Distance effects with Japanese Wh-phrases

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Introduction

- Distance effects are sometimes absent in head-final languages, such as Japanese, German, and Hindi (11)-(12)(13)(14)
- Some studies suggest that distance effects may be present or absent depending on the type of integration ([7]).
- Wh-interrogative sentences in Japanese help us to tease apart various types of integration processes.

Different integrations, different cost?

- Distance effects may vary depending on the type of integration.
- How about Wh-phrases? (cf. It seems that a distance effect emerges when a quantificational element is integrated with a verb in English (King & Kutas, 1995; Kaan, et al. 2000).

Processing of Wh-questions involves two kinds of integrations

1. Wh-V Integration / 2. Wh-Q Integration: In Japanese, Q-marker is overt (−kA) and may or may not be attached to the theta-assigning V.

This property makes it possible for us to tease apart these two kinds of integrations:

- When the material was not too complex, anti-TME disappeared, which conforms to the claim that Anti-TME was due to the large series of NPs.

Example 1 (Self-paced reading)

Factor 1: Placement of the licensing Q-particle (Mid vs. High-Attachment). Factor 2: Distance between the Wh-particle and the V (Distant / Local).

(a) Mid: Wh clause − [CC] V=Q − PP NP V=
(b) Mid: Wh clause − [CC] V=Q − PP NP V=
(c) High: Wh clause − [CC] V=comp − PP NP V=
(d) High: Wh clause − [CC] V=comp − PP NP V=

Experiment 1: Results

- Regardless of the Q attachment, the Distant conditions were read slower.
- Wh-V integration is distance-sensitive, unlike NP-V integration.
- At Region 8, the presence of Q incurred greater RTs (anti-TME) only when it was far from wh−. Wh-Q integration is costly and distance-sensitive.
- At the spillover region 9, a TME was found.
- Why Anti-TME at Region 8? − The magnitude of TME is constant while Wh-Q integration is distance-sensitive? (See the diagram)
- At Region 11, Q again incurred greater RTs; no distance effects, because wh was reactivated at V2 in all the conditions (Vasishth & Lewis 2003).

Discussion

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Conclusion

- Unlike the thematic integration between referential NPs and the V, both Wh-V and Wh-Q integrations in Japanese exhibit distance effects (cf. negative polarity items; Nakatani, 2009).
- In Japanese, plain thematic integrations are distance-insensitive; other integrations may be distance-sensitive.
- The magnitude of Wh-Q integration, which is distance-sensitive, can surpass Typing Mismatch Effects (TME; [8][9]), which may lead to anti-TMEs.
- The type of the intervening materials matters. Component clauses including general processing cost than the V.

References