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Assertion, Implicature, and Speaker Meaning

Mitchell Green
University of Connecticut
mitchell.green@uconn.edu

Abstract Students of conversational implicature generally agree that when a cooperative speaker makes an assertion that, given the conversation in which she is participating, is less informative than it might have been expected to be, she also conversationally implicates that she is not able to be any more informative than she has been. Such cases, often termed either 'quantity implicatures' or 'scalar implicatures', are an established part of research in pragmatics. It is argued here that for typical cases of this kind, interlocutors do not speaker-mean anything beyond what they say. Instead, parsimony enjoins us to see such cases as rudimentary forms of meaning better described in the framework of biological communication theory: they are generally either manifestations, cues, or signals in senses of those terms developed and motivated within that framework; in some cases they are also expressive utterances. Acknowledging this point enables us to see that while some aspects of human communication require cognitive sophistication, other aspects run on comparatively simpler machinery. Such features also provide clues to the cultural-evolutionary processes leading to our current practices of assertion and other members of the "assertive family" *sensu* (Green 2016a).

Invited paper.

1. A showcase example, and some ways of violating norms
One of the best-known examples motivating Grice's seminal characterization of conversational implicature is the following.[1] A and B are planning a holiday in France, and it is common knowledge that A would like to see his friend C if doing so would not be too difficult. The following dialogue ensues:

> A. Where does C live?
> B. Somewhere in the south of France.

Grice glosses this example as one in which B conversationally implicates that he is not in a position to be more informative than he has been in answering as he does. Grice writes,

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[1] My thanks to William Lycan as well as two anonymous referees for this journal for comments on an earlier draft of this essay.

> *Gloss*: There is no reason to suppose that B is opting out; his answer is, as he well knows, less informative than is required to meet A's needs. This infringement of the first maxim of Quantity can be explained only on the supposition that B is aware that to be more informative would be to say something that infringed the second maxim of Quality, "Don't say what you lack adequate evidence for," so B implicates that he does not know in which town C lives (Grice 1989: 32-33).

Conversational implicature (hereafter just 'implicature') is normally construed as a species of speaker-meaning, in that for an agent to implicate that P, she must harbor reflexive communicative intentions toward an addressee.[2] On the most common construal of such intentions, in the South of France case (hereafter 'SF') that would require that B intend A to believe that B does not know anything more specific about C's whereabouts than that C is in the south of France, with the further intention that A come to believe this at least in part by recognition of B's intention that she do so.[3] Accordingly, as Grice and many commentators who follow him, such as Levinson (1983), affirm, B not only speaker-means what he says, namely that C lives somewhere in the south of France, but also speaker-means a further content that he does not say, namely that he is not in a position to be more informative than that.

Many cases of implicature depends upon the violation of conversational norms, and it will be useful for what follows to distinguish among ways of violating such norms.[4] Grice distinguishes among various ways of failing to live up to a conversational maxim or other norm such as the Cooperative Principle: on his account one may opt out, flout, or violate a conversational norm or group of norms.[5] One who opts out, on Grice's usage, gives no indication of attempting to conform to those norms. At the other extreme, in flouting a norm one not only violates it, but does so with the further intention that one's intention to violate that norm be readily discernible by others. On Grice's understanding, one who intentionally violates conversational norms without flouting them still presents himself as aiming to conform to those norms. Grice illustrates his conception of norm-violation with the case of someone who "quietly and unostentatiously" fails to conform to one or more norms, mentioning as well that such a speaker is apt to mislead others. Grice evidently intends his readers to think of lying as a typical case: the liar presents what he says as true, while violating Quality in the hope of avoiding detection.[6]

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[2] See Neale (1992: 24ff), for defense and development of this point, as well as Petrus (2010: 4-12), Bianchi (2013: 110), and Bach (2012: 54).

[3] Such intentions need not be consciously entertained. Instead, they need only be intentions that a speaker would avow were she to reflect on them. Also, the standard, audience-directed conception of speaker meaning is not mandatory for the considerations that follow. The line of reasoning below would work equally well by employing a conception of speaker meaning, such as that defended by Green (2016), which depends on overtness but with no appeal to intentions to produce an effect on an addressee.

[4] Not all implicature requires norm violation. Many implicatures that exploit the Maxim of Manner (formulated in the Appendix to this essay), for instance do not do so: a speaker who describes events in a certain order, tends to implicate that they occurred in the order listed; but in doing so she does not violate any conversational norms.

[5] Grice adds to this list of ways of violating conversational norms the case of a speaker who is faced with a clash, such as between the Quantity and Quality maxims. This is puzzling because being faced with a maxim clash is not itself a way of violating a conversational maxim; violation only occurs if the speaker responds to that clash in a certain way.

[6] In general, we may distinguish at least five ways of violating norms: (1) inadvertent norm violation in which the agent can't have been expected to know that she was in violation of that norm; (2) inadvertent

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The above delineation of the varieties of norm-violation obscures the possibility of such a violation, even by an ostensibly cooperative interlocutor, that is neither covert nor overt. To see why, observe first that 'covert' and 'overt' do not exhaust the logical space of ways of behaving. As I scratch my ear while riding on a crowded subway, I intend to conceal neither my intention to scratch my ear nor my ear-scratching. At the same time, I do not intend to advertise either my intention or my behavior. My ear-scratching is thus neither covert nor overt. (One may by contrast readily imagine cases of covert as well as of overt ear-scratching.) So too for behavior that violates a norm. A pedestrian who deliberately breaks a law by jaywalking in order to save time on her way back to her office from her lunch break is most likely not doing so covertly, but nor is she doing so overtly. The former case would require some effort to hide her behavior, while the latter would require some effort to advertise it: perhaps the jaywalking pedestrian sashays her way across the street in plain view of a police officer. But the pedestrian need do neither of these things on her way back from lunch while still violating traffic laws.

Do matters appear any different as we get closer to the SF case while remaining outside the realm of communication? We approach that case by considering a person who is ostensibly conforming to a set of norms, is unable to live up to them fully, and instead does something that lives up to them only in part. Suppose you've asked me to run an 8-minute mile and I agree to try. As the laps go by and the clock ticks, it is becoming clear that I will take longer than 8 minutes. Assuming that I am still trying to fulfill your request, the best explanation of my sub-par behavior is that I am unable to run any faster than I am currently running. Nothing about my behavior requires the further hypothesis that my violation of the goals we've set is either covert or overt. It is by contrast not difficult to envision both covert and overt variations on this case. For the latter, just imagine that I give you a hangdog look as I pass you on the track, while hyperventilating in a way that is obviously intentional. In this case I am making my violation of our shared expectation overt.[7]

In the SF scenario, B could have satisfied A's curiosity by being more specific about C's whereabouts: B could have claimed that C is in Nimes, even that C is living in a flat in that city right off the central plaza above a boulangerie. However, as the case is normally understood, doing so would have required B's transgressing Quality, the injunction against asserting things for which one lacks evidence. For in answering as he does, B is being as informative as he is capable of being, given his epistemic situation. A can readily discern this, and conclude that B has given only a partial answer to the question posed because B does not take himself to know enough to be any more informative without committing an infraction of Quality. B's norm violation can thus be fully explained by adverting to his awareness of his epistemic limitation and his wish to respect Quality while doing his best to answer A's question. It would accordingly be explanatorily otiose to suppose that B's behavior is covert (for instance that he is "quietly and unostentatiously" violating a norm); so too it would be idle to suppose that his behavior is overt.[8] Consequently, and since speaker-meaning is a form of overt behavior, nothing about the SF case either shows or suggests that B speaker-means that

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norm violation in which the agent can have been expected to know that she was in violation of a norm; (3) a foreseen but not intended consequence of a distinct, intended action; (4) intentional violation of a norm; (5) blatant violation of a norm in which an agent not only violates that norm but does with the intention of making her intention to do so readily discernible.

[7] Mooney (2004) provides a detailed discussion of the approaches that various authors in pragmatics take to conversational norm-violation.

[8] Had B laid stress on 'somewhere' in his answer, that choice would have called for explanation, and would have made an imputation of overtness plausible.

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he can be no more informative than he has been in answering as he does. It follows that the conclusion that Grice reaches in the above-quoted gloss, («so B implicates that he does not know in which town C lives») is a *non-sequitur*: it is neither entailed by the premises that he gives, nor justified as an abductive inference via inference to the best explanation from those premises.[9]

If the argument of this essay is sound, its lessons go beyond a needed correction in our understanding of a famous example. Instead, it will follow that a wide range of alleged quantity implicatures[10] have been inaccurately characterized: except in unusual cases they are not implicatures at all, and are instead best seen as either manifestations, cues, signals, or expressions (in senses of these terms to be explained below) of a speaker's epistemic state. (Which of these categories applies depends on who if anyone benefits from the transaction.) Similarly, it is widely accepted that the ascription of implicature is often justified by the need to make a speaker's apparent violation of a conversational maxim consistent with the assumption that she is being a cooperative interlocutor. We shall see that this view is only a half-truth. It is not true if the violation in question can be accounted for without imputing communicative intentions to speakers beyond what they have said. Rather, the claim is only plausible in situations in which the agent is not only violating conversational maxims but overtly doing so. Only overt norm-violation calls out for explanation that reaches beyond an agent's mere inability to conform to that norm, and thus only there should we expect to find speaker-meaning transcending what (if anything) has been said.[11]

2. A parsimonious route to communication

In this section we will develop some concepts that delineate the minimum requirements for a case of communication that nevertheless stop short of the conditions needed for speaker meaning. Doing so will provide us with alternative ways of conceptualizing the type of information that we now, in light of the last section, know not to be speaker-meant by cooperative speakers who fail to meet a conversation's expectations.[12] While

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[9] Geurts (2010) rightly emphasizes the critical role of inference to the best explanation in the determination of conversational implicature. Also, Geurts does not couch his theory of conversational implicature in the framework of speaker meaning. Instead, on his view, an implicature is simply an attitude we are justified in ascribing to a speaker. In the terminology we develop below, then, for Geurts implicatures are either manifestations of or cues to a speaker's psychological state, and are thus best seen as manifest events in the parlance of Stalnaker (2014). I will instead continue to use 'implicature' as a term for a form of speaker meaning.

[10] I follow Geurts (2010) in calling these *quantity implicatures*, as well as his arguments (*ivi*: 49-66) against the view that so-called scalar implicatures form a useful theoretical category.

[11] Gil (2015) defends a position complementary to that taken here, using examples of parapraxes to motivate it. When for instance Chicago's Mayor Daley remarked, "The police aren't here to create disorder, they're here to preserve disorder," it is tempting to suppose that on some level Daley implied that he believes the police's role is to preserve disorder even though he would not avow that implication if he were to reflect on it. Gil argues that this conclusion poses a challenge to both the Gricean approach to implicature as well as that of Relevance Theory. In terminology to be explained in § 2, the present essay enables us to see such utterances as at least manifestations of psychological states, which once manifested may be entered into conversational common ground. If certain psychoanalytic speculation about such cases is borne out, that may justify claiming as well that such utterances are signals of such states. For further discussion of parapraxes and of psychoanalytic explanations more broadly, see Green (2018b).

[12] The approach developed here shares with Wharton (2003) an interest in communicative phenomena that do not rise to the level of speaker meaning. It differs in that Wharton restricts his concerns to intentional communication, in which, paradigmatically, an agent uses a natural sign such as a rash or a blushed face with the intention of conveying information. By contrast, the approach here, particularly in

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the biologist's notion of meaning may not have a role to play in the discourse of laypeople, its established use in that discipline merits attention from students of natural language. Accordingly, I first set out some theoretical machinery that will help us to conceptualize this middle space between natural and non-natural meaning. First, a creature that *manifests* a state S enables a properly situated observer to know or otherwise act appropriately to the situation of its being in that state. An agent's manifestation of her state need not be intentional. In looking around for my house keys, I manifest my ignorance of their whereabouts without intending to do so. (I may even be trying to hide my ignorance.) Also, enabling others to know something does not guarantee success: one may manifest one's state without anyone else becoming aware of that manifestation or of the state it manifests.

To appreciate how these distinctions relate to communication, let us observe that every object in the physical world is a source of information even if the vast majority of such information goes unused. At the same time, some organisms are able to exploit the information-conveying powers of their surroundings to aid their survival. A mosquito uses the presence of a higher-than-typical level of CO_2 in the air to find a meal, usually in the blood of a mammal (Dekker *et al.* 2005). The presence of CO_2 in the air is thus a cue for the mosquito, though it may not be for other animals. More officially, we may say *C is a cue for organism O* just in case O is competent to use C for the acquisition of information for its benefit. That the presence of a higher-than-typical level of CO_2 in the air is a cue for organism O does not imply that anything (either natural selection or a sentient creature's intention) designed it to play that role. Cues can even be produced by inanimate objects.

An organism's use of a cue is not yet communication. I am not communicating with the mosquito when it enjoys a meal at my vascular expense; nor is it with me. Nevertheless, cues can be precursors to communication. For a related notion, consider that instead of gathering information from other objects for its own purposes, a creature could manipulate that information to gain an advantage over other creatures. Crypsis is a case in point, in which a creature uses camouflage in order to avoid predation or to make potential prey more vulnerable to its attack (Ruxton *et al.* 2005). Following usage in the biological literature, we may call *coercion* any trait or behavior in which an organism manipulates information to gain an advantage in its interaction with others (Maynard Smith & Harper 2003).

When an organism uses a cue, it has an evolved response to the transmission of information; but the entity transmitting that information does not do so as a result of an evolved response. In coercion, by contrast, an organism uses a trait that is evolved to manipulate information. So in cues we have receivers of information making adaptive use of it; and in coercion we have potential senders of information manipulating that information for their own ends. If we now combine these two concepts in such a way that both the sender and receiver of information make adaptive use of it, we approach communication. A process by which this occurs in nature is ritualization (Green 2017b). Signaling emerges at the confluence of cues and coercion, and is a matter of conveying information in a way that is due to design on the part of both sender and receiver. Otte defines a signal as a behavioral, physiological, or morphological characteristic fashioned

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its reliance on the notion of a signal, does not make crucial use of intention in its account of communication: signaling can occur even among mindless organisms. Also, Jary (2013) argues that a class of implicatures – which he terms 'material implicatures' – may be fully accounted for without relying on any mental attributions to the speaker. While space limitations preclude a detailed assessment of Jary's position, I would argue that it is indefensible as it stands, but could be made defensible if supplemented with the notion of a signal as defined below.

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or maintained by natural selection because it conveys information to other organisms. (1974: 385) We can reframe Otte's account in a way that makes clear the relation of signals to cues:

S is a signal iff it is a behavioral, physiological, or morphological characteristic fashioned or maintained by natural selection because it serves as a cue to other organisms.

Or more pithily, *signaling is exploitation of a cue*, where this exploitation benefits the exploiting organism in some way. Although I will not try to do so here, we may generalize this notion of a signal to include other processes that might fashion or maintain an information-conveying characteristic.[13] Also, we should clarify that the notion of information built into the concept of a cue used here includes misinformation: it is possible for a behavior or trait, either by design or error, to convey information that is not correct. Further, when something is a signal, we may ask what it signals, or what it is a signal of. Possible answer-schemata include *a's Fness* (e.g., a particular organism's readiness to attack), *that something is so*, as well as *to do something*. In a given case, the available evidence will not always enable us to settle whether a signal's content is best expressed in objectual, indicative, or imperatival terms. Further, even when this choice is settled, there may still be indeterminacy as to how precisely to express that content. Such indeterminacy does not justify a refusal to theorize about what a given signal means.[14]

Signaling is not restricted to species other than our own. Human pheromones appear to signal sexual arousal or availability, for instance (Grammer *et al.* 2004). Further, some signals pertain to the signaler's psychological state, and only some such signals are voluntary. A number of factors may cause a person's face to redden including hyperthermia, alcohol consumption, anger, etc. Another factor is embarrassment, which may be triggered by one's awareness of one's violation of a social norm. Perhaps blushing is designed by natural selection to indicate such an awareness.[15] If so, then blushing possesses this status even though for most of us it is not within our control. Indeed, if blushing is a signal of the sort we have just imagined, it is also a form of expression, which is that type of signal designed to convey information about an agent's psychological state (Green forth., Green 2016b). Observe, however, that a behavior or trait may be so designed without intentions, to say nothing of communicative intentions, coming into the picture. The reason is that natural selection can design traits and behaviors for the transmission of information (Green 2019c).

Signalers and receivers need not be of the same species, and may be single- or multi-celled organisms. Likewise, nothing in the definition of signaling rules out plants or living things in other kingdoms as potential signalers/receivers.[16] So long as the notions

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[13] Such a generalization would permit not just natural selection, but also artificial selection, cultural evolution, and even conscious intention to produce signals; indeed, the definition should be generalized to allow inanimate objects such as computers to signal one another as well as animate objects. I shall not, however, attempt such a generalization here.

[14] Green (1999) offers a fuller explication and defense of this attitude toward indeterminacy. Also, just as we defined a cue as relative to an organism that makes use of it, so too a more precise definition of a signal would reflect this fact. Our definiens would then be: *S is a signal of M for organism O*. Such a definition would make clear that a single trait or behavior might be a signal for one species but not a signal for another.

[15] Dijk *et al.* (2009) provide suggestive experimental evidence pertinent to this question, considered more fully in Crozier & De Jong (2013).

[16] The definition of signaling would require modification in order to be generalized the important intra-cellular case. Also, Mooney (2004) introduces a notion of *social implication* that bears affinities with the

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of information, transmission, and adaptation apply to a pair of organisms, they are capable of participating in a signaling transaction. Such a transaction does not, however, require intentions to communicate, to say nothing of reflexive communicative intentions. The concepts we have delineated so far are displayed in Table 1 below[17]:

	sender benefits	receiver benefits	mind-involving	communicative
manifestation				
cue		x		
coercion	x			
signal	x	x		x
expression	x	x	x	x

Table 1: three pre-communicative concepts, and two post-communicative concepts that do not rise to the level of speaker-meaning.

3. Intending and being willing

With these options in hand, we can now consider how to conceptualize the kind of information made available by diffident speakers in cases like that of SF. There need not be a single row of the above diagram that covers all such cases uniformly. Instead, where a particular case occurs on this table depends on how the question, *cui bono?* is answered. Some manifestations of ignorance benefit neither the speaker nor addressee; in such cases they are mere manifestations. If the addressee but not the speaker benefits, then we have a cue, and so forth. Again, it may well be that both speaker and addressee benefit, because the incompleteness of the information spurs them to look elsewhere to complete their inquiry. In this situation, the speaker's incomplete answer about C's whereabouts is a signal of her ignorance[18], whence C's diffidence is also an expression of ignorance. Still, however, expression as conceptualized here does not presuppose the conditions that are sufficient for speaker meaning, and so will not constitute a case of implicature.[19] Nothing, of course, prevents B from harboring more complex intentions. At the same time, no part of the original scenario described by Grice (unlike his gloss on that scenario) suggests that any such intentions must be imputed to make sense of B's verbal behavior. But just as we should opt for parsimony, as enshrined in Grice's Modified Occam's Razor, over a facile multiplication of word senses, so too we do well

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notion of signal developed here. However, she explains the notion of social implication as something that «tells us something about the relationship between interlocutors» (*ivi*: 909) This characterization elides the differences among manifestations, cues, coercion, signals, and expressive behavior that we are at pains to tease apart here.

[17] Grice (1989) also contemplated an account – albeit at the level of a just-so story – about how speaker meaning could emerge naturalistically. However, as Bar-On & Green (2010) argue, the explanatory route his account suggests is logically possible but psychologically implausible.

[18] One may reasonably doubt whether ignorance is a psychological state. However, for our purposes it is sufficient to understand 'ignorance' as shorthand for 'belief that one lacks a certain piece of information.'

[19] I should stress that it is still possible for a speaker to speaker-mean the information that is the topic of our discussion here. The only constraint on her doing so is that her behavior must in some way make her communicative intentions available to appropriate recipients. This is in line with what Bianchi (2006) terms the *availability constraint*. See Green (2019a) for further discussion.

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to avoid attribution of communicative intentions beyond those needed to make sense of our interlocutors' verbal behavior.[20]

Grice's reconstruction of an addressee's reasoning process ending in an attribution of implicature makes the above points difficult to appreciate. He writes,

> A general pattern for the working out of a conversational implicature might be given as follows: "He has said that p; there is no reason to suppose that he is not observing the maxims, or at least the Cooperative Principle; he could not be doing this unless he thought that q; he knows (and knows that I know that he knows) that I can see that the supposition that he thinks that q is required; he has done nothing to stop me thinking that q; he intends me to think, or is at least willing to allow me to think, that q; and so he has implicated that q" (Grice 1989: 31).

In the SF case the q in question would evidently be something along the lines of, 'B knows nothing more about C's whereabouts than that C is in the south of France.' Further, if B gives a less informative answer than he might have given to a question that he and an interlocutor share, he *may* give some thought to the reaction that that answer would provoke in her. On the other hand B might focus his cognitive efforts on finding other types or sources of information he may be able to offer so that he and A can make progress on their conversational project. Now, if A reasons about B's state of mind, she could discern all this as well. That is, A may discern that B's diffidence in answering the question on the table is due to his awareness of his lack of sufficient information. Must A impute to B intentions going beyond that?

A negative answer comes into view as we reflect on the difference between intending that someone believe something, and being willing to allow them do so. We are willing to allow others to think all manner of things, including those views that pertain to ourselves. That is not the same as intending that they so think. Intentions, for instance, have fulfillment conditions, while being willing to allow others to do or think things does not. I am willing to allow the Flat Earthers in the house next door to persist in their absurd views, but do not intend that they so believe. I am willing to allow you to believe, as I say something to you in English, that I speak English, that I am alive, and that I am not identical to Mt. Fuji. And as I fail to make the 8-minute benchmark in spite of running as fast as I can, I am willing to let you conclude that I am not able to run any faster. In none of these cases, however, do I speaker-mean the proposition in question; nor could an addressee's imputation of such intentions conjure them into existence.[21] Thus unless we are prepared to populate our everyday lives with armies of communicative intentions that are explanatorily inert, Grice's reasoning in the passage quoted above emerges as fallacious.[22]

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[20] Geurts (2010: 34-37) rightly observes that imputing conversational implicatures depends crucially on the abductive process of Inference to the Best Explanation. Davis (2014), & Colonna Dahlman (2013) rightly observe that conversational implicatures are intentional.

[21] Might willing become intending in a context such as we find in conversations governed by the Cooperative Principle? Grice himself gives persuasive reasons to think not, writing, «we should recognize that within the dimension of voluntary exchanges (which are all that concern us) collaboration in achieving exchange of information…may coexist with a high degree of reserve, hostility, and chicanery and a high degree of diversity in the motivations underlying quite meager common objectives» (1989: 369).

[22] One might ask whether adherence to the Cooperative Principle could require that an insufficiently informative speaker signal (if not speaker mean) that she cannot be more informative than she has been? The CP enjoins speakers to do what the conversation requires. What that comes to depends on what kind of conversation they are having. In a conversation aimed at answering a question of fact (where is the bus station?, what is the cause of this illness?, etc.), that injunction comes down to our pooling our

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A similar point emerges as we consider a more recent critical discussion of implicature. Davis (2014) offers a general characterization of implicature as follows:

> **Theoretical Definition:** *S* conversationally implicates *p* iff *S* implicates *p* when:
> (i) *S* is presumed to be observing the Cooperative Principle (*cooperative presumption*);
> (ii) The supposition that *S* believes *p* is required to make *S*'s utterance consistent with the Cooperative Principle (*determinacy*); and
> (iii) *S* believes (or knows), and expects *H* to believe that *S* believes, that *H* is able to determine that (ii) is true (*mutual knowledge*)

We may have our doubts about whether clause (iii) is satisfied in cases such as SF: whether that is the case depends on how we characterize tacit belief. However, even if (iii) is satisfied in that case, it will not follow that we have a case of speaker meaning: one may fulfill all conditions in Davis' Theoretical Definition of implicature without speaker meaning anything beyond what one has said. The reason is that believing that someone believes something (even about oneself) is not sufficient for intending that they do so; likewise for believing that another is able to determine that something is the case.[23]

4. Common Ground and "Manifest Events"
Even if SF and structurally similar cases do not amount to implicatures, this does not entail that they are conversationally inert. In this section I shall explain how such cases may be understood as contributing to conversations without having to be understood as implicatures.

For many purposes guiding conversations, it makes little difference whether one manifests one's psychological state, signals that state, or speaker-means that one is in that state. In the scenario imagined by Grice, A can reasonably infer from B's answering as she does that B is not epistemically in a position to be more informative about C's whereabouts than she is currently being. A may do this without having to suppose in addition that B is speaker meaning that this is the case. In Stalnaker's (2014) conception of conversation, common ground (that set of propositions that all interlocutors accept, and that all interlocutors recognize one another as accepting) may be modified by the at-issue content of utterances (such as when a speaker asserts that he has a pet tortoise and

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information in such a way as to correctly and completely answer whatever question we are jointly trying to answer. A speaker who contributes only a partial answer is being less helpful than she might have been in this endeavor. However, it is doubtful that the cooperative nature of the enterprise requires that in such a situation he also signal that this is the best he can do. Instead, the situation will often make that clear. This is in line with cooperation more generally: someone helping me to fix a flat tire on my bicycle might manifest, by their unsuccessful efforts, their inability in spite of their best efforts to get the tube to fit inside the rim. They could, in the process, also make a point of looking sheepish or apologetic about their incompetence, thereby signaling it. So too in the not-quite-8-minute-mile case, I might also give you a hangdog look as I struggle around the track more slowly than either of us had hoped. But in both cases, context can make it clear that we are doing the best we can. So too, the context can make it clear that I am doing the best I can conversationally without my also having to signal that I am doing so.

[23] I assume that 'expects' in Davis' formulation is used as a stylistic variant on 'believes'. Also, Lepore and Stone (2015) offer a general criticism of the Gricean approach to implicature and of pragmatic phenomena more generally. That criticism may appear to make the more specific criticism of certain types of Gricean explanations offered in this essay moot. However, Green (2018a) replies to Lepore and Stone by arguing that their criticisms rest on a number of confusions, including a conflation of speaker meaning with conventional word meaning, and a conflation of eliminative reductions with reductions that do not eliminate the reduced phenomena. See also Roberts (2017) for a detailed critical discussion of Lepore and Stone.

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his interlocutors accept that claim), by the presupposed content (such as when a speaker asserts that his pet tortoise ate some lettuce and his interlocutors accommodate the proposition that he has a pet tortoise), or by a "manifest event" (such as when the speaker's pet tortoise comes rambling into the room in which the conversation is taking place and in plain view of all interlocutors in such a way that they not only all see the animal but all see that they all see it). Any of these events will, assuming interlocutors do not demur, result in common ground's now containing the proposition that the speaker has a pet tortoise. Among other manifest events are the fact of a speaker's making an utterance. Further, an event might be cognitively but not perceptually manifest, thereby requiring observers to draw inferences to discern that it is occurring: at least this much occurs in the SF and like scenarios, with the result that common ground now contains the proposition that B cannot be any more specific on the matter of C's whereabouts than he is currently being. A symptom of this fact is that subsequent utterances may felicitously presuppose that B does not know enough to be more specific than that C is somewhere in the south of France. We could, that is, easily imagine the SF conversation continuing as follows:

> A. Where does C live?
> B. Somewhere in the south of France.
> D. Well, since B doesn't know where C is specifically, why don't we just text her to find out?

Our results about the SF case generalize at the very least to other alleged quantity implicatures in which an erstwhile cooperative interlocutor's failure to provide sufficient information is due to a clash between conversational maxims (such as between Quality and Quantity), or between a conversational maxim and an extra-conversational norm, such as one enjoining politeness. A speaker's diffidence might be due to her not wishing to hurt another's feelings by remarking that P even though she knows that P is true. Such a situation will still not mandate an ascription of implicature, as the speaker's diffidence can be fully accounted for without it.

5. Expressing and implicating
Our line of reasoning thus far is not aimed at minimizing the importance of implicature understood as a species of speaker meaning. Instead, it shows that many cases normally thought of as implicature are better construed in more parsimonious terms. While it is beyond the scope of this essay exactly to delimit the extent of cases that should be so construed, in this section I will first explain why certain types of case do not merit such treatment, and then suggest another range of cases that do merit it.
Geurts (2010: 27-33) in discussing quantity implicature distinguishes between weak and strong implicatures. In a *weak implicature*, a cooperative speaker implicates that a stronger, relevant claim that might have been a useful contribution to the conversation in which she is participating is not one that she takes to be true; in a *strong implicature*, such a speaker implicates that she takes such a stronger claim to be false. As mentioned above, Geurts' discussion of quantity implicatures is not couched in terms of speaker meaning, and he accordingly does not address the question whether strong implicatures should be construed in terms of that concept. We nevertheless do well to address this issue. For instance, the question on the minds of the calculus teacher's students is how many of them passed the exam about to be returned. She now remarks

"Some of the students passed the exam".

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The teacher presumably knows how everyone performed, knows that her students know this, and knows that they are interested in that further question in addition to the one she answered by means of what she said explicitly. Her students may accordingly discern that her violation of Quantity is not due to her lack of sufficient information to answer the question that is on their minds. Instead, her violation of Quantity is more likely due to her desire to let her pupils know of her wish to be diplomatic. This, however, suggests that her violation is also overt: she intends to make manifest her intention to violate Quantity. That in turn makes the following hypothesis a reasonable one: the teacher is overtly manifesting her belief that some of the students did not pass. On at least one view of assertion, discussed under the rubric of "assertion as overt belief expression" in Green (2019b), it will also follow that the teacher is asserting that some of her students did not pass, but without saying that this is the case.

We do not need to dwell on the question whether this imputation of speaker meaning is the best explanation of the teacher's utterance under the mooted conditions; whether it is depends on the details of the case. However, it is at least a reasonable hypothesis that the teacher's signal is also a case of speaker meaning. Similarly, in cases of damning with faint praise, such as Grice's notorious example of the tepid recommendation letter, it is not credible that the writer lacks sufficient information to comment on the student's intellectual abilities. The writer is aware of this, knows that her readers are as well, and so is likely not just violating, but also flouting Quantity, that is, violating this maxim while intending to make manifest his intention to violate it. How can we make sense of such behavior while assuming that the speaker is still being cooperative? The most likely answer is that the writer speaker-means something he would rather not say. This may be because etiquette enjoins us to avoid criticizing people directly, or because of the amusement value of indirection, or a desire not to be sued for causing someone's failure to get a job, or some combination of these. Regardless of which is these conditions holds, it is at least a reasonable hypothesis that the letter writer speaker-means that the student in question lacks talent.

There is no guarantee that a cooperative speaker who patently knows more than she tells, in situations where the withheld information would be conversationally appropriate, also speaker means that withheld information. However, the two phenomena appear to go hand in hand, and where we find the former, it is often a reasonable hypothesis that we will find the latter as well.

Some so-called relevance implicatures may also be amenable to our parsimonious treatment with the concept of expression. Suppose that E is a guest for dinner at D's, and it is common knowledge among D and E that E has to rise early the next morning to begin a new job. The following exchange ensues as they finish their meals:

> D. Would you like some coffee?
> E. Coffee would keep me awake.

E presumably so speaks for the sake of indicating that he doesn't want coffee. In our terms, his utterance is designed to manifest a preference against coffee at this hour, and is thus an expression of such a preference. Nothing of course prevents E from harboring the more complex intentions needed for speaker meaning, such as the configuration of intentions needed for an act of declining an offer. Unless we have

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reason to impute such intentions, however, parsimony enjoins imputing a simpler, expressive aim to E.[24]

6. From Attitude Expression to the Assertive Family

In addition to providing us with conceptual resources to understand forms of communication more primitive than speaker meaning, the concepts of manifestation, cue, signal, and their ilk also provide a suggestive framework for investigating how modern-day practices of assertion could have emerged via cultural evolution. This way of thinking is not the typical one of asking how much cognitive sophistication is needed for an agent to participate in an act of speaker meaning. Rather, although agents' cognitive sophistication plays a part, we may also consider how cultural evolution can develop practices that can in a sense outsource this cognitive sophistication for us.

I have argued elsewhere that it is possible to imbue voluntarily producible sound-patterns with semantic properties without the population in which this occurs needing to do so through acts of speaker-meaning (Green 2017, 2019). Such properties might either be of the NP or VP varieties; although it may be indeterminate which of these two grammatical categories best describes a particular act. But with such semantic properties in place, we can also imagine a practice of what we may call *ur-assertion* (or more succinctly *ursertion*) emerging, in which a speaker expresses her belief with the aid of semantic properties but not in a way that is overt, and not in a way that would make a third party confident that she does so with all of the normative properties we now expect to be carried by assertions: she is not prepared to defend her claim if challenged, nor does she issue an "inference license" to her addressees. On the other hand, her utterance has some normative properties: if by means of her ursertion she expresses her view of a matter, and that view turns out to be incorrect, she has been shown to be in error. That might undermine her credibility in later exchanges. So too, others might find out that she was trying to mislead them; and this could result in a loss of face as well.

Ursertions will have value in primitive societies in which we are imagining them in use: they may be employed in the exchange of information as well as for planning. It is known that honeyguide birds have worked symbiotically with humans for at least 20,000 years in Africa to detect and consume the contents of beehives (Isack and Reyer 1989): the bird leads hunters to the hive, whereupon the hunters destroy the hive and recover the honey; the bird then consumes the wax and larvae from the destroyed hive. We may easily imagine a group following one such bird in search of a hive; presently the bird is out of view, but one hunter utters, 'tree!' accompanied by a pointing gesture as an expression of his belief that the bird is in the ostended tree. Given the intricate normative dimensions that we attach to assertion, it would be anachronistic to suppose that the hunter asserted that the honeyguide is in the tree. On the other hand, he may nevertheless have urserted this.

A linguistic community benefits from the institution of a practice that differentiates the prediction of one's future course of action from the undertaking of a promise to perform that action. Promising enables promisees to coordinate their actions more reliably than do mere predictions, and it does this in part by making the utterance in question a potentially costly one: one who predicts that she will do X in the future but does not do X is subject to milder censure than is someone who promises to do X and

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[24] Green (2007) offers a general account of self-expression, and that account is extended and updated in Green (forth). Also, Bertolet (2017) points out that a piece of behavior's functioning in certain respects as a speech act does not entail that it is a speech act. Thus, even if we say that E's reply in the coffee case functions as an act of declining an offer, it does not follow that it is such an act.

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does not follow through. As Green (2009) argues, it is precisely this potential cost that makes promises more reliable as guides to action than are predictions of future action (even one's own).

A similar pattern emerges with the transition from ursertions to assertions. One who urserts that P expresses her belief but does not thereby represent herself as knowing that P; nor does she commit herself to defending P if challenged. The ursertor might still be shown wrong, since the belief she expresses might turn out to be incorrect. However, just as society gains a valuable new tool in the institution of promising over that of predicting, I suggest that it also gets a valuable tool in the creation of a new practice of assertion over and above that of ursertion. Further, what undergirds this new practice of assertion is its riskiness: one who sticks her neck out with an assertion as opposed to a mere belief expression encourages others to rely on what she says as being true; she also presents herself as knowing, and thus as being justified in saying what she does.

Once assertion has come into being as part of communicative practice, a linguistic group is free to develop cognate practices that differ from assertion proper in some way: conjectures, guesses, and other act that have elsewhere (Green 2016) been said to make up the *assertive family* may be instituted for specific tasks. Whereas not all linguistic groups will have need for guesses, for instance, other groups may find it useful in the generation of hypothesis that could explain otherwise puzzling phenomena. Guesses and conjectures are, however, still more refined than ursertion.

Taking a step back for a wide-angled view, then, we have seen that contrary to established opinion in pragmatics, non-overt violations of conversational norms perpetrated by cooperative speakers need not be loci of speaker-meanings beyond what is said. Instead, the information that is conveyed by such diffidence is better conceptualized as a manifestation, cue, signal, or expression of the speaker's psychological state – which of these it is depends on how the *cui bono?* question is answered in a given case. What is more, acknowledging the value of these more primitive, pre-speaker-meaning concepts provides suggestive material for investigating how cultural evolution might have fashioned assertion and its kin from the loins of ursertion.

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