Assessing the applied benefits of perceptual training: Lessons from studies of training working-memory.

By ahissar
Created 9/8/2015
By ahissar September 8, 2015

Jacoby, N, Ahissar M. 2015.

Abstract:

In the 1980s to 1990s, studies of perceptual learning focused on the specificity of training to basic visual attributes such as retinal position and orientation. These studies were considered scientifically innovative since they suggested the existence of plasticity in the early stimulus-specific sensory cortex. Twenty years later, perceptual training has gradually shifted to potential applications, and research tends to be devoted to showing transfer. In this paper we analyze two key methodological issues related to the interpretation of transfer. The first has to do with the absence of a control group or the sole use of a test-retest group in traditional perceptual training studies. The second deals with claims of transfer based on the correlation between improvement on the trained and transfer tasks. We analyze examples from the general intelligence literature dealing with the impact on general intelligence of training on a working memory task. The re-analyses show that the reports of a significantly larger transfer of the trained group over the test-retest group fail to replicate when transfer is compared to an actively trained group. Furthermore, the correlations reported in this literature between gains on the trained and transfer tasks can be replicated even when no transfer is assumed.

Journal:
Journal of vision

Volume:
15

Issue:
10

Pagination:
6

Date Published:
2015 Jul 1

Custom 1:
ATTACHMENTS

- i1534-7362-15-10-6.pdf (558.8 KB)

UPCOMING EVENTS

Learn more about our exciting upcoming events!

read more
Studyng at ELSC

Our Int'l Ph.D. program provides outstanding students with top-notch courses in computational neuroscience.

read more
The Building

The Jerusalem Brain Sciences Building will provide a state-of-the-art research and teaching facility for the Edmond and Lily Safra Center for Brain Sciences.

read more
ELSC Media Channel

Get into our media channel and investigate ELSC's latest videos: seminars, public lectures, courses and video articles.

read more

Source URL: https://elsc.huji.ac.il/ahissar/publications/assessing-applied-benefits-perceptual-training-lessons-studies-training-working