1 Introduction: Criteria of adequacy for pragmatic theory


An important warning:

Be more careful with forcing bits and pieces you find in the pragmatic wastebasket into your favorite syntactico-semantic theory. It would perhaps be preferable to first bring some order into the contents of this wastebasket as is, to clarify somewhat better the explicandum—to use Carnap's undeservedly neglected slogan—before embarking on the explication.        

Lacking an adequate pragmatics and rejecting ad hoc pragmatic explanations, many are tempted to capture in the logical form of an utterance—in its conventional contributions to proffered content—aspects of meaning which properly belong to context. Thus over-burdened, LF tends to become baroque and messy, with a variety of scattered silent operators, free variables not motivated by movement or ellipsis, and wild scopal relations similarly unmotivated by syntactic considerations. Such features of LF obscure rather than explaining, are often empirically inadequate.

We want an account of pragmatic competence, which would explain why we find so many similar features of contextual influence across languages, e.g.:

- the role of the QUD and the way it is universally reflected in the focal prosody of utterances across contexts (Roberts 1996, 1998)
- the fact that presuppositions are triggered by all near-translation equivalents of the same expressions across all languages (Roberts & Simons, 2022)
- the fact that shifting indexicals are universally interpreted de se across languages (Roberts 2014, 2020)
- the fact that epistemic necessity modals cross-linguistically universally receive a weak reading (Karttunen 1972, von Fintel & Gillies 2010)

The approach sketched in Roberts (2017) aims to do this. Today:

- a schematic picture of the central features of this approach, contrasting with prominent earlier views of the semantics/pragmatics interface.
- an illustration of its value: the role it affords for auxiliary content, the conventional contributions to interpretation that yield what Chris Potts (2005) calls supplemental conventional implicatures.
The classical two-phase view of the interaction between semantics and pragmatics: (Kaplan, Montague, Heim & Kratzer 1998)

- the conventional input to compositional semantics: the syntactic logical form (LF) along with the semantic values of its lexical components
- what is interpreted: a contextualized logical form (LF) with lexical entries, annotated with contextual information for resolution of indexicals, variables.
- context: a combination of Kaplan’s tuple (speaker, addressee, time, etc.)—given once per LF—and a Tarskian assignment function.

- The two-fold role of pragmatics:
  - The context of utterance acts like a sky hook to magically pull values for variables out of the ether.
  - Gricean maxims play a post-compositional role: generating implicatures on the basis of the output of the compositional rules.
  - addition in H&K (following Heim 1983): presuppositions bear indirectly on proffered content, via constraints on felicity in context.


- In Geach’s donkey sentences (1), though the pronouns are unbound, their utterance-internal resolution crucially bears on truth conditions

(1) If a farmer₁ owns a donkey₂, he₁ uses it₂ to plow s₂.

- To account for such examples:
  - semantic content of an expression: its context change potential (CCP), a function from contexts to updated contexts; e.g. the CCP for a first conjunct, if clause changes the context for interpretation of a second conjunct/consequent.
  - context itself is tracked across discourse, updated from utterance to utterance:
    - a richer body of information than on the classical view, including the interlocutors’ common ground and a way of tracking information about individuals: the set of discourse referents
    - uses the assignment functions from classical semantics to track information for the resolution of non-bound anaphora, presuppositions more generally, including donkey sentences (1) and comparable temporal phenomena (2).

(2) Whenever Mary wrote a letter₃, Sam answered it₃ two days later. [Partee 1984]

- Presuppositions triggered by lexical items constrain felicity of the local context of interpretation, which must resolve anaphora/satisfy presuppositions (Heim 1983).

Problems for dynamic semantics:

- The assumption that the update of an indicative automatically contributes to the Common Ground/Context Set of the input context is problematic from the point of view of Speech Act theory (Portner 2018, Roberts 2018). See (3).

(3) A and B are strategizing about how their gang is going to rob a bank:
   i. A: Suppose the police arrive while we’re cleaning out the vault.
   ii. B: We’ll elude them by escaping over the roof.
   iii. A: What if our short-circuiting software fails and the alarm goes off?
   iv. B: Grab the cash in the drawers and run!
   v. A: Suppose the guard gets untied.
   vi. Should I shoot him?

   Grammatical mood does not determine speech act type.

- makes no allowance for non-conventional update: modal subordination (3), other contextually given domain restriction; anaphoric bridging (4); intrusive implicatures (5), (6)

(4) If a farmer1 owns a John Deere2, he1 uses the tractor2 to plow.

(5) If the old king has died of a heart attack and a republic has been declared, then Tom will be quite content. [Cohen 1971]

(6) Bill believes that some of his students are waiting for him. [Chierchia 2004]

standard accounts predict: ‘it is not the case that Bill believes that all of his students are waiting for him’ [true if Bill has no beliefs about the students]

attested implicature: ‘Bill believes that not all of his students are waiting for him’

• Stalnaker (2014): dynamic semantics fails to clearly represent the proffered content of an utterance.

Summarizing: though context update is driven by explicit semantic content, it seems that semantic content does not determine context update:

It is the way that context is updated that is dynamic, not semantic content per se.

Auxiliary content: a challenge for both the classical view and dynamic semantics

Potts’ (2005) supplemental conventional implicatures. Contributed in English by nominal appositives, non-restrictive relative clauses (NRRs) and other constructions.

• Not locally entailed:

(7) a) Sam believed that his wife, a very honest woman, was lying to him.

b) #Sam’s wife isn’t an honest woman.

c) ✓Sam’s wife wasn’t lying to him.

• cannot bind or be bound by semantic content:

(8) *No reporter1 believes that Ames, often the subject of his1 columns, is a spy. [Potts 2005]

Potts (2005) concludes that auxiliary content:

a) does not directly contribute to the proffered semantic content of an utterance

b) is directly added to globally available information about the speaker’s “world view”, except when shifted in direct quotation to the reported agent of the utterance quoted.

But Amaral et al. (2007), while agreeing with (a, point out auxiliary donkey sentences (9), problematic for (b):

(9) [Every professional man I polled]1 said that while [his1 wife]2, who had earned a bachelor’s degrees3, had no work experience, he1 thought she2 could use it3 to get a good job if she2 needed one. [ARS 2007]

2 Dynamic Pragmatics

See Figure 1: a schema for the architecture of interpretation, motivated by the above considerations, among other phenomena. This includes:

• a static compositional semantics, working off a contextualized LF

• a dynamic pragmatics (Dever 2013, Stalnaker 2014, K.Lewis 2014, etc.), with a context directly affected by:

  • anaphoric presuppositions, determining felicity (Heim 1983)

  • the addition of auxiliary content (more below)

  • addition of the semantic interpretation of sub-constituents of an utterance

The context is simultaneously affected by pragmatic constraints on well-formed context, including relevance, coherence, and consistency; effecting disambiguation, anaphora resolution, presupposition accommodation, implicature generation, speech act recognition. . .

Dynamic pragmatics determines a local context of interpretation for each sub-constituent, feeding the contextualized logical form, which in turn feeds compositional semantics.
Roberts (2017) explored psycholinguistic evidence for similarities between the interaction of these kinds of information and that of two aspects of visual processing:

- Both visual and linguistic processing include both bottom-up (visual parsing/word recognition, syntactic parsing) and top-down (expectation/QUD-based) systems, operating in parallel and feeding each other in the course of interpreting sensory input.
- Both systems are pre-cognitive, cognitively impenetrable, and rapid.

All elements of the architecture in Figure 1c are language-specific developments of a general cognitive strategy for processing perceptual input.


- \(C_D\), a newer element (Roberts 2014, 2020, to appear) tracking the doxastic perspectives available at that point in discourse, with dynamic update and downdate modeled after the way the Reference Times are updated in Partee (1984):

The set of discourse centers in context \(D\), \(\mathcal{C}_D\):

A discourse center \(\mathcal{C}\): an ordered set \(<d_i,e_j>\), s.t. \(d_i, e_j \in DR_D\) and \(d_i\) is a doxastic agent whose beliefs in \(e_j\) are under discussion in \(D\) at speech time in the actual world. \(\mathcal{C}_D\) is an ordered set. It always includes as its last element the un ordered set of discourse centers involving the interlocutors \(\{\mathcal{C}_i,j^*, \mathcal{C}_k,j^\ominus, \mathcal{C}^*\ominus\}\), where:

- \(\mathcal{C}_i,j^*\) is a distinguished center corresponding to the speaker \(d_i\) in the actual event of utterance \(e^* = e_j\),
- \(\mathcal{C}_k,j^\ominus\) corresponds to the addressee \(d_k\) in \(e^* = e_j\),
- \(\mathcal{C}_i+k,j^CS\) (= \(\mathcal{C}_i+k,j^*\ominus\)): inclusive ‘we’, the joint (purported) doxastic point of view of speaker and addressee \(d_i \oplus d_k\) in \(e^* = e_j\) as reflected in CS_D.\*

Other elements of \(\mathcal{C}_D\) are discourse centers introduced in conjunction with the interlocutors’ direct consideration of alternative doxastic states, i.e. attitudes:

- In the scope of attitude predicate \(\text{pred}\), \(\mathcal{C}_i,j^{\text{pred}}\) (e.g., \(\mathcal{C}_i,\text{know}\), \(\mathcal{C}_i,\text{hope}\), \(\mathcal{C}_i,\text{claim}\), etc.) is introduced as the first element of the local \(\mathcal{C}_D\). \(\mathcal{C}_i^{\text{pred}}\): the ordered pair of the agent \(d_i\) of the attitude in the arbitrary eventuality \(e_j\) in which it obtains.
- In Free Indirect Discourse, reflecting the doxastic perspective of some third party: \(\mathcal{C}_i,j^{\text{FID}}\), the agent \(d_i\) whose perspective in a given (possibly fictional) eventuality \(e_j\) is being adopted globally in the narrative.
- Perspectival adverbials like \(\text{according to a (at time t)}\) or \(\text{from a’s point of view (at time t)}\): a new element \(\mathcal{C}_i,j^{\text{POV}} = <a,e_j>\), \(d_i\) the agent \(a\) in the (possibly arbitrary) eventuality \(e_j\), the point of view is available at \(t = \text{time}(e_j)\).
- In an epistemic conditional, the \(\text{if}\)-clause enriches a presupposed modal base, MB, which introduces a doxastic perspective, \(\mathcal{C}_i,j^{\text{episMB}} = <d,e_j^{\text{episMB}}>_i\), \(d_i\) the anchor of the epistemic modality, \(e_j^{\text{episMB}}\) the arbitrary eventuality where \(\cap\) MB is true. The \(\text{if}\)-clause introduces a modified perspective: the same anchoring agent, a new arbitrary eventuality, where the \(\text{if}\)-clause is true as well as \(\cap\) MB: \(\mathcal{C}_i,j^{\text{if}} = <d,e_j^{\text{episMB}+\text{if}}>\).

When the scope of the operator triggering introduction of some \(\mathcal{C}\) is closed, \(\mathcal{C}\) itself is removed from \(\mathcal{C}_D\). No other way to introduce discourse centers to \(\mathcal{C}_D\) in English.

Why track \(\mathcal{C}\)? These serve to anchor perspective-sensitive expressions: indexicals & shifting indexicals (2014), deictic motion verbs (Barlew 2017), epistemic modals (Roberts to appear), auxiliary content (Roberts 2022), etc.

---

* where \(\oplus\) is the join operator of Link (1983).
**Dynamically updated context feeds contextualized LF:** (bottom of Figure 1c, after Heim 1983)
The **global context**, \( K \), serves as the local context of interpretation for simple clauses, the prejacent of a negated clause, the first conjunct of a conjunction, the \( if \)-clause of a conditional. The second conjunct/conditional are interpreted in the context resulting from update of the global context the interpretation of the first clause in the complex sentence. The context updates in blue are simplified to only consider update of \( CS_K \), elaborated to be a set of world/assignment pairs: the \( <w,g> \) in which all the familiar discourse referents in \( DR_K \) are assigned values in \( w \) by \( g \) that are consistent with the information the interlocutors share about those discourse referents.

\[
CS_K = \{ <w,g> : \text{all the familiar discourse referents are assigned values by } g \text{ in } w \text{ that are consistent with the information the interlocutors share about them} \}
\]

**What’s lexical CHARACTER and how does it feed interpretation?** Unlike Kaplan’s Character, captures a richer semantico-pragmatic content for a lexical entry.
- Only semantic content directly feeds compositional semantics, in logical form.
- Presuppositions constrain contextual felicity, as in dynamic semantics.
- We will see the effects of Auxiliary content below.

**Deriving donkey anaphora:**
The contextualized LF of (1) in (1’), with the updated context for the main clause highlighted:

(1') \( K'[S_0 \ if \ K'[S_1 \ a \ farmer_1 \ owns \ a \ donkey_2 \ S_1] \ K^+\{S_2 \ he_1 \ uses \ it_2 \ to \ plow \ S_2\} \]S_0\]

Calculation of context revision:
1. \( K^+(1) = K' + [if [S_1]K' then [S_2]CS_K^+\]^K = K \ \backslash \ (K^+||S_1||K^+||S_2||CS_K^+)\)
2. \( K^+\{S_1\} : \text{update } DR_K \text{ to add } d_1, d_2; \text{update } CS_K \text{ to yield } CS_K^{+\{S_1\}} = CS_K \cap \{<w',g>| g(d_1) \text{ is a farmer in } w', g(d_2) \text{ is a donkey in } w' \}
3. \( K^+||S_1||K^+||S_2||CS_K^{+\{S_1\}} : \text{update } CS_K^{+\{S_1\}} \text{ to yield } CS_K^{+\{S_1\}} \cap \{<w',g>| g(d_1) \text{ uses } g(d_2) \text{ to plow in } w' \} = \{<w',g>| w' \text{: } g(d_1) \text{ is a farmer & } g(d_2) \text{ is a donkey & } g(d_1) \text{ owns } g(d_2) \text{ & } g(d_1) \text{ uses } g(d_2) \text{ to plow}\}

Substituting 2 and 3 into 1 yields 4:
4. \( K^+(1) = CS_K^{+\{S_1\}} \ \backslash \ \{<w',g>| g(d_1) \text{ is a farmer in } w', g(d_2) \text{ is a donkey in } w', g(d_1) \text{ owns } g(d_2) \text{ in } w' \} \ \backslash \ \{<w',g>| g(d_1) \text{ is a farmer & } g(d_2) \text{ is a donkey & } g(d_1) \text{ owns } g(d_2) \text{ & } g(d_1) \text{ uses } g(d_2) \text{ to plow}\} \)

If \( CS_K \) is the set of all \( <w,g> \) pairs, the set of worlds that are first elements in \( K^+(1) \) is The result of that interpretation is added to the global context for the next utterance.

A donkey sentence involving anaphoric bridging:

(5) \( K'[S_1 \ a \ farmer_1 \ owns \ a \ John \ Deere_5 \ S_1], K^+\{S_2 \ he_1 \ uses \ the \ tractor_5 \ to \ plow \ S_2\} \]

3 Dynamic update with auxiliary content
Auxiliary content, contributed by appositive NPs, nonrestrictive relative clauses (NRRs), a variety of other triggers (Potts 2005): makes no direct contribution to the proffered content of the utterance in which it occurs, but nonetheless it may have a truth conditional impact in a dynamic fashion, straightforwardly afforded by this architecture.

**Properties of auxiliary content:**

i. doesn’t directly contribute to the proffered content of the clause in which it occurs at LF, as we saw in (7). (Potts 2005)

ii. cannot be bound by/bind semantic content, as we saw in (8). (Potts 2005)

On the basis of examples like (7) and (8), Potts concludes that auxiliary content does not take scope at LF; Schlenker (2013b, 2021) offers apparent counter-evidence, but I think these examples can be understood to involve modal subordination, not scope at LF.
iii. can’t by itself serve to make an utterance RELEVANT to the QUD, hence is not part of what is proffered by an utterance in which it occurs. (Amaral et al. 2007)

iv. carries an anti-novelty implication, so is not presupposed. (Potts 2005)

Together, (i) – (iv) argue that the implications in question are neither semantic content nor presuppositions.

v. perspectival: anchored to a salient doxastic perspective, which (pace Potts) is not always that of the speaker (Amaral et al. 2007, Harris & Potts 2009). So in (7) the appositive is anchored to the speaker, but in (10) the NRR who has an awful lot of legos is anchored to the arbitrary kid, and in (11) the appositives are both anchored to the agent of belief, Lois.

(10) [The speaker is a child psychologist studying play activity, with young subjects.]
Whenever I play with kids in a poorly equipped daycare center, they clearly hope that this stranger, who has an awful lot of legos, will leave some of them behind when she goes.

(11) a) Lois believes that Clark Kent, the milquetoast reporter, is attractive. (False)

b) Lois believes that Clark Kent, the superhero, is attractive. (True)

vi. may contribute indirectly to the truth conditional content of a clause, not only via anaphoric dependencies in (9) and (10), but non-anaphorically (11).

A constituent contributing auxiliary content is so-marked (English appositives and NRRs: pauses on either edge—Potts’ (2005) feature COMMA; Schlenker (2013b): French relative pronoun lequel can only occur in NRRs, etc.).

The interpretive contribution of auxiliary content:

Auxiliary content is presuppositionally anchored to an available discourse center © in ©D.

If accepted, it directly updates the contextually available information about the belief state of ©: DOX(©), where DOX is a function that takes a discourse center © = <a,e> and yields the belief state of a in the world in which e occurs.

Auxiliary content makes no direct contribution to compositional semantics.

Unlike Potts’ proposal, here the context to which the auxiliary content contributes may be non-global, when it is not anchored to the perspective of the speaker, as in (9) – (11).

COMMA presupposes the denotation of the coindexed head NP, takes a type <s,<e,t>> syntactic complement RC to yield a proposition:

CHARACTER of COMMA:

Given local context K = <CSk, DRk, ©k>, world and time of interpretation w and t, and relative clause complement RC (type <s,<e,t>>), for all CSk-consistent assignments g, COMMA(RC) makes the following contributions to interpretation:

Presupposed content:

∃d ∈ DRefk ‘there’s a familiar dRef coindexed with NP’
∃© = <dk,e> ∈ ©K ‘there’s a salient discourse center ©’

Auxiliary content:

∀wDOX(©)[[RC][DOX(©)(w)]](g(di) (w))
‘in e, dk believes that the denotation of di has the property RC’

COMMA(RC) has no semantic value, does not contribute to proffered content.

Contextualized LF of (10), © anchored to the arbitrary kids d2, updates highlighted:

Whenever I play with kids in a poorly equipped center, they hope that this stranger, who has a lot of legos, will leave some of them behind when she leaves.

‘whenever the speaker plays with kids in a poorly equipped center, the kids think that this stranger has a lot of legos and they hope that she will leave some of them when she leaves’.
In (10):

a) The appositive appears to take narrow scope relative to hope, whenever. But this needn’t be represented at LF; a reflection of merely local presupposition satisfaction.

b) The subject embedded under hope, this stranger, is clearly intended to refer de dicto to the speaker from the perspective of this stranger means roughly “the individual who, from the perspective of hope (the arbitrary kid during the visit) is the salient, present [because of proximal this] stranger in that circumstance”, a de dicto description of the speaker in her role in that eventuality.

Similarly, we can explain the truth conditional effects of the appositives in (11):

(11) a) Lois believes that Clark Kent, the milquetoast reporter, is attractive. (False)

b) Lois believes that Clark Kent, the superhero, is attractive. (True)

[Zsófia Zvolenszky, p.c., after Saul 1997]

Aloni (2001): In examples involving the classic puzzles about belief attribution, captures the intended interpretation via a pragmatic perspective-shifting operator ℘, which takes a variable (the referential index on the modified NP) and yields a conceptual cover, a method of individuating entities which yields for the index in question a way of uniquely picking out that individual in a given world.

Roberts (2014):

• Modifies ℘ to require that it be anchored to a salient discourse center, ©.

• For index i, world of interpretation w, call ℘©(i)(w) a guise of the intended denotatum, the res, from the perspective of ©.

• In (11), take the appositives the milquetoast reporter and the superhero to be anchored to ©believe, Lois in the belief situation, directly contributing information to the context of utterance about Dox(<Lois,e>): Lois’ beliefs in e about the res Kent.

• We assume that Lois is familiar with Kent under these guises without realizing that both describe the same res. Her beliefs aren’t irrational; they’re just ill-informed.

• To capture this assumption, in (11a/b) apply ℘, anchored to the same ©believe, to Clark Kent: ℘©-believe(5)(w). Then the content of the appositive in each case is understood to specify the relevant guise with respect to which Lois believes Kent is or is not attractive: the appositive gives the relevant value for ℘©-believe(5).

Finally, consider:

(12) [Background: In (a) – (c) the speaker is gossiping about a prominent community member named Lauren and her son Spenser. The speaker and Lauren aren’t close, but they have several mutual friends. The speaker knows that Spenser has a boyfriend named George, but hasn’t met him.]

a) Spenser seems poised to propose to George.

b) Most of her friends think that Lauren, who would enthusiastically approve, would be misguided in that endorsement: George is handsome and intelligent, but he isn’t kind or loving.

c) I myself don’t know George, but he certainly hasn’t made many friends around here.

The meaning of (b):

‘most of Lauren’s friends believe that if Spenser proposes, Lauren would enthusiastically approve of the proposal, and they think that if that occurs Lauren would be misguided in her endorsement of the proposal, and they believe this because though George is handsome and intelligent, he is neither kind nor loving’

The global perspective is that of the speaker, but in (b), both under the scope of most of her friends and in the FID-like continuation, the reported perspective is that of the arbitrary friend of Lauren, both modally subordinate to the possible proposal, with all the auxiliary content dynamically contributing to information about that perspective.
4 Conclusions

Reviewing challenges to earlier views of the semantics/pragmatics interface:
• intrusive Phase 1 phenomena: donkey anaphora, shifting indexicals (Roberts 2014)
• intrusive Phase 2 phenomena: donkey bridging, modal subordination, intrusive implicature
• intrusive auxiliary content: dynamic contextual-dependence (both phase 1 and 2) between non-proffered, auxiliary content and the output of the semantic composition of proffered content, as in (12).

These challenges are met by a view of the semantics-pragmatics interface involving:
(a) a rich notion of a context of interpretation, tracking the kinds of information shown to have a consistent contextual influence on interpretation;
(b) rules for the evolution of context across an utterance, operating (comparably to the parallel architecture in vision competence) on simultaneous:
  • bottom-up dynamic input from the grammar: compositional semantic output for sub-
    constituents of the utterance in question
  • top-down constraints and affordances from linguistic mechanisms designed to yield in run time the effect of abductive application of rationally motivated principles and constraints, without actually involving inferential processes, e.g.:
    • inattentional blindness (Simons & Chabris 1999) resulting from focus on the QUD/task structure of discourse yields
    • a metric for relevance (Roberts 1996/2012), a constraint yielding implicature
    • salience (Roberts 2016, drawing on Polanyi 1985), inducing restriction of domains for reference, anaphora resolution and quantification
    • the determination of modal and imperative flavor (Roberts 1989, 2018, to appear; Moss 2015)
    • contrastive prosodic cues (themselves related to the QUD, hence universally serving as clues to task. Roberts 1998) give rise to referential expectations, scalar implicatures (Rooth 1992), etc.: a structural mechanism reinforced by relevance
    • constraints on the relationship between QUD and G yield imperative flavor and the deontic implications of directives (Portner 2004, Roberts 2018)
    • lexical priming and spreading lexical associations triggered by lexical content (Simons & Danks 2001) contribute to word recognition, disambiguation, bridging (donkey bridging being the utterance-internal version), and enrichment implicatures

This approach allows for simplification and/or explanation of features of interpretation elsewhere treated as syntactically unmotivated principles of the grammar. For example:
• We can derive Heim’s Maximize Presupposition as a requirement to maximize cohesion across moves. Constraints on rhetorical relations can similarly be seen to characterize well-formed, maximally cohesive strategies of inquiry in the QUD.
• Some features commonly included in LF are arguably redundant and/or empirically inadequate e.g.: Hacquard’s (2010) binding of epistemic modal auxiliaries (see Roberts, to appear), Chierchia’s (2004) use of a tacit operator EXH to generate intrusive scalar implicatures, Schlenker’s (2013b, 2021) scope of NRRs at LF, etc.

This evidence argues, pace K. Lewis (2017) inter alia, that linguistic competence consists not just of knowledge of grammar—phonology, syntax, compositional semantics— and its realization in a given language, but also crucially includes the capacity to wield and update a specifically linguistic context in the course of interpretation.

Like UG, formal pragmatics so-conceived is a theory of competence, not performance:
• There are many ways the mind might store the kinds of information that we seem to track in order to interpret quickly and efficiently. The scoreboard is just an abstract
characterization of certain kinds of information that we arguably need ready access to and track in the course of interpretation.

- There are many ways that the posited pragmatic constraints might be realized in an actual implementation, including statistically or in a connectionist system. The constraints in pragmatic theory just tell us what such an implementation must do in order to realize this competence.

Selected References

- Dekker, Paul Edgar (1993) Transsentential Meditations, ups and downs in dynamic semantics, Ph.D. Thesis, University of Amsterdam, ILLC.
Chicago: The University of Chicago Press.


