

# Varieties of Compositionality and Loose Talk\*

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September 28, 2011

## Preview

- The pragmatics of loose talk
  - Loose talk and literal truth: Some counterintuitive observations.
  - Loose talk creates strict commitments.
  - This has repercussions for the pragmatics of loose talk.
  - Repercussions that help explain some as-yet unexplained generalizations.
- A purely pragmatic account of loose talk?
  - Three kinds of compositionality in natural language.
  - Slack regulators as partly compositional.
  - Slack regulators as expressions that 'signal without asserting'.
- What 'signaling without asserting' means.
  - Towards a dynamic pragmatics.
  - Lewis conventions in a dynamic pragmatics.
  - Information gain in a dynamic pragmatics.
  - Postscript: Why Lewis conventions are not enough.

## 1 Loose Talk and 'Slack Regulators'

(The following exposition of 'loose talk' follows, in essence, the discussion in Lasersohn (1999))

- (1) I live in Berlin.  
*[Context: Speaker lives in Potsdam, which abuts Berlin, but is not part of it]*
  - (2) Mary arrived at three o'clock. (Lasersohn 1999)  
*Context: Speaker knows that Mary arrived at 3:03.*
  - (3) There were five hundred people at the rally.  
*Context: Speaker knows that there were exactly 493 people at the rally.*
- There are contexts in which a speaker can blamelessly assert any of these sentences under the indicated circumstances.
  - Tempting assumption: **Berlin** is simply polysemous between two readings (and similarly for the other cases):
    - 'Berlin proper'
    - 'the Berlin area'
  - But that cannot be right:
    - (4) a. #I live in Berlin proper and I am quite taken with my Potsdam neighborhood.  
b. #I live in Berlin and I am quite taken with my Potsdam neighborhood.  
c. I live in the Berlin area and I am quite taken with my Potsdam neighborhood.
    - (5) a. #Mary did arrive at exactly three o'clock, but she did not arrive until slightly after three.  
b. #Mary did arrive at three o'clock, but she did not arrive until slightly after three.  
c. Mary did arrive 3-ish, but she did not arrive until slightly after three.
- If '(in) Berlin' were just polysemous, (4b) should be just as felicitous as (4c), if the polysemy is resolved to the '(in) the Berlin area' reading.
- But (4b) is always contradictory, just as (4a) is.
  - Solution: Truth-conditionally, **in Berlin** always means the same as **in Berlin proper**.
    - Similarly, **at three o'clock** is truth-conditionally equivalent to **at exactly three o'clock**.
  - That is, if the speaker of (1) lives in Potsdam, the sentence he utters is literally false.
  - And yet, (4) may be blamelessly asserted—this is what Lasersohn (1999) calls PRAGMATIC SLACK.

\*I am indebted to Cleo Condoravdi, Chris Potts and the audiences at CUSP3 and Sinn und Bedeutung 16 for helpful discussion and comments. All remaining errors and inaccuracies are mine, and mine alone.

### 1.1 Pragmatic Slack vs. Vagueness

- The contrast in (5) shows that pragmatic slack is distinct from truth-conditional vagueness, as in (6a):

- (6) a. Homer is bald.  
b. Homer is bald, he only has, like, two hairs left.

- (6b) is not contradictory in most contexts.
- That indicates that (6a) can be literally true if Homer has some hairs left.



### 1.2 Slack regulators

- I have argued that (7a) and (7b) are truth-conditionally equivalent:

(7) a. John is from Berlin.  
b. John is from Berlin proper.
- Of course, **proper** still has an effect on the interpretation of the utterance:
  - (7b) cannot be used with slack (or not with as much slack as (7a)).
  - (7b) is, it seems, never appropriate when John lives in Potsdam.
- So, **proper** is what Lasersohn (1999) calls a SLACK REGULATOR.
- Lasersohn observes that slack regulators are not just a pragmatic signal that the utterance should be interpreted (more) strictly:

(8) John is from Berlin proper, but now lives in San Francisco.

  - In (8), **proper** 'takes away' the possibility of the speaker speaking loosely with respect to Berlin (e.g. John could not be from Potsdam).
  - But it does not take away the possibility of speaking loosely with respect to San Francisco (e.g. John could be living in San Bruno or Oakland, given the right context).

### 1.3 Lasersohn's account: Weakening felicity conditions on assertions

- Lasersohn (1999) takes the fact that slack regulators selectively remove the slack from their complement as a cue that 'pragmatic slack' is computed compositionally.

- He proposes that each expression comes with a 'pragmatic halo' which is compositionally determined.
  - That is, he proposes an additional 'dimension of meaning'.
  - Even though the 'halos' of complex expressions are determined compositionally, atomic expressions get their halos assigned by the context.
- Lasersohn then proposes to modify the felicity conditions on assertions:
  - **Classical version(?)**: A speaker can/should only assert  $\phi$  if he believes / has adequate evidence for  $\phi$ .
  - **New version**: A speaker can/should only assert  $\phi$  if he believes / has adequate evidence for one of the propositions in the halo of  $\phi$ .
- Lasersohn is concerned with the conventional felicity conditions on assertions and the conventional semantics of slack regulators.
- This talk is more about the pragmatics of loose assertions, i.e. the non-conventional aspects of pragmatic slack.

**Lasersohn** When can a speaker felicitously utter a sentence he does not know to be true?

**Lauer** When will a speaker (be expected to) 'speak loosely'?

### 1.4 Something to set aside: Krifka's (2006) approximate interpretation of number words

- Observation: With numbers, more slack is expected (and hence usually employed) for 'round' numbers, which usually are expressed with shorter words (10, 20, 30 ...).

(9) a. Thirty people were at the party.  
→ slack possible/likely  
b. Twenty-nine people were at the party.  
→ slack impossible.

- Krifka (2002, 2006) gives an account of this in an optimality/game-theoretic framework.
- The pragmatic pressures Krifka investigates ultimately interact with the considerations presented here.
- To a considerable extent, however, they are orthogonal.
- Krifka explains how non-round number terms can serve as slack regulators by themselves.

## 2 The pragmatics of loose talk

- **New observation:** If a speaker wants to elaborate on a loose assertion with the truth, he has to retract this assertion:

- (10) Mary arrived at three. # When she wasn't there at 3:03 ...
- (11) A: I live in Berlin.  
B: Oh, where?  
A: # Potsdam / # Potsdam, which is just outside of Berlin.  
A: Actually, I live in Potsdam, which is ...  
(but I study/work in Berlin / always go out in Berlin / etc.)
- (12) A: Will we have enough coffee for the council meeting?  
How many people will be there?  
B: Thirty.  
A: Great, then we have a quorum.  
B: # No, we need 30 people for a quorum, but only 27 will be there.

### Weird!

- Suppose it is commonly presupposed that the speaker will speak with a certain amount of slack, say +/- 5 minutes.
- Then:
  - The speaker says: "Mary arrived at four."
  - The hearer comes to believe: "Mary arrived between 3:55 and 4:05."
  - The speaker meaning: "Mary arrived between 3:55 and 4:05."

- **Naïve idea:** The discourse should proceed as if the speaker had uttered the weaker proposition.
  - In particular, the speaker should feel free to give more precise information, as if he had said something like 'Mary arrived around four.'
- **Actual fact:** The speaker is not free to do so, he has to acknowledge that his previous assertion was false.

## 2.1 Modeling the constraint

- With Condoravdi and Lauer (2011) (generalizing ideas from Hamblin (1971) and Gunlogson (2008, & ms.)) I assume:

### Minimal Effect of the utterance of an indicative

Any (sincere) utterance of any indicative *.p* commits the speaker to act as though (s)he believes *p*.

- See Condoravdi and Lauer (2011) for details on how this commitment should be conceived of, and what 'acting as though (s)he believes' amounts to.
- What is important in the following is simply:

(13) If a speaker (sincerely) utters an indicative *.p*, he cannot (without overt retraction of *.p*), utter anything that is (contextually) incompatible with *p*.
- Note: The sense in which 'commitment' is used here is a weak one—in most contexts, assertions can be easily retracted, esp. if there were good reasons to make the first assertion. But they do have to be retracted.

## 2.2 Sidebar: The very conception of conventional meaning

- I think the above considerations and the proposed solution shed some light on some theoretical questions.
- In particular: What is primary: Speaker meaning or conventional (semantic) meaning?
  - **View 1** (Grice 1957) Non-natural speaker meaning is all that matters, conventional meaning is only a convenient way to non-naturally mean things.
  - **View 2** (Lewis 1969) Conventions are crucial for natural language meaning, they play a role beyond enabling speaker meaning.

The facts reviewed above suggest that **View 2** is more adequate: Conventional (or semantic) meaning plays a role even if speaker meaning diverges from it.

### 2.3 Getting away with murder taking on a commitment

- So, When will a speaker 'speak loosely'?
- When he thinks he can get away with it.

When a speaker is speaking loosely, (s)he

- either says something (s)he knows to be literally false (e.g. saying (14), knowing that John lives in Potsdam)
- or says something that (s)he is not certain is literally true (e.g. saying (14), knowing only that John lives somewhere in the Berlin area).

(14) John lives in Berlin

- Two questions to consider when deciding on speaking loosely:

**Question 1:** Does uttering a literally false (or unsupported) sentence suit my immediate conversational goals as well as uttering a sentence that adequately reflects my knowledge or uncertainty?

**Question 2:** Will the commitment taken on by uttering the sentence get me into trouble later?

- **Question 1** is what is what is addressed in many of the recent(-ish) Game Theoretic approaches to pragmatics.
- A recurring 'problem' are WHITE LIE scenarios:

- Worlds:  $w_1, w_2, w_3$
- Possible addressee actions:  $a_{13}, a_2$
- In  $w_1, w_3$  :  $a_{13} > a_2$   
In  $w_2$  :  $a_2 > a_{13}$
- Messages:  $m_1, m_2, m_3$ , picking out single worlds
- $m_3$  is more costly for the sender than  $m_1$

Prediction: In  $w_3$  the speaker will utter  $m_1$ , which literally means 'we are in  $w_1$ '.

- I want to suggest that this prediction is not terribly problematic: It is exactly what is the case if **Question 1** has a positive answer.
- **Question 2** is unanswered by such accounts (unless one moves to the theory of repeated games, which, to my knowledge, no pragmaticist has done so far).
  - For now, I will have to contend myself with saying that, if speaking loosely, the speaker takes it to be unlikely that the (possible) difference between the actual world and his assertion will become relevant in the future of the discourse.
- Question 2 makes apparent that 'speaking loosely' always carry a certain risk.
  - We predict that a speaker will only 'speak loosely' if he has an incentive to do so.
    - \* The false sentence may be shorter/more standard/easier to produce or process ... than a more prolix form that is known to be true or reflects the speaker's uncertainty.
    - \* The false sentence may be preferable for other reasons (politeness, memory limitations, &c.).
    - \* The speaker may assume that the hearer assumes that he would speak loosely— in this case, being very exact might well trigger unwanted inferences on part of the hearer.

### 2.4 Reaping the benefits

Laserson's unamended account fails to predict some basic facts about loose talk. Here I will concentrate on three of those:

- (i) There are general restrictions on the amount of slack speakers employ.
- (ii) Contradictions are always infelicitous.
- (iii) 'Pure slack widenings' do not exist.

(i) There are general restrictions on the amount of slack speakers (are assumed to) employ

**The facts** Even in very permissive contexts, there are limits to the amount of slack a speaker may employ.

- Sven is from Frankfurt (loosely speaking).
  - Suppose we are in a context in which all that matters is what country Sven is from.
  - Sven cannot say (15) to provide this information
- (15) I am from Berlin.
- This is so, presumably, because there are equally complex/long/standard etc. forms he could have uttered without employing slack (e.g. **I am from Germany** or **I am from Frankfurt**).
  - Indeed, there is a pressure to avoid pragmatic slack, in the following sense:

**Avoid loose talk!** If a speaker can avoid speaking loosely by using an equally appropriate form, he should do so.

**Why Lasersohn does not predict this**

- Lasersohn does not discuss how halos emerge from the context.
- He assumes, though, that the context is all that matters for the assignment of halos.
- On Lasersohn's unamended account, there does not seem to be a downside to speaking loosely.

**How the present account does**

- Recall that, on the present account, loose talk is risky.
- In general the fact that speaking loosely involves a risk will act as a pragmatic pressure to 'keep close to the truth', as, at least in many cases, the risk increases with the 'distance from the truth'.
- At the same time, loose talk will be avoided if there is an equivalent expression that is not more costly (or inappropriately precise, etc.).

(ii) Contradictions are always infelicitous.

**The facts**

- Contradictions are always infelicitous (unless we are dealing with non-literal speech, as in metaphor).

**Why Lasersohn does not predict this**

- Given his set-up, Lasersohn points out that he is in a predicament:
  - Logical contradictions are not necessarily predicted to be infelicitous.
  - This is so because it is possible (indeed, expected) that the 'halo' of a contradiction contains a true sentence.
- Lasersohn's solution:
  - He suggests that in a sentence like (5b) (repeated below) is infelicitous not because it is contradictory, but because the speaker first makes a loose assertion and then follows it with a more precise one, indicating that he does take the difference to be relevant in context after all.
  - I don't think this line of argumentation works in general.
  - The felicity of (5c) shows that such a shift in precision is pragmatically viable.

(16) Did Mary arrive at three?

- a. #Mary did arrive at three, but she did not arrive until slightly after three.
- b. Mary did arrive three-ish, but she did not arrive until slightly after three.

**How the present account does**

- It is never a good idea to commit yourself to act as though you believed in a contradiction.
- For that means committing yourself to act irrationally.

(iii) **There are no slack regulators that increase the (expected) amount of slack**

**The facts**

- Recall that slack regulators like **on the dot, exactly** (on its slack regulation use) and **proper** do not have truth-conditional impact.
- Instead, they only interact with Lasersohn's halos and/or signal that the speaker takes small deviations from the strict truth to be relevant.
- Note that all of these regulators are slack removers: They reduce the amount of allowable/expected slack.
- What about slack regulators that increase the amount of allowable/expected slack?
- Operators that do this, i.e. hedges like **-ish, around, roughly**, etc. always have truth-conditional impact and thus weaken the commitment the speaker undertakes.
- What is the reason for this asymmetry?

**Why Lasersohn does not predict this**

- On Lasersohn's account, this is curious: A 'halo widener' should be just as natural to define in his system as a 'halo tightener'.
- Lasersohn admits that he has no explanation for why there should be such an asymmetry between tighteners and wideners.

**How the present account does**

- I claim that if such a hypothetical pure slack-widener would exist, it would never be used.
- Here is what would have to be the case if a speaker were to use such an operator:
  - The speaker must have a reason for using the slack widener.
    - \* He must take small deviations from the strict truth to be relevant (otherwise he could just use the plain form of the sentence).
    - \* And he must at least doubt that the sentence is not strictly true.
  - At the same time, since the hypothetical operator does not have truth conditional impact, the speaker commits himself to the strict truth.
  - No moderately rational speaker would do this.
- Upshot: On the conception presented here, slack wideners would be pragmatically self-defeating.

- Prediction: At least in the presence of truth-conditional weakeners, such slack wideners would never be used, and vanish from the language.
- Alternatively, they may be reinterpreted as truth-conditional weakeners.

**2.5 Interim Conclusion**

- There are reliable generalizations that can (and should) be explained by investigating the pragmatics of loose talk.
- An adequate treatment of the pragmatics necessitates looking beyond one-shot interactions.
- This is so because assertions made while talking loosely still create enduring commitments to the strict truth of the sentence.
  - This can be viewed as a vindication of truth-conditional semantics in the face of abundant loose talk.
  - While we may speak loosely a lot of the time, and what we communicate to each other, most of the time, will be the weak 'loose propositions', truth-conditions still matter, namely with respect to the public commitments

**2.6 Interlude: Back to the Krifka-facts**

- Observation (Condoravdi, p.c.): Some expressions, by themselves, appear to disallow slack.
- (17) On Wednesday, Sven finished his handout.  
*cannot be taken to convey*: Sven finished his handout sometime between Tuesday and Thursday.
- Generalization: Expressions that name times or periods (calendrically) cannot be used with (much) slack, but expressions that measure time can:
- (18) a. A second measurement was taken after twenty-five weeks.  
→ slack possible.  
b. A second measurement was taken in week twenty-five.  
→ slack impossible.
- Hunch: 'Asymmetries' like those between round numbers and non-round ones give rise to expectations of slack with some items but not others (Krifka explains how).
- Maybe such asymmetries are necessary, at least in some domains, to align the expectations of slack between the interlocutors.

### 3 Pragmatic Slack without Halos

- Given the assumption that assertions directly create commitments, we arguably can dispense with felicity conditions of truth-fullness (or close-enough-to-truthfulness).
- Generally, we may wonder if we cannot give a purely pragmatic account of loose talk.
- The main obstacle for such an account: Slack regulators.
- Recall that those ‘take away slack’ only from their complement.

(19) John is from Berlin proper, but now lives in San Francisco.

#### 3.1 Lasersohn’s pragmatic halos

- Lasersohn proposes that each expression comes with a ‘pragmatic halo’.
- That is, he proposes a new ‘dimension of meaning’ in which halos are computed.
- The halo of any given expression  $\phi$  is a set of objects of the same type as the denotation of  $\phi$ , e.g. ...
  - ... if  $[\phi]$  is of type  $e$ , the halo of  $\phi$  will be a set of entities
  - ... if  $[\phi]$  is of type  $\langle e, t \rangle$  (a property of individuals), the halo of  $\phi$  will be a set of such properties.
  - ... if  $[\phi]$  is of type  $\langle s, t \rangle$  (a proposition), the halo of  $\phi$  will be a set of propositions
- The last example is what is the case at the sentence level.
- This set of propositions determines when a sentence is ‘felicitously assertable’: If, and only if, the halo of the sentence contains a true proposition.<sup>1</sup>
- Atomic expressions get their halos assigned ‘by the context’.
- The halo of complex expressions gets computed (for truth-conditional items) by point-wise function application (as in Rooth’s (1985) focus semantics and much subsequent work employing variants of alternative semantics).
- Slack regulators only operate on the halo of the expression they combine with: A ‘halo-tightener’ like **proper** will ‘shrink’ the halo (by removing some objects that are ‘far away’ from the denotatum).

- (20) a. Mary arrived in Berlin at 3 o’clock.  
 b. Mary arrived in Berlin proper at 3 o’clock.



Figure 1: A halo for **Berlin**

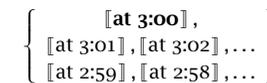


Figure 2: A halo for **at three o’clock**



Figure 3: A halo for **Mary arrived in Berlin at 3 o’clock**.

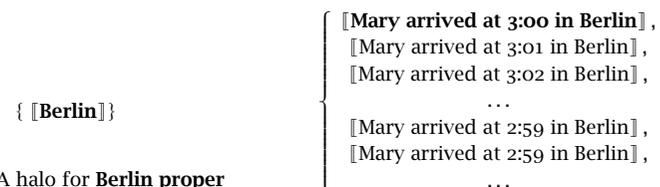


Figure 4: A halo for **Berlin proper**

Figure 5: A halo for **Mary arrived in Berlin proper at 3 o’clock**.

<sup>1</sup>This definition works as it is, because Lasersohn assumes that the halo of an expression always contains the denotation of the expression.

### 3.2 Slack regulation without halos

- Lasnik's main argument for deriving 'allowed slack' compositionally:
  - Slack regulators take away the potential for slack only from their complement.
  - If 'allowable deviations' are recorded in a second dimension of meaning, we can simply let slack regulators operate on this dimension.
- But: Lasnik's argument only really shows that the contribution of slack regulators depends on what they combine with—not really that they fully partake in compositional interpretation.

**Downward Compositionality** An expression  $e$  is DOWNWARD-COMPOSITIONAL iff the semantic contribution of  $e$  is a function of the meaning of the expression  $e$  syntactically combines with.

**Upward Compositionality** An expression  $e$  is UPWARD COMPOSITIONAL iff the semantic contribution of expressions containing  $e$  are a function of the meaning of  $e$  (and their other constituents).

- These two properties are logically independent: An expression can have either, or both, or none.
  - The truth-conditional operators we are used to (e.g. quantifiers, connectives, ...) are both downward- and upward-compositional (which we may express by calling them COMPOSITIONAL simpliciter).
  - An item that is neither downward- nor upward compositional is, arguably, English **please**.
  - Slack regulators, I want to suggest, are items that are downward- but not upward-compositional.
  - Another candidate for such operators: Modal particles like German **doch**, which typically combine with some kind of proposition, but contribute something to the containing utterance 'globally'.<sup>2</sup>

<sup>2</sup>See, e.g. Grosz (to appear) for a proposal that treats **doch** in this way—which Grosz calls 'non-compositional'.

Two questions arise:

- Q1: How does a non-upward compositional operator directly predicate something of the utterance situation?
- Q2: How does the content of such an operator get communicated, if it does not become part of the asserted content?

- To answer Q1, we could just use the familiar Kaplan-style system, but I propose a more general solution: Allow these operators to make indexical reference to the containing utterance.
  - We thus need only one parameter for interpretation, instead of a (potentially) large number (speaker, time, previous beers, ...).
  - The open-endedness of potentially relevant features of the context that may become relevant is not a problem anymore.
- So the idea is that a slack regulator predicates something of the utterance it occurs in.
- But what does it predicate?
- I suggest the following:

$[[\text{proper}(P)]]^u = \lambda P .$  the speaker of  $u$  takes even slight deviations from  $P$  to be relevant in the context of  $u$

- The fact that **proper** 'reduces slack' comes about indirectly:
  - The speaker commits himself to the strict truth of the sentence.
  - At the same time is known / expected to take small deviations from  $P$  to be or become relevant.
  - But then, he cannot be speaking loosely with respect to  $P$ .
- Turning to Q2, we may want to say that the content contributed by the slack regulator is not asserted, but only signaled (or 'conveyed').
- But what does that mean?
  - My favored answer: **proper** and similar 'signaling' items are associated with Lewisian conventions of use.

### 3.3 Interim conclusion II

- Lasnik's argument for the compositionality of slack regulators cuts only partially.
- By distinguishing between upward- and downward-compositionality, we can diagnose the problem more carefully.
- One ingredient to make items that are downward-, but not upward compositional work is to allow them to make indexical reference to the utterance situation.
- A second one is to treat its content as 'not asserted, but signaled'.

## 4 Signaling without asserting

- **Q.:** How can we model 'signaling without asserting'?
- We can do this in various ways:
  - Through a separate dimension of meaning, effectively treating them as fully compositional, but taking care that they cannot interact with items higher up in the tree (the strategy of Potts (2005)).
  - By syntactically scoping the operator in question very high up in the sentence (perhaps at LF), so that it can combine with an (unpronounced) 'illocutionary operator'.
  - By assuming that (a) their contribution to the compositional semantics is null and (b) they are directly associated with a convention of use.
- A CONVENTION OF USE is a convention in the sense of Lewis (1969).
  - Simplifying somewhat, these conventions are self-sustaining regularities of behavior in a population.
  - That is if (almost) everyone follows the regularity, then (almost) everyone has an incentive to follow it (almost) all of the time.
- Lewis (1975) proposes conventions of use already:
  - Lewis asks: Given there are many possible languages (mappings from forms to truth-conditions), what does it mean to say that language is used by a population?
  - Lewis' answer: A language  $L$  is used by a population  $p$  iff there is a convention of truthfulness and trust with respect to  $L$  in  $p$ .
  - That is, (almost) everyone in  $p$  only ever utters true sentences, and (almost) everyone trusts that (almost) everyone does so.
  - This is obviously highly idealized: The occasions quantified over by this description must be restricted to instances of cooperative communication.

- While I agree that such conventions play a central role in communication, I do think that the content of the convention(s) has to be slightly different.
  - In particular, I assume that such conventions mediate the form-force mapping.
  - So, there will be a convention of use that specifies that a speaker who utters an indicative  $p$  becomes committed to act as though (s)he believes  $p$ .
  - Similarly for other sentence types.
- Regarding the case at hand, we can also reformulate the 'meaning' of slack regulators like **proper** in terms of conventions of use.
- That is, I propose that there is a convention of use in the community of (most) speakers of English to the effect that:<sup>3</sup>

A speaker will use **proper**( $P$ ) in an utterance  $u$  only if (s)he takes even relatively small deviations from  $P$  to be relevant in the context of  $u$ .

- But how does signaling come about?
  - Let  $W$  be a hearer-information state (set of worlds the hearer takes to be possible).
  - Further, assume that the hearer assumes the speaker  $S$  to follow the above convention.
  - That is, all worlds  $w \in W$  are such that if  $S$  makes an utterance containing **proper**( $P$ ) in  $w$ , then, in  $w$ ,  $S$  takes even slight deviations from  $P$  to be relevant in the context of this utterance.
  - Now, the hearer observes an utterance (by  $S$ ) which contains **proper**( $P$ ).
  - He updates his information state with the information that  $S$  made this utterance.
  - It will then be the case, in all worlds in the updated information state, that the speaker takes even small deviations from  $P$  to be relevant in the context of his utterance.
- That is, the hearer learns something about the speaker, without this something being part of the asserted content.
- And yet, he learns this in virtue of linguistic convention (a particular kind, namely conventions of use).

<sup>3</sup>*Nota bene* that this differs from the characterization in the main text in that there is no mention of 'signaling' or anything of the kind.

- That is 'signaling without asserting' are cases in which the fact that a certain utterance was made has certain contextual entailments.
- This signaling-through-conventions view has many possible applications, e.g. it might just be the right thing to model what Horn (2002) calls 'assertoric inertia'.
- While there does not yet exist a formal dynamic model of the right kind (in which updates are made to reflect which utterances have been made), it should be plausible that such a model can be given.
- Note also that such a model of dynamic pragmatics will be just the right thing to formalize the informal comments made earlier on the pragmatics of loose talk.
  - The basic question 'When will a speaker (be expected to) speak loosely' can be answered by giving a characterization of the information states relative to which a loose utterance is rational.
  - We can prove that 'slack widenings' are pragmatically contradictory by showing that no information state will be such that it would be rational to use a slack widener.

## 5 Conclusion

### The pragmatics of loose talk

- An account of the pragmatics of loose talk can (and should) be used to explain reliable generalization about the phenomenon.
- Loose talk gives rise to stringent commitments to the strict truth.
  - This can be seen as a vindication of truth-conditional semantics in the face of abundant loose talk.
  - Truth-conditions matter, namely (at least) for what a speaker becomes committed to.

### Loose talk as a purely pragmatic phenomenon

- A purely pragmatic account of loose talk becomes viable, once we realize that not all items that partially partake in semantic composition do so completely.
- With this, 'loose talk' is just one instance of the more general phenomenon of speakers asserting sentences that they do not believe to be true. Other such cases include deliberate deception, bullshitting, etc.

### Signaling without asserting: Towards a dynamic pragmatics

- Lewisian conventions of use give us a tool to understand how 'signaling without asserting' is to be understood.
- We can give these notions formal content in a dynamic system of the right kind, *viz.*, one in which the information that is used to update is information about utterance events.
- Such a system is useful for capturing pragmatic reasoning generally.

## 6 Postscript: Why Lewis-conventions are not enough

- Above, I suggested that the convention attached to the use of indicatives is a Lewis-convention, just as the one associated with slack regulators.
- In fact, this will not do.
- The problem is that Lewis-conventions are not sufficiently normative.
- An agent can always decide to 'opt out' of a Lewis-convention.
  - In most cases, opting out will be unwise (this is what makes the regularity a Lewis-convention).
  - But an agent is still free to be unwise (or, on occasion, exploit the convention by violating it).
- But: We want utterances of declaratives to create commitments as a matter of course. It should not be up to the speaker whether he becomes committed.
- So we need the notion of a normative convention in addition to Lewis conventions. Normative conventions specify certain normative consequences (commitments) of certain acts.
- von Savigny (1988) proposes a similar notion.
- However, there is still work to be done for Lewis-conventions: Namely, to account for 'signaling'.

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