultaneous activity accounts for semantic memory. Activation on the basis of past, simultaneous-condition recording accounts for episodic memory. Modulation of recommendation weights accounts for procedural memory.