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Development Of Synaesthetic Consistency:
Repeated Engagement With Graphemes And Colours Leads To Consistent Associations

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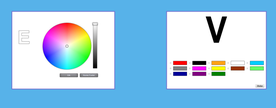
Background

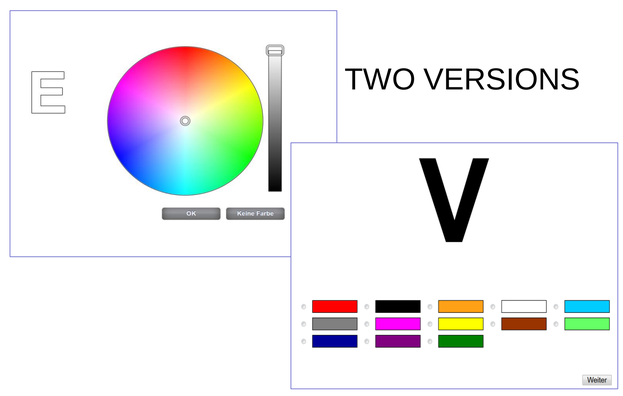
Synaesthetic consistency is the hallmark of synaesthesia and plays an important role in the definition and validation of synaesthesia. It has been hypothesised that the acquisition of initially unspecified synaesthetic associations is based on consolidation processes.

GOAL: We aimed to investigate if the repeated engagement with grapheme-colour associations leads to synaesthetic consistency in a non-synaesthetic sample.

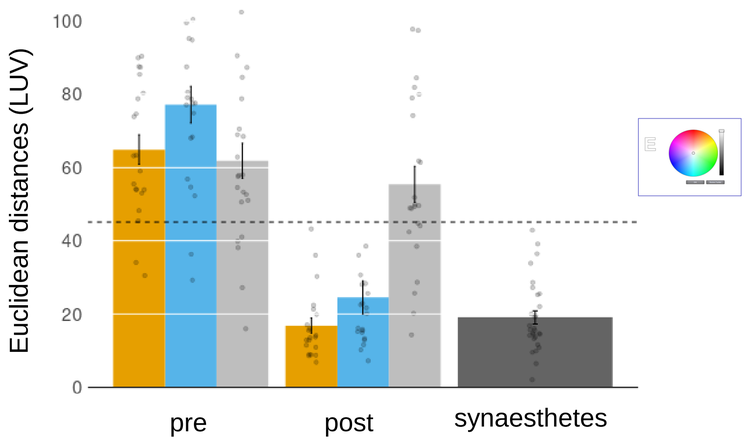
Methods

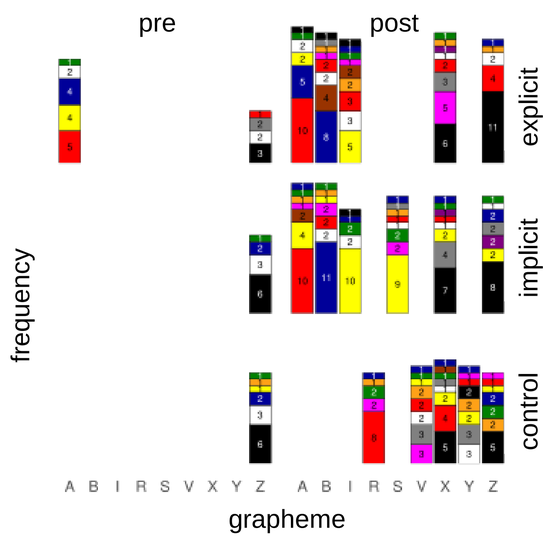
group	before training (pre)	training sessions 1 – 10	after training (post)
explicit group (n = 21) instruction to memorize			
implicit group (n = 21) no instruction to memorize			
control group (n = 23) instruction to memorize			

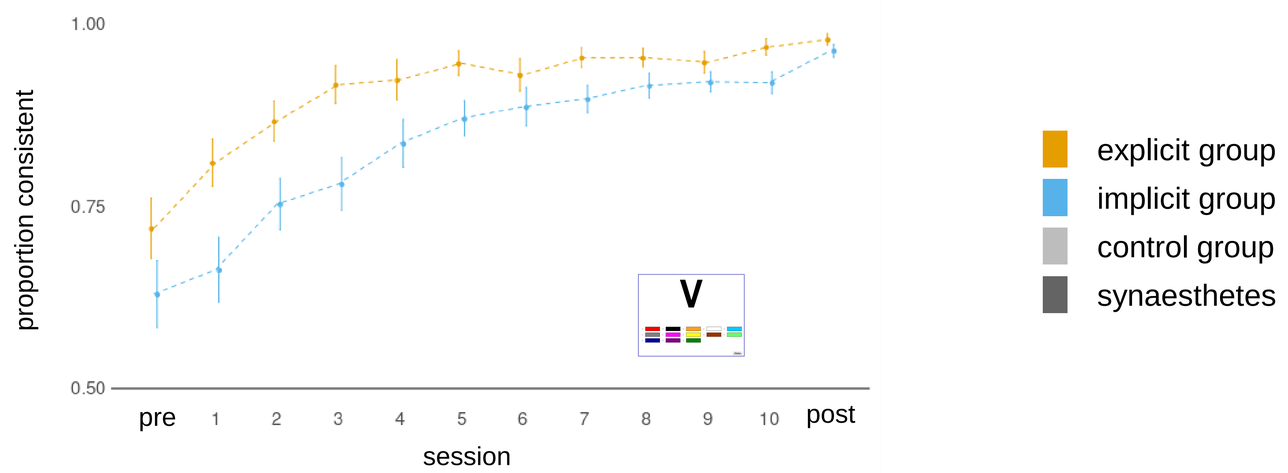
CONSISTENCY TEST: Two runs of associating a colour to each grapheme (A – Z, 0-9)
CONSISTENCY: measure of similarity in grapheme-colour associations between two runs



Results







Conclusions

- increase in consistency across training, regardless of instruction to memorize
- consistency in untrained task resembled synaesthetic consistency of genuine synaesthetes after training
- pattern of consistent grapheme-colour associations comparable to patterns found in synaesthetes
- pattern suggests consolidation processes in development of synaesthetic consistency

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