

# Psychophysical investigations of perceptual learning and attention

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PROPOSITION OF THE THESIS

**Psychophysical investigations of perceptual learning and attention**  
New insights into old principles

Gesa Lange

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- 1 Transfer of orientation discrimination results from early phases of learning, whereas specificity results from late, asymptotic learning.
- 2 A form of exposure-related adaptation may contribute to perceptual learning, but with attention a more robust memory trace will be created.
- 3 Memory traces can be modified by new experiences.
- 4 Temporary withdrawal of attentional resources might be indexed by a reduction of microsaccade rate in the attentional blink effect; but attention and microsaccades could also contribute separately to this effect.
- 5 A well-designed and hypothesis-driven psychophysical study can be deeply informative and truly beautiful.
- 6 Participants are the true heroes in learning studies – *more than half a million trials completed by only eight participants in a single study* puts a number on their devotedness.
- 7 Behavior is a crucial aspect of human life; neuroscience should therefore not neglect it.
- 8 Valuing knowledge and ‘valorizing’ it are two fundamentally different things.
- 9 Art is I; science is we. *Claude Bernard*