The dynamics of loose talk

Presented by Chris Barker, slides version of April 14, 2021

Carter, Sam. To appear. The dynamics of loose talk. *Nous*.
Loose talk motivates an additional layer of meaning that tracks
communicated content versus literal content.

Important predecessor:
Lasersohn, Peter. 1999. Pragmatic Halos. *Language* 75.3: 522-551.
[available on the repo]

Credo (from the conclusion)

- "In many cases the proposition conveyed by an utterance is only loosely related to its literal content.
- Yet, as we have seen, the relation between the communicated and literal content of a loose utterance is subject to strict constraints, capable of being formulated in precise terms.
- These constraints give rise phenomena such as the non-commutativity of conjunction and strengthening of communicated content under negation.
- Systematic phenomena require systematic explanation."

Loose talk

1. Lena arrived at 9 o'clock.

▶ What if she arrived at 9:02?

2. Lena arrived at 9, but she did not arrive at 9 exactly.
3. ??Lena did not arrive at 9 exactly, but she arrived at 9.

▶ Same truth conditions. So felicity must consider more than TCs.

Literal content vs. communicated content

- ▶ [anticipate Harris next week]

1. Lena arrived at 9 o'clock.
2. The fridge is empty.
3. Chicago is 800 miles from New York.

- ▶ "An utterance of (1), taken literally, expresses that Lena arrived at precisely 9pm." This is its "literal content"

- ▶ "In contrast, in its context the utterance conveys that Lena arrived at some time close to 9pm." "Communicated content"

- ▶ NB: these sentences can be felicitous even when literally false

A set of (alleged) contradictions (Lasersohn)

1. Lena arrived at 9, but she did not arrive before 9:02.
2. The fridge is empty, but it is not empty.
3. Chicago is 800 miles from New York, but New York is not more than 796 miles from Chicago.
4. Lena arrived roughly at 9, but she did not arrive before 9:02.

► A way to identify literal meaning

Research questions:

- ▶ How is the communicated content of a loose utterance determined?

- ▶ Given that a loose utterance can be felicitously performed despite being false, what determines the felicity of a loose utterance?

- ▶ "I will argue that the communicated content and felicity of a loose utterance are primarily determined by semantic properties of the sentence uttered, properties which **outstrip** its truth conditional content."

Loose talk regulators

Strengtheners:

1. Lena arrived at 9 o'clock **exactly**.
2. The fridge is **completely** empty.
3. Chicago is **precisely** 800 miles from New York.

Weakeners:

4. Lena arrived at **roughly** 9 o'clock.
5. The fridge is **effectively** empty.
6. Chicago is **about** 800 miles from New York.

▶ Here, literal and communicated content coincide
  ▶ strengtheners assimilate the communicated content to the literal content
  ▶ weakeners assimilate the literal content to the communicated content

Negation

- ▶ So far, loose use corresponds to weaker truth conditions
- ▶ Should the loose interpretation of a negated sentence be weaker or stronger than its prejacent?

1. Lena didn't arrive at 9.

- ▶ Literal meaning: Lena didn't arrive exactly at 9.
- ▶ Conveyed meaning: Lena didn't arrive at a time close to 9.
- ▶ Conveyed meaning is **stronger** than literal meaning.

2. Lena didn't arrive exactly at 9.

- ▶ Literal meaning: Lena didn't arrive exactly at 9.
- ▶ Conveyed meaning: same
- ▶ Weaker than (1).
- ▶ So adding "exactly" strengthens a positive, but weakens a negative

Lasersohn's Pragmatic Halos

▶ Every expression denotation is surrounded by a set of nearby objects

  ▶ Same semantic type
  ▶ "Pragmatically indistinguishable"

▶ Composition: combine the halo of a functor f with its argument a pointwise:

$$\textbf{halo}(f(a)) = \{f'(a')|f' \in \textbf{halo}(f), a' \in \textbf{halo}(a)\}$$

▶ Strengthening: strengtheners denote an identity function (of some specific semantic type). The halo of an identity function is a near-identity function.

Lasersohn's problem with negation

▶ On Lasersohn's theory, the conveyed meaning is always at least as strong as the literal meaning

1. Lena didn't arrive at 9.

▶ Assume **halo**($\neg$) = $\{\neg\}$
▶ **halo**($[\![$Lena arrived at 9$]\!]$) =
  that L arrived at $\{9.000$ or 9.001 or $9.002...\}$
▶ Negated sentence predicted felicitous iff there is any time near 9 at which Lena didn't arrive!

▶ See Dan Hoek's 2019 NYU dissertation discussing this and a similar problem for Yablo; Hoek's solution doesn't automatically handle order effects

- ▶ **Non-detachability** (Grice): utterances differ wrt non-conventional meaning only if they differ in conventional meaning (excepting Manner implicatures)

1. Lena arrived at 9.
2. Lena arrived at 9 exactly.
3. Lena didn't arrive at 9 exactly.

- ▶ Contrast: $1 + 3$ is ok; $2 + 3$ is not ok
- ▶ Assume this is a difference in non-conventional meaning
- ▶ Therefore (1) and (2) must differ in conventional meaning
- ▶ [ignore an explanation relying on the maxim of Manner]
- ▶ So the presence of strengtheners changes conventional meaning

1. Lena arrived at 9 exactly with a dozen friends.
2. Lena arrived at 9 with exactly a dozen friends.
3. Lena didn't arrive at 9 exactly.

▶ Contrast: $1 + 3$ is not ok; $2 + 3$ is ok
▶ Therefore (1) and (2) must differ in conventional meaning
▶ [SC claims (1) and (2) have the same truth conditions]
▶ So the semantic argument of a strengthener affects its contribution to conventional meaning

1. If Lena arrived at 9, she saw the fireworks.
2. If Lena arrived at roughly 9, she saw the fireworks.

▶ The communicated content of (1) is the same as the communicated content of (2)

▶ Non-conventional meaning is supposed to be available only at the utterance level

▶ So the communicated content of (1) follows from its conventional meaning

▶ Likewise with quantifiers:

3. Everyone who arrived at 9 saw the fireworks.
4. Everyone who arrived at roughly 9 saw the fireworks.

Formal account preliminaries: pragmatic relevance

▶ "the felicity of a loose utterance is sensitive to what differences are relevant in a conversation"

▶ "certain assertions [involving LT-strengtheners] can affect which differences are relevant in a context"

1. Pyotr drove exactly 796 miles.

▶ makes the diff between driving 796 and 800 miles relevant

$$\mathcal{R}_\sigma = \{\langle w, w'\rangle | w' \text{ is pragmatically equivalent to } w \text{ in } \sigma\}$$

▶ "two worlds are pragmatically equivalent at a context σ iff they do not differ in ways which are relevant given the aims of the discourse in σ"

▶ $\mathcal{R}_\sigma$ must be reflexive, symmetric, but need not be transitive

Shouldn't "pragmatically equivalent" be a partition? (Zhuoye Zhao)

▶ In order for a relation to be an equivalence relation, must be not only reflexive and symmetric, but also transitive.

▶ Question meanings are generally modeled as a partitions (complication: Inquisitive Semantics)

▶ So it would be natural to align "pragmatically relevant" with "QUD relevant"

▶ Cf. Manuel Križ's theory of plurals being "true enough" if homogeneity exceptions are irrelvant for answering the QUD

Account sketch

A declarative. . .

- ▶ . . . expresses a proposition corresponding to its literal content and
- ▶ . . . modifies the conversational context

1. Lena arrived at 9.

- ▶ **conveyed content = update effect**: rules out worlds that are relevantly different from worlds in which Lena arrives exactly at 9.

2. Lena arrived exactly at 9.

- ▶ *exactly* changes which differences are relevant
- ▶ a use of (2) updates both the information state and the relation of pragmatic equivalence at a context

Account sketch: negation

- "a negated sentence rules out all and only those worlds which survive update with the clause under negation"
- "a negated sentence has the same effect on the relation of pragmatic equivalence as its negated clause does"
- [relevance projects like presupposition?]

1. Lena didn't arrive at 9.

- conveyed content: that there is no pragmatically equivalent world at which Lena arrived at 9pm
- [complement of the halo of the prejacent]

Account details

- $\llbracket \phi \rrbracket$: static interpretation = literal content (a proposition)
- $[\phi]$: dynamic interpretation = conveyed content (a CCP)
- $\sigma = \langle c_\sigma, \mathcal{R}_\sigma \rangle$: context: set of worlds and an accessibility rel
- Communicated content $\mathcal{C}_\sigma(\phi) = c_{\langle \mathcal{W}, \mathcal{R}_\sigma \rangle[\phi]}$
    - "the set of worlds which survive [after] updating the pair comprising the minimal information state and the accessibility relation of σ"
- Why not define communicated content relative to a context?

Static semantics

i. $[\![\beta(\alpha)]\!] = \{w \mid [\![\alpha]\!] \in w(\beta)\}.$

ii. $[\![Exactly(\beta)(\alpha)]\!] = [\![\beta(\alpha)]\!].$

iii. $[\![Roughly(\beta)(\alpha)]\!] = \{w \mid \mathfrak{R}(w) \cap [\![\beta(\alpha)]\!] \neq \emptyset\}.$

iv. $[\![\neg\phi]\!] = \mathcal{W}/[\![\phi]\!].$

v. $[\![\phi \wedge \psi]\!] = [\![\phi]\!] \cap [\![\psi]\!].$

Figure 1: Static semantics

▶ $w \in [\![roughly(\beta)(\alpha)]\!]$ iff w is $\mathfrak{R}$-related to $\beta(\alpha)$ world

▶ Why aren't *exactly* and *roughly* symmetric?

▶ [typo in the negation rule?]

Dynamic semantics, basics

- $\sigma[\beta(\alpha)] = \langle \{w \in c_\sigma | \mathcal{R}_\sigma(w) \cap [\![\beta(\alpha)]\!] \neq \emptyset\}, \mathcal{R}_\sigma \rangle$
  - updated infostate is intersection with the halo; $\mathcal{R}_\sigma$ unchanged

- $\sigma[\neg\phi] = \langle c_\sigma \backslash c_{\sigma[\phi]}, \mathcal{R}_{\sigma[\phi]} \rangle$
  - content is relative complement of the prejacent, $\mathcal{R}$ mods project
  - $c_{\sigma[\phi]}$ is the communicated content of ϕ restricted to σ
  - "negation reverses the relationship between the literal and communicated content of a loose utterance"
  - Hm. $[\![\phi]\!] = [\![\neg\neg\phi]\!]$? $\mathcal{C}_{\sigma[\phi]} = \mathcal{C}_{\sigma[\neg\neg\phi]}$? $\sigma[\phi] = \sigma[\neg\neg\phi]$?

- $\sigma[\phi \wedge \psi] = \sigma[\phi][\psi]$
  - standard dynamic conjunction

Dynamic semantics, regulators

Def. 9. $\mathcal{R}^{\sim\beta} = \{\langle w, w'\rangle \in \mathcal{R} \mid w(\beta) = w'(\beta)\}$

w is $\mathcal{R}^{\sim\beta}$-related to w' iff (i.) w is $\mathcal{R}$-related to w' and (ii.) w and w' agree on the extension of β. Intuitively, $\mathcal{R}^{\sim\beta}$ can be thought of as the relation just like $\mathcal{R}$, except that any differences in the extension of β are relevant.

Def. 10. i. $\sigma[Exactly(\beta)(\alpha)] = \langle \{w \in c_\sigma \mid \mathcal{R}_\sigma^{\sim\beta}(w) \cap [\![\beta(\alpha)]\!] \neq \emptyset\}, \mathcal{R}_\sigma^{\sim\beta}\rangle;$

  ii. $\sigma[Roughly(\beta)(\alpha)] = \langle \{w \in c_\sigma \mid \mathfrak{R}(w) \cap [\![\beta(\alpha)]\!] \neq \emptyset\}, \mathcal{R}_\sigma\rangle.$

Update with $Exactly(\beta)(\alpha)$ has a dual effect. It first restricts the input accessibility relation to relate only worlds agreeing on the extension of β. Second, it eliminates any worlds from the input information state which are not related by this new relation to a $\beta(\alpha)$-world.

Figure 2: Regulators, dynamically

▶ $\mathcal{C}_\sigma(\text{exactly}(\beta)(\alpha)) = [\![\text{exactly}(\beta)(\alpha)]\!] = [\![\beta(\alpha)]\!]$

▶ $\mathcal{R}_{\sigma[\text{roughly}(\beta)(\alpha)]} = \mathcal{R}_\sigma$

Granularity

- optimality; Krifka 2002, 2007; Klecha 2018

Austin

"Sometimes, it is said, we use *I know* where we should be prepared to substitute *I believe*, as when we say *I know he is in because his hat is in the hall* : thus *know* is used loosely for *believe*... The question is, what exactly do we mean by "prepared to substitute" and "loosely"?" Austin (1946, 176)

- ▶ "The present paper provides an answer."
- ▶ "we will substitute *S knows that* ϕ for *S believes that* ϕ just in case every possibility in which S believes that ϕ is equivalent to some possibility in which S knows that ϕ, given the conversational aims."
- ▶ "We use an expression (such *S knows that* ϕ) loosely just when there is some possibility at which it is false (i.e., at which S does not know that ϕ) but which is equivalent, in all ways which relevant given the aims of the conversation, to a possibility in which it is true (i.e., at which S does know that ϕ)."

Challenge to a claim of Carter's (Anna Alsop)

(1) Lena arrived at 9 o'clock and she arrived at 9.02pm.

▶ Claim (p. 28): (1) is infelicitous at every context (as long as Lena didn't arrive twice)

Context: Yesterday was move-in day at a certain college, and students were directed to arrive on campus at either 2pm or 9pm. If students arrived on time (before 2:05pm and 9:05pm, respectively), they get a free t-shirt.

A and B are in charge of t-shirt delivery. There are two different t-shirt designs, one for the 2 o'clock group and one for the 9 o'clock group. A and B are currently looking at the sign-in records to determine which students should receive each t-shirt.

2. A: Did Lena arrive at 2 o'clock or 9 o'clock? And at what time exactly did she arrive?

3. B: Lena arrived at 9 o'clock and she arrived at 9.02pm. (So she qualifies for a 9 o'clock group t-shirt.)

Diagnosis (Anna Alsop)

- ▶ Assume that "pragmatically relevant" corresponds to the QUD.

- ▶ This motivates a more complicated representation for QUDs in the semantics. A single accessibility relation cannot capture the difference in granularity between the two time-related questions—we could imagine a system that contains a set of accessibility relations instead. This could allow two different conjuncts in the same utterance to answer different QUDs.

Symmetry? (SC and AA)

Suppose that students are allowed to choose the hour they arrive. However, in order to get a t-shirt, they must arrive before the hour.

Q1: When did Lena arrive?

Partition Q1: arrival in $(t - 30, t + 30]$, $t \in \{12, 1, ...\}$

Q2: Was she on time?

Part. Q2: arrival in $(t, t + 30]$, $t \in \{12, 12:30, 1, 1:30, ...\}$

(1) A: When did Lena arrive? Was she on time?

B: Lena arrived at 9_{Q1} but she didn't arrive at 9_{Q2}.

B′: Lena didn't arrive at 9_{Q2} but she arrived at 9_{Q1}.

▶ Does a pitch accent on 9_{Q2} help?

Update or pointwise?

- ▶ The positive view is presented as an update semantics with CCPs
- ▶ Could the update be computed pointwise?