Coming to an understanding of some projective contents

Jefferson Barlew
The Ohio State University

Abstract: This paper explores the hypothesis that what Tonhauser, Beaver, Roberts and Simons (2013) call Class B projective contents—projective implications associated with Potts' (2005) CI triggers, as well as implications triggered by possessive and demonstrative NPs—do not share a common semantic component that accounts for their Class B status. I call this the (Class B) Heterogeneity Hypothesis. The paper demonstrates that Class B contents have a previously unnoticed common feature: they provide additional information about a particular discourse referent. It argues that the performance of Class B contents on projection diagnostics depends on properties of this discourse referent as much as on the meanings of Class B triggers themselves. The argument is supported by novel data on a previously undiagnosed Class B content triggered by the use of the deictic motion verb *come*. The proposal made here has implications for analyses such as those of Potts (2005) and McCready (2010), who develop substantial theoretical machinery in order to predict properties related to Class B membership. If the current proposal is on the right track, then such approaches require unnecessary theoretical commitments and do not generalize cover all Class B contents. The Heterogeneity Hypothesis suggests instead that analyses should vary from trigger to trigger, and performance on projection diagnostics should be predicted by properties of the discourse referents about which Class B contents provide additional information.

Coming to an understanding of some projective contents

This paper explores the hypothesis that what Tonhauser, Beaver, Roberts and Simons (2013; henceforth TBRS) call Class B projective contents—projective implications associated with Potts' (2005) CI triggers, as well as implications triggered by possessive and demonstrative NPs—do not share a common semantic component that accounts for their Class B status. In other words, they are a heterogenous group of expressions that TBRS's taxonomy happens to lump together. Call this the (Class B) Heterogeneity Hypothesis. I present one theoretical and two empirical arguments in favor of this hypothesis. First, I show that in TBRS's system, Class B is the default class. It is defined to include all projective contents that are not included in Classes A, C, and D. As a result, there is no single property that is shared by all instances of Class B contents. Second, I demonstrate that all Class B contents have a common structural feature: they provide additional descriptive information about some discourse referent (dref). From this generalization, I argue that whether or not a particular instance of a Class B content displays properties involved in diagnosing projection depends not only on the semantics of the trigger but also on facts about the dref being described. With respect to projection itself, this follows Martin (2015), who argues that the projection of appositive implications is an epiphenomenon best accounted for in terms of properties of the drefs those implications describe (see also Amaral et al. 2007; Nouwen 2007) and Simons et al. (2010), who argue that in general projection is partially a function of context. Finally, I show that this approach generalizes to account for a previously undiagnosed Class B content triggered by the use of the deictic motion verb *come*, which performs differently w.r.t. one of TBRS's diagnostics depending on the dref it describes.

The Heterogeneity Hypothesis: In addition to diagnosing projection itself, TBRS develop two diagnostics that subdivide projective contents. First, projection trigger t exercises a **strong contextual felicity constraint** w.r.t. implication m if an utterance with t is acceptable only in an m-positive context, i.e. a context that entails m. Class B contents are defined as not satisfying this diagnostic. Therefore, a content is Class B as long as there exist some examples in which the use of t is acceptable in an m-neutral context, even if there are other examples requiring an m-positive context. Thus, whether or not a particular Class B content exercises a strong contextual felicity constraint in a particular context must depend on something other than the meaning of t itself.

The diagnostic for **obligatory local effect** identifies projective contents that are necessarily interpreted within the scope of an attitude predicate when t is syntactically embedded under that predicate. Again, Class B contents are defined as not satisfying the diagnostic. Thus, a content is Class B as long as there are some contexts in which it is interpreted outside the scope of the embedding attitude predicate, even if there are other contexts in which it is necessarily interpreted inside the scope. Therefore analyses of Class B contents should not be formulated to predict that the contents never have necessarily local effect, provided they allow for non-local effect in some examples.

The way that the diagnostics are defined thus ensures that there is no property or configuration of properties such that all and only the instances of Class B contents have these properties. Following this observation, the Heterogeneity Hypothesis says that Class B contents do not share a common semantic component that predicts their Class B membership. Different Class B contents may exercise a contextual felicity constraint or have local effect in particular examples due to facts about the examples themselves rather than the semantics of their associated triggers. On this hypothesis, there is no reason to assume that Class B contents should receive a unified analysis.

Additional descriptive content: Class B contents do share a common feature, though, just not one used to diagnose Class B membership. They provide additional descriptive information about some dref. This claim generalizes Potts' (2005) observations about appositives and non-restrictive relative clauses, which provide supplemental information about their arguments, as in (1).

(1) John's dog, (which is) a poodle named Fifi, is at the vet having an operation.

In (1), the appositive takes the dref contributed by the interpretation of *John's dog* as its argument, and says that the dog is a poodle named Fifi. This information is extra in that it is not necessary for computing the main point of the utterance: that the dog is at the vet. To see how this characterization of Class B contents generalizes, consider (2), which includes a demonstrative NP (c.f. TBRS ex. 16).

(2) [Context: John and Maria are walking down the road. They see an animal approaching. Maria, who cannot see very well, can't tell what kind of animal it is or how it is behaving, but John, who can, suggests that they move to the other side of the road. Maria asks why:]
John: That dog is dangerous.

Following TBRS, the Class B implication triggered by a demonstrative NP is that the descriptive content of the noun is attributed to the antecedent of the NP. The Class B implication of (2) can be represented $\textsc{dog}(x)$, where x is the antecedent. In (2), predicating $\textsc{dog}(x)$ adds information to the common ground, showing that the implication does not exercise a strong felicity constraint. Note, however, that in a minimally different context in which Maria can see as well as John and there are two different animals approaching, this information can be used to help (and may even be necessary for) Maria identify the antecedent and thus John's intended meaning. This minimal variant illustrates how facts about the dref being described by the Class B content and the context play a part in determining whether a particular use a trigger exercises a contextual felicity constraint. Similar observations apply, *ceteris paribus*, to the possessive relation implied by the use of a possessive NP such as *John's dog*, which is integral to the interpretation of (1), but supplemental in other contexts.

Expressives exemplify the generalization in a different way from the other Class B triggers discussed by TBRS. An expressive does not contribute additional information about the dref it contributes to the compositional content of the utterance. For example, the use of *honky* does not contribute additional information about the dref denoted by e.g. *the honky*. Rather, it gives rise to the implication that the agent of the context believes that white people are despicable (Schlenker, 2007). This implication includes an argument for the agent of the context, which Schlenker, following Potts (2007), characterizes as the perspective on which the implication depends. Thus, the implication provides additional information about the dref representing the perspective holder.

Class B content of *come*: The use of an utterance with *come* to describe a motion event has been shown to give rise to the implication that some contextually supplied individual, usually an interlocutor, is located at the destination (Fillmore, 1975). This implication is projective (Cinque, 1972; Oshima, 2006). Barlew (2015; under review), calls this the **anchoring implication** of *come*, and argues that it is a *de se* commitment of the individual located at the destination. The projection of the anchoring implication is well-documented in the literature, so I do not include evidence of projection in this abstract for reasons of space, focusing instead on the strong contextual felicity constraint and obligatory local effect.

Following TBRS, let an m-positive context be a context that entails m and an m-neutral context one that entails neither m nor $\neg m$. If an utterance with projection trigger t and projective implication m is acceptable only in an m-positive context, then t exercises a strong contextual felicity constraint w.r.t. m. If the utterance is acceptable in an m-neutral context, it does not. In (3) and (4), t is *come*, m is the anchoring implication, and the speaker and Ron are the anchors, respectively.

(3) [Context: In LA, Joe and Fred have just met. As they talk, Joe mentions that he moved to California in 1985, but doesn't say from where. Fred asks What brought you out here?]
Joe: When I was a teenager, my uncle, who lived in California at the time, came to Chicago one Christmas with stories about year round sun, beaches, and girls. That was all it took.

(4) [Context: Al and Betty live in New York, and are there today. Betty says:]
I met this guy Ron on the internet. He told me President Obama is coming to Chicago today.

The contexts in (3)-(4) do not entail that the anchor is in Chicago, so (3)-(4) show that *come* does not exercise a strong contextual felicity constraint w.r.t. the anchoring implication.

Obligatory local effect: Obligatory local effect is defined in (5).

(5) Obligatory local effect (TBRS 93): A projective content m with trigger t has obligatory local effect if and only if, when t is syntactically embedded in the complement of a belief predicate B, m necessarily is part of the content that is targeted by, and within the scope of, B.

Obligatory local effect is diagnosed by conjoining a clause with t and a clause explicitly contradicting m, and embedding the result under *believe*. If m has obligatory local effect, then the utterance will be contradictory. If the utterance is acceptable, as in (6), m does not have obligatory local effect.

(6) [Context: Anna and Frank are at La Hacienda restaurant. They know that Mary is at home.] Frank: Mary thinks that Sam is coming (here) to La Hacienda for dinner and that we are eating at home. She's wrong on both counts. We're here, and Sam is staying home for dinner.

In (6), the anchor is the speaker (the example is unacceptable if Anna and Frank elsewhere). The anchoring implication is that Frank is at La Hacienda. In Mary's belief state, this is false. Thus, the acceptability of (6) shows that the anchoring implication does not have obligatory local effect. Thus, (3), (4), and (6) demonstrate that the anchoring implication is Class B.

However, the test for obligatory local effect reveals an additional generalization, first noticed by Oshima (2006) in the context of a different argument. When the attitude holder is the anchor, the anchoring implication of *come* appears to obligatorily have local effect:

(7) John goes to St. Maarten to buy a new sailboat. While there, he is knocked on the head and becomes confused about where he is. Specifically, he believes that he is in Tulsa, Oklahoma, visiting his son Dave. His wife Sue calls him on the phone and tells him that she is on the way to take care of him. After she hangs up, she tells their other son:

#Your dad believes that he is in Tulsa visiting Dave and that I am coming to St. Maarten.

In (7), the anchoring implication that John believes himself to be in St. Maarten contradicts the claim that John believes himself to be in Tulsa, making (7).

(6)-(7) show that whether or not the anchoring implication has local effect in a particular example depends on facts about the dref about which it provides information. Here's why. The anchoring implication of *come*, provides additional evidence about two drefs. The first is a dref for the destination location, call it d. On a semantics for *come* adapted from Oshima (2006), the proffered content of *come* is MOVE-TO(w, e, x, d), where w is the world of evaluation, e is the motion event, and x is the theme/mover. Following Barlew (2015; under review), the anchoring implication contributes the additional information about d that the anchor believes *de se* that she is there. Like the projective content of expressives, this is also information about an additional dref, namely the perspective holding anchor. The observation that this is *de se* information about the anchor's own perspective accounts for the difference between (6) and (7). When the attitude holder is the anchor, the anchoring implication, must be compatible with the attitude holder's beliefs because it is an implication about her beliefs. In contrast, when the attitude holder is not the anchor, the anchoring implication need not be compatible with her beliefs. As with projection and strong contextual felicity, properties of the dref described by this Class B content play a role in determining whether, in a particular example, that content has local effect. Nothing about local effect need be stipulated in analyses of *come*.

Implications: The Class B Heterogeneity Hypothesis suggests that researchers analyzing Class B projective contents need not posit a common semantic feature predicting Class B membership. Class B contents project, exercise a strong contextual felicity constraint, or have local effect, depending on facts about the drefs they are used to describe and the contexts in which they are used. This result has implications for analyses such as those of Potts (2005) and McCready (2010), who develop substantial theoretical machinery in order to predict properties related to Class B membership. If the current proposal is on the right track, then such approaches require unnecessary theoretical commitments and do not generalize cover all Class B contents. Instead, analyses of Class B contents should vary from trigger to trigger, and performance on projection diagnostics should be predicted by properties of the drefs about which Class B contents provide additional information.

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