Not Just Projecting

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1 A smorgasbord of meanings

We all know by now that the totality of what is conveyed by a linguistic utterance includes multiple types or categories of content. The categories are distinguished in two main ways: how they arise (e.g. due to linguistic convention or due to norm-based inference); and how particular contents of that category behave (e.g. whether the content can embed under operators). The principal types of content that we recognize have been handed down to us by notable figures: from Grice’s 1967 William James Lectures (Grice 1989), we inherited the categories of conventional and conversational implicature, the latter sub-divided into generalized and particularized. From Strawson (preceded by Frege) we inherited the category of presupposition, elaborated for example by Karttunen and Stalnaker. All of these are taken to contrast with each other and with the linguistically most basic category of meaning which, for the case of declarative sentences, we can categorize as entailments.

For the more general case, we use the term proffered content. These are the major sub-divisions recognized within the dominant neo-Gricean paradigm. It is worth mentioning some others, that may cross-cut these. There are aspects of content arising from what Searle (1975) and Morgan (1978) call conventions of use. Speech act force may belong to this category; so perhaps might generalized conversational implicatures. Levinson (2000) develops a strong version of this view, taking GCIs to be theoretically distinct from PCIs. Further within the category of implicature, Thomason (1990) distinguishes between background and foreground implicatures, echoing the Relevance Theorists’ distinction between implicated assumptions and implicated conclusions. Background implicatures have a substantial overlap with what are otherwise labeled presuppositions (see Simons 2004). Then we have Bach’s (1994) category of conversational implicature, perhaps deriv-
able via Gricean mechanisms but (in Bach’s view) distinct from implicature of any stripe. Relevance Theory and the theory developed by Francois Recanati (Recanati 2006) make comparable distinctions. Another subcategorization posited in Relevance Theory is the distinction between *procedural* and *conceptual meaning*, with procedural meaning encompassing much of what is categorized in other frameworks as conventional implicature, but also at least some presuppositions, as well as other phenomena. And to add to these distinctions we have the development of the notion of Conventional Implicature in Potts (2005) and related work, and work by Horn on assertorically inert meaning (Horn 2002).

This brief overview may not exhaust the types of meaning that have been proposed, but is a reminder of the smorgasbord of theoretical options from which we can choose.

## 2 Towards a taxonomy

If a taxonomy is doing the work a taxonomy should, then it should be fairly simple to take a particular element of meaning and say to which category it belongs. Alas, no. It is becoming increasingly clear that we are rather far from this ideal. Consider, for example, the range of treatments of the content of the prejacent of *only*. As surveyed in Roberts (to appear) and Beaver and Clark (2008), this content has been characterized by different researchers as a presupposition, as a conversational implicature, and as an entailment. Roberts ultimately concludes that it is none of the above, while Beaver and Clark also end up with a non-standard result, concluding that the root of the confusing phenomena involving *only* is not a standard presupposition, but a presupposed question. For current purposes, we do not wish to argue for a particular analysis of the prejacent of *only* but rather wish to draw a tangential moral: what the case makes clear is that the categories at our disposal do not allow for straightforward categorization in many cases.

The difficulty in using the standard taxonomy—or other related ones that have been proposed—stems from two inter-related weaknesses. On the one hand, none of the categories in the taxonomy is firmly rooted in a wide range of specific empirical observations. On the other hand, although a very large number of diverse expressions and expression types have been identified as triggers of some kind or other of non-proffered meaning, we have rather partial, unsystematic knowledge of the empirical properties of the meaning-contributions which these expression make.

Of course, there is something of an empirical foundation for the taxonomy. Cancelability, for example, is routinely used as a diagnostic, under the following rather standard (but not universal) assumptions: Proffered content is non-cancelable;
implicatures, in contrast, are cancelable; and presuppositions can be accommodated or locally satisfied, but (on certain views) not canceled.

But this merely scratches the surface. There are multiple ways of preventing inferences that would otherwise be drawn — as a first pass, see Horn’s (1972) distinction between cancelation and suspension. Different cases behave differently with respect to these different inference-blocking strategies. Moreover, none of the generalizations just made is robust. Some entailments, under certain circumstances, can be canceled, to preserve consistency of the discourse. Some notions of cancelation cannot coherently be applied to particularized implicature, and generalized implicature has some resistance to cancelation. In the case of presupposition, the picture is widely acknowledged to be complex. The distinction between cancelation and local satisfaction is a theoretical, not empirical, one. Existing investigations of the potential for cancelability or local accommodability of presuppositions have found significant variation depending on the type of cancelation and on the particular trigger, as we discuss further below. Even with a single class of triggers, such as the factives, different items behave differently.

Projection behavior—the ability of an element of meaning to fall outside of the semantic scope of operators (such as negation and modals) within whose syntactic scope its trigger occurs—is another venerable property of certain cases of non-proferred meaning. Projection is standardly considered a robust diagnostic of presupposition. Indeed, the fact that presuppositions are shared by simple affirmative sentences and their negations was perhaps the first empirical observation made about presupposition, in Frege’s Sense and Reference; early (semantic) accounts of presupposition defined the notion in these terms, as entailments shared by affirmative/negative pairs.

But for some time, it has been noted that elements of meaning lacking other standard characteristics of presupposition can also project. Chierchia and McConnell-Ginet (1990) observe that the content of non-restrictive relative clauses projects, but hesitate to call this content presuppositional because it does not seem to be subject to any requirement to be old information for the addressee, and Beaver (2001) comes to similar conclusions regarding parentheticals. Several authors (Levinson 1983; Kadmon 2001; Simons 2004) have observed that certain kinds of conversational implicature can project (with each author drawing different conclusions from this observation), and Potts (2005) takes robust projection behavior to be a core property of the components of meaning he classes as conventional implicatures (thus including inferences triggered by parentheticals, expressives, and honorifics). Consider also the approximatives, discussed by Horn (2002). (1), with approximative almost, has the polar implication that Gore didn’t win the election:

(1) Gore almost won the election.
Proximal implication: Gore came close to winning the election.
Polar implication: Gore didn’t win the election
NPIs: *Gore almost got any votes.

But this implication can clearly be new information, it fails to license NPIs, and it can be suspended, and it displays a number of other features atypical of proffered content. Negating the VP in (1) with didn’t before the adverbial seems to yield only a corrective sense. But the polar implications of approximatives do project, as we see in (2), and they may be satisfied merely locally, as in (3), where the implication that Bush lost is satisfied in the local context consisting of Marcie's beliefs:

(2) Did Gore almost win?
    implication: Gore didn’t win.

(3) Marcie mistakenly believes that Bush lost, though she thinks he almost won.

These observations raise questions about how to delineate the category of presupposition: should we call everything that projects a presupposition, ignoring other distinctions? Or should we ignore projection, and rely on other properties as diagnostics of presupposition? And if so, which?

This, though, is a false dilemma, stemming from the assumption that the standard categories of meaning are the only ones possible. There is no reason either to try to squeeze all of our phenomena into these traditional categories or to search for characterizations of the categories that allow them to accommodate, even if uncomfortably, somewhat disparate seeming phenomena.

How, then, to proceed? We hypothesize that projection is indeed an important distinguishing feature of non-proffered content, and that this property picks out a large and theoretically interesting class of meaning-types. But this is a heterogeneous class, within which multiple sub-classes can be identified. To identify the substructure of the class of projective meanings, what is needed is much more systematic knowledge and understanding of a range of empirical properties of particular instances of this type of meaning. Empirical investigation should not be restricted to projective meaning in English, but should be extended cross linguistically. To date, work on categories of meaning has been based almost exclusively on English, so we have very little idea of whether the same distinctions apply cross-linguistically, and whether the contents of what appear to be translational equivalents across language will always display the same behaviors. In order to facilitate the kind of systematic investigations we envisage, and building on much other recent work, we have begun the development of a battery of diagnostic tests, each aimed at a particular property of interest. In section 3, below, we try to give an idea of the sort of diagnostics we have in mind. A summary of diagnostic tests is given.
in the Addendum. In section 4, we discuss the problems involved in carrying out research of this kind in unfamiliar languages. This is a daunting task, but, we think, crucial for furthering our understanding. The difficulties involved make clear the importance of understanding the workings of each test to allow for flexibility and ingenuity in applying them in a wide range of languages and research situations.

3 English diagnostics

In linguistic work on presupposition since the 1970s, it often seems to be assumed that the suite of tests brought to bear on determining whether a given word or construction is a presupposition trigger yield a yes/no answer, cleaving inferences cleanly into those which are presuppositional, and those which are not. In that literature, these tests mainly focus either on intuitions of contextual (in)felicity or on evidence for projection in the classical contexts (under negation, in an interrogative, in the antecedent of a conditional or under the scope of a modal), the latter called by Chierchia and McConnell-Ginet (1990) the “family of sentences tests” for presupposition. If the implication associated with a purported trigger displays projection behavior—seeming to commit the speaker to the truth of the purported presupposition—and yields a sense of infelicity in contexts where the implication was known to be false or not already known to be true, then the implication is labelled a presupposition and the target word or construction, a presupposition trigger. But there has always been some question about whether the class of expressions which passes these basic tests is, in fact, homogeneous. Early critiques of the view that presuppositional phenomena are homogeneous appear in Bör and Lycan (1976) and Karttunen and Peters (1977). This view has gained traction as additional tests have been proposed and applied, and it has become evident that different tests for presupposition yield different results for different purported triggers. In this section, we review some prior work which shows how investigation of specific properties of projective meanings can lead to new insights as to their appropriate classification.

As we have noted, projection is the oldest diagnostic of presupposition. But projection itself is not a simple yes/no property. Zeevat (1992:396) points out that two different theories of presupposition projection, the satisfaction-based theory of Heim (1983) and the anaphoric/DRT-based theory of van der Sandt (1992) and Geurts (1999), make different predictions about projection from under Karttunen’s (1973) holes. Heim’s theory predicts that even when the presupposition is satisfied globally (i.e. projects to yield the assumption that it is true in, say, the common ground) it must also be satisfied locally, in the local context of interpretation under the scope of the hole functor. Van der Sandt’s theory, on the other hand, leaves open
the possibility that an embedded presupposition might be satisfied globally (in his theory, find an antecedent in the top-most DRT) but not satisfied locally. Zeevat then argues that there are in fact presupposition triggers that behave as predicted by Heim’s theory, while other triggers behave as predicted by van der Sandt. Too is an example of the latter sort, the type which Zeevat dubs anaphoric. He illustrates their behavior with examples similar to the following:1

(4)  
  a. Bill called Mary a Republican. And it is clear from Mary’s diary that John insulted her, too.  
  b. It is clear from Mary’s diary that she believed that Bill insulted her.

It seems evident that the speaker of (4a) uses too to invite the inference that in calling Mary a Republican Bill insulted her.2 But although the trigger too occurs in an embedded context relating implicitly to the content of Mary’s beliefs presumably, these beliefs are what is recorded in Mary’s diary – this use of the trigger does not commit the speaker to presupposing (4b). In other words, although too occurs in a clause which (implicitly) describes Mary’s beliefs, the inference it triggers need not be understood as being satisfied by that belief context.

Zeevat contrasts this with the behavior of the factive realize, in the following:

(5)  
  a. Bill called Mary a Republican. And it is clear from Mary’s diary that she realized that he had insulted her.  
  b. It is clear from Mary’s diary that she believed that Bill had insulted her.

Here, realize triggers the presupposition of the truth of its complement. As in (4), the trigger occurs in a clause which describes Mary’s beliefs. In this case, though, it does seem that (5a) commits the speaker to presupposing (5b) as well, whether or not we take the speaker himself to believe that Bill’s calling Mary a Republican constituted an insult. The difference between these cases suggests that though both too and realize give rise to non-asserted content capable of projection, only realize requires local satisfaction of the triggered implication. As illustrated in (4)

1We have modified examples (2) and (3) from Zeevat’s originals and from the discussion in Beaver (2001:131–2), adding she believed that to (b) in each case. The reason is that since being clear from a diary is actually a doxastic filter, not a factive hole, what’s required to show local satisfaction of the trigger in (a) is only that Mary was committed to the truth of the proposition in question. Adding this expression clarifies what’s at issue and yields more robust judgments than the originals.

2Note that in this case the obligatory global satisfaction of the presupposition of too results from the fact that the only sufficiently salient proposition which could satisfy the presupposition is itself global. As we’ll note below, too is very resistant to accommodation, so usually requires such explicit antecedents, as noted by Kripke (ms). However, the presuppositions of too can be merely locally satisfied, as in If John called Mary a Republican, SHE must have insulted HIM, too.
and (5), the family of sentences tests for projection have been significantly extended and refined in work since Karttunen’s (1974). (See the list of tests in the Addendum, including the classical set (“the nuclear family”, #1) and various extensions (#2 and #3).) Besides using the nuclear family to test for the possibility of global projection, detailed work has been conducted on the behavior of conventionally triggered presuppositions under the scope of Karttunen’s filters, e.g. in the consequent of a conditional, in a second conjunct, or in the complement of believe or another attitude predicate. Heim (1983, 1992) and Roberts (1996) argue that conventionally-triggered filtered presuppositions are not simply canceled, but must be at least locally satisfied. In the extended family of tests, the filtering “cousins” are all tests for such local satisfaction under filters. Applying these tests yields several classes of projective meanings: Those which, like the factive presuppositions of realize, must be locally satisfied; those, like Potts’ Conventional Implicatures, which must be globally satisfied; and those which might be globally satisfied without local satisfaction, like too above.

In addition to refinements of the basic projection test, the literature over the last several decades also offers proposals for different sorts of tests for presuppositional or projective meaning. One class of tests, including the so-called Hey! Wait a minute! test of Shannon (1976) (see test #4 in the Addendum and relevant discussion), pertain to what we might call the at-issueness of an implication, the extent to which it seems to be what the discourse is principally about at the time of utterance. Another class of tests pertains to the stability of projective meanings, e.g. whether they can be canceled or suspended and the ease with which they can be accommodated. As might be expected, cancelability distinguishes those presuppositions which are conventionally triggered, and hence tend to arise in any context, from those which might be merely conversationally triggered, but tend to project (as discussed by Levinson (1983:223–4) and Kadmon (2001:213ff), among others).

But accommodation and suspension reveal other distinctions. It seems, for example, that the presuppositions triggered by factive verbs and some definite descriptions can be readily accommodated, while the antecedents of anaphoric triggers like pronouns and too are much more difficult to accommodate, if they can be accommodated at all. Indeed, accommodability is clearly not a binary feature, but rather a scale, with different classes of items, and different items within a class, showing this property to different degrees. The same seems to be true of suspendability. Abusch (2002), using a test she calls conditional weakening, proposes that there are two classes of pragmatic presupposition triggers, which she calls hard and soft triggers, the latter (including those associated with factives and aspectual verbs like stop) much easier to suspend than the former (including too, even, and it-cLEFTs). Other tests for suspension have been proposed by Horn (1972) and Beaver
and Zeevat (2007). The Addendum provides example applications of all these tests. As discussed in Zeevat (1994) and in Beaver and Zeevat (2007), collectively these tests should be expected to yield not just two classes of expressions, those asserted and those presupposed, but a variety of classes and sub-classes. When we consider their application to the wider range of projective meanings, from the novel but assertorically inert meanings of Horn (2002), to Potts’s (2005) Conventional Implicatures, these tests appear to be capable of distinguishing natural classes of projective meaning triggers with a range of properties.

4 Fieldwork on Projective meanings: a case study

Very little is known about projective meanings in languages other than English. Something we do know is that not all languages have the exact same set of projective meaning triggers, simply by virtue of the fact that not all languages have e.g. definite determiners or tenses. But what about the questions of whether all languages have projective meaning triggers at all, whether any two expressions with the same (or a comparable) assertoric meaning behave alike with respect to other kinds of meanings, and whether a theoretical account of projective meanings in one language will be applicable cross-linguistically?

On the basis of an investigation of St’át’imctets (Salish) expressions that are translations of English projective meaning triggers, Matthewson (2006) argues that the answer to these questions is “no”: the St’át’imctets expressions differ in their projective properties from the English expressions, and, hence, she argues, distinct theoretical accounts are needed of presuppositionality in English and in St’át’imctets. This claim, however, is based on examination of a relatively small number of candidate presupposition triggers, and is developed using only the Hey! Wait a minute! test, which, as discussed above, does not necessarily test for presuppositions but rather pertains to the at-issueness of an implication. Our hope is that we can encourage further development of work like Matthewson’s, helping fieldworkers develop a broad battery of tests, and making it easier to perform a wide-ranging and theoretically illuminating study of the properties of the elements in question.

To conduct research on projective meanings in languages other than English, strategies for identifying possible projective meaning triggers are needed, as well as batteries of tests that are theoretically understood well enough in order for a researcher to adapt them to a particular language. As we illustrate with Paraguayan Guarani data below, even seemingly straightforward tests such as the Family of Sentences test can present challenges when applied in languages with a different morphosyntactic makeup than English or in languages whose grammars are not
as well described as those of English. Fieldworking linguists face the additional challenge that the language consultants they work with are most often not trained in linguistics. Hence the tests must be formulated in such a way that they rely primarily on easily accessible judgments such as truth or felicity, and not on introspection about abstract semantic and pragmatic issues or categories — see the methodological discussion in Matthewson (2004).

To identify projective meaning triggers in any language, it is obviously impractical to go through every word in a dictionary applying the tests. One may in one’s work on some other topic come, by chance, across expressions that exhibit contextual restrictions, and begin to probe those for projective meaning properties. This strategy is not entirely effective, however, if one’s goal is to work on projective meaning per se. A more suitable strategy seems to be to work with translations of sentences of a language (such as English) that contain projective meaning triggers, and identify the expressions that seem to translate the triggers, with the goal of testing their projective meaning properties. Since this approach is biased towards the semantics/pragmatics of the original language, it has several pitfalls:

1. Translations might be limited to the proffered meaning of the original expression, and not preserve projective meanings. One can therefore not assume that all translations of a trigger will be triggers in the target language.

2. By approaching the target language through another language, one might miss out on identifying projective meaning triggers that are not used to translate projective meaning triggers of the original language.

While the tests described in section 3 probe semantic/pragmatic properties of projective meaning triggers, their application necessitates the use of expressions with a particular morphosyntactic structure. Since languages differ greatly in their morphosyntactic makeup, it may not be possible to apply a particular projective meaning test in a language other than English by simply re-creating the morphosyntactic structure of an English example in the target language. Rather, research on projective meanings in languages other than English needs to proceed from a fundamental understanding of the semantic/pragmatic properties probed by the test, so that its application can proceed using language-appropriate morphosyntactic structures. We illustrate some of the challenges of this enterprise here using data from Paraguayan Guaraní (henceforth Guaraní), based on recent fieldwork.

3Paraguayan Guaraní is spoken by about four million people in Paraguay and surrounding countries. See e.g. Gregores and Suárez (1967) and Velázquez-Castillo (2004) for basic descriptions of the phonetics, phonology, morphology and syntax of the language. The following glosses are used in the Guaraní examples: A3 = third person set A marker, B3 = third person set B marker, NEG = negation, PERF = perfect aspect, QU = question.
by Tonhauser. The potential projective meaning trigger we explore is *avei*, which is translated by English *too* in positive sentences:4

(6) Juan o-pita. Maléna o-pita *avei*.  
    Juan A3-smoke Malena A3-smoke too  
    ‘Juan smokes. Malena smokes, too.’

Although Guaraní is reasonably well described (see references in footnote 4), even an application of the *Family of Sentences* test is not trivial. Take the part of the test that calls for embedding the potential trigger under the scope of sentential negation. In Guaraní, sentential negation is generally said to be realized with the circumfix *n(d)(a)–...–(r)i*, as illustrated in (7):

(7) Context: Did Malena buy these cigarettes?  
       yes A3-smoke  
       ‘Yes. She smokes.’  
       no NEG-A3-smoke-NEG  
       ‘No. She does not smoke.’

In (7b), the verb *o-pita* ‘A3-smoke’ occurs (morphosyntactically) inside the negation circumfix and the meaning of the verb is (semantically) under the scope of negation. But in (8) only some expressions occur (morphosyntactically) inside the negation circumfix (such as *–ve* ‘more’ but not *–ma* ‘–PERF or Maléna’), which gives rise to the question of which of these expressions are in the scope of negation and which are not.

(8) Maléna nd-o-pita-vé-i-ma.  
    Malena NEG-A3-smoke-more-NEG-PERF  
    ‘Malena does not smoke anymore.’

4When *avei* occurs with negated verbs, as in (i), it is best translated by English *either*:

(i) Context: Juan doesn’t smoke.  
    Maléna nd-o-pita-i *avei*.  
    Malena NEG-A3-smoke-NEG too  
    ‘Malena doesn’t smoke either.’
Thus, in order to use sentential negation to identify projective meaning triggers, the morphosyntactic and semantic properties of the negation circumfix need to be understood to a much larger extent than typically described in reference grammars. If no description is available, research on projective meanings must either rely on other kinds of constructions or be preceded by a study of negation. (Preliminary research suggests that at least expressions that belong to the verbal inflectional paradigm of Guaraní are in the scope of negation only when they are realized inside the negation circumfix (Tonhauser 2009).)

A similar problem arises with polar questions, which can be realized in Guaraní by rising pitch at the end of a sentence (9a), the question marker –pa ‘–qu’ (9b-d) or the emphatic question marker –piko ‘–EMPH.qu’. Since the latter is used to convey annoyance or impatience (and is mainly used for rhetorical questions), it is probably less suitable to test for projective meanings. Although the question marker –pa is preferably realized on the first constituent, this still leaves several options since word order is flexible to some degree (Tonhauser and Colijn 2009). So, which polar question should be used to examine projective meaning triggers? Do the variants in (9) differ e.g. in information-structural properties?

(9) a. Maléna o-pita?
   Malena A3-smoke
   ‘Does Malena smoke?’

b. Maléna-pa o-pita?
   Malena-qu A3-smoke
   ‘Does Malena smoke’

c. O-pitá-pa Maléna?
   A3-smoke-qu Malena
   ‘Does Malena smoke?’

d. Maléna o-pitá-pa?
   Malena A3-smoke-qu
   ‘Does Malena smoke?’

Thus, again, the semantics/pragmatics of polar questions needs to be understood reasonably well before they can be used to investigate projective meanings.\(^5\)

An application of the *Family of Sentences* test to avei ‘too’ requires a (testable) hypothesis about the projective meaning triggered by the expression to be tested.

\(^5\)Complications of other sorts also arise. In Guaraní, the question marker –pa is homophonous with the aspectual marker –pa ‘–COMPLETE’: the only difference is that the aspectual marker attracts word-level stress while the question marker does not. Hence, to properly use the question marker in an investigation of projective meanings, the fieldworker has to be aware of the stress system of the language.
Given that *avei* ‘too’ is used to translate Spanish *también* ‘too’, we may hypothesize that the projective meaning of *avei* ‘too’ is similar to that of English *too* or Spanish *también*. (Again, since it is biased towards the meanings of a projective meaning trigger of another language, this process does not lead to a discovery of projective meanings triggered only by the Guaraní expression, but it’s a start.) First support for this hypothesis comes from the felicity of examples such as (10a) and the infelicity of examples such as (10b). In other words, Guaraní consultants accept utterances such as (10a) in the context presented, while they reject utterances such as (10b) in contexts where nobody smokes (and sometimes even provide explanations such as “the sentence is not good since it means that Malena and somebody else smokes but you said that nobody else smokes”).

(10)  

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<th>a.</th>
<th>Context: Juan smokes.</th>
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<td><em>Maléna o-pita avei.</em></td>
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<td>Malena A3-smoke too</td>
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<td>‘Malena smokes, too.’</td>
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<td>#Maléna o-pita avei.</td>
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<td>Malena A3-smoke too</td>
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<td>‘Malena smokes, too.’</td>
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However, an attempt to apply the *Family of Sentences* test involving sentential negation fails since *avei* ‘too’ cannot occur inside the negation circumfix:

(11)  

*Maléna nd-o-pita-avei-ri.*  
Malena NEG-A3-smoke-too-NEG  
Intended: ‘It is not the case that Malena smokes, too.’

Thus, the morphosyntax of Guaraní makes impossible an application of this part of the *Family of Sentences* test. (Attempts to identify alternative structures that express sentential negation, e.g. along the lines of *It is not the case that...*, failed.) This vividly illustrates the need for formulating tests in such a way that their theoretical motivation is clear, so that researchers working with typologically different languages can develop versions of the test suitable for probing the same semantic/pragmatic property in the language under investigation.

The potential trigger *avei* ‘too’ can occur in other kinds of sentence structures that make up the *Family of Sentences* test, such as polar questions (12a), conditionals (12b) and modals (12c).

(12)  

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<th>Question:</th>
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b. Antecedent of conditional:
Maléna o-pita-ramo avei, nd-a-vy’a-i.
Malena A3-smoke-if too NEG-A1sg-happy-NEG
‘If Malena smokes, too, I am not happy.’

c. Modal:
I-katu Maléna o-pita avei.
B3-possible Malena A3-smoke too
‘It is possible that Malena smokes, too.’

Most consultants will reject such sentences in contexts where nobody smokes, and accept them in contexts where e.g. Juan has been said to be a smoker. These judgments support the hypothesis that avei ‘too’ in (6) presupposes that somebody else smokes. But what about those consultants who accept the sentences in (12) in contexts where nobody smokes? The existence of such judgments is compatible with either (i) avei ‘too’ having a meaning distinct from English too, or (ii) the elicitation method and/or the discourse context being unsuitable in drawing out the meaning of avei ‘too’ properly.

If we can be excused for leaving the reader hanging, we want to step back up a level and draw some morals from these fieldwork experiences. There’s good news, and bad news. One piece of bad news, perhaps unsurprising, is that that fieldwork on projective meanings is fraught with potential pitfalls, and very difficult to conduct in such a way that there is no danger of the results being influenced by knowledge of more thoroughly studied languages. Also, it is obvious that a fairly extensive knowledge of the grammar of a language under study is needed to apply projective meaning tests. But good news is that the program of work that needs to be conducted is clear at least in general outline; with time and patience, empirical diagnostics can be developed, and a detailed study of projective meaning can be conducted in the field. More good news is that an growing number of formal semanticists are working on under-represented languages, thereby increasing the potential for results on cross-linguistic differences and similarities among projective meaning triggers—and also forcing us to refine of our understanding of these tests to ensure their cross-linguistic applicability.
5 A request for help

Over the course of several decades a lot of smart things have been said by a lot of different scholars about various aspects of non-proffered meaning. Yet our proposal for a Workshop on Projective Meaning emanated from a certain disquiet, a feeling that there were significant deficiencies in existing work, especially from an empirical perspective.

The first of these deficiencies is that prior work is very much Anglocentric. The fact is that without actually having done extensive fieldwork, nobody can say just how much the lack of work on languages other than English has biased the theories that have been developed. But it is quite possible that, as e.g. Matthewson’s work suggests, projective meaning is a significant locus of cross-linguistic variation. And if so, then it may be that despite the huge existing literature on presupposition and related issues, we have barely scratched the surface.

The second issue is not one that we have addressed directly in this paper: the issue is that to date a very narrow range of empirical methodologies have been used to study projective meaning. Specifically, almost all current work is based on judgments by linguists of (their own) constructed data. While this methodology still has a place in future work, we feel that it is supplemented with other methodologies. Specifically, we are thinking of the use of linguistically untrained consultants, the use of more controlled experimental paradigms, and the use of naturally occurring data. As regards experimental work, an example is Chemla (2008), but this can be set against the wider background of a steady increase in the last decade of experimental studies of pragmatic phenomena Noveck and Sperber (2004). Use of naturally occurring data has also been on the increase: one recent such study is Beaver (2008), but this a purely qualitative study, showing that certain types of discourse actually occur. Quantitative corpus studies of projective meanings are also possible, as nicely exemplified by Spenader (2003).

The third source of disquiet can be thought of (to adapt a metaphor of which Larry Horn is fond) in terms of lumping and splitting. Presupposition has, for most scholars, been a big lump, which only a few scholars have tried to split. On the other hand, several other phenomena have been split off from proffered content without being lumped together with presuppositions. And we found ourselves with two closely related questions: first, what are the criteria for lumping things together, whether as presupposition, or in some other grouping, and, second, what are the criteria for splitting off other phenomena, such as conventional implicature and assertoric inertia? We found that existing literature provided us with no very satisfying and empirically grounded way of answering either of these questions. But we felt that a good way to proceed was to create a new, bigger, better lump, and then to start figuring out how and why it should be split. That lump is projective
meanings, as defined by projection tests.

So, where are we? Well, we don’t know enough about projective meaning cross-linguistically, we don’t know much about why various types of projective meaning should be split apart, and we don’t know much about which subgroups should remain lumped together. However, we feel strongly that work on these issues is important, and, based on our that work on these issues is doable and rewarding. We need some help. And that, Ladies and Gentlemen, is where you come in...


van der Sandt, R. (1992). Presupposition projection as anaphora resolution. *Jour-


