Distinguishing At-issueness from Anaphoric Potential

Todd Snider
Cornell University

West Coast Conference on Formal Linguistics
April 29, 2017

slides available at: http://conf.ling.cornell.edu/tsnider

🐦 @ToddtheLinguist

■ 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.

■ Many propositions can be sentence implications of a single utterance

(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: Propositional 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 & Looking Ahead

A note on formatting

- In the following examples,
  at-issue content-denoting phrases in boldface
  propositional anaphors in italics
  propositional 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 ⤳ is not-at-issue
- Matrix content addresses the QUD ⤳ 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

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

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 <u>he's a chef</u>
               #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 <u>the whole class was at the party</u>
               #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* ⊨ *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 <u>there is a pile-up on I-287</u>
               #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

---

Not just salience

- 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.   Ned, <u>who was Tina's secret admirer</u>, had lunch with her without admitting *that* to her.

       b. ? Ned, <u>Tina's secret admirer</u>, had lunch with her without admitting *that* to her.

       c. ?? <u>Tina's secret admirer</u> Ned had lunch with her without admitting *that* to her.

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

Towards a syntactic approach

- Krifka 2013 notes that the prejacent of negation licenses anaphora

(21) <u>Ede didn't steal the cookie</u>,

       a.   and he actually can prove *it*.

(21) Ede didn't <u>steal the cookie</u>,

       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

Towards a syntactic approach

- 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) $[_{ActP}$ ASSERT $[_{NegP}$ *Ede did-n't* $[_{TP}$ t$_{Ede}$ t$_{did}$ $[_{vP}$ t$_{Ede}$ t$_{steal}$ *steal the cookie*$]]$
    ↪d$_{speech\ act}$ ↪d′$_{prop}$ ↪d″$_{prop}$ ↪d‴$_{event}$

- 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 empirical coverage, e.g. in embedded CPs in raising/control constructions that don't seem to license anaphora

AnderBois, Scott, Adrian Brasoveanu & Robert Henderson. 2010. Crossing the appositive / at-issue meaning boundary. In Nan Li & David Lutz (eds.), Semantics and linguistic theory (SALT), vol. 20, 328–346. CLC Publications.

Anderson, Stephen R. pseudonymously as "P. R. N. Tic Douloureux". 1971. A note on one's privates. In Arnold M. Zwicky, Peter H. Salus, Robert I. Binnick & Anthony L. Vanek (eds.), Studies out in left field, 45–51.

De Vries, Mark. 2006. The syntax of appositive relativization: On specifying coordination, false free relatives, and promotion. Linguistic Inquiry 37(2). 229–270.

Del Gobbo, Francesca. 2007. On the syntax and semantics of appositive relative clauses. In Nicole Dehé & Yordanka Kavalova (eds.), Parentheticals, vol. 106, 173. John Benjamins Publishing.

Evans, Gareth. 1977. Pronouns, quantifiers, and relative clauses (i). Canadian Journal of Philosophy 7(3). 467–536.

von Fintel, Kai & Anthony S Gillies. 2007. An opinionated guide to epistemic modality. Oxford Studies in Epistemology 2. 32–62.

Heim, Irene. 1990. E-type pronouns and donkey anaphora. Linguistics and philosophy 13(2). 137–177.

Hunter, Julie. 2016. Reports in discourse. Dialogue & Discourse 7(4).

Kadmon, Nirit. 1987. On the unique and non-unique reference and asymmetric quantification: University of Massachusetts, Amherst dissertation.

Krifka, Manfred. 2013. Response particles as propositional anaphors. In Todd Snider (ed.), Semantics and linguistic theory (SALT), vol. 23, 1–18. CLC Publications.

Murray, Sarah E. 2014. Varieties of update. Semantics and Pragmatics 7(2). 1–53. doi:10.3765/sp.7.2.

Partee, Barbara. 1989. Binding implicit variables in quantified contexts. In C. Wiltshire, B. Music & R. Graczyk (eds.), Chicago linguistic society, vol. 25 1, 342–365.

Patel-Grosz, Pritty & Patrick Grosz. 2010. On the typology of donkeys: two types of anaphora resolution. In Sinn und bedeutung, vol. 14, 339–355.

Postal, Paul. 1969. Anaphoric islands. In Chicago linguistic society, vol. 5, 205–239.

Potts, Christopher. 2002. The lexical semantics of parenthical-as and appositive-which. Syntax 5(1). 55–88.

Roberts, Craige. 1996. Information structure in discourse: Towards an integrated formal theory of pragmatics. Working Papers in Linguistics-Ohio State University Department of Linguistics 49. 91–136.

Roberts, Craige, Mandy Simons, David Beaver & Judith Tonhauser. 2009. Presupposition, conventional implicature, and beyond: A unified account of projection. In Nathan Klinedist & Daniel Rothschild (eds.), New directions in the theory of presupposition, 1–15.

Simons, Mandy. 2005. Presupposition and relevance. Semantics vs. pragmatics 329–355.

Simons, Mandy. 2007. Observations on embedding verbs, evidentiality, and presupposition. Lingua 117(6). 1034–1056.

Simons, Mandy, Judith Tonhauser, David Beaver & Craige Roberts. 2010. What projects and why. In Nan Li & David Lutz (eds.), Semantics and linguistic theory (SALT), vol. 20, 309–327. CLC Publications.

Syrett, Kristen & Todor Koev. 2014. Experimental evidence for the truth conditional contribution and shifting information status of appositives. Journal of Semantics 1–53.

Tonhauser, Judith, David Beaver, Craige Roberts & Mandy Simons. 2013. Toward a taxonomy of projective content. Language 89(1). 66–109.