

Age of arrival effects in L2 islands

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Background

- Native speakers are famously sensitive to islands:
*? Who do you wonder [whether Lisa bothered ____]
- L2 sensitivity to islands is thought to decrease as AoA increases (e.g. Johnson and Newport 1991).

How is this possible?

Very hard to explain why island sensitivity should decrease.

- Island effects now thought to be due to **inherent limitations** of grammar and/or processor (e.g., Rizzi 2013, Kluender 2004).
- Thus **all speakers** should show island sensitivity, as long as they have relevant grammatical properties and normal processor.
- Decreased sensitivity to islands would mean L2ers are outperforming natives – **very implausible**.

This study

- What really happens to island sensitivity as AoA increases?
- We use current best practices in experimental syntax: factorial analysis, counterbalancing, numerical response method, etc.

Experiments

- Five sentence acceptability experiments (7-point scale):
 - Whether-islands
 - Wh-islands
 - Adjunct islands (*when*, *because*, *before/after* clauses)
- 60 native speakers of English
- 63 Korean-English bilinguals, in sub-groups by AoA for English:
 - Near-native (AoA = 1-5)
 - Early (AoA = 6-10)
 - Late (AoA = 11-14)
- 2 x 2 design: Structure x Extraction domain
 - 5 tokens per condition, 1:1 filler:experimental ratio

	Structure	Extraction	Example
1	Non-Island	Embedded clause	Who did Mary think [that Lisa bothered ____]?
2	Island	Embedded clause	Who did Mary wonder [whether Lisa bothered ____]?
3	Non-Island	Matrix clause	Who ____ thought [that Lisa bothered Mary]?
4	Island	Matrix clause	Who ____ wondered [whether Lisa bothered Mary]?

- How to calculate size of island effect?
Difference in Differences (DD) score (Sprouse et al. 2012)
(Cond 1 - Cond 2) - (Cond 3 - Cond 4) = DD score

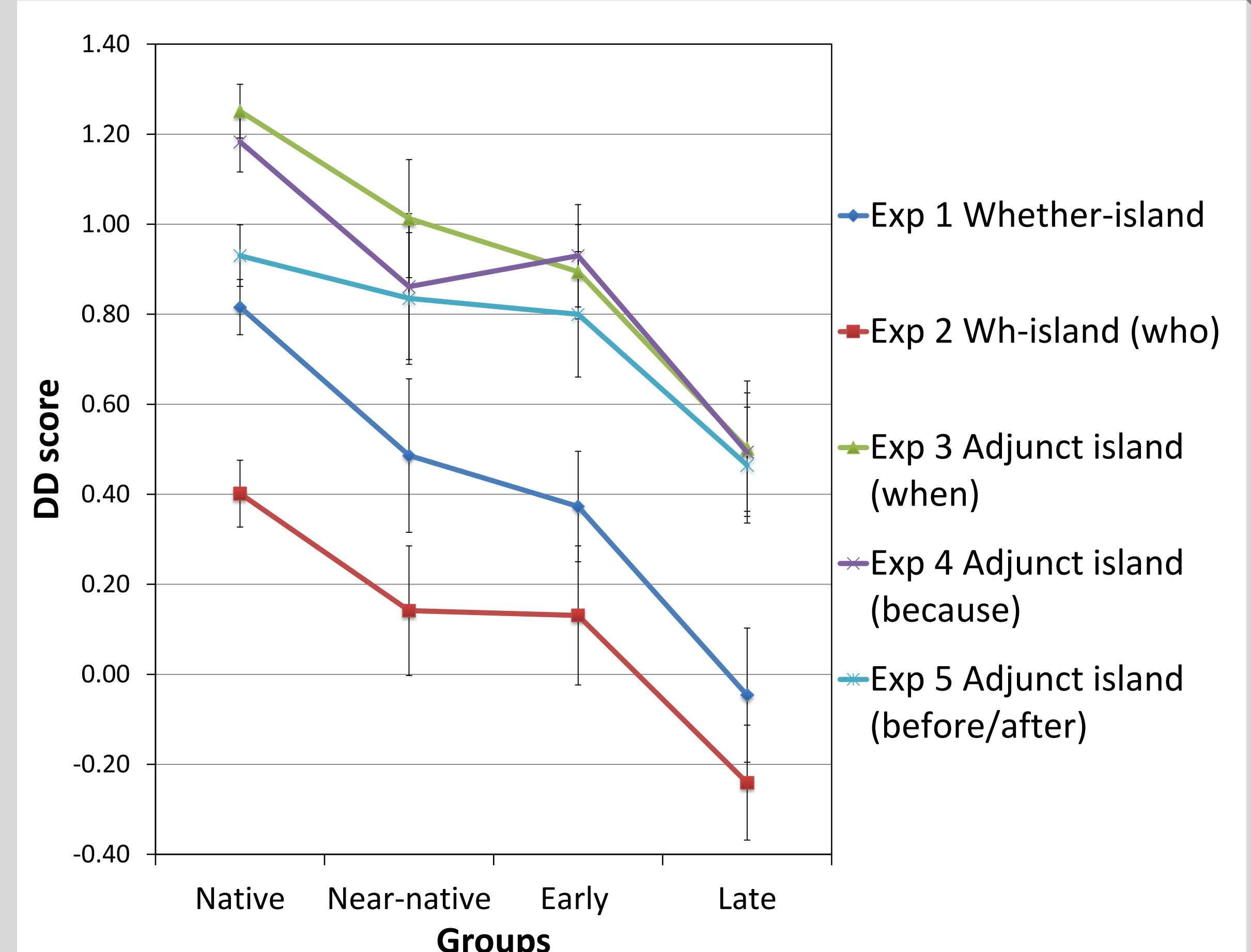
References

Johnson, J. S., & Newport, E. L. 1991. Critical period effects on universal properties of language: The status of subadjacency in the acquisition of a second language. *Cognition*, 39(3), 215-258. Kluender, R. 2004. Are subject islands subject to a processing account. In *Proceedings of WCCFL* (Vol. 23, pp. 475-499). Rizzi, L. 2013. Locality. *Lingua*, 130, 169-186. Sprouse, J., Wagers, M., & Phillips, C. 2012. A test of the relation between working memory capacity and island effects. *Language*, 88(1), 82-123.

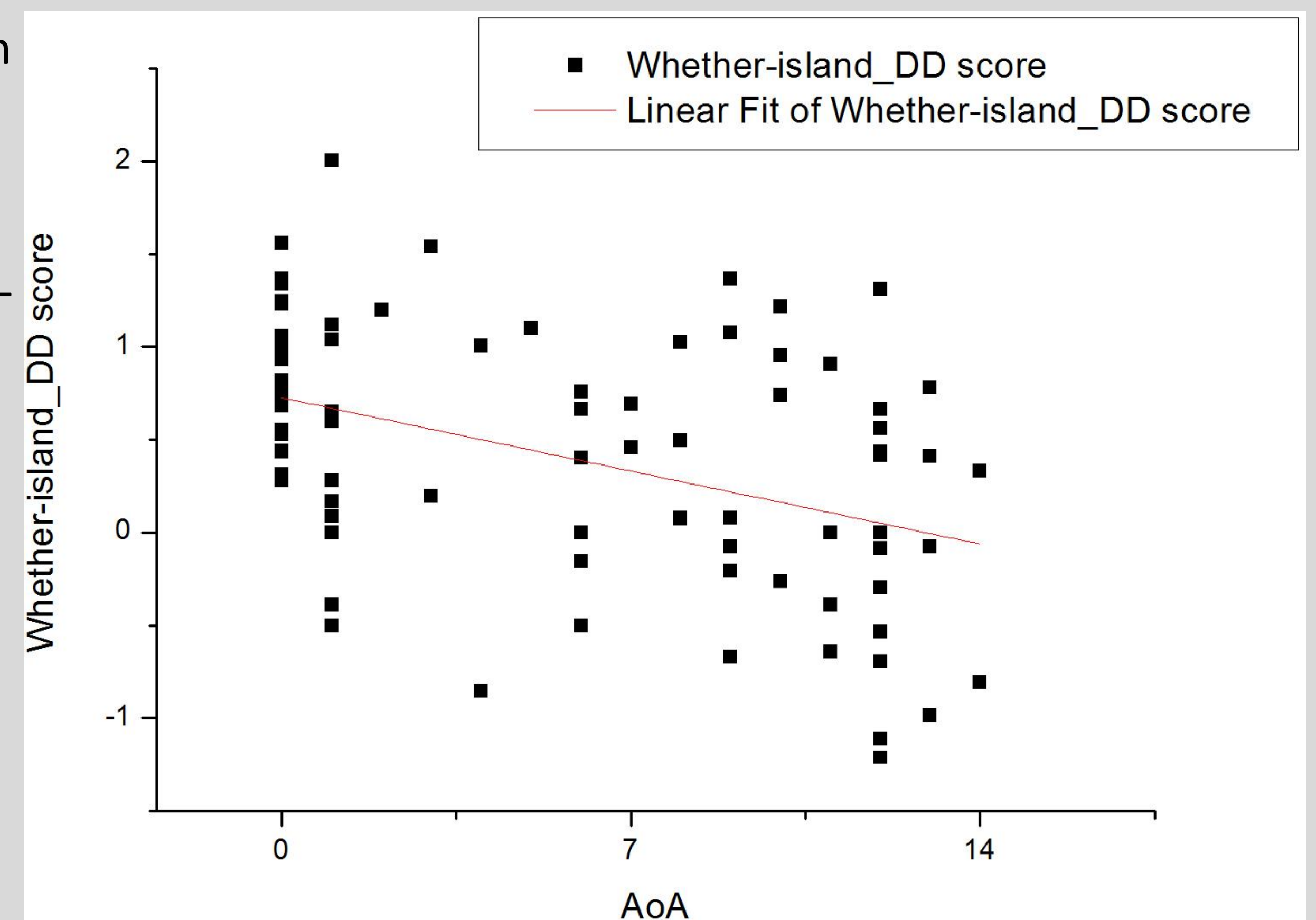
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Results

Island effect sizes (DD scores) generally decrease as AoA increases.



Negative correlation between DD scores and AoA for all islands ($p < .05$). Sample for *whether*-islands:



Sensitivity to islands **appears to decrease** as AoA increases!

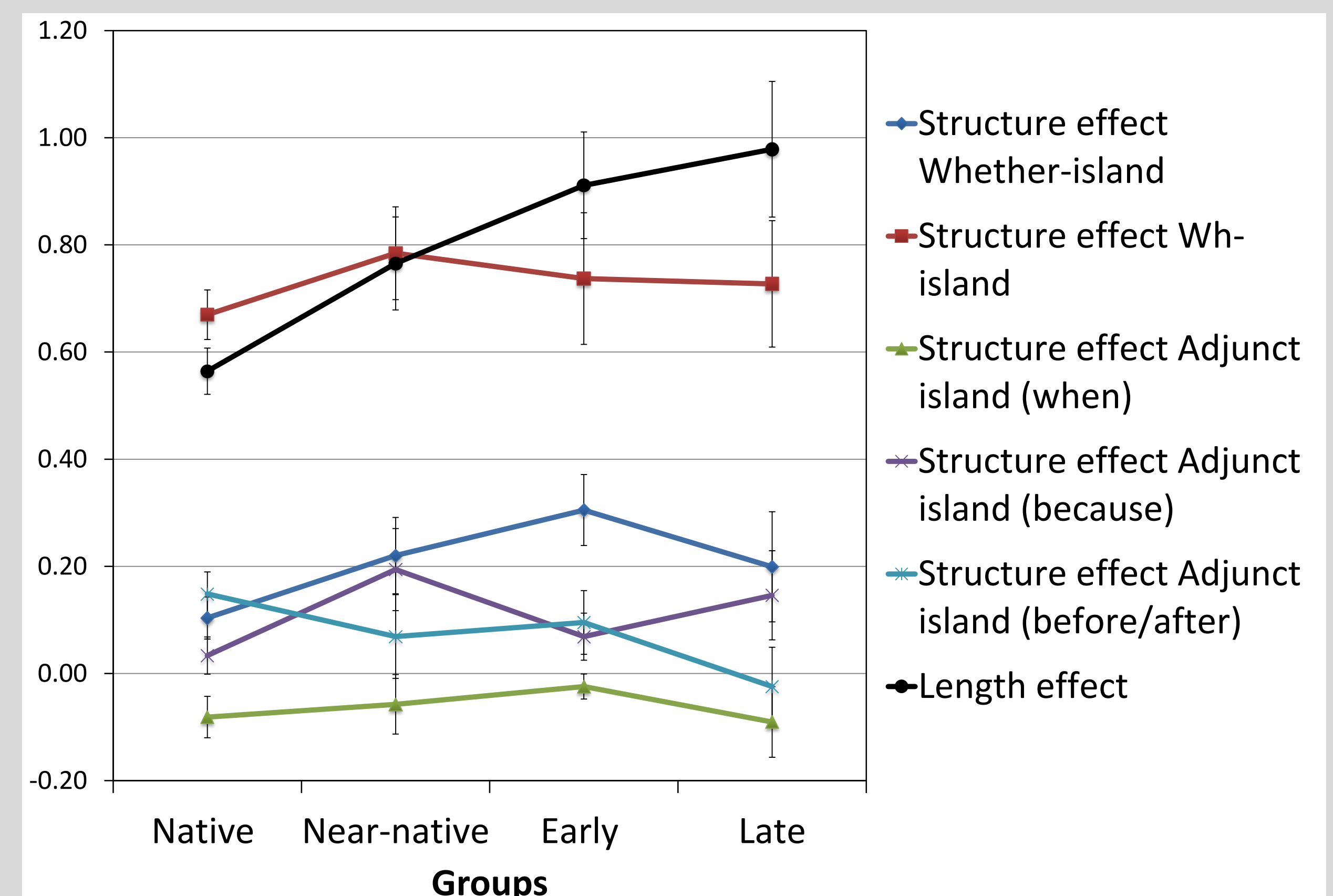
Discussion/Conclusion

What is source of decreasing DD score?

- Increasing difficulty with **complex embedded clauses**?
Cond 1 - Cond 2 = structure effect
- Increasing difficulty with **long-distance extraction**?
Cond 3 - Cond 1 = length effect

No

Yes



Conclusions

- No sign of change in sensitivity to islands or island structures **per se**.
- Instead, increasing difficulty with long-distance extraction as AoA increases.
 - This masks island effects.
 - We leave the source of this difficulty open for now.
- Current views of islands as due to inherent limitations are supported.

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