

Lecture 6: Cleaning out the wastebasket: Criteria of adequacy for a theory of linguistic pragmatics

Syntax and semantics study expressions of a language:

Syntax investigates the structure of acceptable expressions of the language. Hence it determines which expressions are grammatical.

Semantics studies the conventional CHARACTERS of grammatical expressions of the language, determined compositionally as a function of the structure of the expression and the CHARACTERS of the words it contains. Hence it determines the regular, conventional contribution of an expression to any meanings that may arise with its use.

Pragmatics is the study of utterances—the use of expressions of the language in particular contexts. In particular, it attempts to explain how a given meaning arises as a function of conventional structure and content plus context of utterance. Recall:

An **utterance** is an ordered pair of an expression under a linguistic analysis and a context of utterance. Bar-Hillel (1971)

1. Desiderata

Desiderata for an adequate pragmatic theory:

- in keeping with general criteria of adequacy for scientific theory:
 - a **falsifiable** theory, one that makes testable, replicable predictions (controlling for the identified parameters of variation with clear diagnostics) about the kinds of interpretations that will arise for particular contents in particular contexts
 - a theory that's **non-ad hoc**, using for the analysis of a particular phenomenon structures, tools and principles that are independently motivated
- in keeping with general criteria of adequacy for linguistic theory:
 - **Empirical adequacy**: predict all and only the attested meanings of an expression in particular contexts of use, doing so

1. with a view to the independently motivated syntactic analysis and compositional semantics of the expression

2. without appeal to ad hoc pragmatic principles or discourse structures

This should be a **unified** theory, offering a platform for accounts of the full range of relevant pragmatic phenomena and how they interact, including (at least):

- speech acts and mood
- discourse segments and rhetorical relations, especially question/answer relations, response types, discourse particles
- topics and topicality
- clefts, pseudo-clefts, Topicalization, Focus-preposing and other special constructions that play a role in the Information Structure of a language
- pragmatic FOCUS and its relationship to prosody

- presupposition and projection
- anaphora resolution
- domain restriction
- indexicality
- conventional implicature and Relevance
- lexical pragmatics (e.g. the relationship of conventional content to encyclopedic knowledge about the associated notion(s))
- disambiguation
- conversational implicature and practical reasoning
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- **Explanatory adequacy:** offer a satisfactory explanation of language universals that are arguably pragmatically-based (see below for a few), i.e. related to the way that an expression takes its meaning *in context*
- specific requirements for pragmatic theory:
 - give an account of what a context of utterance is, and how it is updated through the interaction with conventional content over discourse: a dynamic pragmatics
 - use a methodology appropriate to investigating the role of context (see below)
 - explain of the interaction between CHARACTER, context and practical (abductive) reasoning, as required for:
 - speech act identification
 - anaphora resolution, including presuppositions triggered by proforms, ellipses, domain restriction, retrieval of prosodically triggered FOCAL alternative sets
 - presupposition satisfaction
 - conversational implicature generation (e.g., determination of what's RELEVANT as a function of contextual entailments)
 -
 - afford a place for those aspects of meaning which cannot be readily reduced to truth conditional content. E.g., see Camp (2014) among our readings.

2. Pragmatic universals

Some linguistic universals to be explained by pragmatic theory:

A. The cross-linguistic ubiquity and canonical function(s) of grammatical mood (see lecture 1):

Mood (grammatical universal): All known languages display three basic clause types, characterized as a distinction in grammatical mood:

Declarative
Interrogative
Imperative

Mood (pragmatic universal): There is a strong correlation between choice of grammatical mood and intended type of move in a language game:

Declarative mood is typically used to make an **assertion**
Interrogative mood is typically used to pose a **question**

Imperative mood is typically used to issue a **direction**

the bridge: the standard semantic types of the moods are tailored to playing the particular functional roles to which main clauses in these moods typically play

Hypothesis: These are the main moves in the language game. (Roberts 1996, 2015)

- B. The cross-linguistic ubiquity and standard function(s) of Focus, typically expressed prosodically. (see lecture 2)

FOCUS grammatical universal: Every language has some way of foregrounding some components of an utterance, backgrounding the rest, (almost) always involving prosody, and sometimes with morphosyntactic means, as well. This phenomenon is known as FOCUS.

FOCUS pragmatic universal: The FOCAL structure of an utterance presupposes the relevance of a congruent alternative set. Among other things, this constrains what questions the utterance can felicitously address.

Hypothesis: FOCUS is a conventional clue to/constraint on what's at-issue, the QUD.
(Roberts 1996, 1998)

- C. The non-detachability of many presuppositions across languages (see lecture 3).

Non-detachability of notional presuppositions (pragmatic universal): If a lexical item t in language L triggers a notional (non-anaphoric) presupposition in one language, we expect that its translation equivalent t' in language L' will trigger the same presupposition.

Hypothesis: Many linguistic presuppositions arise as a function of the character of the underlying notions expressed by the triggers, and are hence not conventional.

- D. Presupposition projection works the same across languages (see lectures 3 and 4): Whatever the triggers, we expect to find the same patterns of filtering and projection with translation counterparts of the family of sentences and other holes, plugs and filters. We see this most clearly in the strongest, least “accommodable” presuppositions—anaphoric elements.

The following candidates for language universals are informed conjectures, based on my knowledge of presupposition projection and anaphora in the languages I'm familiar with and in the literature:

Projection pattern universal: The patterns of projection and filtering captured by rules like Karttunen's are attested across languages.

Hypothesis: Patterns of presupposition projection are reflections of the way that context changes in the course of interpretation. (implicit in Heim 1983)

Anaphora universal: Anaphora resolution across languages is constrained by the same patterns of dynamic context-update as we find in presupposition satisfaction.

Hypothesis: Anaphora is a conventionally triggered presupposition. (Heim 1982)

Predictions:

We will not find a language in which the translation counterparts of an English filtering construction fails to serve as a filter in the same way.

We will not find a language in which the fundamentals of anaphora are different than what we find in English. We *may* find in some language a particular anaphoric trigger which places language-particular constraints on the kind of antecedent that would resolve its anaphoric presupposition (Barlew 2014), but the pattern of anaphoric accessibility, and its effects on felicity, will not differ significantly from what we find in other languages.

Since notional presuppositions arise as a function of the underlying notions, and hence are pragmatic (a function of world knowledge), we expect that whether they project might be influenced by pragmatic factors as well. This differs from functional projection triggers like anaphoric elements and Conventional Implicature triggers (non-restrictive relative clauses, other nominal appositives, etc.), i.e. types of expression whose anaphoric or auxiliary content has no local effect and whose *function* is to either connect with prior context (anaphoric) or contribute content which is orthogonal to what's under discussion. Observations in a few languages seem to support this conjecture (Beaver & Tonhauser 2015, Tonhauser et al. 2015).

Hypothesis: What's taken for granted by a speaker (presupposed or conventionally implicated) is not at-issue, and what's at-issue isn't taken for granted. What's at-issue is a function of the QUD in the context of utterance. (Simons et al. 2011)

E. Weschler's (2010) generalization: The *de se* character of indexicality.

The associative universal for 1st and 2nd person plural pronouns:

It is a language universal that 1st and 2nd person plural pronouns are **associative**: Across all languages studied the counterparts of *we* or plural *you* are never to be understood as coreferential with a plural group of speakers or addressees, but instead only as including the indicated discourse participant (speaker or hearer). Apart from the plural indexicals, associative semantics is extremely rare across languages.

Explanation: The *de se* character of indexicality, i.e. the fact that they are anchored to doxastic centers salient in discourse. (Roberts 2014)

Note that this gives us a way of differentiating indexicals from other types of context-sensitive expressions. E.g. the indexicals are now a *proper* subset of the expressions that trigger anaphoric presuppositions, like non-indexical pronouns, *local*, etc.

Another realm in which pragmatic universals might be entertained is the ubiquity of certain kinds of left-peripheral phenomena in clauses across languages. These include especially positions in which Topics occur and some Focused constituents:

- F. The ubiquity of certain kinds of information structural clues (in syntactic structure) to the structure of the discourse.

The observation of this very strong tendency motivated early work by the Prague School on Functional Sentence Perspective and Halliday (1985) on the distinction and structural reflections between theme and rheme. One might think of the theme as that part of the sentence that ties it to the QUD and even more narrowly to an entity that's the topic of conversation. The rheme is then what's said about that question or entity (von Stechow 1994). *Topic/comment* is another term for the theme/rheme distinction.

Here is one hypothesis one might entertain about this strong tendency:

Hypothesis: Given the pervasiveness of context-sensitivity, and the role of the theme in tying an utterance to preceding context, a theme-rheme structure is optimally efficient for processing.

I.e. we put first in the clause those aspects whose content anchors the interpretation to the intended context of utterance: Hence, besides topical NPs we are not surprised to find that Frame adverbials also tend to occur in the left periphery. More rhematic, QUD-new content then tends to occur later in the clause, understood against the background introduced by the thematic material.

On the basis of observing the common occurrence of thematic constituents in the left periphery of the utterance, Rizzi (1997) argues for the existence between the root node of a syntactic tree, the CP ("Complementizer Phrase") and the IP (the constituent in which are located tense, aspect, etc.) of a Topic Phrase, headed by a functional head Topic, with the Topical constituent located in the Spec(ifier) of this functional head, and the remainder of the sentence (its **Comment**) as its complement. This is supposed to be a feature of Universal Grammar, hence found at some level of abstraction in all languages. It is also assumed that this universally observed TopicP has a corresponding universal semantic roles. Thus, even languages in otherwise unrelated languages like Japanese, English, Italian, and Bulu are predicted to have TopicP, and constituents in TopicP across all those languages are predicted to have a common semantic feature.

However, Roberts (2012) offers a cautionary note: Based on consideration of the distribution and felicity conditions on Topicalized and other supposedly Topic-marked constituents in a number of languages, Roberts argues that the pragmatic function of such an expression in, say, Italian, and that in another, like English, though similar in some vague respects, may be quite different. Even languages with close areal features, like Japanese and Korean, may show important differences in the felicity conditions on Topic-marking (*wa*-marked NPs in Japanese, *num*-marked in Korean). Topics across all these languages seem to be what the sentence in question is *about*, but that proves to have slightly different constraints and effects in different languages: "I strongly suspect that Topicality is really a family of closely-related

notions, rather than one notion which can be defined with a single set of necessary and sufficient conditions.” She concludes:

[T]he diversity observed in the languages briefly reviewed above argues that while [Rizzi’s] phrase structure may be appropriate to Italian, and perhaps for some other closely related Romance languages as well, it is unlikely as a syntactic universal. Both structurally and in terms of function, those elements of these languages which are utilized to reflect Topicality include morphological and prosodic markers, as well as functionally distinguished syntactic positions (both with and without long distance dependencies), and scrambling, thus constituting a set of very different structural devices.

I am reminded of a theme from Chomsky (1982:7ff,120f). Talking about notions like *passive*, *relativization* and *question-formation*, he points out that in early work in generative grammar, there were said to be universal rules, realized in all languages, that corresponded to those notions. Some of us can remember when people debated about the character of the presumed universal Passive transformation. But Chomsky argues:

The notions “passive,” “relativization”, etc., can be reconstructed as processes of a more general nature, with a functional role in grammar, but they are not “rules of grammar”.

We need not expect, in general, to find a close correlation between the functional role of such general processes and their formal properties, though there will naturally be some correlation. Languages may select from among the devices [available to them] to provide for such general processes as those that were considered to be specific rules in earlier work. At the same time, phenomena that appear to be related may prove to arise from the interaction of several components, some shared, accounting for the similarity. The full range of properties of some construction may often result from interaction of several components, its apparent complexity reducible to simple principles of separate subsystems.

Similarly, I would argue that Topic is not a structural universal that we expect to find in the *grammar* of all human languages. Instead, what we have is a loose functional universal, Topicality, so useful in human discourse that we tend to find specialized means of indicating it across a broad variety of languages. This may be the kind of thing that Jacobs (2001) has in mind in talking about *prototypical Topics*. It is useful because it helps lend coherence to discourse to talk about a single entity, often over an extended set of utterances, and to indicate when we have switched what we’re talking about. But even in languages as similar in many respects as Japanese and Korean, the realization of Topicality differs in subtle but interesting ways, depending in the brief data-set considered above on a difference in the presuppositions associated with the enclitics used *inter alia* to mark Topicality: whether they conventionally presuppose familiarity.

3. Methodology in Pragmatics

Methodological principles for pragmatic analysis:

To develop an adequate data set of utterances for pragmatic analysis, you must:

A. Control for context.

You cannot make or trust judgments about meaning out of the blue.

Insofar as it's possible that the attested meaning of an expression arises partly as a function of context, it's crucial to control for possibly relevant contextual factors in arguing for what the expression's conventional content is.

When you get big differences in judgment about the acceptability or the available interpretations for a given example, it's very likely that you have not adequately controlled for some relevant contextual factor.

A sub-principle: Identify and control independently for distinct parameters of context. These parameters are theoretical entities. If you identify parameters which are not distinguished in your theory, modify the theory.

A criterion for whether you have identified the right parameters of variation that bear on how context (helps to) give rise to the meaning of interest: Develop contextual minimal pairs, where the same expression does or does not carry the target meaning as a function of different contexts and where the contexts obviously vary in just the value for the hypothesized contextual parameter.

B. Control for *all features* of the structure of the expression uttered.

Especially, control for prosody.

Part of the structure of an uttered (as opposed to written) expression is its prosody. (e.g., Jefferson's criticism of the claim about Jupiter sentences)

C. Develop a toolbox of carefully constructed and constrained linguistic diagnostics for the features of content you are exploring. E.g., you'll need diagnostics for:

cancelability, or at least for failure to arise in different contexts

detachability (Grice's diagnostic)

projection: the family of sentences tests

at-issue status: what are the structurally-imposed constraints on the QUD

To explore the status of different implications of an expression across contexts, try diagnostics for projection.

See Matthewson (2004), Tonhauser et al. (2013), Tonhauser & Matthewson (2015) for relevant discussions, tips and examples.

4. Types of pragmatic theory

Some types of pragmatic theories which fail to meet the criteria outlined above:¹

¹ My apologies to my esteemed colleagues for the catchy labels. The work criticized here is quite valuable in many respects, and should be read carefully by any serious student of pragmatics. For example, the two-stage model is motivated by the desire to yield an appropriately constrained model of how context influences interpretation. Only by carefully considering exactly where that model fails us can we come to a better understanding of how context and conventional content *do* interact. And Sperber & Wilson's work has played a crucial role in bringing us to explore functional cognitive motivations for pragmatic principles, a motivation which I share: Pragmatics is not just a subject for *linguistics*, but is instead the study of how a particular cognitive module, here linguistic interpretation, is

ICING-ON-THE-CAKE PRAGMATIC THEORIES:

Two-stage account of how contextual factors affect what is said (Stanley & Szabo 2000, Perry 2001):

1. First calculate the truth conditional content of an utterance; the role of context is limited to giving the values of a few indexical elements. This yields (roughly) what the speaker *said*.
2. Subsequently, the maxims and contextual information come to bear on the truth conditional content determined in stage 1, yielding implicatures that enrich what is said.

[On one common view in philosophy of language:] The first way context may determine what is communicated is by affecting the semantic content, via resolution of the referential content of context-sensitive elements in the sentence uttered. This roughly corresponds to what Stanley and Szabo (2000, pp. 228-9) and Perry (2001, pp. 42ff.) call the semantic role of context. The second way is that context plays a role in determining what is communicated by the linguistic act over and above its semantic content. This is the genuinely pragmatic role of context (Ibid., pp.230-31)

(King & Stanley 2005)

I call the characterization of the role of the maxims and context in the second stage the icing-on-the-cake view of the role of pragmatics in determining meaning. We first calculate what is said, the truth conditional content of the utterance, and then “ice” it with some pragmatically derived inferences. A few pesky “indexicals”, typically taken to include anaphoric elements and merely implicit triggers (e.g. for domain restriction), as well as the indexicals we considered in lecture 5, somehow get their values from context using an arbitrary assignment function; the rest of the contextual affects, including any requiring practical reasoning, are added in phrase two, yielding a neat separation of semantics and pragmatics in interpretation.

On this approach, there is no necessary connection between the two roles played by context, and in principle one could have quite distinct theories of the two stages, and hence of the role of context in each. For example, the cooperative principle and maxims might only come to bear on the second stage, the first stage mediated by distinct principles, such as some notion of salience or the like.²

There are also empirical issues that these theories are hard-pressed to account for. Foremost among these are intrusive scalar implicatures—those which only arise non-globally, in the local context under the scope of an operator like disjunction or the conditional:

- (1) Kai ate the broccoli or he ate some of the peas. (Sauerland 2004)
- (2) If I give an extension to some of my students, the others will be upset. (Simons 2011)

constrained by more general cognitive principles and processes, e.g. intention recognition and the ways that intention constrains attention.

² Saul (2002) argues that Grice might not have denied the relevance of the maxims in the first stage as well, so I don't intend to try to pin too much on Grice. But this is the general picture that has come down to us from Grice, and it partly derives from his own assumption that implicatures are derived from reasoning about the independently derived *what is said*.

In (1), the second disjunct is often understood to mean that Kai ate some *but not all* of the peas. But the whole disjunction doesn't implicate that Kai didn't eat all of the peas (or anything about his eating peas, for that matter). Similarly, the *if*-clause of the conditional in (2) is understood to mean that the speaker gives an extension to some *but not all* of her students, with *the others* understood to be anaphoric to the implicated complement set of those who got the extension. But again, the whole conditional fails to carry the implication that the speaker didn't give an extension to all of her students. These are scalar implicatures (Grice 1967; Horn 1972, 1984), usually understood to be part of the second stage of interpretation, post truth-conditional stage 1. Sauerland (2012:5) describes the problem as follows:

...the pragmatic reasoning [involved in generating a scalar implicature] is necessarily global: it can only apply to entire speech acts. This follows because the maxims of quality cannot generally apply to embedded sentences: For example, the sentence *P* cannot be subject to either maxim of quality when it occurs embedded [in] *I don't think that P*: the speaker cannot have any evidence for *P*, since the speaker believes *P* to be false. Therefore, the pragmatic approach predicts that implicatures essentially should be restricted to the level of whole sentences.

This is not to mention that the same kinds of abductive inference that play a role in implicature generation also play a role in resolving the type of anaphoric presupposition relegated to stage 1 on this account, especially as we saw in lecture 4, when the resolution of the anaphora crucially relies on information only available in the local context under the scope of an operator, as in the donkey sentences. So if such reasoning is an on-going part of how we understand an utterance, why wouldn't we expect it to play a more general role in the determination of the proposition expressed, as in implicature generation?

On the other hand, we find theories that go over to an unrestrained interaction between compositional interpretation and practical reasoning. I call these kinds of theories:

WILD WEST PRAGMATICS

Unbridled pragmatic inferences, "free enrichment", even in lexical interpretation.

For example, Recanati (2004) rejects both the two-stage view and the limitation of first stage (non-implicature) contextual effects to indexicals, arguing that a wide range of pragmatic effects, including "modulation" of the usual conventional content of a lexical item (often called lexical *coercion*), take place in the course of determining the proposition expressed: they are not "post-propositional", but involved in a "truth conditional pragmatics". Thus, he rejects the old "essentially modular picture according to which semantics and pragmatics do not mix" (p. 2): "the intuitive truth-conditions of an utterance are affected by free pragmatic processes" (p.12). As a consequence, in his "truth conditional pragmatics", "the top-down pragmatic processes responsible for [pragmatic] modulation" do not presuppose "the prior identification of what is said" (2004:16-17).

Another kind of Wild West theory is the Relevance Theory of Sperber & Wilson (1985), Carston (2002), among others. They're reductionist: arguing that we only need one Gricean principle, Relevance, which they give a purely quantitative definition. Here is a recent version:

Relevance of an input to an individual:

- a. Other things being equal, the greater the positive cognitive effects [e.g., true conclusions] achieved by processing an input, the greater the relevance of the input to the individual at that time.
- b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time. (Sperber & Wilson 2004)

This is a purely quantitative characterization, not relativized to other factors. The more inferences, the better, up to cognitive efficiency. As a consequence, the pragmatic inferencing set loose by their principle is too unconstrained. To illustrate what this means, consider their (3):

- (3) A: Do you want some coffee?
B: Coffee would keep me awake. Sperber & Wilson (1985)

As they note, B's reply can be taken by A as an answer to A's question just in case A knows whether B wants to stay awake. Knowing, say, *B wants to stay awake*, and in the absence of any information that would suggest B doesn't like coffee, A makes the abductive inference that B would like some coffee.

B desires q
p → q
B is rational and knows that p → q
therefore, B desires p

Fine and dandy. The problem is that their theory of Relevance fails to clearly predict that this is just the inferential process A will pursue, and having done so, stop there. Any proposition *p* can be combined recursively with any number of other "mentally represented assumptions" made by the hearer to yield an infinite set of propositions.

e.g. if we have *p*, given other propositions *q, r, s, . . .*, we can yield:

p or q	coffee would keep me awake or I don't need my umbrella
p or r	coffee would keep me awake or Obama will win the election
p or s	coffee would keep me awake or the moon is made of green cheese
...	
q → p	either I don't need my umbrella or coffee would keep me awake
...	
¬¬p	It's not that coffee wouldn't keep me awake
...	
(p & q) or (p & ¬q)	Either coffee would keep me awake and I don't need my umbrella, or coffee would keep me awake and I need my umbrella

etc.

Where do we start, and when do we put on the brakes? Why do we take the most important implications, the really obvious answer to the question, to be drawn first, and not others in the list above? If we did started with other inferences, and then ran out of steam (too much effort!), then the obvious implicature never would get drawn. So why do we draw the inference that we

do? Relevance Theory not only fails to predict where the inferences will start and *when they will stop*, but it fails to predict that *we will draw the attested inferences*, hence both under- and over-generating, failing to hit the mark predictively.

I diagnose the problem in the purely quantitative characterization of Relevance. In lecture 2, we considered a different characterization, one that is inherently relational, hence qualitative. An utterance is Relevant in a given context *relative to the QUD*, just in case it furthers the interlocutors' commitment to addressing that question. This commitment, then, both drives interpretation, leading us to generate implicatures to help understand how an utterance is Relevant (van Kuppevelt 1996, Thomason 1990, Welker 1994, Ginzburg 1994) and, because irRelevance is infelicitous, constraining the practical reasoning involved so that it need not proceed once Relevance has been grasped.³

An altogether different strategy for dealing with problems with the two-stage account is to just avoid pragmatic theory altogether, except when it fits into the neat two stages. Thus, one may try to force pragmatic phenomena into syntax and compositional semantics. But this has its own down-side. Remember that garbage attracts worms!:

KEEP-THE-LID-ON APPROACHES

Far from being a receptacle for discardables, the pragmatic waste-basket is more like a can of worms: the problems that the basket contains tend to spill over into all the domains of linguistic thinking. Instead of making linguistics neat and clean, in the best logical or mathematical style, the waste-basket imposes its unruly order on our explanations. . . .

Jacob L. Mey (2001) *Pragmatics: An Introduction* 2nd edition, Blackwell, p.21

To avoid opening the can of worms, insofar as possible avoid pragmatics, and account for *prima facie* pragmatic phenomena stick to the two-stage model by positing various invisible projections and operators in Logical Form. No messy abductive inferences intrude in first-phase processing, only coming to bear on its output (i.e., preserving the *Icing on the Cake* approach, above).

This contemporary tendency to locate pragmatic accounts in syntactic LF persists even when the resulting syntactic structure has to be extremely abstract (prismatic right-branching with innumerable functional projections) and the implicit structural elaboration is without syntactic motivation *per se*. Thus, such accounts become ultimately non-falsifiable.

Here Bar Hillel's warning is relevant:

³ It's not that Sperber & Wilson are ignorant of the fact that Relevance is relativized to other factors. In fact, they themselves hint at what I have in mind in their 2004 paper:

When is an input relevant? Intuitively, an input (a sight, a sound, an utterance, a memory) is relevant to an individual when it connects with background information he has available to yield conclusions **that matter to him: say, by answering a question he had in mind, improving his knowledge on a certain topic, settling a doubt, confirming a suspicion, or correcting a mistaken impression...** [my emphasis, CR]

But they do not build this insight into their definition of Relevance.

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.

Yehoshua Bar-Hillel (1971) “Out of the Pragmatic Wastebasket”
Linguistic Inquiry 2.3:404.

I don't want to accuse any of these authors of really trying to sweep the can of worms under the rug ☺, but instead to suggest that they proceed without a clear view of what a pragmatic theory should be, or of the range of phenomena we would expect it to predict and explain. Instead, in the absence of a clear pragmatic theory that makes predictions, it's both more convenient and more appealing to give accounts in terms of the tools one already knows well and has at one's disposal. But the end result is just a collection of odd principles and broad claims. No integrated pragmatic theory, just very clever post hoc explanations.

I offer only one example of this type of approach, which has had quite a big influence over the past decade: Chierchia (2004,2006) proposed that local Quantity implicatures like those in (1), (2) above are not pragmatic, but instead involve an implicit exhaustivity operator EXH in LF. Subsequent work by Fox (2007) and Chierchia et al. (2012) expand and elaborate this account, while Geurts (2010) and Sauerland (2012), among others, offer a critical response. There are very good motivations for going beyond the standard neo-Gricean accounts consistent with the two-stage model. Of course, we cannot readily capture most of these implicatures by reasoning over the proposition expressed by the whole utterance (though see Geurts 2010 for discussion of how many of these *can* be generated in the standard second stage). Another is that scalar implicatures have proven to be very robust. For example, Bott & Noveck (2004) report on experimental work, finding that almost 60% of participants judge (4) to be false:

(4) **Some** elephants are mammals.

It isn't clear that the pragmatic theory predicts such robust results. However, Chemla (2009) showed experimentally that the grammatical “local” approach with EXH predicts scalar readings which experimental subjects did not see. This debate is subtle and quite technical, so we cannot review all the relevant literature here. Sauerland (2012) offers an excellent overview of the relevant literature; see also Schlenker (2012).

But there is some reason to think that the LF-only approach to Scalar implicatures is short-sighted. That is, it fails to consider how this type of implicature might be related to others that Grice discussed. In particular, Simons (2011) argues that we should draw a different type of conclusion from embedded implicatures. One important aspect of her argument is a claim that embedded implicatures include not only scalar, but also Relevance implicatures. She calls the following “local enrichment implicatures” (Horn's (1984) R-implicatures; Levinson's (2000) I-implicatures):

(5) A: How will you get to SALT?

B: Either I'll rent a car or I'll fly.

'Either I'll rent a car **and drive that car to SALT** or I'll fly **to SALT**' (Simons 2011)

(6) If you need to get to SALT, you could rent a car or you could fly.

Local issue: how to get to SALT

In (5), each disjunct is understood to be about a way of getting to SALT; one might take them to be Relevance implicatures since they seem to arise as an explanation of how renting a car or flying are Relevant to the preceding question. In (6), the speaker doesn't implicate that the addressee definitely *will* go to SALT, but the disjunctive consequent of the conditional has the same interpretation as the matrix disjunction in (5). These are, thus, embedded just like the scalar implicatures in (1) and (2). But no one has argued that Relevance implicatures should be generated by some type of operator in logical form. It seems that whatever account we give of the implicatures in (5) and (6) should be applicable to (1) and (2) as well, making the grammatical account of scalar implicatures unnecessary *unless it can be shown that there are special features of the scalar cases which cannot be captured in the pragmatic account*. It may be that there *are* such special features. But to date the debates has ignored that question, focusing instead merely on the truth conditional predictions of the accounts with EXH vs. those using global pragmatic reasoning for stage 2 pragmatic enrichment.

Simons is well aware of the problems embedded implicature poses for the classical Gricean story. She characterizes two such problems (noticed elsewhere in the prior literature, of course):

1. the **calculation problem**: For Grice, conversational implicatures are calculated on the basis of *what is said*, and generally he seems to assume that "Saying what you say comes first; conversational implicatures come after" (Simons 2010). Neale (1992) and other scholars seem to agree that by 'what is said' Grice meant the proposition expressed by a sentence on an occasion of use—an utterance in our terms. But this characterization leaves no room for implicatures that arise solely utterance-internal, and do not achieve the status of global implicatures.
2. the **compositionality problem**: In the embedded implicature examples, the conversational implicatures contribute to the truth conditional content of the utterance. But the disjunction and conditional operators are supposed to be truth functional "at least in the sense of having access only to the truth conditional (conventional) content of the component clauses" (Simons 2000:5). Thus, it seems difficult to maintain both a strictly compositional semantic theory and one which accounts for these implicatures.

But she points out (2010:6):

There is no reason why, as theorists, we have to take Grice's views as an unseparable whole. The fundamental ideas underlying the notion of implicature are clearly separable from Grice's expressed views about the nature of "what is said" and about the semantic content of particular items. For example, Grice argued that natural language conditionals have the semantics of material implication, and used the notion of conversational implicature to try to make this view plausible. Formal linguists have by now (I think) universally rejected this account of conditionals; but this does not prevent us from maintaining a Gricean account of conversational inference. Similarly, the Cooperative Principle and the associated maxims are a first stab at formulating the appropriate

principles, not the last word on the matter. One can maintain a broadly Gricean outlook while modifying the details of the account of how implicatures are generated.

In developing her own proposal, she cites Walker (1975:151) (cited in Recanati 2003):

[The Conversational Hypothesis] holds that by a particular utterance on a particular occasion the speaker can convey more than his utterance strictly means through relying on a general recognition of Grice's Cooperative Principle. It is therefore concerned with utterances, whether they constitute self-standing speech acts or not; an utterance of a subordinate clause, as in the antecedent of a conditional, is still an utterance, and therefore may convey conversationally more than it literally means. It may convey, for example, a further condition on which the consequent is taken to depend.

Similar ideas about implicature calculation in sub-parts of an utterance can be found in Green (1998:fn.40) and Kadmon (2001). Certainly they would appear to be compatible with the general program of dynamic interpretation, as Kadmon argues. Simons then attempts to develop these ideas.

This, then, leads us to consideration of another type of pragmatic theory, one that realizes what Stalnaker (2014) calls *dynamic pragmatics*.

Dynamic Pragmatics:

The right kind of pragmatic theory is quite likely to be the kind discussed in Kadmon 2001, Geurts 2010, Simons 2012, Stalnaker 2014, Portner (2015), and the two phase DRT accounts of Kamp et al. (2011). In such accounts, as in Karttunen's (1974) schemata for presupposition projection considered in detail in lecture 3, context is updated *in the course of interpretation*, and in doing so one must make certain inferences. Here is how Simons (2011) characterizes it:

The dynamic pragmatic view

The production of a complex sentence made up of subordinate clauses constitutes an instruction to carry out a structured update to the conversational context/DRS, made up of several sub-updates. The conventional content of a subordinate clause is only a guide to the sub-update intended by the speaker.

Moreover, Thomason (1990) gets at something fundamental that also underlies my own approach to pragmatic theory. Here is a quick paraphrase:

- ❖ Rational interactive agents approach: Pragmatic principles are not stipulated, nor are they of the nature of categorical grammatical rules. They follow from the nature of the language game, i.e. sharing information (meaning_{nn}) via intention-recognition.
- ❖ Relevance is guided, inference constrained by intention-recognition:
 - ❖ QUD models: Ginzburg (1996, 2012), Roberts (1996/2012, 2004)

The point, then, of the QUD models, is to look at how these inferences are *constrained*, both globally and locally. This is supposed to tame the Wild West, while giving what is truly pragmatic its due.

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