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and the Semantics/Pragmatics Distinction

This paper argues that we need to re-think the semantics/pragmatics distinction in the light of new evidence from embedding of irony. This raises a new version of the old problem of '*embedded implicatures*'. I argue that embedded irony isn't fully explained by solutions proposed for other embedded implicatures. I first consider two strategies: *weak pragmatics* and *strong pragmatics*. These explain embedded irony as truth-conditional content. However, by trying to shoehorn irony into said-content, they raise problems of their own. I conclude by considering how a modified Gricean model can explain that irony embeds *qua* implicature. This leads us to prefer a *local implicature* model.

Keywords: embedded irony, embedding, truth-conditional compositionality, embedded implicatures, local implicatures, semantics/pragmatics distinction.

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This paper argues that we need to re-think the semantics/pragmatics distinction in the light of new evidence from embedding of irony. This raises a new version of the old problem of '*embedded implicatures*'. I argue that embedded irony isn't fully explained by solutions proposed for other embedded implicatures. I first consider two strategies: *weak pragmatics* and *strong pragmatics*. These explain embedded irony as truth-conditional content. However, by trying to shoehorn irony into said-content, they raise problems of their own. I conclude by considering how a modified Gricean model can explain that irony embeds *qua* implicature. This leads us to prefer a *local implicature* model.

1   The Semantics/Pragmatics Distinction

Where does semantics end and pragmatics begin? The traditional answer has been that pragmatics starts where semantics finishes. To a first approximation, this division of labour reflects Grice's (1989) division of speaker-meaning into two parts: what is *said* and what is *implicated*. Saying comes before implicating, and functions as a central part of the supporting evidence for working out what else, or what more, the speaker may have implicated in uttering a sentence *S*. Most of the debates on the semantics/pragmatics distinction have predominantly focused on the epistemological question of how meaning is derived—how it is that hearers try to work out what it is that the speaker meant.[1] This is concerned with what kind of information and processes hearers use as evidence to form a hypothesis about what the speaker has said and/or implicated in uttering *S*.

Accordingly, said-content is determined *compositionally*—by composing the semantic meanings or contents of individual words (relative to context), together with their mode of composition via the syntactic structure of the sentence. Implicated-content is *inferred contextually* by reasoning about why the speaker has said what she said in a given context. These two ways of extracting meaning do not mix: saying is bottom-up driven by rules of grammar; implicating is top-down driven by common-sense reasoning.

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[1] Grice distinguishes the epistemological question from the metaphysical question of meaning determination. The metaphysical determination concerns how meaning supervenes on the speaker's communicative intentions. In other words, meaning comes from the mental states of the speaker and these mental states involve higher-order type intentions to get something across while being perceived by the hearer as trying to get something across. The epistemological determination is concerned with how hearers recognise the speaker's communicative intention and work out what it is that they are trying to communicate. Though the metaphysical and epistemological questions are separate, they constrain one another. Speakers want (and expect) to be understood, and hearers seek (and expect) to understand. So, in forming communicative intentions the speaker relies on the hearer's ability to grasp those intentions. Vice-versa, in interpreting an utterance, the hearer relies in turn on the speaker's capacity to exploit this ability. For details about the methodological flaws that may arise from conflating this distinction, see Bach (2005a), Neale (2005), among others.

This way of motivating the semantics/pragmatics distinction has been fraught with heated disputes because it doesn't perfectly align with the said/implicated distinction.[2] This is because we often leave things *un*-said in what we say. So *some* pragmatics is needed to determine what was said, either to fill in what is missing, or fill out what is not contextually specific. This much is undisputed.

What is disputed is *how much* contextual supplementation is needed, and *what kind* of pragmatic processes should be allowed to provide it. Some propose *weak pragmatics*; others *strong pragmatics*. Proponents of weak pragmatics require that the pragmatic supplementation be constrained by semantic rules (e.g. saturation of indexicals, demonstratives, and other context-sensitive expressions, disambiguation).[3] This results in '*weak*' pragmatic effects which feed directly into compositionality— thus retaining a strong and robust *semantic compositionality*. Proponents of strong pragmatics are more liberal, allowing linguistically unconstrained pragmatic processes to intrude into what is said.[4] This sometimes serves to fill the gap between sentence meaning and what we say, and other times it may require recruiting certain types of implicatures in order to fill in the gap between what we say and what we mean, when what we mean goes well beyond what the words themselves mean. This requires a '*free*' *pragmatic inference*—'free' in the sense of a top-down reasoning unconstrained by linguistic rules. This reasoning is similar to calculating implicatures, except that it applies locally to individual words and phrases. This results in '*strong*' pragmatic effects which feed directly into compositionality—though this calls for a weaker compositionality known as *pragmatic compositionality*.

Despite the differences in details, both camps are equally motivated by a desire to preserve compositionality—more specifically, *truth-conditional compositionality* which holds that both inputs and outputs of compositional processes are truth-conditional contents. One way to secure this is to ban implicatures from intruding into compositionality. This thesis has taken various guises[5]—here I shall call it *truth-conditional embedding* (henceforth *TC-Embedding*):

> *TC-Embedding*:   If *S* is embedded in a compound sentence, like conditionals, disjunctions, belief-reports, etc., then what *S* contributes to the compound *cannot be an implicature*, but only a truth-conditional content.

TC-Embedding is associated with a commonly held assumption that logical operators work truth-functionally, by mapping *S*'s truth-conditions onto the truth-conditions of the whole compound.[6] This means that *S* embedded under an operator is only performed in a *propositional act*—an act of uttering a sentence with a propositional (true/false assessable) content such that the utterance can

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[2] I'll use the said/implicated distinction as a proxy for the semantics/pragmatics distinction, though an imperfect one. As we'll see, pragmatics intrudes into semantics in order to fill the gap between the sentence meaning and what the speaker means to say. Nevertheless, the kind of pragmatics that contrasts sharply with semantics concerns paradigmatic conversational implicatures. For simplicity, I leave aside controversial questions of whether conventional implicatures exist (for a denial, see Bach 1994), or whether conversational implicatures exist (for a denial, see Gauker 2001, Lepore & Stone 2014), or whether or not we can have a semantics for a language (for a denial, see Travis 2000; Pietroski forth).

[3] Stanley (2000), Stanley & Szabó (2000), King & Stanley (2005), Cappelan & Lepore (2005), Borg (2004), among others.

[4] Recanati (2004), Carston (2002), Bezuidenhout (2002), among others.

[5] This thesis usually goes by the name of *Scope Principle*, cf. Recanati (1989); see also Wilson (1975), Carston (1991), Green (1998), O'Rourke (2003), Camp (2012).

[6] For Grice, the semantics of connectives is given entirely by their standard truth-functional interpretation, which is non-cancellable content.

be judged true or false. This content may be identical with or otherwise closely correspond to that of the sentence's literal meaning. Nevertheless, this is a content stripped of its *mode of delivery*—say, the illocutionary act under which *S* is performed and/or any implicature(s) that *S* may otherwise carry. Thus, what is common between *S* uttered as a self-standing act and *S* embedded under a compound sentence is only their *truth-conditional content*.

TC-Embedding thus offers a principled way of separating implicatures from other kinds of pragmatic processes that intrude into what is said. In particular, it helps us make sense of so-called '*embedded implicatures*'. If a pragmatic meaning conveyed by uttering *S* is found to embed in a compound utterance—e.g. conditional, disjunction, belief-report—then it's reasonable to think that it's not an implicature but rather a pragmatic component of said-content.

Cohen (1971) first introduced this argument in support of his anti-Gricean, semantic reanalysis of alleged implicatures that are generated by and subsequently embedded in sub-sentential clauses. His solution is to treat the alleged implicature of constituent embedded sentences as some form of truth-conditional content so that it can serve as input into the computation of the truth-conditions of compound utterances. This argument has been extended to many putative implicatures, most of which are of a generalized variety (e.g. '*and*', '*a*')—i.e. which arise in most normal contexts unless the speaker does something to block them.[7] Metaphor has also been shown to embed, thus supporting a truth-conditional account of metaphor.[8] Similarly, for other alleged implicatures involved in hyperbole, loose use, metonymy (Camp 2012). The most disputed cases are scalar implicatures. For example, whereas an assertion of '***Some*** *goats are happy*' might implicate that not all are, it is widely held that an assertion of '*Mary believes that* ***some*** *goats are happy*' typically imputes to Mary the belief that *some but not all* goats are. However, there is no consensus about the nature of this strengthened meaning of '*some*'. Some argue that it is an implicature carried by the whole belief-report.[9] Others argue that it is a truth-conditional meaning that is locally assigned to *that*-clause such that it undergoes compositionality and feeds into what is said.[10] However, Cohen's argument has been resisted in a number of cases—e.g. generalized implicatures (Walker 1975, Green 1998), conventional implicatures (Barker 2003), relevance-implicatures (Simons 2010), even conversational implicatures (García-Carpintero 2001)—where it has been contended that implicatures can embed as implicatures. This means that what is said with compound utterances may depend on something more than just the truth-conditions of their constituent sentences.

Regardless of one's theoretical position, embedded implicatures underscore interesting ways in which semantics and pragmatics are intimately interleaved. This is part of a larger phenomenon, including so-called '*multiplicatures*'—implicatures generated from discourse segments containing several sentences (Geurts 2009), and also figurative compounds—e.g. where a metaphor is used for ironic purposes.[11] These cases raise serious challenges for Grice, calling into question his notion of

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[7] Levinson (2000), Recanati (1989, 2003, 2004), Carston (1991, 2002, 2004).

[8] Stern 2000, Carston 2002, Popa 2009, 2010a, b, Camp 2012, Wearing 2013.

[9] Sauerland 2004; Rooij and Schultz 2004; Russell 2006; Geurts 2009, among others.

[10] Two strategies have been used to implement this idea. One involves weak pragmatics constrained by lexicon or syntax, the result of which is factored in locally in the course of determining truth-conditions (Chierchia *et al.* 2012, and previous developments referenced therein). The other involves strong pragmatics in the form of a free pragmatic inference, the result of which is fed compositionally into what is said (Carston 1998; Breheny & Katsos 2005; Noveck & Sperber 2007).

[11] Bezuidenhout 2001, Camp 2006, 2012, Popa 2009, 2010a, b, Popa-Wyatt 2017.

implicature,[12] or calling for amendments by replacing Grice's model with a more cognitively oriented model (Bezuidenhout 2015).

My aim here is to add a further challenge to the mix. This involves a neglected type of embedded implicature involving irony. I argue that this raises problems we need to take seriously in theorising about the semantics/pragmatics distinction. First, is irony a pragmatic or a semantic phenomenon? Answering this question must take into account the idea that irony embeds. This raises a problem for the Gricean-implicature view of irony (§2), despite attempts to deny the problem (§3). A non-implicature strategy, therefore, might seem a promising solution (§4-5). Nevertheless, I argue that this style of solution robs us of important resources to explain what's characteristic of irony, namely a particular mode of delivering involving a ridiculing portrayal of someone's cognitive states. The question remains whether the Gricean model has resources to accommodate the challenge (§6). I argue that it does, though this may require re-thinking the semantics/pragmatics distinction.

2   The Problem of Embedding Irony

Let's begin with irony. When used in self-standing acts, irony involves engaging in a pretence act that is a ridiculing portrayal of a cognitive state. Imagine I say something ridiculous and you reply:

(1)   That was a brilliant idea!

Clearly, you are not serious. Rather, you pretend to be someone who thinks my idea was great only to ridicule it, thus communicating that the opposite holds—that my idea was idiotic.

This view was promoted by Grice (1975/89: 34; 53-4; 120) under his *implicature model*—henceforth GRICE. Accordingly, an ironic speaker *says* or *makes as if to say* something untrue, pretending to perform an illocutionary act, and thereby *conversationally implicates* the opposite. Grice also notes that expressing a derogatory attitude is critical to what one is doing with irony. Though he doesn't say much about the nature and role of this attitude,[13] the basics of his model hold pretty well. We can summarise this as below—where P is what is said literally in uttering S, and *<Invert-P>* denotes the state of affairs that is the opposite condition of the state of affairs expressed by P:

> ***Irony***:   *(i)* a ridiculing attitude towards P (for a contextually given P).
>   *(ii)* a belief that *<Invert-P >* is the case.

This schematic treatment only focuses on declarative sentences, leaving out cases of ironic questions, orders, etc. Since I'm not concerned with giving a theory of self-standing irony, it will do.

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[12] Gauker 2001, Lepore & Stone 2014.

[13] For developments of attitude-theories, see pretence theories (Currie 2006, Recanati 2004) and echoic theories (Wilson 2006). For a hybrid view, see Popa-Wyatt (2014).

How shall we think of the commitments (i) and (ii)—of ***Irony***? First, let's assume with Grice that (ii) is *conversational implicature*.[14] Second, it seems reasonable to think that by expressing a disparaging attitude towards *P*, I further indicate that I believe something like *<Invert-P>*. This means that (i) and (ii) are equally important to what we do with irony, so it might seem natural to assume that both are *conversationally implicated*.[15] This makes sense: if the speaker engages in a ridiculing portrayal of someone's cognitive states, the hearer can infer that the speaker has a mocking attitude towards that person,[16] and therefore she believes an inverted-content.

GRICE has recently come under attack on account that irony embeds under various complex sentences (Levinson 2000, Camp 2012). Camp (2012: 600) explains that when irony embeds it contributes 'an inverted meaning to the compositional determination of a propositional content which is itself put forward with genuine force'. To illustrate, let's take a variation of (1). Imagine I say again something ridiculous, and this time you warn me:

(2)   If you come up with another brilliant idea like that, you're fired.

Clearly, what you mean is that you'll fire me if I come up with another idiotic idea. You utter something ironically in the antecedent, which gives rise to the inference that my earlier idea was bad, and this inference is then incorporated into the overall point you make with the conditional.

Nevertheless, in uttering (2) the speaker is not ironic in the same way she is in uttering (1). There need be no commitment to the attitude and belief under ***Irony (i)-(ii)***. Why? Because the speaker's purpose in (2) is not to be ironic: she merely uses irony to achieve other goals—e.g. to show how characteristic ironic commitments in the antecedent entail certain commitments in the consequent. For example, her belief that the addressee is probably going to produce another idiotic idea licenses her, if they do, to fire them. Yet understanding the conditional does not require that the speaker undertake ironic commitments. It suffices if she displays characteristic ironic commitments in the antecedent so that the hearer can draw out their consequences. Thus, irony is conditionalized—i.e. is confined at the level of the antecedent—while the whole conditional remains non-ironic.

Irony embeds under other operators as well.[17] Consider its embedding under a belief/thought report. Take the following report by Tan:

(3)   Max believes/thinks that George is a real genius.

There are at least three readings of (3). *Reading-1* is one in which the reporter, Tan, ridicules someone who would believe that Max believes George is a genius. To make this reading clear, Tan

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[14] From now on, I'll use 'implicature' as a shorthand for conversational implicature, unless otherwise specified.

[15] By saying that the attitude is implicature I don't mean that it is calculable, but merely that it is implicitly expressed as a way of meaning something more than what the words themselves mean.

[16] The ridicule typically expressed with irony can also be expressed towards oneself: e.g. after locking myself out and realising I left the house keys inside, I say to myself 'Wonderful!'.

[17] Given space limitations, I cannot discuss in details further possible embeddings—e.g. under disjunction, quantifiers, epistemic modals, or other discourse connectives such as 'since', 'because'. It's worth noting that given syntactic constraints, we should expect the embedded sentences to be typically indicative sentences.

might stress in a mock tone the word '*believes*', or emphasise it with an intensifier by saying '*Max **so believes** that George is a genius*'. Irony doesn't embed here; instead it takes *wide-scope* over Max's believing that George is a genius (literally), so the resulting inverted-content is: Max does *not believe George is a real genius*.

There are two other readings for (3), both in which irony embeds, taking a *narrow-scope*. For *Reading-2*, suppose Max frequently makes claims in the ironic mode, in particular with derision about George's intellectual capacities. This is the mode in which Max thinks ironically and delivers ironic speech. Thus, in uttering (3) Tan is reporting that *Max* is ridiculing anyone who might think George is a genius. To make this reading clear, Tan might stress in a mock tone the words '*a real genius*' to emphasise that those are Max's words. Irony takes here narrow-scope over '*a real genius*', so the resulting inverted-content is contained as part of *that*-clause: Max believes that George is *the opposite of a real genius*. What about the attitude? Since Max is the one thinking in ironic mode, then it's reasonable to think that both attitude and inverted-content are commitments that fall under his viewpoint. Let's call this reading *large narrow-scope*.

It should be obvious that on this reading, Tan doesn't have to have the ironic commitments characteristic of someone who is ironic about George. She is merely reporting that Max has them. For example, the following is a natural continuation of the conversation:

(4)   Ted: Max is really underwhelmed by George.

Tan: Yeah. He thinks he's ***a real genius***. Little does he know: George *is* a real genius.

Tan's last utterance is non-ironic: she believes that George is indeed cognitively gifted, even though she is reporting that Max thinks the opposite. So, on this reading, neither the attitude nor the inverted-content *projects* to become a commitment that Tan undertakes with the whole utterance. Irony doesn't scope out here: instead it is ascribed to Max's thought. The continuation makes explicit that the ironic commitments are Max's and not Tan's.

Reading-3 is likewise narrow-scope, but in this case Max is known to be an utterly un-ironic guy. He never says or thinks anything in the ironic mode. Suppose, however, that we have evidence that Max thinks that George is extremely dim. Then, in uttering (3) Tan is not reporting that Max is ironic, but is merely phrasing ironically Max's belief that George is an idiot. Nevertheless, Tan need not incur the ironic commitments herself. This is because she introduces an ironic mode to characterise Max's non-ironic belief, not her own beliefs. Crucially, since Max lacks an ironic mode, this means that he cannot be attributed an ironic attitude through the report. Let's call this reading *small narrow-scope* in the sense that only inverted-content is contained in *that*-clause, not the attitude.

Note that the difference between *Reading-2* and *Reading-3* is not to do with scope. It's to do instead with the relation between the content of *that*-clause as produced by the reporter (Tan) and the content believed by the reportee (Max). On *Reading-2*, the irony expressed with *that*-clause matches Max's ironic viewpoint. On *Reading-3*, the irony expressed with *that*-clause only partially matches Max's viewpoint, by ironically rephrasing his non-ironic belief.

What's interesting about these narrow-scope readings is that they require us to countenance the idea of an *ironic mode* to capture the mode of thinking, or doing something ironically. This typically amounts to dramatising something, in a ridiculing way, thereby expressing a variety of attitudes

ranging from mockery, poking fun, teasing, to criticising and disparaging, and further conveying some inverted-content. This is what Max is reported as doing on *Reading-2*.[18] However, on *Reading-3*, the ironic mode is merely used to specify a non-ironic content.

We should therefore think of irony not as a mere vehicle for conveying propositional content—*that* one has a ridiculing attitude and believes an inverted-content—but as a *mode of thinking* and *doing* things that involves undertaking a *ridiculing stance*. This means that we cannot separate the content from the mode of delivery. This aligns with the idea that irony is a matter of *doing*—doing something with words—a mode of conducting action involving a known form of *play*, pretence or caricature, and thus *echoing* certain views that are found wanting with the aim of ridiculing them.[19] We can represent this thus:

> ***Ironic Act***:   Uttering *S* under a ridiculing mode is pretending to believe/assert *S* and/or echoing someone else's assertion or thought, thus expressing (given manifest absurdity) commitments *(i)* and *(ii)*—of ***Irony***.

Should we call this an illocutionary act? I don't see why not. After all, it's a move in a conversational game. It's doing something with a sentence: it's pretending to do one thing to achieve something else. This is compatible with GRICE—i.e. having the commitments *(i)-(ii)* of ***Irony*** undertaken as implicature.

With this extension on board, how are we to explain the embedding patterns above? We saw that the embedded sentences (the antecedent in (2); *that*-clause in (3)) use irony, but are not self-standing ironic utterances. How does the *ironic meaning* (including attitude and inverted-content) appear in the embedded sentence? Is it something we *say* or something we *implicate*? Given the said/implicated distinction, this is the choice we are offered. But, if we assume with GRICE that irony is implicated, this requires explaining how implicatures of sentence-parts can enter compositionally into what is said (asked, ordered, etc.) with the whole compound. This is problematic, since *TC-Embedding* bans implicatures from entering compositional processes. How are we then to solve this problem? One way out would be to simply deny the problem—that embedding doesn't really occur. This is a possible Gricean rejoinder.

3   Gricean Rejoinder: No Embedding

Consider again the conditional in (2) repeated below:

(2)   If you come up with another brilliant idea like that, you're fired.

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[18] This requires the idea of a belief with ironic content. But this is contrast with the orthodox idea that beliefs are propositional attitudes, whereby propositional attitudes are truth/false-assessable contents that are, essentially, propositions. See Barker (2017) taking up this issue. For an analysis of belief-reports containing irony, see Barker & Popa-Wyatt (2015).

[19] This is consistent with irony being uttered on a deadpan.

According to the Gricean, (2) is a typical case of implicature where what the speaker means doesn't '*fit*' the meaning of the sentence uttered. She says she will fire the addressee if they come up with another brilliant idea, but this doesn't make much sense. So, the interpreter needs to look for a hypothesis on which the conditional makes sense. This could be that the addressee will be fired if they produce another idiotic idea. On this reading, the whole conditional carries an implicature containing irony as part of it. This means that since a speaker is committed to the implicatures of their utterance, that the whole conditional becomes ironic.

This wide-scope hypothesis is however untenable. First, if the whole conditional is ironic, then this means that the speaker must be giving a ridiculing portrayal of an absurd belief whose content is the conditional she utters taken literally. But what's the absurdity of that conditional on a literal reading? Is it that employers fire their employees if they come up with brilliant ideas? Secondly, it's not very clear what the inverted-content is meant to be. Is it that the speaker won't fire the addressee if they come with idiotic ideas? Clearly, the setting is not for a wide-scope reading. Third, the wide-scope reading is not consistent with this follow-up by Tan:

(5)   Here she comes again: shining on us another brilliant idea. Can't wait the next gem!

Tan's follow-up, together with the conditional in (2), looks like *modus ponens*. Tan is drawing the implications from that conditional. But this fits with a narrow-scope reading in which only the antecedent is ironic, and not the whole conditional.

Another hypothesis the Gricean might adopt is that what's ironic in a conditional like (2) is instead the implication carried by a normal supposition made with the antecedent. Namely, that the addressee producing another brilliant idea is a live epistemic possibility. The irony is that this is clearly the opposite of a live possibility. This hypothesis has some plausibility. It may be that some conditionals are produced with this kind of irony. But this idea does not fit with the present case, since it doesn't explain the relation between the conditional in (2) and Tan's follow-up in (5), which depends on the antecedent being ironic.

The key idea is that the conditional seems to express an implication from the correctness of the ironic antecedent to the correctness of the literal consequent. This means that only the antecedent is ironic, while the whole conditional remains non-ironic. It looks like irony can *embed* after all.

Now if we want to maintain GRICE that irony is an implicature, then the conversational implicatures—***Irony** (i)–(ii)*—that it carries in a self-standing act, would also have to be present as commitments of the compound utterance in which irony embeds. But they are not: in uttering a conditional like (2) the speaker lacks such commitments. Nevertheless, irony embeds in some form. For proponents of *TC-Embedding* that can only mean one thing. Irony must be a truth-conditional operation. I turn now to two strategies for implementing this truth-conditional operation.

4   Irony embeds as 'weak' pragmatic effect

One proposal is that irony is a component of propositional (truth-conditional) content. Semanticists who advocate weak pragmatics explain the pragmatic supplementation needed to determine truth-

conditions by virtue of a linguistic rule.[20] Camp (2012: 591; 599) has first applied this idea to irony. She postulates a covert '*sarcasm-operator*' (henceforth *Sarc*) within the logical form (LF) that is not reflected in the word sequence, but is realised at the surface level by an ironic or sarcastic intonation. The idea is that para-linguistic signals—to which we may add facial expression, gesture, eye-rolling, etcetera—are a key part of the evidence that interpreters use to identify speaker meaning. Camp says that *Sarc* works semantically by taking as input the literal meaning of a word or phrase, and returning an inverted-content which then enters compositionally into what is said. She then applies this rule to lexical irony or sarcasm which targets only a word or phrase while the rest of the utterance is sincere:

(6)   Your *fine* friend is here.

The intonation is built into a semantic rule that inverts the semantic (literal) content of the word or phrase used ironically, and which we can capture thus:

Sarc1:   When prefixed to a (literal) expression φ, *Sarc* maps the meaning of φ onto a set of relevant alternatives or contraries relative to a context c—denoted with [Invert-φ] —such that the proposition <*Sarc*[φ] (c)> is either true or false.

Despite the elegance of this rule, some further pragmatic processes are still required in order to determine how the semantic rule is to be applied. First, to determine the scope of the *Sarc*-operator, then to scan for a set of inverted meanings relative to c, and finally to determine the most salient of these contrary candidates.[21] The upshot is that the resulting inverted-content feeds directly into what is said, or other primary illocutionary acts—e.g. the content of what is asked or requested.

This particular way of subsuming pragmatics into a semantic rule, though familiar from other cases, including metaphor (Stern 2000), is not trivially solved in irony. Stern is sceptical about the prospects for a semantic rule for irony, since it's hard to determine semantically whether in a given context the relevant contrary is a 'contradictory or a polar opposite or some contrary midway on the continuum from the mere contradictory to the polar opposite' (2000: 236).

Even assuming that so much pragmatics can be built into a semantic rule, *Sarc*-analysis has quite limited coverage. Camp restricts the *Sarc*-analysis to lexical sarcasm, allowing that irony has a multi-faceted behaviour, at times contributing to truth-conditions, at other times doing something else. But even in cases where it is ostensibly most suitable, *Sarc*-analysis seems unable to explain how the relevant semantic inversion is determined. For example, consider (7) from Recanati (2000), where the speaker refers ironically to a salient individual, McPherson, who is being mocked for his philosophical pretensions:

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[20] This strategy has been applied to e.g. domain quantification (Stanley & Szabó 2000), indicative and subjunctive conditionals (King & Stanley 2005), and metaphor (Stern 2000).

[21] We may think that the roles of context at play here are the usual ones of ordinary pre-semantics and meta-semantics—i.e. contextual information bearing on what the relevant LF is (in resolving scope ambiguities), and on what fixes the relevant contraries. This is because a semanticist can allow roles for context to play in the calculation of conventional meaning.

(7)   '*Quine'* has not finished writing his paper.

This example highlights the difficulty of subsuming a local pragmatic inference to *Sarc*. There *is* no lexical inversion of 'Quine.' The contrast is pragmatically created by mapping the name of the great philosopher 'Quine' onto a referent in the common ground, McPherson, who has relevantly contrasting properties vis-à-vis philosophical ability.[22] As we'll see later, Recanati argues that this ironic use of 'Quine' has a truth-conditional effect of contributing the referent McPherson to what is said. However, *Sarc* cannot explain this contribution merely as semantic inversion.

Furthermore, we might worry that the *Sarc*-account is too restrictive. As Camp (2012: 613) concedes, not only lexical irony embeds but also propositional irony. E.g. in (8), from Levinson (2000), the irony targets the entire proposition expressed by the antecedent; in (9) it involves not just the inversion of the proposition expressed by the antecedent but a metaphoric interpretation of it.

(8)   [*Sun shining*] If it continues to rain like this, I'll come to England more often.

(9)   If God's gift to philosophy comes, I'll leave.[23]

Before turning to a pragmatic strategy, another hypothesis the semanticist might adopt is a *local context* strategy that doesn't posit a covert operator triggered by sarcastic intonation, and doesn't require a semantic inversion. This allows a rich role for context and pragmatic factors to influence interpretation. E.g. in the case of (7) the context is taken to map 'Quine' onto McPherson. The ironic interpretation comes in the explanation for why this interpretation shift happens—e.g. that typically context maps 'Quine' onto Quine, the great philosopher, but McPherson isn't a great philosopher, so 'Quine' is mapped onto an individual with lesser philosophical ability. Further, in the case of propositional irony, the local semanticist might argue that we can draw on contextual information. So that, in a local context, we can determine that the antecedent of a conditional, as in (8)-(9), is mapped onto a different proposition than usual. The connection with irony comes in the explanation for the interpretation shift. This is insightful. Nevertheless, the ironic interpretation is restricted to propositional inverted-content, leaving out attitude expression.

Finally, there is a more decisive argument against semanticism. Consider the conversation with two possible responses by Sam, to Tan's sarcasm:

(10)   Tan: Here's George, the walking brain.

          Sam[1]: OK! It's absurd to think George is a genius: he's the very opposite of one. But we shouldn't be nasty about it.

          Sam[2]: OK! George is *a real genius*. But we shouldn't be nasty about it.

Sam[1] chides Tan for her sarcastic cruelty. He admits both that it's ridiculous to believe George is a genius, and affirms the inverted-content. Sam[2] does exactly the same, but it uses an ironic mode instead of a literal utterance. Nevertheless, this makes Sam[2]'s utterance infelicitous, whereas Sam[1]'s

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[22] For simplicity, I ignore the possibility that 'Quine' is first interpreted metaphorically.

[23] Thanks to Stephen Schiffer (p.c.) for the example.

utterance is felicitous. Why? After all, both utterances express similar commitments to a ridiculing attitude and inverted-content. The difference, I argue, lies not so much in the content conveyed, but in *how* that content is conveyed. Sam[1] is literal; Sam[2] is ironic. In using irony Sam[2] is being a little nasty: he is doing the very thing he says we shouldn't be doing. His utterance does not fit with his last comment about nastiness, and hence it's infelicitous.

This difference is precisely what makes a semantic explanation of irony inadequate. First, as Camp sketched the view, *Sarc* ignores attitude altogether. But let's suppose that by expanding her *Sarc*-operator idea, we can incorporate the attitude into the truth-conditions thus:

Sarc2: '*Sarc*(*S*)' is true iff (i) believing *S* is ridiculous/absurd, and (ii) [Invert-*P*] obtains.

In this new rule, *Sarc* does at least model the attitude in (i), by treating it as propositional content that can contribute to what is asserted. However, this makes it hard to capture the difference between Sam[1]'s and Sam[2]'s utterances. On *Sarc*-analysis, Sam[1]'s utterance is identical in content to Sam[2]'s, so both ought to have a *Sarc*-reading. But this can't explain the difference between *expressing* a ridiculing attitude, and merely *stating* it. Whereas Sam[2] is undertaking actual performance of an ironic-act with a view to drawing attention to how ridiculous it would be for one to earnestly consider or do the thing in question, Sam[1] is merely asserting in a literal mode that a certain belief is ridiculous and affirming the inverted-content. Sam[2] is ironic, but not Sam[1].

This explains why Sam[2]'s utterance is infelicitous: it is pragmatically defective because he is doing the very thing—ridiculing portrayal—he explicitly says we should not be doing. So, ridicule is required for irony. But Sam[1] is *not* engaging in ridicule, so there is no semantic clash with the following commentary. Thus, the difference between Sam[1] and Sam[2] is not just a matter of the content expressed, but *how* that content is expressed matters a great deal.

We can conclude from this case that irony, *pace* Camp, cannot be merely *stating* that a certain belief is absurd. Are there are other alternatives to make irony a component of said-content?

5   Irony embeds as 'strong' pragmatic effect

Let's turn to a pragmatic strategy in the agenda of truth-conditional pragmatics set out by Recanati (2004), among other pragmaticists. This involves using linguistically unconstrained pragmatic mechanisms such as a 'free' local pragmatic inference to tailor the meaning of words or phrases, by contextually filling in, or filling out, information to the encoded content to enrich, or to loosen, the speaker's message. The resulting pragmatically tailored meaning can thus feed compositionally into what is said.[24]

Recanati (2000: ch. 17; 2007; 2010: ch. 8) has first applied this strategy to irony. He employs a mechanism of *context-shifting pretence*—where the pretence amounts to shifting the actual context of utterance to a context of a make-believe world. He distinguishes two kinds of context-shifting

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[24] This strategy has been applied to metaphor, metonymy, approximation, hyperbole, among others. See Carston (2002), Recanati (2004), Wilson & Sperber (2012), among others.

where pretence can affect '*locutionary*' acts such as a referring-act in (11a) (repeated from (7)), or '*illocutionary*' acts as (11b):

(11)   a. '*Quine*' hasn't finished writing his paper.
         b. [*downpouring*] What lovely weather!

Let's focus on (11a) because this is the case we saw the semantic strategy struggled with. The speaker pretends to refer to the great philosopher Quine, thereby partially shifting the actual context of utterance—where 'Quine' picks up the philosopher Quine—to a *pretend context* or a make-believe world in which a salient individual, McPherson, is like the great philosopher Quine with respect to philosophical ability. As a result, the name 'Quine' picks up McPherson as a way of indicating his aspirations to be like the great philosopher Quine.

Recanati explains this shift by appealing to pre-semantic pragmatic factors that affect what sorts of pragmatic tailoring occurs. He draws on a pre-semantic distinction between *character/content*. He argues that '*Quine*', instead of being used with its normal semantic content, has its character shifted onto a metalinguistic character '*the person named Quine*.' Thus, the semantic content of '*Quine*' is determined by whomever satisfies '*the person named Quine*' in the pretend context, namely McPherson. As a result, McPherson enters into the truth-conditions, and not Quine.

But clearly the speaker is doing something more than just asserting that *McPherson* hasn't finished writing his paper. Her point is to ridicule those, who like McPherson himself, believe that he is anything like the great Quine. How is this attitude captured? One hypothesis is that in calling McPherson '*Quine*', the speaker creates a contrast between the kind of philosopher McPherson wants to be and the kind of philosopher he is, thereby showing how his dreams and expectations fall short of reality. This is a pragmatic contrast. It results from mapping relevant properties from general knowledge about Quine onto what is mutually known about McPherson. This requires a full-blown pragmatic reasoning to understand what the speaker is up to in contrasting McPherson and Quine. So this inference fits with implicature reasoning. But how can Recanati subsume this implicature-like inference to a pre-semantic mechanism of context-shifting pretence?

Recanati concedes that understanding the speaker's point in shifting the reference from '*Quine*' to McPherson requires grasping speaker's intentions, in particular her intention to ridicule those who might think that McPherson is anything like Quine. But he denies that this inference is a Gricean-implicature. What is it then? One hypothesis, though Recanati doesn't explore this in relation to irony, is to invoke a process of so-called '*outer pragmatics*' which he invokes in relation to quotation (Recanati 2013). This is a process very much like implicature, but whose output feeds compositionally into what is said.

How does this help explain embedded irony? Imagine I'm trying to find a match for Sue, and you reply:

(12)   If Sue goes out with one of your *fine friends*, she will be miserable all night.[25]

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[25] Thanks to John Hawthorne (p.c.) for the example.

It follows from Recanati's analysis of irony that in uttering (12) the speaker pretends to refer to what the addressee calls their 'fine friends', thereby partially shifting the actual context of utterance to a *pretend context* in which what they believe to be 'fine friends' are in fact lousy friends. In this shifted-context, the antecedent is then mapped onto the proposition that Sue goes out with one of the addressee's lousy friends. How can Recanati explain this inversion from '*fine friends*' to '*lousy friends*'? In (11a) we had a reference-shift, but here the shift concerns a general term.

One hypothesis is that the context-shift induces a general term to refer to the opposite property by shifting the reference of '*fine*' to the property of being lousy (just as the referent of 'Quine' is shifted to McPherson). To explain this, Recanati might be invoking a shift in the *circumstance of evaluation* with respect to which the extension of the description '*fine friends*' is determined. The description is first interpreted with respect to the actual context, thus fixing the value of the indexical '*your*' to pick up the addressee. Then the description is evaluated with respect to the addressee's belief-world in which what they call '*fine friends*' picks out lousy friends. What friend is picked out will vary across the epistemically accessible worlds being quantified over. The upshot is that the inverted-content '*lousy friends*' is fed into the truth-conditions of the antecedent, thus affecting the truth-conditions of the conditional.

How about the attitude? Although Recanati doesn't consider embedding of irony, one hypothesis is that embedded irony is performed in a kind of illocutionary act (including both attitude and inverted-content), but the force is *cancelled* somehow.[26] This is why in a conditional such as (12) the speaker need not be committed to the conversational implicatures of **Irony (i)-(ii)**. How shall we understand this force cancellation?

For Recanati, pretence or simulation is key to both performing an ironic act, and more generally to embedding in compounds. Irony involves a form of displayed speech or thought, which Recanati (2004: 71) explains in terms of implicature (i.e. his '*secondary meaning*'):

> What the speaker does in the ironical case is merely to pretend to assert the content of her utterance. Still, there is an element of indirectness here, and we can maintain that irony also possesses a secondary character. By pretending to assert something, the speaker conveys something else […] By pretending to say of Paul that he is a fine friend in a situation in which just the opposite is obviously true, the speaker manages to communicate that Paul is everything but a fine friend. She shows, by her utterance, how inappropriate it would be to ascribe to Paul the property of being a fine friend.

Notably, for Recanati (2004: 77), pretence enters the content of primary illocutionary acts. It introduces two layers of acts. One consists in displaying an act *F* (with its content and force), while signalling it is feigned. We might call this *bare pretence* to *F*-ing. The other is *ironic pretence* which consists in staging the performance of *F* with a view to showing that certain *F*-implications are ridiculous. This is the act that carries the ridiculing attitude. Recanati maintains that whereas the first act is merely displayed, the second one is actually performed so that the speaker counts as undertaking a ridiculing attitude, and further conveying an ironic inverted-content.

How does this help with embedding? Recanati (2016) argues that embedded sentences involve a pretend assertion, or more generally pretend illocutionary acts. This requires that the cancellation induced by embedding is *partial* so that the part that is unaffected by the cancellation is not forceless

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[26] See Hanks (2007), among others.

(i.e. a non-committal act). Instead, the illocutionary act (or mental act in thought) that ties the propositional constituents into a unitary act is preserved under embedding. But it's only maintained in the form of an *indicated illocutionary-act type* that the sentence is used to perform in virtue of the conventional forms for performing a given illocutionary act.[27] For example, in the case of irony we typically make an act of assertion, but this is merely indicated and not actually performed. It is mimicked or displayed in the sense that the speaker is not subscribing to what she says, but she's ascribing it to someone else whom she is ironically mocking.

How to extend this thought to embedded irony? It follows from Recanati's general analysis of embedding that what embeds in a conditional like (12) is an *indicated ironic illocutionary-act type* which is not actually performed, but merely displayed. An ironic illocutionary-act type is the kind of act that is normally produced by a self-standing ironic utterance, thereby implicating a ridiculing attitude and an inverted-content, though crucially in an embedding context it lacks the ironic force.

This idea involves giving up *TC-Embedding*, because it suggests that not only propositional (truth-conditional) acts are performed by embedded sentences. The approach faces a serious question. How does a sentence, which normally encodes a proposition with a force, do something completely different when embedded—i.e. *indicating* an illocutionary-act type? It must be that some feature of the embedded sentence is responsible for this *indicating*. Since voice-stress is the canonical form for carrying ironic meaning, we might suppose that in the case of a conditional like (12) it is voice-stress that carries the signal of an ironic act-type in the antecedent. We can represent this thus:

Ironic-Act Indication: 'Sue goes out with one of your fine friends' + voice-stress **indicates** an

ironic illocutionary-act type.

This suggests that the voice-stress has different functions in self-standing acts and embedded cases. In self-standing acts, it is part of a dramatic act. In embedded cases, it does something completely different—merely indicating an ironic illocutionary-act type.

Finally, another possibility that aligns with Recanati's general analysis of embedding is to propose that the ironic sentences, when embedded, are performed in pretence acts. So, in uttering the antecedent of the conditional in (12) the speaker is pretending to perform an ironic act. Given that irony itself involves pretence, this amounts to a form of *pretence under pretence*. So what embeds is the pretend ironic-act. But this just puts off the problem. Now we have to contend with the idea of embedding a pretence act, which will present us with many of the issues that the embedding of irony does anyway. What options are left available?

6   Irony embeds *qua* implicature

While one Gricean response was to deny embedding, and thus preserve *TC-Embedding* (see §3), another option would be to abandon *TC-Embedding* and thus free ourselves from the ban on

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[27] This may involve a *mood-indicator* which conventionally indicates the illocutionary potential of a sentence (e.g. the assertion sign to signal assertoric force, or the imperatival mood to signal commissive force).

embedding implicatures. This opens up the possibility that what an embedded sentence contributes to the matrix of the compound is a content that need not closely correspond to that of the sentence's literal meaning. Indeed, that content may be an implicature. This also opens up the possibility that logical operators can pick up on non-truth-conditional content such as implicature, not just truth-conditional content.

In the remainder of the paper I shall argue that irony can embed *qua* implicature, and consider the consequences. This means the ironic implicature of a sentence-part can be used, in its quality of *implicature*, in the computation of the truth-conditions of the whole compound.

There are two worries with this proposal, though. One is the *calculation problem*.[28] This is the problem of showing how the implicature is worked out from a sentence-part, and not on the basis of the speaker's uttering a full complete utterance, as GRICE holds. For example, embedded sentences such as a conditional antecedent, or *that*-clause of a belief-report, are not asserted on their own because they are part of a larger compound. So according to GRICE, they cannot function as input for licensing implicatures. The other problem is the *compositional problem*. This concerns the truth-conditional compositionality which precludes implicatures from undergoing compositional processes. I argue that while the calculation problem may be solved by amending GRICE, the compositional problem is one that sticks.

One solution to the calculation problem is to show that implicatures can be worked out *locally*, not only globally. There are two options to implement this. One is to argue that the input for implicature need not be a full-blown speech-act—i.e. it need not involve saying or asserting something with a commitment to the truth of the proposition expressed. Instead, implicatures may also be carried by a weak notion of 'saying'—i.e. expressing a proposition with no commitment to its truth. Thus, one 'says' (though not asserts) something by the antecedent of a conditional by virtue of uttering the *whole* conditional and further implicates something else.[29] This weak notion of saying aligns with Grice's notion of '*making as if to say*' to explain figurative speech—i.e. cases in which one *play-says*, openly pretending to say something, when one means something different.

On this hypothesis then, in uttering a whole compound one utters the embedded sentence under a play-act in order to convey something ironical. Thus, play-saying something *can* function as input for a local implicature computed at the level of the embedded sentence. This means that instead of reasoning about the speaker's global intentions with the whole compound, the hearer may reason locally about the speaker's point in uttering the embedded sentence under pretence, and how this is relevant to the whole compound. The upshot is that the hearer may now derive a *local implicature* sub-sententially, independent of the whole compound.

Other factors than pretence may play a key role in licensing local implicatures. For example, what is key for Mandy Simons (2010) in explaining embedded scalar implicatures, is the discourse status of embedded sentences. The idea is that an embedded sentence such as the antecedent of a conditional does not merely serve to contribute content to the proposition expressed by the whole conditional. Instead, the embedded sentences may fulfil a variety of discursive functions to the

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[28] This problem has been taken up in relation to various embedded implicatures, see Recanati (2003), O'Rourke (2003), Wearing (2013).

[29] Walker (1975: 151) uses this strategy to explain that embedded 'and'-implicatures are still implicatures.

extent that they are *conceptually independent* from the compound utterance of which they are part.[30] This enables interpreters to pay attention to the embedded sentence as if it's a linguistic unit with a specific function within the discourse that is independent of the containing compound. Thus, hearers can reason about why the speaker has produced that sentence-part, with that particular form, and how it contributes in turn to the relevance of the whole compound. This gives rise to a *local implicature* by drawing on both local pragmatic considerations at the level of the embedded sentence, and global pragmatic considerations involving finding a plausible interpretation of the compound as a whole.

Crucially, Simons insists that we should understand *locality* in two different ways. One is the idea that the implicature is computed locally—i.e. resulting from a process which takes into account only some sub-part of the entire compound sentence. The other is that the implicature has local effects —i.e. it becomes part of the content of the embedded sentence that falls under the scope of logical operators. Nevertheless, Simons argues that inferences that are locally computed, such as embedded implicatures, may have a *global effect* in that they may be understood as a commitment undertaken by the speaker with the whole compound.

This local-implicature account can be extended to embedded irony. On this account then, understanding embedded irony involves the interaction between local pragmatic considerations at the level of the embedded sentence, and global pragmatic considerations such that we find a plausible interpretation of the whole compound. This reasoning may go back and forth, between the embedded sentence and the whole compound of which it is a part, until the ironic implicature is computed *locally*.[31] Thus, Simons' idea can be extended to account for the calculation problem in embedded irony.

Another option to the calculation problem is to argue that the input for implicature is a full-blown speech-act, as GRICE holds, but that the embedded sentence is performed under a *local speech-act*. Mackie (1973) and Stalnaker (1974) explore this option in relation to conditionals. Accordingly, making a conditional amounts to making two *local speech-acts*: supposing that *P*, then asserting *Q* within the scope of that supposition. We can substantiate this by drawing insights from Stalnaker (2011). There he proposes replacing a truth-conditional analysis on which conditionals are *asserting a conditional proposition*, with a more congenial analysis where conditionals are seen as making a *conditional assertion* about two propositions: one expressed with the antecedent; the other with the consequent. Although conditional assertion is not a categorical (full-blown) assertion, Stalnaker (2011: 231) shows that it nevertheless performs a similar update on context:

> First, one adds the content of the antecedent, temporarily, to the context; that is, one sets aside the possibilities in the context set in which the supposition is false. […] Then the content of the consequent

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[30] This is evidenced by the fact that hearers can respond to the content of the antecedent of a conditional independently of the whole conditional. Haegemann (2003) provides syntactic evidence for the independence between antecedent and consequent of a conditional in terms of illocutionary force in cases of what she calls '*premise-conditionals*'.

[31] O'Rourke (2003) argues that Grice's particularized implicatures associated with '*and*' might be assigned quickly to embedded sentences by virtue of pre-packaged associations forged by its regular conjunction with the lexical term. Such implicatures became generalized and conventionalized with time, so the inference is short-circuited (Bach 1995). Extending this to embedded irony, we might argue that what started as ironic implicature may get conventionalized, and over time become a heuristic for detecting irony. This is helped by the idea that irony is conventionally associated with certain general speech pattern (e.g. intonation). Thus, ironic implicature can be assigned locally to the embedded sentence as the utterance unfolds. This is appealing, but irony is often creative, rather than conventionalized, so these cases are hard to accommodate with short-circuited inferences.

> is treated like the content of a categorical assertion: one eliminates, from this temporary or derived context those possible situations that are incompatible with the content of the consequent.

On this hypothesis then, the Gricean might argue that in reasoning about what speech-act the speaker aims to achieve with the conditional, the hearer might have to locally infer the ironic implicature(s) carried by the antecedent, then add them temporarily to the context, and in this updated context evaluate the consequent. The upshot is that the overall speech-act the speaker is making in uttering a conditional is a conditional assertion, or for that matter any other speech-act made with the consequent that is conditional on the speech-act made with the antecedent. For example, in (2)—*If you come up with another brilliant idea like that, you're fired*—the speaker is threatening to fire the addressee, conditional on their producing another idiotic idea. The point can be generalized by showing how ironic implicatures carried by sentence-parts can be subsumed to the overall point made with other logical compounds (though different analyses might be needed depending on the logical operator under which irony embeds).

On either of these solutions, the ironic implicatures are generated locally and subsequently embedded under the embedded sentence. So the challenge from the calculation problem is thus met. Nevertheless, despite the appeal of a local implicature account, the Gricean faces another pressing problem—the *compositional problem*. This is the problem of explaining how the ironic implicature can undergo compositional processes, thereby affecting the truth-evaluation of the whole compound. This violates *TC-Embedding* which precludes implicatures from entering compositional processes. One alternative at this point would be to abandon *TC-Embedding*, and thus release ourselves from the constraint of composing only truth-conditional content. This also means that we have to allow logical operators to pick up on, and semantically process non-truth-conditional content such as implicatures of sentence-parts. To fully address this problem will require serious amendments, but this falls beyond the scope of this paper.

The Gricean might not be moved by this alternative suggestion. However, it's worth noting that although the local implicature model has made strides towards explaining how implicatures embed, there remain some sticky issues that make embedded irony difficult compared to other embedded implicatures discussed so far in the literature. First, in contrast to other embedded implicatures where both what is said and what is implicated with the embedded sentence make a contribution to the whole compound, with embedded irony only the implicature is relevant, not what is said or made as if said.[32] Nevertheless, what is (made as if) said with the embedded sentence is also present for example in the antecedent of a conditional like (2) on its ironic reading. It seems it better be, because it is this literal meaning of the antecedent that is employed to infer irony.

But here's the problem. The truth-conditions associated with the literal content of the antecedent in (2) are clearly not present as part of what the speaker communicates with the antecedent. Similarly, for the belief-attribution in (3). If *that*-clause encodes the literal proposition that George is a real genius, then why doesn't the attribution in (3) assign this proposition as part of what Max believes? What is (made as if) said with the embedded sentence clashes with what is implicated by it, so what is (made as if) said is discarded. It seems we must conclude that on an ironic reading, the literal truth-conditions of the embedded sentence are cancelled, and so are no

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[32] This problem arises also for self-standing irony (Wilson & Sperber 2002). The Gricean response has been to deploy the concept of 'making as if to say'.

longer part of the content it contributes to the whole compound. Though the literal content plays a role in how ironic attitude and inverted-content are gleaned, it's not something the speaker communicates, so only the implicatures will be incorporated to the compound utterance. It is thus critical to allow ironic implicatures of sentence-parts to undergo compositional processes such that they contribute to the truth-evaluation of the whole compound.

There is a final wrinkle on this localist approach. I said at the beginning (§2) that by embedding irony in a compound sentence there is no communication of the implicatures ***Irony** (i)-(ii)* that attend self-standing ironic acts. The speaker isn't undertaking such commitments as part of her commitments with the whole compound. In uttering the embedded sentence, she is not undertaking actual performance of an ironic-act, but merely uses irony as a means to achieve some further goals, say, making a conditional, reporting someone else's beliefs, and so on and so forth. Thus, understanding what role irony plays in logical compounds requires understanding how characteristic ironic commitments are displayed in the service of achieving other communicative goals. Clarifying the exact nature of how speakers indicate or display characteristic commitments of a speech-act type is an open problem.

7 Conclusion

I've argued that irony embeds in compound sentences such as conditionals and belief-reports. This raises a problem we need to take seriously. I've examined three strategies that are often considered in relation to the so-called *embedded implicatures*. The first two strategies attempt to preserve *TC-Embedding* by explaining embedded irony as truth-conditional content. However, by trying to shoehorn irony into said-content, they raise problems of their own. This leads us to prefer a *local implicature* model. I then showed how a modification of the Gricean model that makes room for local implicature is in a better position to explain how irony embeds as an implicature. The consequence of this is that we must abandon *TC-Embedding*.

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