

Diagnosing (not-)at-issue content*

Judith Tonhauser

The Ohio State University

1. Introduction

Natural language utterances typically convey more than one proposition. Mario's utterance in (1), for example, conveys at least the following propositions: i) that Mario is indicating somebody, ii) that the person indicated by Mario is a man, iii) that Carlos had money, iv) that the man Mario is indicating stole Carlos' money, v) that Mario has a mother, and vi) that the man Mario is indicating is Mario's mother's friend.¹

- (1) Context: Carlos' pocket was picked at the party he is attending with Mario.
Carlos: Who stole my money?
Mario: That man, my mother's friend, stole your money.

Native speakers of English understand the propositions conveyed by Mario's utterance to differ in their primacy. Intuitively, the proposition that the person Mario indicates is a man or the proposition that Mario has a mother are not the main points of Mario's utterance, but rather secondary or backgrounded contents. The proposition that the man indicated by Mario stole Carlos' money, on the other hand, is generally understood to be the main point of Mario's utterance.

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¹Some of these contents, such as i), may be better characterized as a constraint (that must be satisfied by prior context) than a proposition (that must be entailed by prior context). Since nothing I discuss in this paper hinges on whether the relevant content is characterized as a constraint or as a proposition, I remain agnostic here about this matter and characterize all contents as propositions.

The observation that contents conveyed by utterances differ whether or not they are the main point is not a new one. Karttunen and Peters (1979, 1), for example, state that presuppositions, i.e. contents that survive embedding under operators like negation or modals, are “propositions which the sentences are not primarily about”. Likewise, Horton and Hirst (1988, 255) characterize a presupposition as “a proposition that is conveyed by a sentence or utterance but is not part of the main point”, and Abbott (2000, 143f.) finds that “...what is asserted is what is presented as the main point of the utterance — what the speaker is going on record as contributing to the discourse. [...] Anything else will have to be expressed in another way, typically by being presupposed”. For Potts (2005), a defining characteristic of conventional implicatures is that they are not at-issue, i.e. not the main point of the utterance, and evidential implications across languages have been argued to be not at-issue (e.g. Faller 2002, Matthewson et al. 2007, Murray 2010, Lee 2011).

Recently, Simons, Tonhauser, Beaver, and Roberts (2010) have proposed, on the basis of data from English, that at-issueness is relevant to determining whether a content has the potential to project, i.e. can survive embedding under operators like negation or modals (such ‘projective’ contents include classical presuppositions as well as Potts’ conventional implicatures). In particular, they hypothesize that a projective content is one that is not at-issue, with the term ‘at-issue’ defined as follows:

- (2) **Definition of at-issueness** (Simons et al. 2010, 323)
- 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 to the QUD, and
 - ii. the speaker can reasonably expect the addressee to recognize this intention.

We can use this definition to explore which propositions of Mario’s utterance in (1) are at-issue and which are not, i.e. are not at-issue. The question under discussion (QUD) for Mario’s utterance is given explicitly by Carlos’s interrogative utterance *Who stole my money?*. The proposition p that Mario has a mother is not at-issue according to (2) since the question $?p$ (*Does Mario have a mother?*) is not relevant to the question *Who stole my money?* (a question Q1 is relevant to another question Q2 if and only if Q1 has an answer which contextually entails a partial or complete answer to Q2; Simons et al. 2010, 316). That is, since neither a positive nor a negative answer to the question *Does Mario have a mother?* contextually entails an answer to *Who stole my money?*, the proposition that Mario has a mother is not at-issue in the context of the Carlos’ question in (1). Now consider the proposition q that the man indicated by Mario stole Carlos’ money. Since an answer to the question $?q$ (*Did that man steal Carlos’ money?*) contextually entails at least a partial answer to Carlos’ question *Who stole my money?*, the proposition q satisfies clause (2b.i) of the definition of at-issueness. Since Mario can reasonably expect Carlos to recognize Mario’s intention to address Carlos’ question with $?q$, clause (2b.ii) is also satisfied. The proposition that the man Mario indicates stole Carlos’ money is thus at-issue in (1).

To provide cross-linguistic support for the hypothesis that projective contents are not-at-issue contents advanced by Simons et al. (2010) on the basis of English data, it is necessary i) to determine the set of expressions that can give rise to not-at-issue contents

in languages other than English, and ii) to establish that if a content projects in a particular context, it is not at-issue in that context.

The focus of this paper is on the first of these two tasks. Note that identifying whether a particular proposition is at-issue according to the definition in (2) requires judgments on whether one question is relevant to another (2bi), and judgments on whether a speaker can reasonably expect the addressee to recognize a particular intention (2bii). While linguistically untrained native speakers can be expected to provide the first type of judgment (perhaps indirectly, by judging whether one answer utterance entails another), they cannot be expected to provide the second type of judgment.

This paper presents six diagnostics for (not-)at-issueness that are applicable with linguistically untrained native speakers and can thus be used to explore one part of Simons et al.'s (2010) hypothesis cross-linguistically. Section 2 provides theoretical motivation for the diagnostics and relates them to the 'at-issue' definition in (2). The diagnostics, all of which have already been used in the literature, are spelled out in detail in section 3 and applied to a Paraguayan Guaraní (Tupí-Guaraní) utterance containing an appositive. The results of applying the diagnostics to a wider range of projective contents in Paraguayan Guaraní (henceforth Guaraní) are summarized in section 4. Section 5 concludes.

2. At-issue content in discourse

Discourse does not proceed in a haphazard way, with interlocutors contributing random utterances, but is rather “organized around a series of conversational goals and the plans [...] which conversational participants develop to achieve them” (Roberts 1998, 2). Of particular relevance for this paper is the question under discussion stack, “an ordered set of all as-yet unanswered but answerable, accepted questions” (ibid., p.12) at the time of utterance. The question on top of the stack is the current question under discussion (QUD).

An utterance by a cooperative speaker can be assumed to address the QUD, which means that (at least) one of the propositions conveyed by the utterance contextually entails a partial answer to the QUD. A cooperative speaker can furthermore be assumed to structure his/her utterance such that a competent addressee can recognize which proposition conveyed by the speaker's utterance the speaker intends to address the QUD. This proposition is the at-issue content of the utterance.

It is this ability of competent, cooperative addressees to identify the intended at-issue content of an utterance that the diagnostics for at-issueness presented in section 3 tap into. In particular, the diagnostics exploit the following three properties of at-issue content.

I. At-issue content can be directly assented or dissented with. The at-issue content of a speaker's utterance can be accepted or rejected by an addressee, or, in the terminology used in the literature, the at-issue content can be assented or dissented with. Content that the speaker did not intend to address the QUD cannot be directly assented or dissented with but can be challenged with utterances such as “Hey, wait a minute!”, cf. Shannon (1976), von Stechow (2004) (which is a diagnostic for not-at-issue content not discussed here). B's utterances in (3), for example, can only be understood to assent/dissent with the proposition expressed by A's utterance that Juan lives in Maria's house, not with e.g. the proposition

that Maria has a house.

- (3) A: Juan lives in Maria's house.
B: No, that's not true. / Yes, that's true.

The three diagnostics presented in section 3.1 identify contents at (not-)at-issue by exploring which contents can(not) be directly assented/dissented with.

II. At-issue content addresses the question under discussion. The QUD is addressed by the at-issue content of an utterance. In other words, an answer utterance is felicitous only if its at-issue content is relevant to the QUD (Amaral et al. 2007, 732). B1's answer in (4) is acceptable as an answer to A1's interrogative utterance (which makes the QUD explicit) since the at-issue content of B1's answer, that Juan lives in Maria's house, contextually entails a (complete) answer to the QUD. The same answer is unacceptable as a response to A2's interrogative utterance in (5) since the proposition that Maria has a house, which arises from B1's answer, is not at-issue.

- (4) A1: Where does Juan live?
B1: Juan lives in Maria's house.
(5) A2: What does Maria have?
B1: #Juan lives in Maria's house.

Not at-issue content may also address the QUD, but may not be intended as the sole content of an utterance to address the QUD (see Simons et al. 2010, 323f. for discussion). Section 3.2 presents a diagnostic that identifies contents at (not-)at-issue by exploring which contents can(not) serve as the intended answer to an (explicitly given) QUD.

III. At-issue content determines the relevant set of alternatives. The at-issue content of interrogative utterances determines the relevant set of alternatives (the question) that answer utterances must address. The relevant set of alternatives conveyed by A's interrogative utterance in (6) is thus the set determined by "whether *m*" where *m* is the at-issue content that Juan lives in Maria's house, not the set "whether *n*" where *n* is the not-at-issue content that Maria has a house. B1's answer is acceptable in response to A's question since it narrows down the set of alternatives given by "whether *m*", while B2's answer is unacceptable since it attempts to narrow down the set of alternatives given by "whether *n*".

- (6) A: Does Juan live in Maria's house?
B1: Yes, he does/lives in Maria's house. B2: #Yes, Maria has a house.

The diagnostics presented in section 3.3 identify content as (not-)at-issue by exploring which answers are acceptable to a particular question.

In sum, the three sets of diagnostics for (not-)at-issueness exploit the fact that at-issue content can be assented/dissented with, that it addresses the QUD and that it determines the relevant set of alternatives. If discourse in other languages is also organized around conversational goals, in particular the goal of addressing questions under discussion (which is an open, empirical question), the diagnostics can be assumed to diagnose 'at-issue' as defined in (2) from Simons et al. (2010) since they presume the ability of competent speakers of a language to identify the intended at-issue content of utterances.

3. Diagnosing (not-)at-issueness in Paraguayan Guaraní

Tonhauser, Beaver, Roberts, and Simons (ms) present empirical evidence for the claim that Guaraní has projective contents. The contents of appositives, such as *che-sy angiru* (B1sg-mother friend) ‘my mother’s friend’ in (7), are among the projective contents.²

- (7) Pe kuimba’e, **che-sy angiru**, o-monda nde-pirapire.
that man B1sg-mother friend A3-steal B2sg-money
‘That man, my mother’s friend, stole your money.’

This section identifies six diagnostics for (not-)at-issueness and illustrates their application to example (7) on the basis of three native speakers’ judgments.

3.1 At-issue contents can be directly assented/dissented with (diagnostics #1a,b,c)

The three diagnostics presented in this section exploit the property of at-issue contents that they can be directly assented and dissented with.

Diagnostic #1a: Intuitions about assent/dissent

Diagnostic #1 for at-issueness given in (8) relies on the intuitions of a native speaker consultant about what is directly assented or dissented with (for applications of this diagnostic see e.g. Faller 2002 and Papafragou 2006). The assumption behind the diagnostic is that the consultant’s response identifies the at-issue content.

- (8) **Diagnostic #1a:** Create a discourse in which interlocutor A asserts the target utterance and in which addressee B responds to A’s utterance with a simple assent/dissent utterance. Ask the consultant what B is assenting/dissenting with.

The application of Diagnostic #1a is illustrated in (9), where interlocutor A utters the target utterance (7). Interlocutor B1 assents and interlocutor B2 dissents with (7).

- (9) A: Pe kuimba’e, **che-sy angiru**, o-monda nde-pirapire. (= (7))
that man B1sg-mother friend A3-steal B2sg-money
‘That man, my mother’s friend, stole your money.’

²I thank Marité Maldonado, Evert Ojeda Morán and Julio Rolon for working with me. The Guaraní examples in this paper were collected during yearly fieldwork trips to Paraguay in 2009-2011 and are given in the standardized orthography of the language used in Paraguay (Ministerio de Educación y Cultura 2004, Velázquez-Castillo 2004, 1421f.), except that all postpositions are attached to their host. Following this orthography, accents are not written for normally accented words (stress on the final syllable); stressed nasal syllables are marked with a tilde. The set A cross-reference prefixes (which mark transitive subjects and some intransitive ones) are *a(i)*– ‘A1sg’, *ja(i)*– ‘A1pl.incl’, *ro(i)*– ‘A1pl.excl’, *re(i)*– ‘A2sg’, *pe(i)*– ‘A2pl’, and *o(i)*– ‘A3’; the set B prefixes (which mark transitive objects, possessors and some intransitive subjects) are *che(r)*– ‘B1sg’, *ñande(r)*– ‘B1pl.incl’, *ore(r)*– ‘B1pl.excl’, *nde(r)*– ‘B2sg’, *pende(r)*– ‘B2pl’, and *i(ñ)*– */h*– ‘B3’. There are two portmanteaux prefixes *ro(i)*– ‘12sg’ and *po(i)*– ‘12pl’. The following glosses are used: CONTRAST = contrastive focus marker, DIM = diminutive, excl = exclusive, incl = inclusive, NEG = negation, NOM = nominalization, PART = particle, PERFECT = perfect aspect, pron.S = subject pronoun, QU = question, RC = relative clause, TERM = terminative aspect.

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B1: Heẽ, añete.	B2: Na-'añeté-i.
yes true	NEG-true-NEG
'Yes, true.'	'That's not true.'

When asked what B1 and B2 assent/dissent with, the three consultants consistently judged B1's utterance to convey that the man stole the money and B2's utterance to deny that the man stole the money. The consultants responses never mentioned e.g. the proposition conveyed by A's utterance that the man is the mother's friend. This is taken as evidence that the proposition that the man stole the addressee's money is the at-issue content of A's utterance and that other propositions conveyed by A's utterance are not at-issue.

Diagnostic #1b: Assent/dissent with positive continuation

Diagnostic #1b for (not-)at-issueness in (10) explores the acceptability of utterances where an assent/dissent is followed by an utterance that conveys a hypothesized at-issue or not-at-issue content. The assumption behind the diagnostic is that such utterances are acceptable if the continuation conveys the content of what is assented/dissented with (the at-issue content), and unacceptable otherwise. This diagnostic has been applied in e.g. Faller (2002), von Stechow 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.

The application of this diagnostic to the Guaraní utterance in (7) is illustrated in (11) and (12). In (11), B1's utterance consists of a simple assent utterance (*Heẽ, añete* 'Yes, that's true') followed by an utterance that conveys the hypothesized at-issue content, while B2's utterance consists of a simple dissent utterance (*Na'añetéi* 'That's not true') followed by an utterance that conveys the negation of the hypothesized at-issue content.

- (11) A: Pe kuimba'e, **che-sy** **angiru**, o-monda nde-pirapire. (= (7))
that man B1sg-mother friend A3-steal B2sg-money
'That man, my mother's friend, stole your money.'
- B1: Heẽ, añete, ha'e o-monda.
yes true pron.S.3 A3-steal
'Yes, true, he stole it.'
- B2: Na-'añeté-i, nd-o-mondá-i che-pirapire.
NEG-true-NEG NEG-A3-steal-NEG B1sg-money
'That's not true, he didn't steal my money.'

In (12), B3's response to A's utterance in (11) consists of a simple assent utterance followed by an utterance that conveys content hypothesized to be not at-issue in A's utterance, while

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B4's utterance consists of a simple dissent utterance followed by an utterance that conveys the negation of that hypothesized not-at-issue content.

- (12) B3: #Heẽ, añete, nde-sy angiru.
 yes true B2sg-mother friend
 'Yes, true, he's your mother's friend.'
- B4: #Na-'añeté-i, nda-ha'é-i nde-sy angiru.
 NEG-true-NEG NEG-pron.S.3-NEG B2sg-mother friend
 'That's not true, he's not your mother's friend.'

The three consultants consistently judged the utterances by B1 and B2 in (11) acceptable, suggesting that the proposition of A's utterance that the man stole the money is at-issue. Consultants' judgments differed on the utterances by B3 and B4 in (12): while two consultants judged them unacceptable, suggesting that the proposition of A's utterance that the man is the mother's friend is not at-issue, the third consultant did not. However, this consultant commented (helpfully) that the two utterances in each example "habla de diferentes cosas" (talk about different things), which may be taken to suggest that the continuations do not convey what is directly assented/dissented with, which would again support the hypothesis that the proposition that the man is the mother's friend is not at-issue.

Diagnostic #1c: Assent/dissent with adversative continuation

Diagnostic #1c for (not-)at-issueness is given in (13). It is similar to Diagnostic #1b except that the continuations to the direct assent/dissent utterances are adversative utterances (see e.g. Onea and Beaver 2011 for a variant of this diagnostic). The assumption is that utterances where adversative continuations convey the hypothesized at-issue content are contradictory, and hence unacceptable, while utterances where assent/dissent is followed by an adversative utterance that conveys hypothesized not-at-issue content are acceptable.

- (13) **Diagnostic #1c:** Create a discourse in which interlocutor A utters the target utterance and addressee B responds to A with a simple assent utterance followed by an adversative utterance that conveys the negation of either the hypothesized at-issue content or of a hypothesized not-at-issue content, or where B responds with a simple dissent utterance followed by an adversative utterance that conveys either the hypothesized at-issue content or the same hypothesized not-at-issue content. Ask the consultant about the acceptability of B's responses.

The application of this diagnostic to the Guaraní utterance in (7) is illustrated in (14) and (15). The adversative meaning is conveyed in Guaraní by the complex connective *há=katu* 'but'. The responses by B1 and B2 in (14) consist of simple assent and dissent utterances, respectively, followed by adversative utterances that convey the negation of the hypothesized at-issue content (B1) or the hypothesized not-at-issue content (B2). The response by B3 in (15) consist of a simple assent utterance followed by an adversative utterance that conveys the negation of a hypothesized not-at-issue content of A's utterance; the response by B4 consists of a simple dissent utterance followed by an adversative utterance that conveys the same hypothesized not-at-issue content.

- (14) A: Pe kuimba'e, **che-sy** **angiru**, o-monda nde-pirapire. (= (7))
 that man B1sg-mother friend A3-steal B2sg-money
 'That man, my mother's friend, stole your money.'
 B1: #Heẽ, añete, há=katu nd-o-mondá-i che-pirapire.
 yes true and=CONTRAST NEG-A3-steal-NEG B1sg-money
 (Yes, true, but he didn't steal my money.)
 B2: #Na-'añeté-i, há=katu o-monda che-pirapire.
 NEG-true-NEG and=CONTRAST A3-steal B1sg-money
 (That's not true, but he stole my money.)
- (15) B3: Heẽ, añete, há=katu nda-ha'é-i nde-sy angiru.
 yes true and=CONTRAST NEG-pron.S.3-NEG B2sg-mother friend
 'Yes, true, but he's not your mother's friend.'
 B4: Na-'añeté-i, há=katu nde-sy angiru.
 NEG-true-NEG and=CONTRAST B2sg-mother friend
 'That's not true, but he's your mother's friend.'

The three consultants judged the utterances by B1 and B2 unacceptable, which supports the hypothesis that the proposition conveyed by A's utterance that the man stole the money is at-issue. They all judged B4's utterance acceptable and two consultants judged the utterance by B3 acceptable, which suggests that the proposition conveyed by A's utterance that the man is the mother's friend is not at-issue. The one consultant who judged B3's utterance unacceptable commented that A would know better than B3 who A's mother's friends are (which might suggest that this consultant would judge a variant of B3's utterance acceptable if B3 could be assumed to be (more) knowledgeable about the issue).

3.2 At-issue content addresses the question under discussion (diagnostic #2)

Diagnostic #2 for (not-)at-issueness in (16) relies on the property of at-issue content that it answers the QUD. See Lee (2011) for an application of this diagnostic with Korean evidential utterances. The assumption behind the diagnostic is that answering a question $?x.m$ (where the vector \vec{x} is of length zero with polar questions) with an answer whose at-issue content entails $\exists \vec{x}.m(\vec{x})$ is acceptable while answering $?x.m$ with an answer where only the not-at-issue content entails $\exists \vec{x}.m(\vec{x})$ is not.

- (16) **Diagnostic #2:** Create a discourse in which speaker A utters a question with meaning $?x.m$ 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.

In (17), this diagnostic is applied to the proposition m of (7) that the man indicated stole the money. Interlocutor A wonders who stole A's money ($?x.stole'(x,A's\ money')$). B1's utterance is the target utterance (7), which is hypothesized to convey the proposition that the man indicated stole the money (which entails $\exists x.stole'(x,A's\ money')$) as at-issue

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content. In B2's utterance in (17), on the other hand, the same proposition is contributed by a non-restrictive relative clause, and is therefore hypothesized to be not-at-issue content.

- (17) A: Máva-pa o-monda che-pirapire?
who-QU A3-steal B1sg-money
'Who stole my money?'
- B1: Pe kuimba'e, che-sy angiru, o-monda nde-pirapire. (= (7))
that man B1sg-mother friend A3-steal B2sg-money
'That man, my mother's friend, stole your money.'
- B2: Pe kuimba'e, o-mondá-va nde-pirapire, ha'e che-sy angiru.
that man A3-steal-RC B2sg-money pron.S.3 B1sg-mother friend
'That man, who stole your money, is my mother's friend.'

In (18), Diagnostic #2 is applied to the proposition *n* that the person indicated by the speaker is the speaker's mother's friend, which is hypothesized to be not-at-issue content in B1's utterance (which is the target utterance (7)), but at-issue content in B2's utterance.

- (18) A: Máva-pa nde-sy angiru?
who-QU B2sg-mother friend
'Who is your mother's friend?'
- B1: As in (17)
- B2: As in (17)

Consultants' judgments on such examples were mixed. One consultant judged B1 acceptable in (17) and unacceptable in (18), and judged B2 unacceptable in (17) but acceptable in (18). These judgments suggest that the proposition *m* of (7) that the man stole the money is at-issue and the proposition *n* that the man is the mother's friend is not at-issue. The other two consultants, however, merely expressed a preference for B1 over B2 in (17) and for B2 over B1 in (18). Whether a mere preference suffices to consider a particular content (not-)at-issue content is a question for future research.

3.3 At-issue content determines the relevant set of alternatives (diagnostics #3a,b)

The two diagnostics discussed in this section exploit the fact that at-issue content in an interrogative utterance determines the relevant set of alternatives.

Diagnostic #3a: Positive/negative answer with positive continuation

Diagnostic #3a in (19) explores the acceptability of following up a positive or negative answer to a polar question with an utterance that conveys the (negation of) hypothesized at-issue or not-at-issue contents (see e.g. Amaral et al. 2007 for an application of this diagnostic). The assumption behind the diagnostic is that utterances where the positive/negative answer is followed by an utterance that conveys the (negation of the) at-issue content of the question are acceptable, while positive/negative answers followed by an utterance that conveys (the negation of) a not-at-issue content of the question are not acceptable.

- (19) **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.

The application of this diagnostic to the utterance in (7) is illustrated in (20) and (21). A's question in (20) is a polar question formed from (7). B1's utterance consists of a simple affirmation (*heẽ* 'yes') and an utterance that conveys the hypothesized at-issue content of (7), while B2's utterance consists of a simple affirmation followed by an utterance that conveys a hypothesized not-at-issue content. The answer utterances by B3 and B4 in (21) consist of a simple negative reply (*nahániri* 'no'), followed by utterances that convey the negation of the hypothesized at-issue and not-at-issue contents, respectively.

- (20) A: O-mondá-pa che-pirapire pe kuimba'e, nde-sy angiru?
 A3-steal-QU B1sg-money that man B2sg-mother friend
 'Did that man, your mother's friend, steal my money?'
- B1: Heẽ, o-monda.
 yes A3-steal
 'Yes, he stole it.'
- B2: #Heẽ, che-sy angiru.
 yes B1sg-mother friend
 'Yes, he's my mother's friend.'
- (21) B3: Nahániri, nd-o-mondá-i.
 no NEG-A3-steal-NEG
 'No, he didn't steal it.'
- B4: #Nahániri, nda-ha'é-i che-sy angiru.
 no NEG-pron.S.3-NEG B1sg-mother friend
 'No, he's not my mother's friend.'

The three consultants consistently judged acceptable the utterances by B1 and B3 and unacceptable those by B2 and B4. These judgments support the hypothesis that the proposition conveyed by (7) that the man indicated by the speaker stole the money is at-issue content while the proposition that the man is the speaker's mother's friend is not-at-issue content.

Diagnostic #3b: Positive/negative answer with adversative continuation

Diagnostic #3b is similar to Diagnostic #3a except that the continuations to the positive/negative answers to the polar question are followed by adversative utterances (cf. Diagnostic #2c). The assumption is that utterances where a positive/negative answer is followed by an adversative utterance that conveys content hypothesized to be not-at-issue in the question are acceptable, while utterances where the adversative continuations convey content hypothesized to be at-issue in the question are contradictory and, hence, not acceptable. See e.g. Amaral et al. (2007) for an application of this diagnostic.

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- (22) **Diagnostic #3b:** Let *S* be a sentence that gives rise to hypothesized at-issue content *m* and not-at-issue content *n*. Form a polar question *Q* from *S*. Create a discourse where interlocutor A utters *Q* and addressee B responds positively (negatively), followed by an adversative utterance of a simple sentence that conveys $\neg m$ or $\neg n$ (*m* or *n*) as at-issue content. Ask the consultant about acceptability of the answers.

The application of this diagnostic to the Guaraní utterance in (7) is illustrated in (23) and (24). A's question in (23) is identical to A's question in (20). The answer utterances by B1 and B2 in (23) consist of positive answers followed by adversative utterances that convey the negation of hypothesized not-at-issue and at-issue contents, respectively. The answer utterances by B3 and B4 in (24) consist of negative answers followed by adversative utterances that convey hypothesized not-at-issue and at-issue contents, respectively.

- (23) A: O-mondá-pa che-pirapire pe kuimba'e, nde-sy angiru?
A3-steal-QU B1sg-money that man B2sg-mother friend
'Did that man, your mother's friend, steal my money?'
- B1: Heẽ, há=katu nda-ha'é-i che-sy angiru.
yes and=CONTRAST NEG-pron.S.3-NEG B1sg-mother friend
'Yes, but he's not my mother's friend.'
- B2: #Heẽ, há=katu nd-o-mondá-i.
yes and=CONTRAST NEG-A3-steal-NEG
'Yes, but he didn't steal it.'
- (24) B3: Nahániri, há=katu che-sy angiru.
no and=CONTRAST B1sg-mother friend
'No, but he is my mother's friend.'
- B4: #Nahániri, há=katu o-monda.
no and=CONTRAST A3-steal
'No, but he stole it.'

The three consultants consistently judged the utterances by B1 acceptable and those by B2 and B4 unacceptable. Two consultants considered B3 acceptable. These judgments support the hypothesis that the content contributed by the appositive in A's utterance is not at-issue while the proposition that the man stole the money is at-issue. The one consultant who considered B3 unacceptable commented that it is unacceptable because the adversative utterance is superfluous since A already said that that man is B3's mother's friend.

3.4 Summary and conclusions

This section presented six diagnostics (in three sets) for (not-)at-issueness that can be applied cross-linguistically with linguistically untrained native speaker consultants and which have already been used for this purpose in the literature. The results of applying the diagnostics to the Guaraní utterance in (7) support both the hypothesis that the content of the appositive is not-at-issue and the hypothesis that the proposition that the man indicated by

the speaker stole the addressee's money is at-issue. The judgments of the three consultants converged on many of the judgment tasks; where they did not, their judgments at least went in the right direction (but it is difficult to quantify data from only three consultants). If the assumptions behind some of the diagnostics were reformulated to require only a preference for one utterance over another, the picture would be clearer, but this matter requires further research.

4. The (not-)at-issueness of other projective contents in Paraguayan Guaraní

To explore the hypothesis that projective contents in Guaraní are not-at-issue contents (see Simons et al. 2010 for English), the (not-)at-issue diagnostics were applied to projective contents besides appositives. Some additional triggers of projective content are illustrated in (25) to (29). The content of the complement of *(oi)kuaa* 'know' is projective; in (25), the proposition that the addressee came (the 'complement' implication). One of the implications contributed by a demonstrative noun phrase is that the descriptive content is true of the entity indicated; in (26), the relevant 'descriptive content' implication is that the entity indicated is a dog. In (27), the adverb *aimete* 'almost' conveys that the brother did not fall onto the spines of the coconut plant (the 'polar' implication) and the possessive noun phrase *che-kyvy* 'my brother' conveys that the speaker has a brother (the 'possession' implication). The suffix *-nte* 'only' in (28) conveys that the head of the monkey stuck out of the hole (the 'prejacent' implication) and the change of state construction *n(d)(a)–...–vé-i-ma* 'not anymore' in (29) contributes the 'pre-state' implication that Juan used to smoke. Empirical evidence for these implications is given in Tonhauser et al. (ms).

- (25) Context: A family receives a young man who has returned to their town after many years away.

Roi-**kuaa** niko re-ju-ha-gue.
A1pl.excl-know PART A2sg-come-NOM-NOM.TERM

'We knew that you had come.' (from a theater play)

- (26) Context: A cricket is interrupting a man's picnic. The man called one of his dogs

ha **pe jagua** o-ñepyrũ tuicha o-ñaro.
and that dog A3-begin big A3-bark

'and that dog began barking loudly.'

- (27) Context: As children, Maria and her brother once had to cross a field with two bulls on it.

Ha kyhyje-pó-pe ro-hasa ha **che-kyvy aimete** ho'a mbokaja
and scared-hand-in A1pl.excl-pass and B1sg-brother almost A3.fall coco
ratĩ-'ári.
thorn-on

'And we passed fearfully and my brother almost fell into the spines of a coconut plant.'

Diagnosing (not-)at-issue content

(28) Context: A monkey looked for a place to stay dry in the rain.

O-ho oi-ko ha'e yvyra kuá-pe, iñ-akã-ngue-mí-nte
 A3-go A3-enter pron.S.3 tree hole-in B3-head-NOM.TERM-DIM-only
 o-nohẽ o-kẽ-me.
 A3-come.out door-in

‘He entered into the hole of a tree, only his little head stuck out.’ (Acosta Alcaraz and Zarratea 2003, 23)

(29) Juan **nd-o-pita-vé-i-ma**.

Juan NEG-A3-smoke-more-NEG-PERFECT
 ‘Juan does not smoke anymore.’

The applications of the (not-)at-issue diagnostics to these contents cannot be illustrated here for reasons of space but are provided in an online appendix to this paper (<http://www.ling.osu.edu/~judith/nai-guarani.pdf>) together with a discussion of the suitability of particular diagnostics for particular (types of) projective content. Table 0.1 summarizes the results of applying the diagnostics to the aforementioned contents. A checkmark ‘✓’ in a cell in Table 0.1 indicates that the diagnostic identifies the projective content as not-at-issue. A checkmark in parentheses ‘(✓)’ indicates that the diagnostic suggests that the projective content is not-at-issue (e.g. consultants indicated preferences in the expected direction). Finally, ‘x’ indicates that the diagnostic did not distinguish the hypothesized at-issue content from the hypothesized not-at-issue content.

Trigger/content	(Not-)at-issueneess diagnostics					
	#1a	#1b	#1c	#2	#3a	#3b
Appositives	✓	✓	✓	(✓)	✓	✓
(oi)kuaa ‘know’/complement impl.	✓	(✓)	x	x	✓	x
Demonstrative NP/descriptive content impl.	✓	✓	(✓)	✓	✓	✓
aimete ‘almost’/polar impl.	x	(✓)	x	(✓)	✓	x
Possessive NP/possession impl.	✓	x	x	✓	✓	(✓)
-nte ‘only’/prejacent implication	x	✓	x	✓	x	x
nd(a)-...-vé-i-ma ‘not anymore’/pre-state impl.	✓	(✓)	x	(✓)	✓	x

Table 0.1: Not-at-issueneess of projective contents in Paraguayan Guaraní

The results summarized in Table 0.1 provide some evidence that contents contributed by triggers of projective content can be not at-issue. While not all diagnostics are conclusive for all projective contents, i.e. not every cell in Table 0.1 has a checkmark or even a checkmark in parentheses in it, the trend for all of the contents to which the diagnostics have been applied so far suggests that such contents can be not at-issue. A larger, quantitative study with more than three native speakers combined with a discussion of which diagnostics can be expected to be suitable for which kinds of projective content might provide clearer results.

The results presented in Table 0.1 also suggest that all of the diagnostics have their virtues, i.e. they are all useful to diagnose (not-)at-issueness with at least one kind of content, and none of the diagnostics fail to deliver results for all trigger/content pairs. Diagnostic #1, for example, identified the not-at-issue status of appositives (as illustrated above) or the descriptive content implication of demonstrative noun phrases. It was not suitable, however, to explore the status of the polar implication of *aimete* ‘almost’, as illustrated in (30). The target utterance that contains *aimete* ‘almost’ is uttered by A. The assent/dissent utterances consultants were asked to judge are the utterances by B1 and B2, respectively.

(30) Context: Malena fell at home.

A: Maléna **aimete** o-pe hetyma.
Malena almost A3-break B3.leg
‘Malena almost broke her leg.’

B1: Heẽ, añete.
yes true
‘Yes, true.’

B2: Na-’añeté-i.
NEG-true-NEG
‘That’s not true.’

When asked what the utterances by B1 and B2 assent or dissent with, respectively, consultants consistently said that B1 affirms that Malena almost broke her leg and that B2 denies that she almost broke her leg. These responses thus do not distinguish between the hypothesized at-issue content of A’s utterance (that Malena came close to breaking her leg) and the hypothesized not-at-issue content of A’s utterance (that she didn’t break her leg).

5. Conclusions

This paper presented six diagnostics (in three classes) for (not-)at-issueness that can be applied with linguistically untrained native speaker consultants. The application of the diagnostics was illustrated for a Guaraní utterance that contains an appositive, and it was shown that the diagnostics support the hypothesis that the content of the appositive is not-at-issue in Guaraní, thereby replicating e.g. Potts’ (2005) results for English appositives.

Having a suite of diagnostics for (not-)at-issueness available allows one to provide several pieces of evidence that a particular content is (not-)at-issue. Having several diagnostics at one’s disposal is also of advantage if a particular diagnostic cannot be applied to a particular content, as illustrated with (30) above.

The results of applying the diagnostics for (not-)at-issueness to a range of Guaraní projective contents constitute the first step towards providing cross-linguistic support for the hypothesis, motivated on the basis English data in Simons et al. (2010), that projective contents are not-at-issue contents. As discussed in section 1, the next step is to show that if a content projects in a particular context, it is indeed not-at-issue in that context. Such evidence may be provided by minimal pairs like those in (31):

Diagnosing (not-)at-issue content

- (31) a. A1: Who knows that Harry is dating Sally?
B1: Bill doesn't know that he is.
- b. Simons et al. (2010, 321)
A2: Is Harry dating Sally?
B1: Bill doesn't know that he is.

The content of the complement of *know* in B1's utterance in (31a) projects, i.e. is understood to be a commitment of B1. At the same time, this content is not at-issue in the context of A1's question: what is at issue is who knows that Harry is dating Sally. In (31b), on the other hand, the content of the complement of *know* is at-issue in the context of A2's question. And, as discussed in Simons et al. (2010), we also observe that B1's answer in the context of A2's question (and with an intonation marking uncertainty) can be understood in such a way that the complement of *know*, that Harry is dating Sally, is not a commitment of the speaker, i.e. the complement of *know* does not project.

Minimal pairs like (31) thus provide evidence for a relationship between a content projecting in a particular context and the not-at-issue status of that content in that context. Eliciting such minimal pairs in Guaraní and thereby providing evidence for the hypothesis advanced by Simons et al. (2010) is a topic for future research.

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Department of Linguistics
1712 Neil Ave, 222 Oxley Hall
The Ohio State University
Columbus, OH 43210

judith@ling.osu.edu