Hyper-active gap filling

Akira and Ellen
(actively filling their stomach!)
Active dependency completion

• Complete long-distance dependencies at the earliest possible point
  – Filler-gap dependencies (wh, scrambling)
    ...if / who Ruth will bring us home to...
    The book / city that the author wrote about...
  – Backward anaphora
    When he was fed up, the boy / girl visited...

• Attested using various methods (SPR, eye-tracking, ERP, etc.) in many different languages
Active gap filling

• Question: What actually triggers active gap filling?

• Filled-gap effects & plausibility mismatch effects both show that gap filling occurred at the verb, but there are still two possible triggers
AGF Hypothesis 1: Gap-filling in VP whatever the V is

In principle, it’s possible to have a transitive V and fill the gap here.

Gap filling before seeing the verb!

Risky, but very early gap filling

→ Hyper active gap filling
AGF Hypothesis 2: Gap-filling only when V allows it

Conservative active gap filling → Fewer errors, but one step slower

Postulate NP & fill the gap

No gap filling! Just wait more
Support for Hyperactive-AGF?

- Aoshima et al 2004: Japanese gap filling before V

  **Filled-gap paradigm**

- Condition 1: Sentence-initial, scrambled Wh-NP

  **Wh-dat** NP-top [NP-nom Adverb **NP-dat** NP-acc Verb-C] Verb-Q

  ![Filled gap effect observed at the NP-dat position → Pre-verbal gap filling](image)

- Condition 2: Non-scrambled Wh-nom

  **Wh-nom** NP-dat [NP-nom Adverb **NP-dat** NP-acc Verb-C] Verb-Q

  No scrambling of subjects
Support for Conservative-AGF?

- Staub 2007 used intransitive verbs (eye-tracking)
  a. Transitive, RC
  The gadget that the manager called occasionally about...
  b. Transitive, no filler
  The manager called occasionally about...
  c. Intransitive, RC
  The party that the student arrived promptly for...
  d. Intransitive, no filler
  The student arrived promptly for...
Details of Staub results

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<th>Measure</th>
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<th>V</th>
<th>Adv+P</th>
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Concerns about Staub’s design

• Minor one
  – Not controlled for complexity (no filler in baseline)
  → Not neat, but constant across V types

• Bigger concern
  – Predictability of filler-V combinations differs
    Transitive: The gadget that the manager called
    Intransitive: The party that the student arrived
Our study

• In both transitive and intransitive V conditions...
  – Have a filler
  – Filler-V combination is equally implausible
  – For baseline, we use \textbf{RC island}
Our stimuli

a. Transitive, no island
The city that the author wrote regularly about ____ was...

b. Intransitive, no island
The city that the author chatted regularly about ____ was...

c. Transitive, island
The city that \([_{RC} \text{the author who wrote regularly}] \) saw ____ was...

d. Intransitive, no island
The city that \([_{RC} \text{the author who chatted regularly}] \) saw ____ was...
The city that the author who wrote/ chatted regularly about was/ saw rest.
The city that the author who wrote / chatted regularly about was / saw rest

Non-Island conditions
Altogether

The city that the author who wrote regularly about was saw rest
Concerns

• Could be due to the difference in the methodology (SPR vs. Eye-tracking?)
• Could be due to the difference in the stimuli
Back to our stimuli & Stuab’s

a. Transitive, no island
   The city that the author wrote regularly about ____ was...

b. Transitive, island
   The city that \( \text{[RC the author who wrote regularly]} \) saw ____ was...

c. Intransitive, no island
   The city that the author chatted regularly about ____ was...

d. Intransitive, no island
   The city that \( \text{[RC the author who chatted regularly]} \) saw ____ was...

Staub’s stimuli

a. The party that the student arrived promptly for....

b. The student arrived promptly for the party...
Concerns about stimuli

• Verbs like “arrive” can be transitive-like
  – There is a high semantic association between the filler and the verb (e.g., inherently directional), and
  – It’s easy to come up with a preposition

The party that the student arrived... [at]
Better stimuli

a. Non-island; high association
   The costume party that the student arrived promptly for at the fraternity house was late in getting started.

b. Non-island; low association
   The plumbing operation that the student arrived promptly for at the fraternity house was late in getting started.

c. Island; high association
   The costume party that the student who arrived promptly threw at the fraternity house was late in getting started.

d. Island; low association
   The plumbing operation that the student who arrived promptly saw at the fraternity house was late in getting started.
Lab project 2! (5pts)

- Each of you constructs 4 sets of stimuli
- 2 based on Staub’s; 2 from scratch (but make sure you use one of the verbs he used)
- Have a first draft (on googledoc) by Tuesday! I’ll give you further instructions then

Preview of Lab project 3 (10 pts):

You’ll actually run this self-paced reading experiment, and write up the results!