

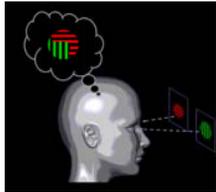
Bi-Stable tactile stimulus shows perceptual rivalry exists across the senses.

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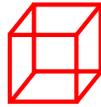
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Introduction: Perceptual Rivalry



When presented with ambiguous sensory information, an observers perceptual experience will generally switch between each of the possible alternatives every few seconds. Common examples include:



Necker cube

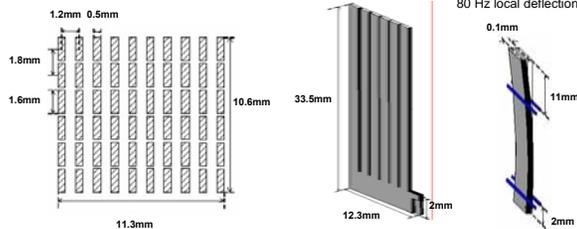
Binocular rivalry

The aim of this study was to explore the existence of perceptual rivalry in different modalities and to find evidence of cross modal interactions

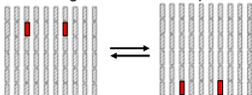
Visual Rivalry (apparent motion quartet)



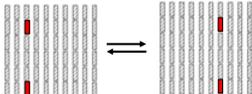
Tactile Rivalry: Methods



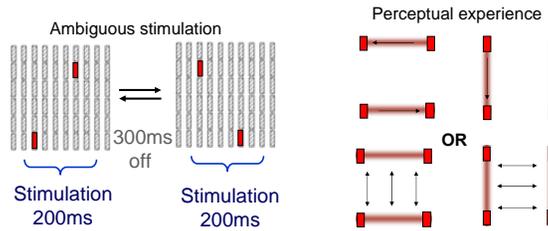
Training – Vertical sweep



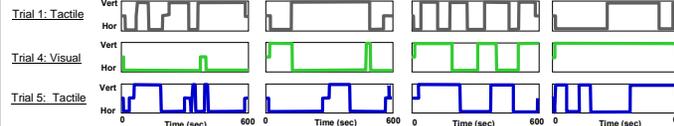
Training – Horizontal sweep



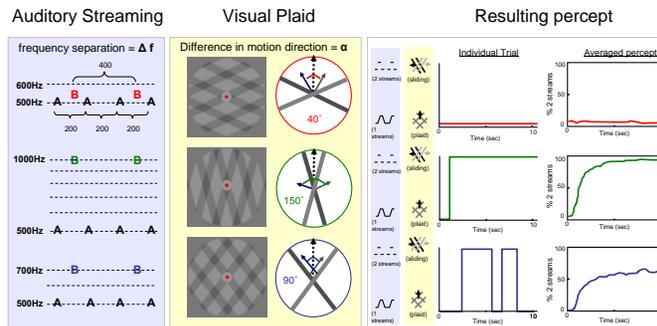
Tactile rivalry: Results



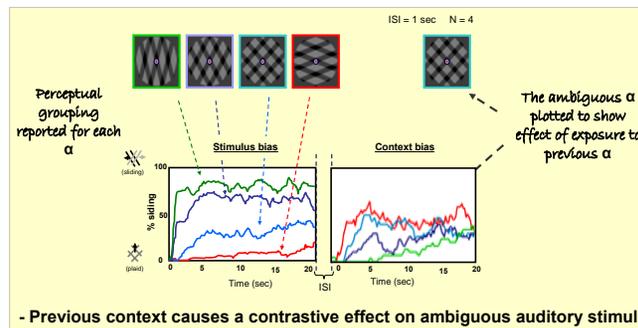
Time course of perceptual switching



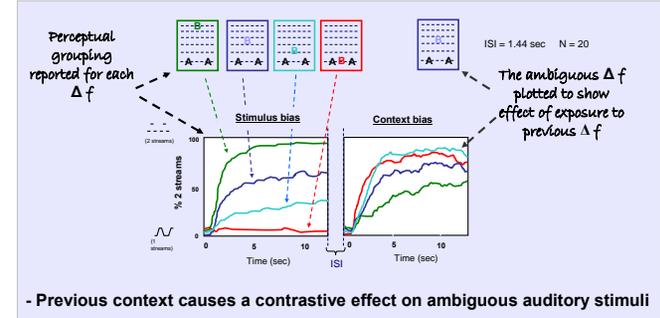
Visual and Auditory Rivalry: grouping/segregation



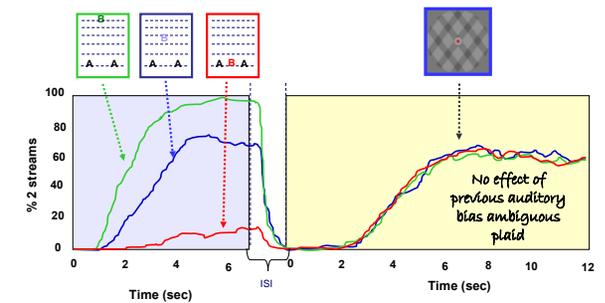
Visual plaid rivalry: Adaptation results



Auditory streaming rivalry: Adaptation results



Cross modal interactions?: Adaptation results



Summary

- Tactile perceptual rivalry exists
- Perceptual rivalry may result WHENEVER a person experience prolonged presentation of ambiguous sensory information.
- There are many similarities between the sensory modalities
- To date, we have been unsuccessful in showing effects of adaptation extend to other sensory domains.. But there are still many more things to try.

References

- Snyder, J. S., Carter, O. L., Lee, S.-K., Hannon, E. E., & Alain, C. (submitted). Effects of context on auditory stream segregation.
- Pressnitzer, D., & Hupé, J. M. (2006). Temporal dynamics of auditory and visual bistability reveal common principles of perceptual organization. *Current Biology*, 16, 1351-1357.