At-issueness ≠ anaphoric availability

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Abstract. The at-issue status of a proposition and its availability for anaphora have been tightly linked in the literature (e.g., Tonhauser 2012; Syrett & Koev 2014). In particular, a frequently used diagnostic for at-issueness crucially relies on propositional anaphora. I argue that two different QUD-based diagnostics from Tonhauser 2012—which do not rely on anaphora—more reliably identify at-issueness. I use these diagnostics to show that neither at-issueness nor availability for anaphora reliably determine one another.

Keywords. propositional anaphora; at-issueness; Question Under Discussion

1. Introduction. Throughout the literature, a tight linking has been posited between the at-issue status of a given proposition and its availability for anaphora, using the (in)felicity of direct assent/dissent as a diagnostic for at-issueness (including for evidentials, e.g., Faller 2002; Matthewson, Davis & Rullmann 2007; Murray 2010; and appositives. e.g., Tonhauser 2012; Syrett & Koev 2014). For example, the sentence in (1) conveys two propositions of arguably different statuses.

(1) Tivi, who is a cat, enjoys chasing her tail.   (Murray 2014: (7))

    a.   No, she doesn't.

    b. # No, she isn't.

The matrix proposition—that Tivi enjoys chasing her tail—is available for direct dissent, as shown in (1a), but the proposition conveyed by the appositive relative clause—that Tivi is a cat—cannot be directly dissented with, as shown in (1b). This has been taken as evidence that the matrix proposition is at-issue where the appositive proposition is not-at-issue.

This tight linking between at-issueness and anaphoric potential has also been captured in formal representations of discourse. The update semantics of Murray 2009, 2014 has at-issue content and not-at-issue content update the common ground in different ways, and at-issue content introduces a propositional discourse referent while not-at-issue content does not. A similar notion is implemented in AnderBois, Brasoveanu & Henderson 2010 for appositives, where propositional variables only represent at-issue content; not-at-issue content updates the context set without introducing a propositional variable.

In this paper, I argue that there is no tight link between at-issueness and anaphoric availability—that these two properties of propositions are distinct. I present data which demonstrates that a proposition's at-issue status alone is not sufficient to determine whether it will be available for anaphoric reference (including but not limited to direct assent/dissent), as well as data which shows that a proposition's being available for anaphoric reference cannot be used to diagnose its at-issue status.

In §2, I provide some background on at-issueness, with the goal of identifying a diagnostic for at-issueness which does not rely on anaphoric availability. Using such a diagnostic, I illustrate

felicitous anaphoric reference to not-at-issue propositions (in §3) and that some at-issue content cannot be referred to anaphorically, including by direct dissent (in §4). In §5, I explain the differing behavior of sentence-medial and sentence-final appositives, which has been implicated in the literature on at-issueness, in the context of our new perspective on at-issueness and anaphoric availability. §6 concludes.

2. Diagnosing at-issueness. Content which is at-issue is frequently described as the "main point" of an utterance (Roberts, Simons, Beaver & Tonhauser 2009; Tonhauser, Beaver, Roberts & Simons 2013, and references therein). This notion has been formalized in Simons, Tonhauser, Beaver & Roberts 2010 as relevance to the current Question Under Discussion (QUD, Roberts 1996). At-issueness has also been described formally as a proposed update to the common ground (Murray 2009; AnderBois et al. 2010; Murray 2014; see also Farkas & Bruce 2010). For the purposes of this paper, I'll be using the Simons et al. 2010 definition, both because of its popularity and because it has associated diagnostics which make testable predictions. The definition is as follows, where $?p$ denotes the question whether or not p:

(2) **Revised[1] definition of at-issueness** (Simons et al. 2010: (26))

    a. A proposition p is at-issue iff the speaker intends to address the QUD via $?p$.

    b. An intention to address the QUD via $?p$ is **felicitous** only if:

        i. $?p$ is relevant[2] to the QUD, and

        ii. the speaker can reasonably expect the addressee to recognize this intention.

Using this definition of at-issueness, Tonhauser 2012 lists three features of at-issue content and then lays out six diagnostics for identifying the at-issue status of a sentence implication.

(3) Features of at-issue content: (Tonhauser 2012)

    I. At-issue content can be directly assented or dissented with

    II. At-issue content addresses the question under discussion (QUD)

    III. At-issue content determines the relevant set of alternatives

Feature (3II) hews closest to the Simons et al. 2010 definition in (2): content is (defined as being) at-issue if a speaker intends to use it to address the QUD, so at-issue content addresses the QUD. Feature (3III) is a sort of forward-looking counterpart to (3II). Where (3II) is about the relevance of at-issue content to its prior context, (3III) is about how at-issue content shapes what things count as relevant in subsequent discourse. These two features are of a kind, and the diagnostics associated with them pattern together in a way to be demonstrated shortly. Feature (3I), on the other hand, is further removed from the Simons et al. 2010 definition of at-issueness: at least *a priori*, whether something is available for direct assent/dissent is distinct from whether it addresses the QUD.

In the remainder of this section, I will introduce these two classes of diagnostics and then compare them. The goal here is to identify a diagnostic for at-issueness which doesn't rely on

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[1]Simons et al. 2010 includes an earlier version of this definition which does not make reference to speaker intention. The differences between the two definitions, discussed in the paper, are immaterial here.

[2]Relevance is defined for assertions (and questions) as entailing (or having an answer which entails) a partial or complete answer to the QUD (Simons et al. 2010: (13)).

anaphora, so that we can then investigate the relationship between at-issueness and anaphoric potential without accidentally conflating the two.

2.1 THE *question/answer* TESTS. The diagnostics that Tonhauser 2012 associates with features (3II) and (3III) look at what content establishes or addresses the QUD. These diagnostics, namely Diagnostics #2 & #3a,b, work by constructing and examining the congruence of question/answer pairs, so they constitute what I'll call the *question/answer* tests.

Diagnostic #2 uses the target sentence (the one whose contents we want to test) as the answer to a question (per (3II)). Diagnostics #3a,b turn the target sentence into a question, and then respond to its contents (per (3III)) with a positive/negative answer and a follow-up: either a "positive continuation" (e.g., *Yes, she is*) for #3a or an "adversative continuation" (e.g., *Yes, but she is*) for #3b. The idea here is that because at-issue content addresses and establishes the QUD, content which fails to address the QUD or which fails to establish a QUD must be not-at-issue.[3]

To illustrate the question/answer tests, Tonhauser's (2012) Diagnostic #2 is given in (4) and exemplified in (5–6), and Diagnostic #3a is given in (7) and exemplified in (8). To demonstrate these tests, I'll be using sentences with appositives, which are thought to convey content which is in some way less central to the utterance (e.g., AnderBois et al. 2010; Tonhauser 2012; Murray 2014).

(4) **Diagnostic #2:** Create a discourse in which speaker A utters a question with meaning $?\vec{x}.m$ and an addressee B utters answers that convey $\exists \vec{x}.m(\vec{x})$ as at-issue content and not-at-issue content, respectively. Ask the consultant about the acceptability of these answers to the question.   (Tonhauser 2012: (16))

(5) Who did Food Network interview?

   a.   Pauline, who is Margaret's cousin, was interviewed by Food Network.

(6) Who is Margaret's cousin?

   a.   # Pauline, who is Margaret's cousin, was interviewed by Food Network.

The same sentence is used to answer the different explicit questions in (5) and (6). The response in (6a) fails to felicitously address the QUD, even though the content conveyed by the appositive entails an answer to the question in (6), so the appositive content must be not-at-issue. (If it were at-issue, it would be able to address the QUD.) The felicity of the response in (5a), meanwhile, is consistent with the matrix clause content being at-issue.

(7) **Diagnostic #3a:** Let *S* be a sentence that gives rise to hypothesized at-issue content *m* and hypothesized not-at-issue content *n*. Form a polar question *Q* from *S*. Create a discourse where interlocutor A utters *Q* and addressee B's positive (negative) response is followed by utterances of simple sentences that convey *m* or *n* ($\neg m$ or $\neg n$) as at-issue content. Ask the consultant about the acceptability of B's answers.   (Tonhauser 2012: (19))

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[3]An explicit question, like those used in all three question/answer tests, might not override an overarching Domain Goal, but it is enough to establish an immediate Discourse Goal (Roberts 1996).

(8) Was Pauline, who is Margaret's cousin, interviewed by Food Network?

    a.   Yes, she was.

    b.   No, she wasn't.

    c. # Yes, she's Margaret's cousin / she is.

    d. # No, she's not Margaret's cousin / she's not / she isn't.

The (c) and (d) responses of (8), which respond to the content conveyed by the question's appositive clause, are infelicitous, which is evidence that that appositive content is not-at-issue. (If the question's appositive clause content were at-issue, it would establish the very alternatives that the (c) and (d) responses convey.) The felicity of the (a) and (b) responses, which respond to the question's matrix clause content, is consistent with that matrix clause content being at-issue.

    The question/answer tests look at the way at-issue content interacts with the QUD, both in terms of responding to an existing QUD (as in Diagnostic #2) and in setting up a QUD to be addressed (as in Diagnostics #3a,b).

2.2 THE *direct assent/dissent* TESTS. The other three diagnostics from Tonhauser 2012 (Diagnostics #1a–c) trade on feature (3I), that "at-issue content can be directly assented or dissented with". These tests rely on identifying the content which is targeted by a statement of direct assent/dissent.

    For Diagnostic #1a, a sentence which conveys multiple contents is directly assented/dissented with, and consultants are asked what is being assented/dissented with. In Diagnostics #1b,c, this judgment is less overt, as consultants are asked only to judge the felicity of discourses with direct assent/dissent. In Diagnostic #1b, assent/dissent is followed up with a "positive continuation" (e.g., *Yes, that's true, he did*), and in Diagnostic #1c it is followed up with an "adversative continuation" (e.g., *Yes, that's true, but he didn't*). Overall, the idea is that because at-issue content can be directly assented/dissented with, content which cannot be assented/dissented with in this way must be not-at-issue (because if it were at-issue, it would be able to be assented/dissented with).

    Though feature (3I) and its associated diagnostics are described as dealing with both assent and dissent, the two do not behave identically. There are cases where dissent is felicitous but assent is not.

(9) Bill has spoken to Mary, who is Martin's best friend.

    a.   No, Mary is not Martin's best friend / she isn't.

    b. ? Yes, Mary is Martin's best friend / she is.

Indeed, where assent seems to be the 'default' result of an unopposed assertion, dissent requires an overt action. Overtly agreeing, then, is often marked. As such, I will focus for the remainder of this paper only on direct dissent, and refer to this as the *direct dissent* test.

    For an example of the direct dissent test in action, Tonhauser's (2012) Diagnostic #1b, given in (10), is demonstrated in (11). As Tonhauser 2012: 244 points out, "This diagnostic has been applied in e.g. Faller (2002), von Fintel and Gillies (2007), Matthewson et al. (2007) and Murray (2010)."

(10) **Diagnostic #1b:** Create a discourse in which interlocutor A utters the target utterance and in which addressee B responds to A's utterance with a simple assent(dissent) utterance

followed by an utterance that conveys (the negation of) the hypothesized at-issue content, or where B responds with a simple assent (dissent) utterance followed by an utterance that conveys (the negation of) a hypothesized not-at-issue content. Ask the consultant about the acceptability of B's responses. (Tonhauser 2012: (10))

As discussed above, I exemplify this diagnostic with only the direct dissent variation.

(11)   Pauline, who is Margaret's cousin, was interviewed by Food Network.

    a.   No, she wasn't interviewed by them.

    b. #/?? No, she isn't Margaret's cousin.

The questionable felicity of (11b), which targets the appositive content of (11), is taken as evidence that this appositive content is not-at-issue: if it were at-issue, it should have been perfectly felicitous to directly dissent with. The felicity of (11a), meanwhile, is consistent with the matrix clause content being at-issue.

      The direct dissent test looks at the ability of content to be directly rejected, taking at-issue content to be always available for direct dissent. Tonhauser 2012 makes no claims about the ability of not-at-issue content to be directly dissented with, but if all at-issue content can be directly dissented with, then any content which cannot must be not-at-issue.

2.3 COMPARING THE *question/answer* AND *direct dissent* TESTS. The question/answer and direct dissent tests align in many cases. For example, the above examples all point to the content conveyed by appositive clauses being not-at-issue. There are differences between these classes, though, which I will argue make them crucially different. Tonhauser 2012 notes that the six diagnostics presented don't always behave identically, but attributes those differences to the type of implication being tested: "not all diagnostics are conclusive for all projective contents" (p. 251). At the end of the day, though, Tonhauser asserts that they are all indeed testing for at-issueness: "they are all useful to diagnose (not-)at-issueness with at least one kind of content" (p. 252). I'll argue that where the question/answer tests are indeed useful for diagnosing (not-)at-issueness, the direct dissent tests are mediated by the anaphoric availability of a propositional antecedent, and so are in fact testing not for at-issueness but for anaphoric availability.

      The anaphoric nature of the direct dissent tests is apparent in their reliance on propositional anaphors. The mechanisms that underlie direct assent/dissent are themselves anaphoric: response particles, which have been argued to be anaphoric (Murray 2010; Krifka 2013; Roelofsen & Farkas 2015), and other propositional anaphors like *that* (e.g., in *That's not true*). The direct dissent tests explicitly rely upon the anaphoric nature of the response particles, identifying the antecedent content (Diagnostic #1a) and looking for inconsistencies between the antecedent content and explicit follow-up material (Diagnostics #1b,c).

      In contrast, the question/answer tests do not rely on the use of propositional anaphors. This difference is easy to miss in the presentation of the diagnostics in Tonhauser 2012, where two of the three question/answer tests are demonstrated with examples that make use of response particles. The Guaraní follow-ups begin with *heẽ* 'yes' or *nahániri* 'no', and if these response particles work like those of other languages (i.e., those discussed in Krifka 2013; Roelofsen & Farkas 2015), then they're likely best analyzed as propositional anaphors themselves. But this illustration with explicit

anaphors is only incidental for the question/answer test: the examples shown in (8) return the same results even without the use of response particles.

(12) Was Pauline, who is Margaret's cousin, interviewed by Food Network?

    a.   She was.

    b.   She wasn't.

    c.   # She's Margaret's cousin / she is.

    d.   # She's not Margaret's cousin / she's not / she isn't.[4]

The responses in (12a) and (12b), which morphologically agree with the tense of the question's matrix clause, are felicitous answers to the question, suggesting that the question's matrix clause content establishes a QUD to be addressed (and so is at-issue). The responses in (12c) and (12d), meanwhile, which agree with the question's appositive, are infelicitous, suggesting that the question's appositive content is not-at-issue, as it does not establish a QUD.

    The question/answer tests return the same results, because their use of anaphors (response particles) is only incidental. In contrast, the direct dissent tests rely on explicit anaphors by design; an anaphor-less equivalent to the direct dissent test in (11) ceases to be the same diagnostic.

(13) Pauline, who is Margaret's cousin, was interviewed by Food Network.

    a.   She wasn't interviewed by them.

    b.   She isn't Margaret's cousin.

The responses in (13) are both corrections, and there is no difference in acceptability between a correction of the matrix clause content and a correction of the appositive clause content.

    The direct dissent tests are mediated by the anaphoric availability of a propositional antecedent, and thus do not in fact diagnose at-issueness, at least not directly. It could only be taken to diagnose at-issueness if at-issueness and anaphoric potential were one and the same: if all and only at-issue content were available for anaphoric reference. In the next two sections, I will show that this is not the case. For the remainder of the paper, I'll use a question/answer test (Diagnostic #2) to establish the at-issue status of content independently of its anaphoric availability. I won't use the anaphora-based direct dissent tests, because as I will demonstrate, one can directly dissent felicitously to both at-issue and not-at-issue content, and there is at-issue content which cannot be directly dissented with.

3. At-issueness is not necessary for anaphora. In this section, I'll present data which illustrates felicitous anaphoric reference to not-at-issue content. This demonstrates that a proposition's being available for anaphoric reference cannot be used to diagnose its at-issue status. In other words, at-issue status is not necessary for anaphoric availability, either for direct rejection or for anaphora broadly. This calls into question the tight linking between at-issueness and anaphoric potential, as well as the explicit assumption made in Syrett & Koev 2014 that being targeted by direct rejection implies at-issue status.

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[4]To the extent that *She's not Margaret's cousin* is a felicitous discourse move, it is not a response to the question posed, but rather a correction. It does not address the QUD. Note, in contrast, that *She's not* and *She isn't* don't have the same potential to be felicitous in this context, perhaps because they are too elliptical to be a useful correction.

As discussed in the previous section, I'll be using a question/answer test to diagnose content as being at-issue or not-at-issue. The novel examples that follow will have an explicit question establishing the QUD and some at-issue content which addresses that QUD, both presented in boldface for ease of identification. Propositional anaphors (including but not limited to response particles) will be presented in italics, with their antecedents underlined.

First, let's look at an appositive, which as we've already seen is typically taken to convey not-at-issue content.

(14) [Context: Mark is a high school 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.

The QUD in (14) is about where Mark's students are sitting, and is addressed by the matrix clause content of the response: Lisa is sitting in the front row. The content conveyed by the appositive, that Lisa is Mark's favorite, does not address the QUD, and so is not-at-issue by the question/answer test (and so is not in boldface). The anaphor *that* in (14) most plausibly refers to the content conveyed by the appositive, even though it is not-at-issue: the context of (14) makes it very odd for where someone is sitting—presumably public knowledge—to be something Mark would say in confidence, making the matrix content an ill-fitting referent for *that* to pick up. In contrast, that a teacher has a favorite student is precisely the sort of thing a teacher might want to keep secret, so the appositive content is a fitting antecedent. So here we have felicitous anaphoric reference to a truly not-at-issue proposition.

(14) shows us a propositional anaphor (*that*) referring to a not-at-issue proposition, but not direct dissent. On its own, (14) suggests that felicitous direct dissent of appositive content, such as was demonstrated by Syrett & Koev 2014, needn't invoke a "shifting" at-issue status: if this sort of not-at-issue content is available for anaphoric reference by means other than direct dissent, then why posit a change in status when it is also available for direct dissent? It may be the case that in fact direct dissent is more restricted than propositional anaphora generally (at least in English[5]). As we'll see in a moment, though, there is also felicitous direct dissent to not-at-issue content.

The anaphoric availability of not-at-issue content is not a feature only of appositive content; we can also see parallel behavior in speech/attitude reports. Such reports convey multiple propositions which can be at-issue in a given context (Simons 2007, see also Hunter 2016). For any given report, the matrix clause content which describes the reporting event may be at-issue, or the embedded clause content which conveys the report may be at-issue, depending on context. For example, the B responses in (15) and (16) are the same, modulo pronoun resolution and ellipsis, but they differ in terms of which content is at-issue.

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

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[5]Krifka 2013 accounts for the more restricted behavior of *yes* compared to German *ja* by positing a syntactic difference, that the latter is at the level of TP while the former is an ActP.

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

In (15), the QUD is about Louise and who she was with. This is addressed by the embedded clause content of B's response; the matrix content about Henry only provides the source of the relevant at-issue information, and is itself not-at-issue. In the context of (16), the QUD is about Henry and his state of mind. This is addressed by the matrix clause content of B's response, so it's what's at-issue. The reported content itself is not-at-issue.

In the context of an explicit question which makes the at-issue content clear (that is, using a question/answer test), we can see felicitous anaphoric reference to a not-at-issue proposition in a speech report, as in (17):

(17) Q: **Who was at the party?**
A: <u>Kevin said **Meghan was there**</u>. Erin told me *that*.

In the context of (17), it is the embedded clause content of A's response which is at-issue: the QUD is about who was at the party, and the embedded clause is what addresses it. The matrix clause content attributes the source of this report, but is itself not-at-issue. And yet, a very natural interpretation of (17) is for Erin to have spoken about Kevin, i.e., for the anaphor *that* to target the not-at-issue matrix clause content.[6]

As in (14), the example in (17) uses a propositional anaphor in a single speaker follow-up. We can also see direct assent/dissent to not-at-issue content in a parallel speech report example:

(18) A: **Who was at the party last night?**
B: Gabrielle said **Polly was there**.
a. C: *Yes, that*'s true, but she's mistaken. **Polly was at the movies**.
b. C: *No, that*'s not true, she said [PAULIE]$_F$ was there; you must have misheard her.

Just like in (17), the QUD in (18) is addressed by the embedded clause content of B's response, both in boldface. The matrix clause content of B's response introduces the source of the report, but doesn't address the QUD, and so is not-at-issue. Nevertheless, this not-at-issue matrix clause content is available for direct assent in (18a) or direct dissent in (18b). In (18a), the anaphors *yes* and *that* refer to the matrix clause content of B's response: C affirms the reporting but then goes on to deny the content of the report itself. (18a) addresses the QUD only in the final clause: Polly was at the movies, and thus was not at the party. In (18b) as well, the anaphors *no* and *that* refer to the matrix clause content of B's response, here denying the reporting itself (explained as a mishearing). (18b) doesn't itself address the QUD, in that it doesn't entail even a partial answer to *Who was at the party?* nor does it preclude Polly from having in fact been at the party (independently of

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[6](17) is at least very marked, if not infelicitous, as a way to report that Erin said something about Meghan directly. Contrast (17) with (i):

(i) A: **Who was at the party?**
B: Kevin said **Meghan was there**. Erin told me *that*, too.

The embedded clause content is still available for anaphoric reference, but without the addition of *too*, the anaphor in (17) more naturally is interpreted as referring to the matrix clause content.

Gabrielle's report). It does serve to prevent perhaps-false information from being added to the common ground, though, if A would otherwise have accepted B's assertion as truthful.

The responses in (18) show felicitous direct assent/dissent to not-at-issue content, without a change in topic or other indication of a shift in QUD (and thus what is at-issue). Together with (14) and (17), we have evidence of licit anaphoric reference to not-at-issue propositions. This shows us, first, that at-issueness is not necessary for a proposition to be available for anaphoric reference, and second, that being targeted by a propositional anaphor, even in direct dissent, is not evidence for a proposition's at-issueness, contra the assumption of Syrett & Koev 2014.

4. At-issueness is not sufficient for anaphora. In this section, I'll present data on at-issue contents which systematically fail to be available for anaphoric reference. This illustrates that given only knowledge about the at-issue status of a proposition, we can't predict whether it will be available for anaphora. In other words, at-issue status is not sufficient for anaphoric availability, either for direct dissent or for anaphora broadly. This calls into question not only the tight linking of at-issueness and anaphoric potential in the literature, but also feature (3I) from Tonhauser 2012.

Roberts et al. 2009: 5 tells us that "at-issue content may include non-conventional content as well, e.g. conversational implicatures which arise as a result of the utterance in context", as exemplified by the conversational implicature in (19).

(19) A: I have to pay this bill.
      B: The customer accounts office isnt open today.   (Roberts et al. 2009: (9))

"[S]peaker B intends to convey (ii) that A will not be able to pay her bill (or at least not in the standard way). The second implication, a Relevance implicature, is what is directly at-issue in the utterance: it is what is intended by the speaker to help resolve the implicit question raised by A's utterance." (Roberts et al. 2009: 5).

The same is true of presuppositions, as "a presupposition…can have main point status" (Simons 2005: 340), exemplified in (20).

(20) Ann: The new guy is very attractive.
      Bud: Yes, and his wife is lovely too.   (Simons 2005: (10))

Simons 2005: 340 tell us that "the main point of Buds utterance is to inform Ann that the new guy has a wife". It of course also conveys that his wife is lovely, but "another of the communicated propositions, namely that the new guy has a wife, is more relevant for Ann than the fact that the wife is lovely" (p. 341) and Ann recognizes Bud's intention for her to pick this up, as reflected in the Simons et al. 2010 definition of at-issueness in (2).

In this section, I'll show that these sorts of at-issue propositions systematically fail to be available for anaphoric reference. Just like in the previous section, I'll use a question/answer test to clarify the at-issue status of the various propositions floating around in each example. First, let's look at a presupposition.

(21) 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**

In (21), the explicit QUD is about whether Vicky has any siblings. This QUD is addressed via the existence presupposition triggered by the DP *her brother*: Vicky's brother exists, therefore she has at least one sibling. That he is a chef, the main clause content, does not address the QUD; it is only the existence presupposition that is at-issue. The anaphor *that*, however, can't be interpreted as referring to the at-issue proposition that Vicky's brother exists. It can only be understood as referring to the proposition that he's a chef. If Vicky's mom had in fact only told A about his existence, and not his profession, (21) would not be a felicitous way to report that. The at-issue status of the existence presupposition is not enough to make it available for anaphoric reference.

We can see the same with a non-presuppositional entailment, as in (22).

(22)   [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*.

$\checkmark$ that the whole class was at the party
\# that **Kim was at the party**

The explicit QUD in (22) is about whether Kim was at the party, but the response given is about the whole class. The QUD is only addressed by an entailment of the answer: if the whole class was there, then Kim must have been there. This entailed proposition is what addresses the QUD and so is at-issue. The anaphor *that* can't be taken to refer to the proposition about Kim, however. The only possible reading of (22) is for Jessie to have told her mom that the entire class was at the party. The proposition that Kim was at the party, even though it is at-issue, is not an available antecedent for anaphoric reference.

We can see the same pattern with a conversational implicature, as in (23).

(23)   Q: **Will Gretchen be able to make the meeting?**
       A: There's a pile-up on I-287. Alexa told me *that*.

$\checkmark$ that there is a pile-up on I-287
\# that **Gretchen won't make the meeting**

The explicit QUD in (23) is about Gretchen, but the response given is about a traffic accident. The QUD is only addressed via conversational implicature, in particular a Relevance implicature: the only way we can take A's response as relevant is if the traffic will affect Gretchen's attendance at the meeting. Given world knowledge and some other assumptions, we take it that the traffic does bear on this question: presumably Gretchen would normally take I-287 to get to the meeting, and so now will be unable to attend or will be delayed. In other words, A's response conveys, via conversational implicature, the proposition that Gretchen won't make the meeting. It's this proposition which addresses the QUD, and so it's this proposition which is at-issue in the context of (23).

Despite being at-issue, the proposition that Gretchen won't make the meeting (on time) is not an available antecedent for the anaphor *that*. The only available interpretation of (23) has Alexa reporting on the traffic accident, whether or not she knows about Gretchen or the meeting. If Alexa had told A only about Gretchen's attendance without knowing the cause of the delay, (23) is not a felicitous way to report that. So here, too, we have an at-issue proposition which is unavailable for anaphoric reference.

A version of (23) which involves direct dissent shows us the same unavailability:

(24)   Q: **Will Gretchen be able to make the meeting?**
        A: There's a pile-up on I-287.
        B: #*No, that*'s not true! She'll be there, she took the subway today!

$$\checkmark \text{that } \underline{\text{there is a pile-up on I-287}}$$
$$\# \text{ that } \textbf{Gretchen won't make the meeting}$$

This variant has the same QUD, the same response, and the same Relevance implicature. Here B attempts to directly reject the at-issue proposition that Gretchen won't make the meeting, offering in a follow-up a reason to reject the Relevance implicature: she took the subway, so road traffic won't affect her travel. Nonetheless, the anaphors *no* and *that* here obligatorily target the proposition that there's a pile-up; they cannot refer to the at-issue proposition that Gretchen won't make the meeting. According to Tonhauser 2012, at-issue content can be directly dissented with, but (24) shows us that this is not the case for (at least some) at-issue conversational implicatures.

Parallel examples to (21) and (22) that include direct rejections of entailed content are hard to construct in a way that makes them demonstrative.

(25)   [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!
        B: #*That*'s not true! Kim was the library all night!

B's direct dissent in (25) denies the claim that Kim was at the party, but it's difficult to determine whether this dissent *targets* that at-issue proposition, or whether it in fact still targets the asserted proposition about the whole class: knowing that Kim was at the library is a reason to deny the claim that the whole class was at the party. My intuition is that indeed this direct dissent can only target the content that the entire class was there, bearing on the at-issue content only indirectly, but this is hard to demonstrate conclusively.

Nevertheless, the data in (21)–(23) are evidence that not all at-issue content can be targeted by propositional anaphors. And at least in the case of conversational implicature, (24) shows us an example where at-issue content cannot be directly dissented with.

5. Medial & final appositives. All of the appositives diagnosed as not-at-issue in Tonhauser 2012 (and here, in §2) were sentence-medial, but it has been noted that the ability of an appositive to be targeted by direct assent/dissent is sensitive to the position of the appositive clause in a sentence (AnderBois et al. 2010; Syrett & Koev 2014). In this section, I explain this sensitivity as a consequence of the anaphoric nature of the direct dissent test, and demonstrate that the question/answer tests do not show the same behavior. This is further evidence for my claim in §2 that the question/answer tests are truly diagnosing at-issueness, in contrast to the direct dissent tests, which diagnose only anaphoric availability.

AnderBois et al. 2010 gives (26b) as an example of felicitous direct dissent to a sentence-final appositive.

(26)   a. He took care of his husband, who had prostate cancer.

        b. No, he had lung cancer.

        c. No, he took care of his brother.   (AnderBois et al. 2010: (47))

This was tested experimentally in Syrett & Koev 2014, which examined participants' willingness to accept direct dissent to appositives in medial and final positions. Syrett & Koev 2014 confirmed the intuition that final appositives are more acceptable targets for direct dissent than medial appositives.

Syrett & Koev 2014 takes the existence of felicitous dissent to appositives, both medial and final, as evidence for the "shifting at-issue status" of appositives. "[W]e believe we have reason to think that these appositives may take on at-issue status, provided we assume that being the target of a direct rejection is one of the main diagnostics for being at issue. (See, for example, Tonhauser 2012.)" (p. 551–552). This analysis explicitly presumes that direct rejection (that is, direct dissent) is evidence for at-issue status.

Syrett & Koev (2014) come to this conclusion because they rely exclusively on the direct dissent tests as their diagnostic for at-issueness. As discussed in §2, the direct dissent tests rely on anaphoric availability, so they can be misleading as to the interaction between at-issueness and anaphoric potential. To make this point even clearer, we can observe the anaphoric nature of the direct dissent tests in their behavior around medial and final appositives.

The direct dissent tests, demonstrated in §2 only with medial appositives, are sensitive to the position of an appositive: compare the direct dissent test with a medial appositive in (11), repeated here, to a final appositive, as in (27).

(11)   Pauline, who is Margaret's cousin, was interviewed by Food Network.

        a.   No, she wasn't interviewed by them.

        b. #/?? No, she isn't Margaret's cousin.

(27)   Food Network interviewed Pauline, who is Margaret's cousin.

        a.   No, they didn't interview her.

        b.   ? No, she isn't Margaret's cousin.

The response in (27b) is significantly less marked than that of (11b). This is the same effect noticed by AnderBois et al. (2010) and confirmed by Syrett & Koev (2014). We can explain this behavior if we consider the anaphoric nature of the direct dissent tests. Anaphora resolution is sensitive to recency, among other things (Ariel 1988 and references therein), so it shouldn't be surprising that the direct dissent tests, which crucially rely on anaphora, return different results for more recent material (here, sentence-final appositives).

The question/answer tests, in contrast, show the same behavior for both medial and final appositives. Diagnostic #2 identifies matrix content as at-issue (in (5)) and appositive content as

not-at-issue (in (6)), regardless of the position of the appositive:

(5)   Who did Food Network interview?

     a.   Pauline, who is Margaret's cousin, was interviewed by Food Network.

     b.   Food Network interviewed Pauline, who is Margaret's cousin.

(6)   Who is Margaret's cousin?

     a.   # Pauline, who is Margaret's cousin, was interviewed by Food Network.

     b.   # Food Network interviewed Pauline, who is Margaret's cousin.

Diagnostic #3a is similarly unaffected by the position of the appositive:

(8)   Was Pauline, who is Margaret's cousin, interviewed by Food Network?

     a.   Yes, she was.

     b.   No, she wasn't.

     c.   # Yes, she's Margaret's cousin / she is.

     d.   # No, she's not Margaret's cousin / she's not / she isn't.

(28)   Did Food Network interview Pauline, who is Margaret's cousin?

     a.   Yes, they did.

     b.   No, they didn't.

     c.   # Yes, she's Margaret's cousin / she is.

     d.   # No, she's not Margaret's cousin / she's not / she isn't.

The question/answer tests show the same results for all appositives, regardless of their position in the sentence, and do not appear to be sensitive to recency. They are sensitive to discourse structure—the QUD—but not the position of the material that establishes or addresses that QUD.

This supports the notion that the direct dissent tests, which are sensitive to recency, are in fact not diagnosing at-issueness but the anaphoric availability of a proposition. The question/answer tests, in contrast, reliably indicate a proposition's at-issue status under the Simons et al. 2010 QUD-based definition.

6. Discussion. Despite the tight linking between at-issueness and anaphoric availability presumed in the literature, the data presented here show that the two notions are independent of one another, and must be distinguished. Of the diagnostics presented in Tonhauser 2012, only the question/answer tests, which tap into what content establishes and addresses the QUD, diagnose at-issueness as defined by Simons et al. 2010. The direct dissent tests, which are moderated by the availability of anaphoric antecedents, do not diagnose at-issueness at all, but rather anaphoric availability.

If we're interested in the question of what diagnoses at-issueness, then the data presented here demonstrate that a proposition's being anaphorically available is neither necessary nor sufficient to determine its at-issue status. The data in §4 show that felicitous anaphora is not necessary for determining a proposition as being at-issue, as we can see the systematic infelicity of anaphoric reference to content which is nevertheless at-issue. The data in §3 show us that anaphoric availability is not sufficient, either, as we have felicitous anaphoric reference to a proposition, where that proposition is nonetheless not at-issue.

Alternatively, if we're interested in the question of what determines the anaphoric potential of a proposition, then the data presented here demonstrate that a proposition's being at-issue is neither necessary nor sufficient to determine its anaphoric potential. The data in §3 show us that at-issueness is not necessary, as we have felicitous anaphora (including direct dissent) to not-at-issue propositions. The data in §4 show us that at-issueness is not sufficient, as we have at-issue propositions which are systematically unavailable for anaphoric reference, direct dissent or otherwise.

There is still more work to be done to determine what precisely determines the anaphoric potential of a proposition, now that I have demonstrated that it is not at-issueness. Krifka 2013 offers a syntactic account, but a full consideration of that account is beyond the scope of this paper; I save that question for future work.

There is also more work to be done in clarifying the differences between direct assent and direct dissent, as well as their relationship(s) to propositional anaphora more generally. In what ways is direct assent more restricted than direct dissent? And is direct dissent more limited than propositional anaphora in general?

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