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**Generality of learning as driven by dichoptic visual training**

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Sensory eye dominance refers to a situation where one eye's input dominates over that of the other eye. Visual training protocols employing dichoptic presentations of signal-noise motion stimuli have been shown to be promising in promoting eye rebalancing and strengthening binocular functions; however, the underlying mechanisms have yet to be elucidated. Here, we aimed to characterize the mechanisms underlying training-driven improvements in sensory eye balance and binocular functions by examining the generality of training effects across different training and test cues. Two groups of observers trained on one of the two tasks: a dichoptic signal-noise motion task or a dichoptic fine motion task. In the signal-noise motion task, signal dots carrying a coherent motion direction were presented to one eye while noise dots carrying random motion direction were presented to the other eye. The observers were asked to report the net motion direction of the stimuli. In the motion fine task, a center-surround configuration was adopted such that the surround carrying a reference motion direction was presented to one eye while a target motion direction in the center was presented to the alternate eye. The observers' task was to judge whether the motion direction carried by the central target was offset clockwise or counterclockwise relative to the reference motion direction in the surround. The observers received training over three consecutive days and completed a binocular phase combination task to index sensory eye balance, signal-noise and fine depth discrimination tasks to measure stereopsis, dichoptic signal-noise and fine motion and orientation tasks before and after training. Results showed that both training tasks were effective in altering sensory eye balance and improving stereopsis. Interestingly, training on both tasks drove improvement beyond the immediately-trained paradigm. Not only did learning transfer between signal-noise and fine feature discriminations task, but training effects were also observed in the untrained orientation task. Our data suggest that training effectiveness does not depend on whether the training entails a signal-noise or fine feature discrimination, implicating the unique and significant role of balancing interocular suppression in the dichoptic training paradigm.