UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Gradual Recovery from Cerebral Blindness during Visual Training

Permalink https://escholarship.org/uc/item/77v1b0r2

Journal Proceedings of the Annual Meeting of the Cognitive Science Society, 31(31)

ISSN 1069-7977

Authors

Bergsma, Douwe Van der Wildt, Gerjan

Publication Date 2009

Peer reviewed

Gradual Recovery from Cerebral Blindness during Visual Training

Douwe Bergsma

Utrecht University

Gerjan Van der Wildt

Utrecht University

Abstract: Abstract: Several studies on recovery of hemianopsia after CVA report visual field enlargements after stimulation of the visual field border area. However, it is not known how the visual field enlargement develops as a function of time. We trained 11 subjects by stimulating their affected visual field. We assessed the border location with Goldmann perimetry before, during and after training. To exclude eye-movements as a cause of field enlargement, an eye-tracker was used during each complete perimetry session. We found that the visual field is enlarging gradually during training in the direction of the blind area, despite the fact that we did not only stimulated the shifting border area, but used a wide-ranged stimulus-set. Concluding, detection thresholds in stimulated areas in the affected field only start to decrease when the shifting field-border reaches those areas, resulting in a gradual visual field enlargement. Training effects can be generalized to important daily-life activities like reading.