

Hemispheric modulations of the attentional networks

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Although several recent studies investigated the hemispheric contributions to the attentional networks using the Attention Network Test (ANT), the role of the cerebral hemispheres in modulating the interaction among them remains unclear. In this study, two lateralized versions of this test (LANT) were used to investigate the effects on the attentional networks under different conflict conditions. One version, the LANTI-A, presented arrows as target and flankers, while the other version, the LANTI-F, had fruits as target and flankers. Data collected from forty-seven participants confirmed well-known results on the efficiency and interactions among the attentional networks. Further, a left visual field advantage was found when a target occurred in an unattended location (e.g. invalid trials), only with the LANTI-F, but not with LANTI-A. The present study adds more evidence to the hemispheric asymmetry of the orienting of attention, and further reveals patterns of interactions between the attentional networks and the visual fields across different conflicting conditions, underlying the dynamic control of attention in complex environments. © 2016

Alerting

Attention

Executive control

Orienting

Right hemisphere asymmetry

Visual field asymmetries

adult

Article

attention

Attention Network Test

attention test

attentional network

brain asymmetry

female

human

human experiment

male

normal human

priority journal

visual field

visual stimulation

attention

executive function

hemispheric dominance

nerve cell network

physiology

young adult

Adult

Attention

Executive Function

Female

Functional Laterality

Humans

Male

Nerve Net

Visual Fields

Young Adult