



Interpreting Sluiced Prepositional Phrases

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Abstract

Problem: Prevailing approaches to sluicing which rely on either syntactic or semantic identity with an antecedent are unable to account for SPPs with NP antecedents.

Proposal: Interpreting SPPs involves pragmatically inferring a proposition by associating a relevant property with an antecedent.

Findings: Stranded SPPs found for 26 out of 38 single-word preps (16 more than claimed by C&J) and 45% of the antecedents were NPs. 10 of the 12 preps not found were mean rated 3.0 or greater in a grammaticality survey.

1. Background

Sluicing & SPPs

SLUICING (Ross, 1969): A *Wh*-word functioning as an embedded question.

SPPs: Sluices with either stranded prepositions as in (1a); or pied-piped (preposition+*Wh* word order) as in (1b).

(1a) Ben gets mad if Abby flirts and it doesn't matter **who with**.

(1b) Ben gets mad if **Abby flirts** and it doesn't matter **with who**.

VP ANTECEDENT

SLUICED PP

(Assumption: SPPs functionally PPs in either word order)

2. SPP antecedents

What's interesting about SPPs?

SPPs often have **NP** rather than **VP** antecedents:

(2) An automated telemarketing **message** was left, I forget what about.¹

NP ANTECEDENT

...what about = *what the message was about*

...what about ≠ *what a message was left about*

➔ VP [*message was left*] **NOT** appropriate antecedent!

3. Modeling SPP Interpretation

What is needed to interpret SPPs?

Problems with Existing Models

I. Syntactic Identity (Ross 1969, *inter alia*): elided portion of sluice must match antecedent for all syntactic features

Problem: Antecedents with barriers to extraction (*i.e.* islands)

(1b) * Ben gets mad if Abby flirts and it doesn't matter with who_1 Ben gets mad [if Abby flirts t_1]

➤ pronouncing elided portion *should* be grammatical!

II. Semantic identity (Merchant 2001, *inter alia*): Mutual entailment must hold between a sluice and an available antecedent

Problem: NP antecedents

(2) * An automated telemarketing message was left, I forget what an automated telemarketing message was left about.

➤ **NO** mutual entailment holds between available antecedent proposition ...*that a message was left* and required proposition ...*that a message is about something*!

4. Pragmatic Proposal

SPPs Interpreted via Extension of Indirect Licensing

(Culicover & Jackendoff 2005)

➔ **SYNTACTICALLY:** SPPs are PP fragments which function to question a property of an antecedent NP, VP or AP

➔ **SEMANTICALLY:** SPP propositions are pragmatically inferred (using world knowledge) by associating an antecedent with a relevant property

- In example (2): Associating *message* with a TOPIC property provides the necessary proposition ...*that a message is about something*

➤ **NO** account for licensing SPPs with NP antecedents under C&J's original IL proposal in which a sluice's proposition is explicitly provided by association with a VP antecedent.

5. Stranded SPP Investigation

Finding Evidence for SPP Systematicity

➤ **PREDICTION:** any single-word prep can occur in stranded SPPs unlike C&J's original IL proposal which claims stranded SPPs occur idiosyncratically with only 10: *about, at, by, for, from, in, of, on, to, with*

Objective: Find stranded SPPs with *who* or *what* for 38 single-word preps

Method: 20 search strings 'predicate_WH_prep' for 10 predicates which select interrogative complements: *believe, clear, find out, forget, guess, know, recall, remember, say, sure.* (e.g. ...*know what with.*)

Source: The World-Wide Web via the GOOGLE API

6. Results of SPP Investigation

Stranded SPPs Found for 26 Prepositions!

(40% more than claimed by Culicover & Jackendoff)

Over 3000 well-formed SPPs collected:

- 2800+ with 10 undisputed preps (plain font)
- 200 with 16 newly attested preps (**bold font**)
- No evidence for 12 preps (*italic font*)

SPPs with NP antecedents: a large subclass

- For 26 preps: 45% NP, 45% VP & 10% AP antecedents (SPPs with NP antecedents require inferring a proposition)

Observations:

- 10 undisputed preps are both the most frequent and the most abstract (grammaticalized/conventionalized)
- 16 newly attested preps mostly used abstractly in SPPs
- 12 preps not found are among the least frequent and have almost exclusively spatial connotations

	-Frequency of Prepositions-	
	Google (millions)	Google (millions)
in	22870	<i>without</i> 3270
to	22870	between 3100
of	22810	since 2910
for	20940	<i>below</i> 2830
by	19340	around 2780
on	18830	<i>down</i> 2510
about	16540	<i>during</i> 2330
at	16120	<i>above</i> 2010
from	14670	<i>across</i> 1750
with	10700	against 1720
out	8030	<i>inside</i> 1490
up	7600	<i>outside</i> 1370
over	5880	<i>near</i> 1280
into	5020	<i>beyond</i> 1170
through	4290	behind 1050
after	4260	<i>until</i> 970
under	3880	towards 531
off	3500	<i>beneath</i> 118
before	3480	<i>beside</i> 77

7. Grammaticality Survey

Acceptability of Spatial SPPs

Objective: Determine to what extent native speakers accept SPPs with low frequency preps when spatial association (salience) with the antecedent is strengthened

Stimuli: 12 target preps in 24 pied-piped SPPs & 24 distractors (12 good/12 bad) randomized & counterbalanced

Subjects: 50 UCSD undergrad native-English speakers

Task: Rate acceptability using a 5-point scale in which 1 = completely unacceptable and 5 = perfectly fine

Survey Results

- Mean rating was 3.0 or greater for 10 of the 12 target preps for at least 1 of their 2 stimuli
- Mean rating was below 3.0 for only '*during*' and '*without*'

8. Conclusions

- Stranded SPPs are not idiosyncratic, but instead involve a large degree of systematicity.
- SPPs with NP antecedents comprise a significant subclass previously unacknowledged.
- Abstract use of prepositions in SPPs correlates with over-all preposition frequency.
- Spatial use of prepositions in SPPs may be acceptable in sufficiently enriched contexts.
- Salience affects associating SPPs to their antecedents (and thus their grammaticality).

References:

- Culicover, P. and R. Jackendoff. (2005) *Simpler Syntax*, Oxford: Oxford University Press.
 Culicover, Peter. (1999) *Syntactic Nuts*, Oxford: Oxford University Press.
 Merchant, Jason. (2001). *The Syntax of Silence: Sluicing, Islands, and the theory of ellipsis*, Oxford: Oxford University Press.
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 Ross, John. (1969) Guess who? In R. Binnick et al (eds.), *Papers from the 5th Regional Meeting of the Chicago Linguistic Society*, v5 pp 252-286.

¹ <http://slashdot.org/article.pl?sid=04/11/27/2216200&from=rss>

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