

Conditions on Propositional Anaphora

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- Individual anaphora

(1) 'Moana' is about a young girl. *She* saves the world.

- Event anaphora

(2) My cousin saw it in 3D. I'm still dying to do *that*.

- Propositional anaphora

(3) 'Moana' is the #1 movie in the country. I heard *that* on the radio.

■ A single utterance can imply multiple propositions

(4) Moana, who is the daughter of a Polynesian chief, teams up with the demigod Maui and together they save the world.

↪ Moana teams up with Maui.

↪ Moana and Maui save the world.

↪ Moana exists.

↪ A Polynesian chief exists.

↪ Moana is the daughter of a Polynesian chief.

↪ Maui exists.

↪ Maui is a demigod.

↪ The speaker of (4) speaks English.

⋮

■ Which propositions are available for anaphora? When? How?

- One idea: Anaphora is sensitive to discourse status
Only at-issue content is available for anaphoric reference

My goal

Demonstrate that at-issueness and anaphoric availability are distinct

- 1 At-issue status is not necessary for anaphoric availability
- 2 At-issue status is not sufficient for anaphoric availability

Outline

- 1 At-issueness
- 2 Anaphora to Not-at-issue Content
- 3 Anaphora to At-issue Content
- 4 Discussion

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A Note on Formatting

- In the following examples,
at-issue content-denoting phrases in boldface
anaphors in italics
antecedents underlined
- (7) (**Who is Tamatoa?**)
Tamatoa, voiced by Ricky Gervais, is a very shiny lobster.
a. *No, that's not true, he's a very shiny crab.*

Defining At-issueness

- Not all content conveyed by an utterance has the same status
 - Conveyed content can be at-issue or not-at-issue
 - Simons et al. 2010 defines at-issue content as content which addresses the question under discussion (QUD, Roberts 1996)
- (5) Q: **Who is Maui?**
A: **Maui**, who is voiced by Dwayne Johnson, **is a demigod**.
- (6) Q: **Who plays Maui?**
A: # **Maui**, who **is voiced by Dwayne Johnson**, is a demigod.
- Appositive content can't address the QUD \rightsquigarrow is not-at-issue
 - Matrix content addresses the QUD \rightsquigarrow is at-issue

At-issueness & Anaphora Licensing

- (7) Tamatoa, voiced by Ricky Gervais, **is a very shiny lobster**.
- a. *No, that's not true, he's a very shiny crab.*
- (7) Tamatoa, voiced by Ricky Gervais, **is a very shiny lobster**.
- b. *? No, that's not true, he's voiced by Jermaine Clement.*

- Easy to refer anaphorically to the at-issue matrix content
- Harder to refer to the not-at-issue appositive content
- AnderBois et al. 2010 and Murray 2014 introduce propositional variables for at-issue content
- Syrett & Koev 2014 interprets experimental data on anaphora to appositive content (like (7b)) as proving “shifting at-issue status” of appositives, on the assumption that all and only at-issue content is available for anaphora

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The idea

- Content which is at-issue addresses the QUD
- Content which doesn't address the QUD is not-at-issue
- If not-at-issue content can be available for anaphora, then at-issue status is **not a necessary condition** for anaphoric availability

Appositives

(8) [Context: Mark is a teacher. His parents come to visit during a school assembly. His father is looking around the auditorium, curious about Mark's students.]

Dad: **Where are Mark's students sitting?**

Mom: **Lisa, who is Mark's favorite, is sitting in the front row.**
He told me *that* in confidence, though, so don't tell anyone.

- Explicit QUD addressed by the at-issue matrix clause
- Appositive content doesn't address the QUD, is not-at-issue
- Anaphor *that* targets the appositive content
- ∴ not-at-issue content can be available for anaphora

Reports

- Speech reports convey multiple propositions which can be at-issue (Simons 2007, see also Hunter 2016)

- (9) A: Who was Louise with last night?
B: Henry thinks she was with Bill. (Simons 2007 (2))

- (10) A: What is bothering Henry?
B: He thinks Louise was with Bill last night. (Simons 2007 (3))

- Either the matrix (reporting) content or the embedded (report) content can be at-issue in a context

Reports

(11) Q: **Who was at the party?**

A: Kevin said **Meghan was there.** Erin told me *that*.

- Explicit QUD addressed by the embedded report
- The matrix content attributing the source is not-at-issue
- Very natural reading for Erin to have spoken about Kevin: *that* targets the matrix reporting
- ∴ not-at-issue content can be available for anaphora

- ∴ at-issue status is not necessary for anaphoric availability

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The idea

- Content which addresses the QUD is at-issue

- “at-issue content may include non-conventional content as well, e.g. conversational implicatures which arise as a result of the utterance in context.” (Roberts et al. 2009)

(12) A: I have to pay this bill.

B: The customer accounts office isnt open today.

(at-issue: A won't be able to pay.) (Roberts et al. 2009 (9))

- “a presupposition... can have main point status” (Simons 2005)

(13) Ann: The new guy is very attractive.

Bud: Yes, and his wife is lovely too.

(at-issue: The new guy has a wife.) (Simons 2005 (10))

- If at-issue content fails to be available for anaphora, then at-issue status is **not a sufficient condition** for anaphoric availability

Presupposition

- Presuppositions can be at-issue (see, e.g., Simons 2005)

(14) Q: **Does Vicky have any siblings?**

A: Her brother is a chef, just like me. Her mom told me *that*.

✓ that he's a chef

#that **he exists**

- Explicit QUD addressed by a presupposition, triggered by *her brother*
- Anaphor *that* can't be taken to address the at-issue presupposition
- This proposition is at-issue, but is not available for anaphora

Entailment

- Entailments can be at-issue (Roberts et al. 2009)

(15) [Context: Kim and Jessie are high school students. Kim's mom asks Jessie's:]

Q: Where was Kim last night? **Was she at the party?**

A: The whole class was there! Jessie told me *that*.

✓ that the whole class was at the party

#that **Kim was at the party**

- Explicit QUD is about Kim, response is about the whole class
- QUD is addressed by an entailment of the answer (*whole class* \models *Kim*)
- Anaphor *that* can't be taken to refer to the proposition about Kim
- This proposition is at-issue, but fails to be available for anaphora

Implicature

- Implicatures can be at-issue (Roberts et al. 2009)

(16) Q: **Will Gretchen be able to make the meeting?**

A: There's a pile-up on I-287. Alexa told me *that*.

✓ that there is a pile-up on I-287

#that **Gretchen won't make the meeting**

- Explicit QUD is about Gretchen, literal response is about traffic
- QUD is only addressed by conversational implicature
- Anaphor *that* can't refer to the implicated proposition about Gretchen
- At-issue content can fail to be available for anaphora
- ∴ at-issue status is not sufficient for anaphoric availability

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Summary

- 1 Content which is not-at-issue can be available for anaphora
 \rightsquigarrow at-issue status is not necessary for anaphora
 - 2 Content which is at-issue can fail to be available for anaphora
 \rightsquigarrow at-issue status is not sufficient for anaphora
- Need a detailed explanation of what *does* license anaphora
 - If not conditioned by discourse status, then what?

- Looking back at our examples that didn't license anaphora

(14) Her brother is a chef ↗ 'her brother exists'

(15) The whole class was there! ↗ 'Kim was there'

(16) There's a pile-up on I-287. ↗ 'Gretchen won't make it'

Q: What do these have in common?

A: The at-issue content isn't denoted by any syntactic constituent

- [[her brother]] is an individual
- [[her brother is a chef]] is a proposition, but not the one we want
- [[her brother]] requires us to presuppose the existence proposition, but doesn't denote it
- Maybe we need to look to syntax, rather than discourse status
- Salience in discourse isn't sufficient

- Reminiscent of the Anaphoric Island Constraint/Formal Link Condition (Postal 1969; Kadmon 1987; Heim 1990, a.o.)

The Formal Link Condition (Simplified)

A pronoun must have an overt NP antecedent, and this antecedent cannot be a sub-part of a word

- (17) a. One of the ten balls is missing from the bag. It's under the couch.
b. # Nine of the ten balls are in the bag. It's under the couch. (Partee 1989)
- (18) a. Fritz owns a dog and it bites him.
b. # Fritz is a dog-owner and it bites him. (cf. Evans 1977)
- (19) a. Followers of McCarthy are now puzzled by his intentions.
b. # McCarthyites are now puzzled by his intentions. (Postal 1969)

Formal Link Condition, continued

- Argued to be gradient, not categorical, for nominal anaphora (Anderson 1971; Patel-Grosz & Grosz 2010 a.o.)
- Equivalent for propositional anaphora?

- (20)
- a. Kayla Jones, who is an Olympic gold medalist, proposed to her fiancé without telling him *that*.
 - b. ? Kayla Jones, an Olympic gold medalist, proposed to her fiancé without telling him *that*.
 - c. ?? Olympic gold medalist Kayla Jones proposed to her fiancé without telling him *that*.

- Clausal appositive, nominal appositive, and prenominal modifier all convey the same proposition
- Not just salience: syntactic factors in play, too

A Syntactic Approach

- Krifka (2013) notes that the prejacent of negation licenses anaphora

(21) Ede didn't steal the cookie,

a. and he actually can prove *it*.

(21) Ede didn't steal the cookie,

b. even though people believed *it*.

(Krifka 2013 (24))

(+ my notation)

- Anaphor in (21a) refers to the matrix negative proposition
- Anaphor in (21b) refers to the prejacent
- Prejacent isn't an implication of the sentence (in the Tonhauser et al. 2013 sense), but is still at-issue according to Simons et al. 2010

- The same is true for the prejacent of a modal (von Fintel & Gillies 2007)
- (22) [Context: Pascal and Mordecai are playing Mastermind. After some rounds where Mordecai gives Pascal hints about the solution, Pascal says:]
There might be two reds. (von Fintel & Gillies 2007 (20))
- (23) [Mordecai, knowing the solution, has a range of possible responses:]
- a. That's right. There might be.
 - b. That's right. There are.
 - c. That's wrong. There can't be.
 - d. That's wrong. There aren't. (von Fintel & Gillies 2007 (21))
- Anaphors in (23b,d) refer to the prejacent of *might*
 - $\diamond\varphi$ doesn't imply φ

A Syntactic Approach

- Krifka 2013 proposes that anaphora licensing is syntactic:
 - Any phrases TP or higher license propositional anaphora
 - This includes NegP and ModP

(24) $[\text{ActP } \text{ASSERT } [\text{NegP } \textit{Ede did-n 't} [\text{TP } t_{\text{Ede}} t_{\text{did}} [\text{vP } t_{\text{Ede}} t_{\text{steal}} \textit{steal the cookie}]]]]$
 $\hookrightarrow d_{\text{speech act}} \quad \hookrightarrow d'_{\text{prop}} \quad \hookrightarrow d''_{\text{prop}} \quad \hookrightarrow d'''_{\text{event}}$

- Works for appositives, which are embedded CPs (in competing analyses, see Potts 2002; De Vries 2006; Del Gobbo 2007)
- But what is it about these phrases that they license anaphora?
- The content presupposed by lower phrases (*her brother; stop*) is propositional—why don't DPs/VPs license propositional anaphora?
- Also some worries about embedded CPs in ECM constructions that don't seem to license anaphora (but CP > TP)

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Propositional Formal Link

- (25) a. Ted, who is Karen's biological father, had dinner with her without telling her *that*.
- b. ? Ted, Karen's biological father, had dinner with her without telling her *that*.
- c. ?? Karen's biological father Ted had dinner with her without telling her *that*.