

interval (signal-offset to shield-onset) varied from 2-8 s and additional Martian symbols were introduced to act as distractors. The results indicated that the number of invasions triggered increased and suppression ratios decreased as a linear function of both trace interval and number of distractors. Further analysis revealed the effects of trace depended on the number of distractors occurring during the trace interval. Overall, the results were consistent with Revusky's (1971) analysis of delay learning.

#### **How ambiguous is an audio-visual impact?**

COTTRELL, D., & YOUNG, C. (James Cook University)

david.cottrell@jcu.edu.au

When two similarly sized white disks are seen to move toward each other, coincide and then move apart, the usual perception is to see the figures as passing despite the perception of an impact being equally plausible. However, if a brief sound is presented at the moment of coincidence this perception is reversed and the objects are seen to collide. Most interpretations of this observation emphasise the role of sound in disambiguating the visual stimulus however the sound induced bounce effect occurs even when the objects unambiguously pass by each other (as for example when one is a disk and the other a square). We will report a series of experiments in which we varied a number of characteristics of the visual stimuli without removing the effect of the sound. It appears that the saliency of a sound is paramount in the perception of an audio-visual impact event.

#### **From whole horses to human faces: Perceptual narrowing during infancy**

CROOKES, K., & MCKONE, E. (Australian National University)

kate.crookes@anu.edu.au

Recent evidence suggests human infants are born with an innate representation that enables individual-level recognition of upright faces. This representation starts out broadly tuned, supporting discrimination of monkey and other-race faces at 3 months. It then narrows with experience to be human face and own-race specific by 9 months of age. The present study asks: How broad is the innate representation driving adult face-specificity? Is it (a) restricted to faces only, initially broadly tuned to include non-human primates but narrowing to become human specific with experience or (b) a more general whole animal representation? We tested discrimination ability for faces and horses using a habituation paradigm. Experiments 1-3 tested infants aged 3-4 months, an age before any narrowing has been observed for faces. Despite the fact that these infants found faces more interesting than horses (looking times during early habituation trials were longer to faces), they showed strong individual-level discrimination for upright faces (Experiment 1) and upright horses (Experiment 2). Results for inverted horse discrimination in 3-4 month-olds (Experiment 3) and upright horse discrimination in 9-10 month-olds (Experiment 4) will also be discussed.

#### **Quantifying the effect of attention on the discrimination of motion**

CROPPER, S.J. (University of Melbourne)\*, WOLFGANG, B.J. (Defence Science and Technology

Organisation), WERDEN, E.J.\*, & NGAN, A.J.\*

scropper@unimelb.edu.au

The current study aims to investigate the discrimination the motion of first and second order stimuli using the attentional blink (AB) paradigm. There has been an underlying assumption in the literature that not only is the motion of first and second order stimuli detected by different mechanisms, but that only second-order stimuli require attention to perform the task. Participants were asked to discriminate the direction of motion of a vertically oriented Gabor patch embedded in a stream of dynamic visual noise. Either the carrier (first-order structure) or the envelope (second-order structure) of the Gabor moved in a two-target sequence with a varying asynchrony between the two, a modified attentional-blink paradigm. While the results are interestingly quite variable between observers, the overall pattern suggests that the attentional resources required to discriminate the motion of either the first or second modulation are equivalent, or not revealed adequately by the paradigm. Given that previous work has been equally inconclusive on the role of attention in motion processing, our major interest is to examine the use of this dual-task blink-like manipulation of attention, given the differences in stimulus processing dynamics, and the unknown timeframe of the AB effect in this domain.