'Free' enrichment and the nature of pragmatic constraints[*]

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Abstract

Contextualist theories of utterance interpretation posit a process of free pragmatic enrichment that contributes 'unarticulated constituents' of the explicit content of utterances. In this paper, I address the main concern about this process, which is that it is not sufficiently constrained, and appears to allow for enrichments that clearly do not occur. One variety of this overgeneration objection is that the contextualist seems to incorrectly predict that extra propositions and semantic arguments and predicates can be composed into explicit content, and the first part of the paper responds to this charge. The explanation turns on the fact that enrichment is a local (non-global) process, while complete propositions, arguments and so on, are derived by global inferences, so that the latter are properly inferentially warranted and can function independently as premises or conclusions in inferences. I also suggest that, from this distinction between global and local pragmatic processes, there follows a further constraint on enrichment, which is that, in contrast to conversational implicatures, unarticulated constituents cannot consist of information that is 'at issue' in the context of utterance. I go on to discuss the more general issue of how much systematicity is required, and what kinds of predictions and explanations should be expected from a contextualist account. The main point is that the criticisms rest on a failure to properly appreciate how the occurrence or non-occurrence of such free, or 'optional', pragmatic processes depends on the details of the particular context, including the clues provided by the linguistic form. When the context-specific nature of the process is taken into account, it can be seen to be sufficiently constrained by pragmatic mechanisms and to have the requisite explanatory power.

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1 Introduction: Contextualism and semantic indexicalism

The content explicitly communicated by an utterance often appears to go well beyond the result of decoding the linguistic meaning, assigning values to all the parts, and composing the results. Consider utterances of sentences (1) and (2):

(1) If it rains, we'll stay at home.
(2) Everyone's ready.

In both cases, normal speaker-hearer intuitions are that what the speaker intended to assert, or explicitly express, is something more specific than what results from simply saturating the indexical elements (such as "we" in (1), or the tense indicators). I take the explicit content to be the basis on which we would intuitively judge the utterance to be true or false[1], and will refer to it as explicature or (intuitive) truth-conditional content. Given the appropriate context, a possible explicature of (1) is IF IT RAINS IN LONDON, WE'LL STAY AT HOME[2]. The truth conditions of the utterance are not that if it rains just anywhere, the people in question will stay at home, with the specific location featuring only at the level of implicature. In (2), grasping the explicature requires that the hearer work out what it is that everyone is ready *for*, and, since the speaker is not talking about everyone *in the world*, infer what more restricted domain of people she intends.

What underpins the provision of these 'extra' elements of explicit content? According to the contextualist, at least some such elements are 'unarticulated constituents' – that is, there is nothing in the standing linguistic meaning indicating that some value is to be supplied; rather, they are composed into the content by a pragmatically motivated and constrained process known as 'free enrichment' ('free' meaning free of *linguistic* control)[3]. On this approach, the role of linguistic meaning is not to determine the utterance's truth-conditional content, modulo disambiguation and reference assignment; rather, linguistic meaning is seen as just one (albeit often very

[1] As this is agreed on by all the authors involved in the present debate, I simply assume it here. See, e.g., Carston (2002), Stanley (2005b), Recanati (2004) for justification.

[2] Small capitals indicate propositional contents. These are, of course, only rough indications, abstracting away from many details (such as the fact that propositional contents will not contain pronouns, demonstratives, and so on, requiring saturation).

[3] Bach (1994), Bezuidenhout (2002), Carston (1988, 2002), Neale (2004, 2007), Recanati (1989, 2004), Soames (forthcoming), Sperber and Wilson (1986/1995), Stainton (2006) are advocates of the view that there are unarticulated constituents of explicature. Though they don't all approve of being called 'contextualists', for the purposes of this paper I'll group them under this label, to distinguish them from those who think that context affects explicature only when linguistically mandated.

detailed) among several kinds of evidence that the audience uses to infer communicated meaning. On this view of the role of language, it is to be expected that linguistic encoding need not come very near to determining explicit content or even its structure (i.e. number and arrangement of constituents).

Many philosophers and linguists are skeptical about the existence of this process of enrichment. The key objection to it, made forcefully by Stanley (2002, 2005a), is a worry about its apparently unconstrained and unsystematic nature: it appears to allow for, and predict, enrichments that do not occur. Because the paper concentrates on giving a response to this charge, I won't assess in any detail here the main alternative approach to this level of content, which is the 'hidden indexical' account of Stanley and others, who I label 'semanticists'[4]; I just give some brief background in order to situate and motivate the present enterprise.

The semanticist broadly agrees with the contextualist on where to draw the explicit-implicit distinction, accepting that explicature goes well beyond the overt (phonologically realized) material. So, to account for the elements of explicature that are not traceable to *overt* linguistic form (the location in example (1); the quantifier domain in (2)), he posits *covert* indexicals or semantic parameters in the linguistic expression-type meaning. For example, weather verbs, as in (1), might have an attached location variable, to be assigned an appropriate value in context. In (2), the quantifier domain would be restricted by assigning a value to a domain variable encoded in the quantifier phrase 'everyone'.

Contextualists have responded by questioning (a) whether there is linguistic evidence for any or much of the extensive hidden linguistic structure that the semanticist assumes, and (b) regardless of lack of linguistic evidence, whether all genuine effects of context on explicature can plausibly be accounted for anyway by such structure. Regarding (a), there may be evidence for hidden indexicals with words like "ready", "local", and possibly quantifier phrases[5]. Regarding (b), the words just

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[4] So-called because this is a semantically-oriented approach to this level of content, in contrast to the 'pragmatic' approach of the contextualist. Stanley (2000, 2002, 2005a), King and Stanley (2005), Martí (2006), Stanley and Szabó (2000), Taylor (2001) are some of the main representatives of a hidden indexical account.

[5] Two types of linguistic argument have been suggested. The binding argument (Stanley 2000) showed that some of the disputed elements of meaning, such as quantifier domains, locations, and the comparison class with comparative adjectives like "small", could be bound, and took this to indicate the presence of a bindable variable in the standing linguistic meaning of the sentence. However, the argument depends on the methodological presupposition, which Stanley doesn't justify (as he says, it's a presupposition) that semantic and syntactic binding coincide. This has been challenged by Carston (2002), Neale (2004), and Recanati (2004), while Jackendoff (2002) and Culicover and Jackendoff (2005) provide an alternative to positing syntactic variables to account for binding. More convincing are weak crossover effects, which may provide evidence for indexicals in words such as

mentioned, particularly "ready" and "local" and perhaps also comparative adjectives such as "tall" and "rich", are the most likely cases of indexicality, because such expressions seem inherently underdetermined: they are always incomplete without the specification of a particular kind of value. Conversely, the key cases for the contextualist are those where the effects of context are clearly optional, not occurring in every context, hence unlikely to be the result of assigning a value to an indexical that is part of the standing linguistic meaning and mandates saturation. These include metonymy or deferred reference, as in (3), the cause-consequence relation communicated in certain cases of "and"-conjunction, such as that in (4), and the referential use of definite descriptions in (5):

(3) The ham sandwich wants his bill.
(4) Mary double parked and John ran into her.
(5) The guy over there is a famous philosopher.

Metonymy is widely agreed (Carston 2002, Recanati 2004, Stanley 2005a) to contribute to explicature, rather than to feature merely at the level of implicature. And there is agreement among these authors that the deferred interpretation is not traceable to an operator or variable in the linguistic form[6]: the fact that the deferred interpretation is clearly optional, and that practically any expression in the language can be given a deferred interpretation, suggests that, as Stanley (2005a: 229) says, 'the phenomenon of deferred reference does not have to do with the semantics [= standing linguistic meaning] of any particular construction. Rather, it involves how we can *use* constructions that have a certain semantics to communicate something different than such constructions semantically express.' Moving on to the next example, the cause-consequence relation clearly contributes to the proposition on the basis of which an utterance of (4) (appropriately contextualized) would be judged true or false, and would be agreed or disagreed with (e.g. "No, John ran into her and that's why she stopped where she did"). But none of the elements of this sentence are likely candidates for harboring an indexical that could account for this causal meaning

"ready", "local", and perhaps also some quantifiers (see Marti 2003), though there is not complete consensus among linguists exactly what conclusions should be drawn from weak crossover.

[6] A recent attempt to handle some kinds of figurative language semantically is Stern (2000, 2006). He posits a metaphor operator that can apply to any subpart of the linguistic form and generate a metaphorical interpretation, and he suggests that such an account would carry over to metonymy. An older one is Sag (1981). Since the main representatives of the broader semanticist approach agree that metonymy is not a semantic phenomenon, I won't consider those accounts here. For criticisms of Stern's account of metaphor, which would, likewise, carry over to an attempt to deal with metonymy in a similar way, see Camp (2005) and Wearing (2006); on metonymy specifically, see Stanley (2005a: 228-30).

getting composed into explicature. I won't review the arguments here[7], but just give what I hope is a fair characterization of the current state of play. Even if domain restriction and some other effects turn out to be better analysed as underpinned by covert linguistic structure, it is highly unlikely that **all** effects of context on explicature are traceable to linguistic meaning. So the question of exactly which effects are linguistically mandated, which pragmatically, can be set aside here: The important point is that, once you admit *any* free pragmatic effect on explicature, then you are open to the charge of unconstrainedness and overgeneration that has been leveled against the contextualist. Unless all such effects can be excluded, then like it or not, everyone's syntactic-semantic theory will need supplementing by an account of what constraints allow free pragmatic processes to 'intrude' on explicature in some places, but exclude them elsewhere.

In the next section, I introduce in more detail the concern about unsystematicity and lack of constraints on explicature that contextualism is held to suffer from. Section 3 develops a solution to Stanley's particular version of the overgeneration objection, and section 4 investigates further the nature of pragmatic constraints, illustrating how, once the context-specific nature of pragmatic processes is properly appreciated, the contextualist account has far more explanatory power than its critics have acknowledged. Finally, I revisit the issue of systematicity in the light of the discussion in previous sections, and consider what sorts of predictions and explanations we should want from an account of enrichment.

2 Pragmatics, explicature, and systematicity

The most serious objection to the existence of free enrichment is the worry that it is unsystematic and unconstrained, so it massively overgenerates interpretations of utterances. Since there are, clearly, restrictions on what we can communicate explicitly, but these restrictions appear to be incompatible with enrichment, that has been taken as a good reason to deny the existence of enrichment and pursue the hypothesis that all pragmatic effects on truth conditions can be traced to logical form. This objection has been made overtly by Stanley (2002, 2005a, 2007), but is also evident in the skepticism about the prospects for a principled, systematic account expressed by many others, including Martí (2006), Ostertag (2008), Szabó (2001), and Weiskopf (2007). Ostertag (2008), for instance, is concerned that, 'while the Contextualist remains faithful to speaker's intuitions, there is a question whether she can give a principled account of how we arrive at the relevant proposition. If the

[7] For the details, see Carston (2002: section 2.7), Hall (2008a: section 3), Neale (2004), Recanati (2002).

mechanisms underlying pragmatic enrichment are truly "free" – unconstrained by logical form – then there is a real worry that our speaker's capacity to interpret those utterances freely enriched by context will elude systematic treatment.'

This section first introduces the general objection and the specific way that Stanley develops it, followed by some brief comments on enrichment versus implicature, in preparation for responding in the next section to Stanley's overgeneration objection.

Firstly, some points that contextualists and semanticists agree on, beyond what the object of explanation is (that is, the intuitive truth-conditional content or 'explicature'). Both camps start from the assumption that the recovery of sentence (type) meaning is systematic. It is recovered by linguistic decoding, which is algorithmic, unaffected by context: for each token of a given sentence type, the decoder/parser delivers the same logical form (or set of logical forms, in cases of lexical or structural ambiguity). And turning to speaker's meaning, the recovery of (particularized) conversational implicatures is obviously not systematic in the way that linguistic decoding is – it is not algorithmic; rather, it involves abductive inference – hypothesis formation and testing.

So there is agreement that getting to the conveyed meaning involves both (algorithmic, systematic) linguistic decoding and non-demonstrative pragmatic inference, including at least one variety of 'free' pragmatic process – that is, recovery of conversational implicatures. They also agree that there is extensive context-sensitivity, and hence, extensive pragmatic input to explicatures, which are also speaker-meant propositions. However, the relationship between sentence meaning and explicature is, in some ways, more systematic than that between sentence meaning and (particularized conversational) implicatures. While there is clearly no systematic mapping between sentence meaning and the *content* of the explicature (at least of its context-sensitive elements), explicature is obviously far more constrained by sentence meaning than conversational implicatures are. Moreover, when the sentence meaning contains quantifiers, such as "every" and definite descriptions, we regularly (always?) complete them; with weather verbs, we infer the location; given "and"-conjunctions, we infer what relation holds between the states of affairs represented by the conjuncts, and so on.

The semanticist thesis – that all truth-conditional effects of context are traceable to logical form – seems well-suited to capture such regularities. Although the mechanism of saturation is hardly better understood than that of enrichment[8], the semanticist

[8] Neale (2007) develops this point at length, in response to the implication, found in the work of semanticists who object to the existence of free enrichment, that saturation is well-understood, and thus preferable. As he says, 'it would be extremely misleading for a [...] semanticist to claim [...] that a [...] pragmatist who talks about pragmatic enrichment [..] in characterizing the contributions made to the contents of the propositions we express is appealing to "magical" ellipsis or "magical" enrichment, if the implication in such a claim is that nothing equally "magical" is involved in talk of

approach at least appears to offer clear, straightforward predictions about where context can affect explicature and, importantly, where it *cannot*: where there is an indexical or parameter in the logical form of the sentence, requiring saturation, then (and only then) context affects explicature. Otherwise, there are no pragmatic contributions: any other pragmatic effects result in implicatures.

In contrast, on the contextualist approach, which allows for free pragmatic processes to 'intrude' on explicature, the prospect of a systematic account of how we get from sentence meaning to explicature apparently diminishes – the process of free enrichment is seen as unsystematic and intractable to theorizing. This in itself would not be a particularly good reason to reject the existence of enrichment: after all, the existence of conversational implicature is pretty much universally accepted, and *it* seems no less unsystematic. However, this lack of systematicity leads to a particular kind of objection to enrichment – an objection that is avoided (in principle, anyway) by the alternative account that the semanticist is offering.

With free pragmatic processes in general, it is relatively straightforward to give an explanation for why they do or don't occur. For example, hearers will infer a 'free' pragmatic meaning, such as an implicature, if: it is required if the interpretation is to meet the expected level of informativeness or relevance; the contextual premises for doing so are sufficiently accessible; and the speaker can reasonably be taken to have intended the hearer to do this. But with free enrichment, the situation is in certain respects different. This point has been highlighted by Stanley (2002), who charges the contextualist account with massively overgenerating interpretations of utterances at the level of explicature: free enrichment appears too powerful and unconstrained a process. If pragmatics can affect explicature 'freely' – that is, not only where its contribution is mandated by linguistic form – then explanations and predictions become far less straightforward, if possible at all. Stanley's way of developing this point is as follows. He claims that, if constituents such as quantifier domains, locations, and so on, can be composed into explicature through free enrichment, then the contextualist should predict that we can use the sentences in (6)a and (7)a to explicitly express the propositions in (b):

(6) a. Everyone likes Sally.
    b. EVERYONE$_I$ LIKES SALLY AND HIS$_I$ MOTHER.
(7) a. Every Frenchman is seated.
    b. EVERY FRENCHMAN OR DUTCHMAN IN THE CLASS IS SEATED.

Everyone would agree that these cannot be the explicatures. But, if the process of

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contexts assigning "salient" individuals, properties, sets, or functions to aphonic "indexicals" in syntax.' (2007: 81)

enrichment freely supplies propositional constituents beyond what is mandated by the linguistic meaning, constrained only by pragmatic considerations such as what assumptions are contextually salient, then surely, goes Stanley's argument, extra conjuncts, disjuncts, and more, should be able to be composed into the explicit content (2002, 2005a). In contrast, the semanticist has a simple answer to why an utterance of ((6)a) or ((7)a) could never explicitly express the propositions in (6)b and (7)b): there is no element in the logical form of (6)a and (7)a requiring the provision of such constituents. Responding to this kind of counterexample will be the aim of the next section.

What the semanticist thesis is aiming to do is make tractable an account of how we grasp an utterance's truth conditions, or explicature. Our grasp of explicature feels more systematic than other kinds of inferential process, which creates the suspicion that it is unlikely to be determined by pragmatic inference to such an extent as contextualists think: it must be more linguistically controlled. The free enrichment account is seen as too unsystematic: it is difficult to see how the process is sufficiently constrained by general considerations of rationality. Yet, *pace* Stanley's complaint that 'if the bulk of intuitive truth conditions were determined by extra-linguistic context, it would become unclear why we would need to utter sentences at all' (2007: 17)[9], the contextualist can acknowledge the important role that linguistic meaning plays in shaping explicature, without accepting the semanticist claim that all pragmatic processes affecting explicature are linguistically mandated. Because linguistic meaning is recovered algorithmically, the hearer can generally be certain that the speaker intended him to recover this meaning[10]. This contrasts with pragmatic inference, which, by virtue of being hypothesis formation and confirmation – constrained guesswork – involves risk: the hearer can never be completely certain that what he recovers is what the speaker intended. So, within the domain of free pragmatic processes (implicatures and enrichment), those that contribute to truth-conditional interpretation are constrained far more than implicatures are simply by the fact that the former are operating on a highly determinate, encoded content: they have to incorporate and develop the linguistic meaning; implicatures are not so constrained. So, if you accept, as everyone does, that free pragmatic processes such as implicature exist, than their contribution to truth conditions – where the starting point is a

[9] And, in a closely related vein, 'if the advocates of truth-conditional pragmatics are correct, then the proper place to situate an account of the bulk of the truth-conditional interpretation of linguistic assertions is in whatever account one has of reasoning generally, regardless of its subject-matter. If, by contrast, the truth-conditional interpretation of assertions is entirely a matter of semantics, then the truth-conditional interpretation of assertions is special in a way that other kinds of reasoning processes are not' (2000: 398).

[10] With the usual caveats about cases of mishearing, or slips of the tongue.

determinate, linguistically encoded meaning – seems a promising place to start investigating how they work.

In the next section, I begin to address the problem of how the contextualist should explain the lack of certain interpretations of utterances that appear to be compatible with general pragmatic principles. First I discuss the kind of example used by Stanley as cases of overgeneration, and suggest why inferred propositions, conjuncts, and so on, cannot be incorporated into explicature, despite the apparent lack of anything in the contextualist theory to preclude this: the way in which the overall interpretation is warranted excludes global inferences. Having concluded that enrichment is constrained to be local, I go on to illustrate in more detail what this involves, before moving on in the subsequent sections to consider further factors that influence when enrichment does or does not occur.

3 A solution to the overgeneration objection

3.1 Excluding global inference

Given the right context, just about anything can be part of the utterance's *implicatures*. But if one grants that certain entirely pragmatically motivated and derived elements can enter into explicature, how can one give a principled explanation of why other elements are excluded?

As a matter of empirical fact, extra propositions, or extra semantic arguments or predicates generally (e.g. conjuncts, disjuncts) cannot be composed into explicature as unarticulated constituents. We saw above (examples (6) and (7)) that an utterance of the form "P" cannot have the explicit content P AND Q, or P OR Q. Here are some more examples:

(8) A: [Deciding what film to see] What about *Black Dahlia*?
B: I want to watch a comedy.

(9) She is happy.

What is communicated by B's reply in (8) is, roughly, B DOESN'T WANT TO SEE BLACK DAHLIA BECAUSE SHE WANTS TO WATCH A COMEDY AND BD IS NOT A COMEDY. But not all of this meaning enters into the explicature, which is only B WANTS TO WATCH A COMEDY. In (9), the explicature would involve assigning reference, and perhaps some narrowing of the adjective "happy" to a more specific concept, but could not be, e.g., MARY IS HAPPY BECAUSE IT IS HER BIRTHDAY.

Elbourne suggests that the following generalization would rule out examples such as (8)-(9), and (6)-(7) in the previous section, as a problem:

> When the result of translating the sentence uttered into a language of thought string is fully propositional, it is not possible in pragmatic enrichment to add extra arguments to those contributed by items in the syntax. (Elbourne 2008: 99)

This excludes extra propositions, NP-conjuncts and -disjuncts, and so on (and to 'extra arguments' should be added 'extra predicates', in order to rule out, e.g., VP-conjuncts). Elbourne continues that this generalization looks rather ad hoc, and that the defenders of the pragmatic enrichment approach would need to 'be able to bring their various pragmatic theories to bear in order to try to derive this principle from deeper and more general ones' (ibid: 100).

It has already been noted, by Recanati (2004: chapter 2), that free enrichment is a *local* process. What is meant by a local pragmatic process is one that modifies *subparts* of the linguistic logical form, and, as Recanati puts it, it is the modified meaning of these subparts that goes into the composition process. The addition of extra semantic arguments/predicates or propositions, in contrast, is not a case of just modifying a subpart of the linguistically encoded meaning; rather, it is a *global* process in that it operates on fully propositional forms. I return later to elaborate a little further on what a 'local' pragmatic process is, and for now just illustrate it using some of the examples of enrichment that have been proposed by contextualists (the material outside square brackets is the utterance; inside brackets are possible unarticulated constituents):

(10) The ham sandwich [ORDERER] wants his bill.
(11) It will take [A LONG] time.
(12) Every boy [IN THE CLASS] was there.
(13) I've got nothing [SUITABLE FOR A WEDDING] to wear.

Recanati (1993, 2004), Sag (1981) and Nunberg (1995) discuss metonymies such as (10), and point out that (when it's appropriately contextualised) we don't seem to first compute the absurd 'literal' meaning on which a culinary item wants the bill, then, recognizing the absurdity, infer that the speaker was referring to the person who ordered it. Instead, the deferred meaning is computed at the local level, and is what goes into the composition process. Enrichment of (11) involves modification of just the noun, rather than recovery first of the trivially true proposition that the activity in question will take place over a period of time, and then the calculation that what the speaker is trying to communicate is something else. Likewise, domain restriction, as in utterances of (12) and (13), can also be seen to be local: Recanati (1993: 262-3) treats (12) as enrichment of the predicate 'boy' to BOY IN THE CLASS, rather than the whole proposition being enriched.

But what emerges from the discussion of Stanley (2002) and Elbourne (2008) is that it is not enough for the contextualist to define enrichment as not including adding these extra propositions or semantic arguments or predicates. They claim that a theory that posits these powerful pragmatic processes able to freely enter into truth-conditional content without any linguistic mandate, appears to contain nothing to exclude extra propositions that are salient, relevant, etc., from similarly 'intruding'. So, in the rest of this section, I show how this locality constraint is motivated.

The reason why enrichment has to be local follows from the way in which the interpretation of an utterance is inferentially warranted. In order to show this, I need to first sketch some assumptions about how pragmatic processing works, and particularly about the explicit-implicit distinction.

The key point about the distinction between explicit and implicit content is how each is derived: linguistic decoding produces a logical form which underdetermines explicature in various ways – it (virtually) always requires at least saturation, and generally some degree of enrichment. So explicature is recovered by a combination of linguistic decoding and pragmatic inference, while implicatures are calculated purely inferentially from a set of fully propositional premises. Because implicatures are inferred as conclusions from the premises consisting of explicature and contextual assumptions, the overall interpretation forms a valid argument, with the explicature and contextual assumptions warranting the implicatures.

The explicature is one of the premises involved in the derivation of the implicature[11]. But although logical form is *logically* prior to explicature, and explicature to implicature, most authors (including Recanati 2004: 49-50; Stanley and Szabó 2000: 230-1; Wilson and Sperber 2002) agree that online comprehension need not simply be, and in fact, generally is not, a matter of first decoding the logical form, then recovering the explicature, and only then calculating implicatures. Rather, the hearer's hypotheses about implicatures, formed on the basis of his expectations given the conversational situation, including factors such as the speaker's non-linguistic behavior, can influence the development of logical form into explicature. As Wilson and Sperber (2002) put it, the comprehension process involves hypotheses about explicatures, implicatures, and contextual assumptions being 'mutually adjusted', in parallel, until the various assumptions settle into a valid argument relation with explicatures and contextual assumptions warranting implicated conclusions (and this overall interpretation meets the hearer's expectation of relevance). This process can involve several adjustments and readjustments to each of the various kinds of

[11] For ease of exposition, I will deal just with those implicatures that follow from the (basic) explicature, and not with those that follow from anything else – e.g. from speech-act/propositional attitude descriptions, which some authors, such as Sperber and Wilson (1986/1995), see as falling on the explicit side of the explicature/implicature division.

assumptions involved, with hypotheses about any one or combination of explicature/implicature/contextual assumptions affecting hypotheses about any of the others.

Here is an example to illustrate mutual adjustment as simply and intuitively as possible (Carston 2002, Wilson and Sperber 2002, 2004 contain several far more detailed derivations):

(14) A: Do you want to come round for dinner tonight?
B: I'm going to the cinema.

The idea is that with B's reply here, the hearer, A, would first form a hypothesis about the implicature, from various cues, including perhaps B's facial expression, and the fact that she's starting to explain, which suggests that she's communicating a rejection. This negative answer is implicated, but it seems plausible that the hearer would first access the hypothesis about the implicature – perhaps as early as the beginning of B's utterance – and only subsequently would the temporal reference be fixed (to TONIGHT) in the explicature, and the contextual assumption constructed or retrieved (that going to the cinema precludes going to dinner with A on the same evening): explicature and contextual premise are being adjusted/selected to warrant the implicature.

At this point, I should attempt to clarify the notion of 'warrant' that is involved. I take it that, at its most general, the notion of inferential warrant pertains to the rational nature of the conclusion derived. With regard to non-demonstrative inference, of which pragmatic inference is a variety, the idea of a warranted inference, or a 'sound' inference, as Sperber and Wilson tend to call it, is inevitably going to have to be somewhat looser than how such notions are understood in logic, but the idea is that an inference is sound, or warranted, if it is based on premises from which it follows logically. For example, given the premises in (15)a and (b), the conclusion in (c) follows logically (or 'deductively') and is warranted, in as strong a sense of those expressions as can be expected to apply to pragmatic inference:

(15) a. IF IT'S SUNNY, WE CAN PLAY TENNIS.
b. It's sunny.
c. WE CAN PLAY TENNIS.

If (15)b is an utterance, and (a) a contextual assumption, then (c) is an implicature of the utterance, warranted by following from the explicature and contextual premise. That the overall interpretation that a hearer recovers forms this valid argument is what makes the process inferential, as opposed to being, for example, merely associative or connectionist.

In ostensive communication, a speaker is trying to get her message across, and can to some extent 'read' the mind of the hearer – that is, judge what information is accessible to him and what interpretations are likely to occur to him – so can shape her utterance to help guide the hearer to her intended meaning. For this reason, the first interpretive hypothesis to occur to the hearer has a high degree of initial plausibility[12], simply by virtue of occurring first. For the hearer's part, the first hypothesis he entertains – a hypothesis about an intended implicature, say – is given some initial warrant, in that it is rational for the hearer to assume that it is a plausible hypothesis. So if, by developing the logical form and accessing contextual assumptions, he can form an argument on which this implicature is logically warranted by premises that are accessible to him (premises whose accessibility to him the speaker should have been able to predict, and which the utterance guides him to), then this increases the likelihood that the overall interpretation is the intended one, so confirms the hypothesis[13].

Now I'll show how the requirement for the utterance to be processed so that the overall interpretation is warranted precludes 'global' inference from entering into explicature. I'll start by discussing one of Stanley's examples, mentioned in section 2 and repeated here. Imagine that the contextual assumption (16) is already highly salient. In that case, Stanley asks, why can an utterance of sentence (17) not be enriched to (18):

(16) EVERYONE$_i$ WHO LIKES SALLY LIKES HIS$_i$ MOTHER.
(17) Everyone likes Sally.
(18) EVERYONE$_i$ LIKES SALLY AND HIS$_i$ MOTHER (Stanley 2002: 165-6)

The explicature of (17) is just EVERYONE LIKES SALLY (abstracting away from domain restriction). Why can the highly salient meaning EVERYONE$_i$ LIKES HIS$_i$ MOTHER not be incorporated into explicature? It turns out that, in this case, the answer is quite straightforward when we consider how the utterance would be processed and the overall interpretation derived in the context Stanley describes. The explicature cannot be enriched further as it is needed as input to a modus ponens inference, together with the premise in (16), to derive the implicated conclusion EVERYONE$_i$ LIKES HIS$_i$ MOTHER before the two could, even in principle, be conjoined. And EVERYONE LIKES

[12] When I refer to the plausibility of an interpretation, I mean the plausibility of it being what the speaker means, as opposed to the likelihood of it being true.

[13] This is not to say that this interpretive strategy guarantees successful communication: it is a heuristic which is reliable enough that it will be automatically applied due to the time constraints, and limits on what computational resources – e.g. working memory – can be deployed, that are inherent in online comprehension.

SALLY is not a contextual assumption, in the context described, so must be derived as the explicature of (17): development of logical form into explicature cannot go beyond this, as this proposition is required independently as input to further inference.

This foreshadows what will be an important theme in the final section, which is that, if the semanticist is going to produce a convincing example of overgeneration by a context-dependent process – of which free enrichment is an example – then he needs to consider the context-specific processing, and show how the pragmatic principles employed by the theory would enable the hearer to derive the non-occurring interpretation, given the details of the particular context, which include accessible contextual assumptions as well as the linguistic form chosen.

The omission of an adequate consideration of the context-bound processing is the weakness in this case, and Hall (2008a,b) shows how it applies to some variations on the examples cited so far. However, rather than working through more examples on a case-by-case basis, it would be worth looking for a more general explanation for why global 'enrichment' does not occur.[14]

Inferential comprehension is a matter of forming and confirming a hypothesis about the set of assumptions the speaker intends to communicate, and the confirmation of the interpretation is constrained by the need for the various propositions communicated by the utterance to form a valid argument relation, with the premises (contextual assumptions, explicature) logically warranting the conclusions (implicatures). We have a strong warrant for the overall interpretation if the various assumptions involved form this relation where there is a sound inference from the explicature and contextual assumptions to the implicature. And, as I indicated earlier in this section, when introducing mutual adjustment, this is what makes the process inferential: the various stages of the process are all constrained by the fact that the overall aim is this sound inferential relation.

Implicatures are properly inferentially warranted – logically warranted – because they follow deductively from the premises. Between logical form and explicature,

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[14] Particularly since some examples, including the following variation on (17), look more difficult to explain than others. If it is already salient somehow in the context that John likes his mother, why can't an utterance of (i) express proposition (ii)?

i. John likes Sally.

ii. JOHN$_i$ LIKES SALLY AND HIS$_i$ MOTHER.

iii. IF JOHN$_i$ LIKES SALLY$_j$ AND [HIS$_i$ MOTHER]$_k$, THEN HE$_i$ WILL FEEL TORN BETWEEN THEM $_{jk}$.

iv. JOHN$_i$ WILL FEEL TORN BETWEEN SALLY AND HIS$_i$ MOTHER.

In the context of a discussion about the hostility of John's mother towards his girlfriends, another premise like (iii) would be easily accessible. In this case, deriving the conjunction (ii) would be highly relevant as it would allow the hearer to draw the conclusion in (iv). The proposition JOHN LIKES SALLY doesn't appear to be required independently here, as it was in the above example, so a more complicated story would need to be told to explain why it cannot be the explicature.

however, there is no relation of logically valid inference, and free enrichments, merely involving operations over subpropositional constituents, do not follow logically from anything; rather, they are recovered on the basis of their high accessibility in the context of utterance (and confirmed in so far as they contribute to an overall interpretation which is plausibly what the speaker intended). I show here how this excludes 'global' enrichments (I also suggest later that it has other implications for the kind of information that can form unarticulated constituents).

While the implicature is warranted by following logically from the premises – the explicature and contextual assumptions – these two types of premise receive their inferential warrant in different ways. Given mutual adjustment, illustrated a few pages ago, the premises can be confirmed by 'backwards' inference: that is, if the conclusion – the implicature – seems a promising hypothesis about the speaker's intended meaning (e.g. it would answer the hearer's question), and the entire interpretation is confirmed by being consistent with expectations of relevance, then the hearer has good reason to adjust the premises so that they warrant that conclusion. Contextual premises get their warrant entirely from this kind of confirmation, and are not constrained by any logically prior stage in the interpretation process: that is, they are warranted by the fact that they fit into this valid argument relation with the other assumptions that are in play (the overall interpretive hypothesis, as explained above, having some initial warrant anyway, simply by virtue of occurring to the hearer). The explicature, on the other hand, while needing to form part of this argument relation, also needs to be justified given the (logically prior) linguistic meaning – if it were just warranted by fitting into the argument relation, the inferential link between linguistic meaning and explicature would be lost (it would be essentially just an associative relation). The move from linguistic meaning to explicature needs to be as rational a step as possible, given that it is part of an overall inferential process that should be reconstructable by explicit reasoning. But because this particular sub-part of the overall process is not logically warranted, that is a good reason for the material that is composed into explicature to be, in a sense, minimal. Other propositions, or semantic arguments/predicates such as NP- or VP-conjuncts (which can be straightforwardly propositionalized), that are not partially isomorphic with the linguistic meaning, can stand alone, and therefore will remain as independent propositions, as this way they can be more strongly inferentially warranted by virtue of forming an independent premise or conclusion in the argument that is constructed as the interpretation of the utterance. Subpropositional constituents, such as those that are composed into the explicature as unarticulated constituents, cannot form independent premises/conclusions, so cannot themselves be warranted in the same way. So, as long as there is enough evidence of a different sort for them – e.g. they are highly accessible in the context of utterance and are compatible with the linguistic meaning – they are incorporated into the explicature (this point will be developed further in the

next sections). This is why free enrichment can only be a local process, and is not susceptible to the accusation that it overgenerates by allowing for extra inferred arguments, etc, to 'intrude' on explicature.

The need for the communicated assumptions to be adjusted so that they settle into a valid argument relation is what determines which pragmatically derived material goes into the explicit content, and which is conversationally implicated. Free enrichment takes place just as far as is necessary to reach a proposition that provides the inferential warrant for the utterance's expected implications, and there is pressure from opposite directions on how much material is composed into explicature. On the one hand, the subpropositional logical form, although it has a role in the derivation of implicatures, cannot itself provide the inferential warrant for the implicatures, so needs developing into something that can have this function, and so some degree of enrichment is generally necessary. On the other hand, any material that can stand alone will remain as independent propositions, as the inferential nature of the overall process means that there is pressure for the material composed into explicature to be minimal.

3.2 Enrichment as a local process

That free enrichment is a local pragmatic process means that it applies to subpropositional constituents: it modifies subparts of the linguistic logical form, which then go into the composition process, so enrichment contrasts with global processes, which need a proposition as input. One way to think about enrichment is as the equivalent, at the level of thought, of adding linguistic adjuncts – elements that modify a subpart of the linguistic form, rather than all of it.

All the examples of enrichment suggested by contextualists can be seen to be local: the cases of domain restriction and deferred reference that I mentioned at the start of section 3; inferring the location with weather predicates; and so on[15]. Because enrichment is a process of adjusting parts of the linguistically encoded logical form, for it to occur, there needs to be at least a part of a proposition already there to enrich. One can't add extra propositions or semantic arguments/predicates if there is no encoded element at all to start from in building that proposition/argument/predicate:

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[15] That free enrichment should be treated as a local process is also suggested by the fact that the unarticulated constituents fall in the scope of logical operators and propositional attitudes (as demonstrated by the following examples), positions that are not susceptible to a global inference process. In (ii), for example, the consequent, that the speaker will stay at home tomorrow, depends on the location of rain, demonstrating that the unarticulated constituent is in the scope of the conditional:

i. If Hannah insulted Joe and Joe resigned, then Hannah is in trouble. (King and Stanley 2005)
ii. If it rains tomorrow, I'll stay at home.
iii. I don't believe she's parked in front of the entrance.

At a minimum, for example, some kind of argument slot given by the linguistic form is necessary, as is confirmed by the following pair of cases, based on examples in Blakemore and Carston (2005). The word "and" indicates that two conjuncts are required. So, given an utterance of the form "And Q", as in (19), there is at least something very minimal present in the encoded linguistic meaning for pragmatic processes to develop, and so the explicature can have the form P AND Q:

(19) [Seeing an acquaintance flirting with a man who is not her betrothed]
And she's just got engaged!

There is a strong intuition that the truth or falsity of an utterance of (19) does not depend only on whether the woman referred to has just got engaged, so it is reasonable to suppose that the explicature is, roughly, SHE IS FLIRTING WITH THAT MAN AND SHE HAS JUST GOT ENGAGED. Whether the recovery of the extra conjunct is similar to free enrichment, or should be construed as a form of saturation, given that there is some (albeit extremely minimal) linguistic material mandating it, is a question I won't address here, but the point is that development of the logical form into explicature requires that there be something already there to develop. Compare a case where only the 'conjunct' is uttered, without the word "and":

(19') [Same context as above]
She's just got engaged!

Here, the truth or falsity of the utterance intuitively depends just on whether or not the woman in question has just got engaged, confirming that the explicature is the simple proposition, rather than the conjunction.

Summing up, then, the pragmatic processes that develop the logical form into explicature are operations on subparts of that logical form, and, by definition, do not include the addition of extra semantic arguments or propositions. However, even once this is accepted, the semanticist's suspicion is likely to persist, because local enrichments that might look, in principle, to be possible, do not always occur, which potentially still leaves us with a problem of overgeneration. So we need to look for further, more context-dependent factors that constrain enrichment. In the next section, I suggest that, from the local-global distinction and considerations about inferential warrant discussed above, there follows a further constraint on what can constitute a local enrichment. In the subsequent and concluding section, I return to the issue of systematicity.

4 Explicature and what is 'at-issue': a further constraint on unarticulated constituents

Enrichment is viewed as an almost mechanical process, less context-sensitive than conversational implicature, which leads to the suspicion that the contextualist cannot avoid (incorrectly) predicting that, for example, every time a quantifier is uttered, a process of completion/restriction occurs. In the remainder of the paper I aim to disprove this view. In this section, I investigate in more detail the distinction between global and local pragmatic inference introduced above and show that, from this, a constraint emerges on when local enrichment can occur and where it is excluded.

The following pair of cases, the first from Nishiyama and Mineshima (2006), are considered in Hall (2008a). The authors imagine a situation where the interlocutors are at a gathering attended only by painters, and are wondering if any of them are from their village. The speaker points at one of the guests, who is a painter, but who she realizes is not from their village, and utters (20):

(20) That guy is not a painter.

Nishiyama and Mineshima say that this utterance is false, since the person indicated is a painter, which shows that (20) cannot be used in this context to explicitly express the proposition that the guy is not a painter *from our village*.[16]

Enrichment of indefinites can sometimes take place, though, as in the following example, suggested by Richard Breheny (personal communication):

Context: At a department party for professors and students. The professors all attend evening classes at a different college, so are students too; this is (mutually) known to the interlocutors, who are trying to tell if people at the party are students in their department. The speaker points at a professor and utters (21):

(21) He is not a student.

[16] While I agree that it is false, I don't think that the hearer would take it to be false, at least initially: more likely is that he would look for some other interpretation. Given that, as far as he knows, all the people at the gathering are painters, it could be worth reporting if someone there turned out not to be one. So he would be likely to recover as the explicature THAT GUY IS NOT A PAINTER (*punkt*), and accept it as true, using it to infer, for example, that that person shouldn't be there; there's a gatecrasher, etc. But whatever the correct construal, the point is that, despite the contextual salience of the domain in question, the indefinite cannot be enriched by a value for a domain, even if the hearer goes back and revises his initial hypothesis.

Despite the fact that the professor *is* a student, an utterance of (21) is uniformly judged true, and this shows that the indefinite is being enriched to something like 'a student *in this department*'.

Indefinites are frequently used just to express the property encoded, without restriction: they are not incomplete at the conceptual level in the way that, for example, definite descriptions generally are (since the latter usually need completing to meet the Russellian uniqueness condition: see Neale 1990). So indefinites, at least, do not look like good candidates for hosting domain variables: The fact that restriction with indefinites is optional suggests that the linguistic meaning of the indefinite does not demand a contribution from context, so it is pragmatic constraints alone that will explain where this effect does and does not occur; for the sake of argument, I'll assume this. But then, what prevents it from occurring in (20) given the apparent salience of the necessary background context to support it?

As a first step towards an explanation, note that an important difference between the two cases concerns the relation between, on the one hand, what information is 'given', or can be taken for granted, in the context, versus what is at issue, and, on the other hand, what the speaker makes overt, i.e. encodes, versus what she leaves for the hearer to supply inferentially. In (21), it is background information that everyone present is a member of that department. What speaker and hearer are trying to decide is whether some particular person is a professor or a student; the assumed domain is people in this department, and this domain is what the hearer composes into explicature. Compare (20), where what is already given and forms the background to the utterance is that everyone at the gathering is a painter. What is at issue in (20) is whether the indicated person is from the interlocutors' village or not; the speaker does not linguistically encode the answer to this question, and the encoded content cannot be enriched to provide an answer.

So a promising hypothesis is that information that is at issue in the context cannot be incorporated by free enrichment into the proposition expressed. 'At issue' information covers, for example, the subject of a currently salient (explicit or implicit) question, plus, more generally, information that is contradictory to or does not follow from assumptions that the hearer is already capable of representing as true[17]. Beyond this pair of examples, it seems that quite generally, at-issue information must be either encoded, or, if left to be inferred by the hearer, it must be implicated rather than part of

[17] By saying that the hearer is "capable of representing an assumption as true", I mean that the assumption is 'manifest' to him in the Sperber and Wilson (1986/1995) sense: it doesn't need to be stored in memory by him already; he just needs to be capable of spontaneously inferring it and accepting it as true.

the explicature[18]. The motivation for this follows from the comments a few pages ago about how the interpretation is warranted. As a brief reminder: implicatures are properly inferentially warranted, following logically from explicature and contextual assumptions; unarticulated constituents, however, are not, being subpropositional elements which do not follow logically from anything, but which are recovered on the basis of their high accessibility in the context of utterance, and confirmed by a process of 'backwards' inference, given the mechanism of mutual adjustment (hypotheses about how the logical form is to be developed into explicature can be influenced by hypotheses about intended implicatures). A further important point is that, while linguistic decoding is an algorithmic, invariant process, so the hearer can normally be certain that the meaning he recovers is something that the speaker intended him to use in working out her meaning, pragmatic inference always involves some risk of misunderstanding, because it depends on the hearer being able to figure out the speaker's intentions, and the speaker judging accurately what the hearer can figure out, and so on. It is essentially a form of guesswork, constrained by what kind of effects the hearer expects from the utterance, and the need for the various propositions communicated to form a valid argument relation.

If some piece of information is 'at issue' (i.e. it is at issue whether *p*), the hearer requires some justification for accepting *p* as speaker-meant, as opposed to, for example, not-*p*, or other alternatives; after all, if it's at issue, or is not inferable from his existing beliefs, then he has no prior reason for choosing any one of these as the interpretation. Such justification can be provided either by the speaker encoding the 'answer', or by the answer following logically from premises that are accessible in the context – that is, it could be justified by being implicated, since implicatures follow deductively from the premises (explicature and contextual assumptions), and so are inferentially warranted. The step from logical form to explicature, which includes processes of free enrichment, cannot be as strongly warranted: unarticulated constituents are subpropositional constituents so do not follow logically from anything. It follows that free enrichment should be constrained to incorporating material that is not at-issue – e.g. assumed domains, assumed locations, information stored in stereotypical scripts, that is, information that is highly accessible in the context of utterance and is confirmed by 'backwards' inference from the implicature, so itself does not need warranting by an 'argument'.

Inferred at-issue information, then, needs to be capable of being given the justification of a logical argument, so needs to be inferred *from* the explicature in order

[18] Of course, not all encoded meaning need be at-issue, nor need all implicated meaning. The at-issue versus not-at-issue distinction I am discussing here is only relevant with respect to what *could*, in some contexts, be a local enrichment.

for it to be inferentially warranted. This will be supported by the data I consider in the next few pages.

First, though, the idea that we really do need to create 'arguments' to warrant accepting, as speaker-meant, information that is at-issue, or more generally new or surprising in some way, or that does not follow from the hearer's existing beliefs, can be supported by appeal to a quite different phenomenon than free enrichment. Consider the following dialogue. Two of the assumptions probably communicated by B's reply in (22) are given in (23):

(22) A: Are you inviting me to your party?
B: I'm only inviting friends.

(23) a. B IS NOT INVITING A TO B'S PARTY.
b. A IS NOT A FRIEND OF B.

(23)a is the (indirect) answer to A's question, and is obviously an implicature. (23)b looks like the contextual premise needed to warrant (23)a. But (23)b is not like an ordinary contextual premise, which would normally be something that is known to the interlocutors, or something inferable from their existing assumptions (something that they are capable of representing as true). It's clear that (23)b is not a mere premise used to infer the communicated meaning, but is part of the communicated message in its own right, and very likely contradicts the hearer's existing assumptions; like 'at-issue' information, then, for the hearer to infer it as speaker-meant requires it to be inferentially warranted. Recanati (2004: 47-8) suggests that such premises, when part of the speaker's meaning, are actually implicated conclusions that follow from the saying of what is said – i.e. that follow from the propositional-attitude description THE SPEAKER SAID THAT P – and others, such as relevance theorists, agree about the intuitive appeal of this idea.

What this suggests is that there is a widespread intuition that, when something that is at-issue is to be inferred, it cannot be a contextual premise or an unarticulated constituent of explicature, unwarranted by any prior explicitly represented assumption. Rather, we do in fact create an argument, constructing premises to reason from so that the element of meaning in question follows logically from some other assumption(s), and is thus warranted: In (22), the reasoning would go something like 'She's giving an explanation so it's a negative answer (she's not inviting me); what justifies this negative answer is that she's only inviting friends; if I were a friend I would probably be invited, therefore she doesn't consider me a friend'. Even though these assumptions themselves are largely arrived at through non-demonstrative reasoning, once accessed they provide the premises for a valid argument in which the at-issue material is derived as a conclusion, which, if this reanalysis is correct, is enough of a warrant for the hearer to accept it as an implicature.

Returning now to the pair of examples of indefinite descriptions with which I started this section, an account of the difference can be given in terms of the constraint that explicature cannot incorporate at-issue information that is optionally pragmatically inferred (i.e. as unarticulated constituents). In (21), it is background information that everyone present is a member of that department. What the speaker and hearer are trying to decide is whether some particular person is a professor or student, so this is what the speaker can be expected to make explicit – to encode, so that there is no room for doubt. The domain is people in this department, and this, being already assumed in the context, can be incorporated by free enrichment into explicature. In (20), what is already given and forms the background to the utterance is that everyone at the gathering is a painter. What is at issue in (20) is whether the indicated person is from the interlocutors' village or not, so, if the speaker wants to explicitly communicate an answer to this, this answer is the material that she can be expected to make overt. If she doesn't, then the hearer has no reason to assume that it is part of explicature and so has no reason for enrichment.

I'll now go through some more examples – 'and'-conjunctions and weather predicates, which have been two of the cases central to the free enrichment debate – to demonstrate that information that is at-issue in the context of utterance cannot be an unarticulated constituent, even though it would on other occasions be composed into explicature.

First, the causal connection communicated by certain cases of "and"-conjunctions is held by contextualists to usually contribute to explicature. This would be the case with an utterance of (24), considered in isolation:

(24) John dropped the vase and it broke.
(25) JOHN DROPPED THE VASE AND AS A RESULT IT BROKE.

When we see this kind of example, presented decontextualized, we tend to invoke a 'default context' (that is, an easily-imaginable situation in which it would be normal to utter this sentence), and it is likely that the explicature of (24) would be the proposition (25), with the constituent AS A RESULT recovered on the basis of stereotypical knowledge about fragile things breaking when dropped (cf. Carston 2002, chapter 3). However, it appears that when the element of meaning in question is something that is at-issue, then, if not encoded but left to be inferred, it does not form part of the explicature, but may be communicated as an implicature or some other kind of implication:

(26) A: Did John break the vase?
B: Well, he dropped it and it broke!

B's answer is not direct (he could simply have said "Yes"), and the intuition is that the explicature is simply the logical, truth-functional conjunction. What is at issue here is whether John broke the vase, and so the causal connection (on which the answer to that question depends) cannot be inferred as an unarticulated constituent. It may be an implicature that there is a causal connection, though it is not completely clear how it should be analyzed[19].

The second case I will discuss is weather predicates. In the absence of a salient alternative specific location, the location talked about in an utterance of "It's raining" is, virtually by default, the location of the speaker. But in B's reply in (27), where it's the location that is at-issue, the location cannot be inferred:

(27) A: Where is it raining?
B: It's raining.

One might expect B's answer to assert that it's raining *here*, but it isn't understood this way – it just seems like a non-answer. In other words, it seems impossible to incorporate even the default location when it is the location which is at issue. Compare when it's just 'raining or not' that is at-issue, and the location is irrelevant (capitals indicate emphasis):

(28) A: Is it RAINING here or somewhere else?
B: It's raining.

(28) is intended as asking something like "Is it raining anywhere?" (or "Is it raining *punkt*?"), so the location is not at-issue. Ignoring, for the purposes of the argument, the slight infelicity that arises from the fact that the most natural answer would simply be "Yes", B's reply sounds fine, or at least a lot more acceptable than in the previous example, because what is at-issue is just 'raining or not?', and the speaker encodes the answer to this.

The examples in this section constituted potential counterexamples to free enrichment, as it was not clear that the contextualist could avoid the incorrect prediction that the at-issue material would be composed into explicature. I've shown

[19] It is highly likely that the hearer would infer the causal meaning, but whether it should be considered an implicature of the utterance is unclear. On the one hand, the speaker is giving a less-than-cooperative answer, and seems to communicate something like "Work it out for yourself". So it might be better to consider it an implication that the hearer derives of his own volition, where an implication is something that is likely to be true given the truth of the utterance. On the other, the speaker is clearly not intending to withhold the information from the hearer, and can predict that he will recover it somehow or other from her utterance, so some theorists might consider it to be communicated.

here that the contextualist can explain the data using the independently necessary distinction between global and local pragmatic processes. Based on those cases, though, an interesting question arises, which is why the at-issue information in the previous examples is not communicated as an implicature. After all, at-issue information *is* frequently implicated, as in the following indirect answer:

(29) A: Do you want coffee?
B: It would keep me awake.

What is at-issue in (29) is whether or not B wants coffee, and the answer uncontroversially is an implicature. The case of the 'staged' premise in (22) above (A: "Are you inviting me to your party?" B: "I'm only inviting friends") was another example: it seems promising to reanalyze it so that the apparent premise, that A is not a friend of B, is actually an implicated conclusion.

In the examples of potential local enrichments discussed in this section, though, it seems that if the material is at-issue, it generally cannot be inferred at all as part of the speaker's meaning: There are no cases where it clearly does appear as an implicature, though the "and"-conjunction example in (26) is a possible exception (see footnote 19). In general, such information seems hard to convey at all unless encoded.

Since at-issue material *can* often be implicated, why is it that in these cases, we cannot construct an argument, selecting the contextual assumptions and not enriching the explicature, so that the at-issue material is an implicature, warranted by following logically from the premises?

Where at-issue information does get implicated, as in (29), it consists of propositions that are independently accessible (or propositionalized semantic arguments/predicates) that would never be composed into the explicature anyway, as discussed in section 3. It is not easy to propositionalize the subpropositional adjunct-like elements that form unarticulated constituents so that they come out as following from explicature and contextual premises: Consider the relation between IT IS RAINING *punkt*, and IT IS RAINING IN BARCELONA. Because these free enrichments are modifications of only subparts of the logical form, they cannot be warranted by inference from any more minimal explicature: They could, at best, be justified by reasoning from the uttering[20] of the explicit content ('he uttered x so he must have meant y'), which is not a deductive inference. So it's because enrichment is a local process that the kind of information that can sometimes be inferred as unarticulated constituents can never be

[20] I use 'uttering' rather than 'saying' to avoid the suggestion that the speaker is committed to the content.

strongly inferentially warranted, so, if not encoded, it is difficult to communicate at all in a context where it is at issue[21].

5 The systematicity issue revisited

In the last two sections, I motivated the restriction that free enrichment is a *local* process, modifiying subparts of the encoded content, then posited a constraint on what kind of material can constitute unarticulated constituents. As I discuss in this concluding section, that may well be all we need or want by way of constraints specific to enrichment that hold whatever the context: other factors in the explanation of enrichment should simply be applications of principles and constraints that govern pragmatic processes in general.

Setting aside questions about empirical coverage, in principle the semanticist thesis allows one to predict, for any expression-type, where there will be a pragmatic effect on truth conditions. But it is not desirable for an account of free enrichment to be able to make similar predictions: enrichment is optional, with no markers in the linguistic system to trigger it; whether or not it occurs depends on the details of a particular

[21] This paper has dealt with examples that, on the assumption that they are not traceable to logical form, are clear cases of unarticulated constituents: that is, composing into the explicature extra conceptual material that is not reflected in the sentence's logical form. With respect to unarticulated constituents, the thesis that at-issue information cannot be composed into explicature holds up, but there is another type of 'free' pragmatic process that has been claimed by pragmatists to contribute to explicature, namely, 'ad hoc concept construction' or 'modulation'. Rather than extra conceptual material being added, as in "It's raining [IN LONDON]", it seems that in some cases, what is going on is better construed as a concept in the encoded logical form being pragmatically modified so that the concept that forms a constituent of the speaker's meaning replaces the one that was encoded: It may be looser, as in an utterance of "I'll be there in an hour", or narrower, as with "I'm tired", where the encoded concept TIRED is likely to be quite abstract, and the communicated concept would be narrower, denoting a more specific variety or degree of tiredness, depending on, for example, whether the context was an enquiry about whether the speaker feels like watching television, or about whether she wants to go for a run. I'm not going to address here the question of whether this 'not-at-issue' constraint holds for modulation, due to the lack of clarity about certain prior questions: (i) what word meanings consist of, and (ii) what the modulation process involves in terms of the manipulation of logical and encyclopedic properties associated with, or perhaps constituting, encoded meaning and communicated concept. The idea that word meanings might not be concepts, but more like constraints, instructions for building concepts, or rules for use, has been gaining popularity recently (see Carston 2002, Pietroski 2005, Recanati 2004, Schiffer 2003). If it turns out to be correct, then modulation, while not linguistically mandated in the way that saturation is, is not exactly optional either, in the way that unarticulated constituents are optional, in that, without modulation, there would not be any content at all. So then one would probably expect some differences in what constraints will apply to the two types of enrichment.

context. The natures of the two competing theories are such that whether or not they make predictions about expression *types* is not a useful measure for comparison; a principled theory of constraints on 'free' pragmatic processes has to satisfy different considerations, tied to expression *tokens* and specific contexts.

Beyond the very general restrictions described so far, we cannot make abstract predictions along the lines of 'an utterance of this expression will always/never be enriched', but then that is not among the desiderata on an account of enrichment. As I demonstrate below, when we look at the expression token, taking into account the context in which it was tokened, and the linguistic form (which are, after all, the evidence that the hearer has to operate on) then we can in fact give context-specific explanations of the occurrence or absence of enrichment.

Given the context-sensitive nature of pragmatic processes, to convincingly argue that free enrichment predicts a certain interpretation, one has to show how pragmatic principles would enable the hearer to derive that interpretation, and this, of course, would require considering the details of the particular context of utterance, and the context-specific processing. Yet this is a significant omission in many discussions of free enrichment by semantically-oriented theorists. Here I just discuss one example, from Elbourne (2008), which illustrates this well.

Elbourne uses the following pair of examples to try to show that, with the definite determiner, a domain variable is both required to explain certain judgments about binding, and attached to the determiner itself. Speakers who can interpret "the cat of Mary's" as bound in ((30)a) cannot interpret "Mary's cat" as bound in (30)b:

(30) a. John fed no cat of Mary's before the cat of Mary's was bathed.
b. *John fed no cat of Mary's before Mary's cat was bathed.

For many speakers, according to Elbourne, (30)a has the reading 'There is no cat of Mary's x such that John fed x before the cat of Mary's x was bathed'. Although it is quite infelicitous, there is a clear contrast with (30)b, which for no speakers has this reading.

If a defender of the covert variables view were to claim that the variable were attached to determiners (as opposed to nouns[22]), he could simply say that, 'as a matter of idiosyncratic subcategorization properties, "the" can host one and "Mary's" cannot' (Elbourne 2008: 101). But there looks to be a problem for the view that there is no

[22] Elbourne also sees these cases as counterexamples to Stanley and Szabó's (2000) account on which the variable is attached to the nominal rather than the determiner. If that were correct, then the variable would be present in both (a) and (b) here, attached to "cat", and, Elbourne says, the difference between them would be inexplicable.

linguistically encoded variable, and that the requisite value can be supplied and binding established entirely pragmatically: if (30)a can be enriched with a bound variable (or something in the medium of thought that does the job of natural-language bound variables), what prevents the same happening in (b)? Elbourne concludes (ibid) that the enrichment approach overgenerates.

In fact, the difference between (a) and (b) can be explained without appeal to a covert linguistic variable[23], the key factor being the redundancy of much of the material in the two descriptions "the cat of Mary's" and "Mary's cat". Because this extra descriptive material (as opposed to a pronoun, or even just "the cat", which is much more felicitous here), would be otherwise redundant, it strongly discourages a reading on which the second occurrence of "cat" is anaphoric on the first, and instead encourages the search for a new referent in both (a) and (b). The reason why (a) is not as infelicitous as (b) is partly because of the different point in processing of the utterance at which this material is encountered by the audience. With the genitive description in (b), the hearer gets the descriptive material immediately, and at the onset of processing of the description, he is directed towards the search for some brand new referent. With the definite description in (a), the first thing the hearer gets to is the words "the cat", which, in contrast, triggers the search for something already salient. It is only later that the redundant description (the words "of Mary's") is encountered. So, at the onset of the description in (a), the hearer's (tentative) interpretive hypothesis is likely to be the bound reading; then the extra material is processed, encouraging instead the search for a new referent, and this has the effect of either partially overriding the bound reading (for those who get the reading) or completely overriding it (for those who don't).

In both cases, then, the 'extra' material has the effect of directing the hearer to search for a new referent, and, since the linguistic form chosen makes the bound reading less accessible than it would have been, it is infelicitous. However, a combination of factors about processing make the bound reading in (a) possible for

[23] I don't actually want to commit to the view that domain restriction is an instance of enrichment. As mentioned in section 1, it is one of the more plausible candidates for being underpinned by covert linguistic structure, though the seemingly intractable question of where to locate the variables – on the determiner, on the noun, adjoinable in different sites (the latter being Stanley's latest position: Stanley 2007: 223, note 15) – increases the appeal of the conclusion that there aren't any. The reason I'm using an example of domain restriction to illustrate this methodological point about the explanatory power of free enrichment is that it is widely considered a knockdown example against the enrichment approach to quantifier domain restriction (Elbourne 2008; Partee 2009: 6; several other people in conversation). So even if it turns out that this is an instance of saturation, that will be the result of other evidence (for example, weak crossover, mentioned in a footnote in section 1), which will not affect the conclusion I aim to establish, which is that these overgeneration claims fail because they seriously underestimate the resources of the pragmatic approach.

some people. First, there is the exact form the definite and genitive descriptions take, as described in the last paragraph. Second, the repetition of the exact form of words "cat of Mary's" in (a) also contributes to making it slightly easier to interpret the definite description as anaphoric: it takes less effort to parse the description, as the same material has just been parsed and the pairing of input and output are still in working memory, and primed, hence highly accessible. So despite the fact that the speaker of (a) has chosen a patently less than optimal form of words for conveying the bound reading, it is, for many native speakers, 'rescued' to some extent by these two factors which are not present with an utterance of (b).

This illustrates well the misunderstanding about what sort of predictions an account of pragmatic enrichment should make. The enrichment account does not predict that enrichment always occurs – precisely because the process, being optional, will depend on the details of the particular context. So, in explaining why enrichment does or does not occur, we need to consider how the utterance would be processed in context. To drive this point home, compare the other, non-controversial, type of 'free' pragmatic process – the calculation of conversational implicatures. Borrowing an example from Recanati (2004), an utterance of "I'm French" would often implicate something; indeed, could be used to implicate just about anything, given the right context. For instance, if used in reply to a question "Do you drink red wine?" it would implicate an affirmative answer. But in certain contexts, it would not convey any implicatures: for example, if uttered in response to a question about what her nationality is. The explicitly communicated content – that the speaker is French, in itself answers the question. In certain contexts, the speaker may have no idea what the hearer will do with the information that she is French, and so cannot be taken to conversationally implicate anything. Does this mean that an account that predicts that "I'm French" can be used to convey implicatures overgenerates in this context where no implicatures are conveyed: that it wrongly predicts an implicature? Of course, no one has claimed that it does: implicatures are, obviously, context-sensitive; they are optional and their recovery depends on context-specific factors (including the linguistic meaning chosen, what the hearer's expectations are – of a certain kind of interpretation, a certain level of informativeness – and the accessibility of contextual assumptions). But those are also features of the process of enrichment at the explicit level, and so the same conclusion should hold: we cannot predict, for any given sentence type abstracted from considerations of context and processing, whether it will carry a conversational implicature; similarly, it is mistaken to expect an account involving free enrichment to predict whether, for any given sentence type, this *optional* pragmatic process will occur.

The aim of this paper has been to substantiate the idea of free enrichment as an optional, context-sensitive process, and show how, once this is appreciated, the contextualist account is powerful enough to generate context-specific explanations for

the data that the semanticist uses to charge it with overgenerating. The proposals developed here also suggest the reason why enrichment can seem to be more 'automatic' or 'mechanical' than conversational implicature, and hence to give rise to alleged counterexamples, like some of those discussed above, which share the basic form: *The contextualist claims that free enrichment can supply quantifier domains (e.g.), therefore, it predicts that a quantifier domain will be supplied in this example. This interpretation is not available to speaker-hearers, therefore free enrichment overgenerates*. Ludlow (2006: 110) captures the impression thus: 'if we were Griceans about our pragmatics, so that the process of "free enrichment" involved general principles of rational communicative behavior … but I always think of the Sperber and Wilson notion of free enrichment as being more mechanical'. Section 4 hints at why this impression arises: unarticulated constituents are constrained to consist of information that is not 'at issue' in the context of utterance; that is, in a sense, 'given', as in domains and locations that are assumed in the context. If such information is at issue, then it cannot be inferred as an unarticulated constituent, because it requires the warrant of a logical argument. So in the examples where enrichment does occur, it feels mechanical, because it is incorporating information that is 'given', that does not need any effortful computation to work out, so we are less aware of it. It's the cases where it does not occur that show that enrichment is not mechanical, but genuinely context-sensitive.

The conclusion, then, is that when the context-sensitive nature of the process is taken into account, it can be seen to be tightly constrained by pragmatic mechanisms, and the factors I discussed above go a long way towards meeting the semanticist challenge that the process is mysterious and unconstrained. Enrichment is a *local* pragmatic process: it modifies subpropositional constituents. In section 3, I explained why this is what enrichment is: any 'global' inference is excluded from entering into explicature by independent considerations about how the overall interpretation of an utterance is warranted. In section 4, I suggested that, from the same considerations, there emerges a general constraint: that unarticulated constituents cannot consist of information that is 'at issue' in the context. As far as 'predictions' go, we should not expect any more from an account of enrichment, given that not only is the exact result of the enrichment context-dependent, but so is whether or not enrichment occurs. It follows that, in accounting for where it occurs (and where it does not), the theorist needs to consider the specifics of the context, including the exact linguistic form chosen, as illustrated in section 5. Unlike on the semanticist account, predictions cannot be made without the relevant details of the context. But once the mistaken requirement for this kind of prediction is dropped, and the nature of pragmatic constraints appreciated, an account that invokes free enrichment turns out to have a surprising degree of explanatory power.

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