

Amblyopic perception of biological motion

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Although a number of low-level visual deficits in amblyopia have been identified, it is still unclear to what extent these deficits extend throughout the visual processing hierarchy. Biological motion perception can be a useful measure of local and global visual processing since the point-light stimuli that are often used to study this ability carry both local motion and global form information. To investigate the integrity of the biological motion processing system in amblyopia, we employed both detection and discrimination tasks with coherent or scrambled point-light walkers either alone or embedded in different types of point-light masks. These manipulations allowed for control over the amount of form and/or motion information available to the observers that could be used for task performance. We found that amblyopic eyes could process both the global form and local motion components of point-light walkers, indicating intact processing for these stimuli. However, amblyopic eyes did show an increased susceptibility to the addition of masking dots suggesting that segregation of signal from noise is deficient in amblyopia.