

# Seminar on Context-Sensitivity

## Week One

### 1 Propositions (background)

I'll be helping myself to a way of talking about propositions that takes the following schemata for granted.

- Necessarily, the proposition that  $\phi$  is true iff  $\phi$ .
- Necessarily, for every  $x_1, \dots, x_n$ , the proposition that  $\phi(x_1, \dots, x_n)$  is, necessarily (true iff  $\phi(x_1, \dots, x_n)$ ).
- Necessarily, one believes / knows that  $\phi$  iff one believes/knows the proposition that  $\phi$ .
- Necessarily, for every  $x_1, \dots, x_n$ , one believes / knows that  $\phi(x_1, \dots, x_n)$  iff one believes/knows the proposition that  $\phi(x_1, \dots, x_n)$ .

### 2 The simple picture

If everything went perfectly, we could hope to do useful theoretical work by thinking of languages as entities which, somehow or other, associate each of the sentences we are interested in with a unique proposition, the proposition it *semantically expresses* in the language in question. When  $\sigma$  is a sentence, we write  $|\sigma|_{\mathcal{L}}$  for the proposition it semantically expresses in  $\mathcal{L}$ . We will usually drop the subscript.

- It is customary to think of this function as *rigid*: if  $|\sigma|_{\mathcal{L}} = p$ , then necessarily, always  $|\sigma|_{\mathcal{L}} = p$  (at least if  $\sigma$  exists). This doesn't fit so well with our ordinary talk of "languages" as things that evolve and change, but it's useful for avoiding confusion.

The notion gets its point from its connections with other notions. Here are some connections one might want to maintain, and some of which one might want to appeal to as part of an explanation of what it is for a sentence to semantically express a proposition in a language, or of what it is for a language to be spoken by a population, depending on how one is thinking of languages.

(1) Meaning.

- (i) If  $|\sigma|$  is the proposition that  $P$ , then  $\sigma$  **means that  $P$**  in  $\mathcal{L}$ .
  - (ii) [?]  $|\sigma|$  is **the meaning of  $\sigma$**  in  $\mathcal{L}$ .
  - (iii) [?] If  $|\sigma| = |\tau|$ , then  $\sigma$  and  $\tau$  are **boldsynonymous / mean the same thing** in  $\mathcal{L}$ .
- (2) Speech acts and the theory of communication.
    - (i) If  $|\sigma|$  is the proposition that  $P$ , then anyone who utters  $\sigma$  while intending to be speaking  $\mathcal{L}$ , and... thereby **says that  $P$** .
    - (ii) [?] ... and doesn't say anything else.
    - (iii) [If  $|\sigma|$  is the proposition that  $P$ , then] anyone who utters  $\sigma$  while **speaking literally in  $\mathcal{L}$**  [means that  $P$  / [states/asserts/tells the relevant audience/intends to communicate/intends to convey/intends to ensure [recognition of] belief in/commits himself to]  $|\sigma|$ ].
    - (iv) [?] [If  $|\sigma|$  is the proposition that  $P$ , then] anyone who intends to be speaking  $\mathcal{L}$  and... who utters  $\sigma$  and [means that  $P$  / [states/asserts/. . . ]  $|\sigma|$  is speaking literally in  $\mathcal{L}$ .
    - (v) Anyone who utters  $\sigma$  while speaking literally and **sincerely** in  $\mathcal{L}$  believes  $|\sigma|$ .
    - (vi) Anyone who utters  $\sigma$  while speaking literally and knows (believes?) the negation of  $|\sigma|$  is **lying**.
  - (3) **Truth and falsehood** (for things other than propositions).
    - (i)  $\sigma$  is **true** [false] in  $\mathcal{L}$  iff  $|\sigma|$  is true [false].
    - (ii) Any utterance of  $\sigma$  by someone who is speaking  $\mathcal{L}$  is a **true utterance** iff  $|\sigma|$  is true.
    - (iii) Anyone who utters  $\sigma$  while speaking [literally?] in  $\mathcal{L}$  speaks truly/speaks the truth iff  $|\sigma|$  is true.
  - (4) **Validity and inconsistency** (for sets/sequences of sentences).
    - (i) The (sentential)-argument with premises  $\sigma_1 \dots \sigma_n$  and conclusion  $\sigma_{n+1}$  is **valid** iff the (propositional)-argument with premises  $|\sigma_1| \dots |\sigma_n|$  and conclusion  $|\sigma_{n+1}|$  is valid.
    - (ii) The set of sentences  $\{\sigma_1 \dots \sigma_n\}$  is **inconsistent** iff the set of propositions  $\{|\sigma_1| \dots |\sigma_n|\}$  is inconsistent.

- If there are different senses of validity/inconsistency for propositions—e.g. a sense in which the proposition that there is water entails the proposition that there is H<sub>2</sub>O, and one on which it doesn't, these will generate corresponding notions of validity/inconsistency for sentences.
- (5) **Compositionality.** The proposition expressed by a sentence is determined in a uniform way by its syntactic structure and an assignment of propositional constituents to its constituents.
- (6) **Explanatory role.** The fact that a community speaks a language  $\mathcal{L}$  such that  $|\sigma|_{\mathcal{L}} = p$  plays some kind of important role in explaining the pattern of facts about how members of that community use  $\sigma$  in communication.
- Or maybe it is speakers' *knowledge* [or belief, or ...] that  $|\sigma|_{\mathcal{L}} = p$  that plays such a role? Or their knowledge about some other relation between  $\sigma$  and  $|\sigma|_{\mathcal{L}}$ ?
  - Gricean attempt to spell this out: hearer's ability to figure out what speakers are trying to communicate by uttering  $\sigma$  can be reconstructed as depending on (a) their knowledge of the pattern of which propositions are expressed by which sentences in the language being spoken, plus (b) their general smarts, knowledge of human nature, and knowledge of the world.
  - Lewisian attempt to spell this out: what it is for a community to speak  $\mathcal{L}$  is for there to be a convention that for any  $\sigma$ , one not utter  $\sigma$  nor hear other people utter  $\sigma$  without believing  $|\sigma|_{\mathcal{L}}$ .

### 3 The challenge from context-sensitive sentences

What single proposition could be expressed by sentences like ...

- I am hungry
- That is a car
- Every town has a bank
- Every boy loves some girl

- Bill Bradley is tall
- Every local bar has a TV
- John hasn't had breakfast
- If Caesar had fought in Korea, he would have used catapults[the atom bomb].

Three modes of argument:

- (Premise justified by survey of a range of possible cases:) There is no one proposition that is, necessarily, asserted by everyone who utters  $\sigma$  while speaking literally in  $\mathcal{L}$ . But if there were such a unique proposition as  $|\sigma|$ , it would be such a proposition. Therefore. . . .
- (Premise justified by survey of a range of possible cases:) Every proposition that is, necessarily, believed by everyone who utters  $\sigma$  while speaking literally and sincerely in  $\mathcal{L}$  is very weak and obvious. But there is no weak and obvious proposition such that necessarily, everyone who utters  $\sigma$  while speaking literally in  $\mathcal{L}$  asserts it. Therefore. . . .
- $|\sigma|$  and  $|\lceil \text{It is not the case that } \sigma \rceil|$  are inconsistent. So if they expressed unique propositions, by ??, these propositions would be inconsistent. But it is necessary that every set of inconsistent propositions contains at least one false proposition. And it is not [necessarily] the case that whenever one person utters  $\sigma$  and another utters  $|\lceil \text{It is not the case that } \sigma \rceil|$ , and both speak literally [and sincerely], at least one of them asserts [believes] something false. Therefore. . . .

### 4 Ambiguity

Orthodoxy deals with some of these cases by claiming that different utterances we have been thinking of are utterances of *different sentences*. (There are no ambiguous words: instead, there are pairs of words that are homonyms (soundalikes)). How far can this strategy extend?

- The further we extend it, the closer it will come to being *impossible* for a given word or sentence to express anything other

than what it actually expresses.

- Suppose we went all the way and embraced a picture of sentences as having their semantic values essentially. Then a lot of the work we were previously wanting to do by theorising about how hearers figure out which proposition is expressed will instead have to be done by the theorising about how hearers figure out what sentence has been uttered.
- This leads to a worry about explanatory role. Knowledge of the extension of the semantic-expressing relation in  $\mathcal{L}$  isn't doing the work of representing the "conventional" contribution to interpretation: instead, all the work is being done by knowledge of which sentences belong to  $\mathcal{L}$ . Is this bad?

% section Ways of holding on to the simple picture

## 5 Ways of revising the simple picture to deal with context-sensitive sentences: indexicalism

Posit entities called "contexts". Introduce a new argument-place to the "semantic expressing" function, to be filled by a context, or (equiv-ally) let  $|\sigma|$  be a function from contexts to propositions. Other new ideology: the "in" relation between utterances and contexts (relative to a language?). Simple version of indexicalism: Each utterance is "in" exactly one context.

Updates to the role:

- ?? If  $c$  is the context of utterance  $u$  of  $\sigma$ , and  $|\sigma|(u)$  is the proposition that  $P$ , then the speaker of  $u$  **says that  $P$**  if she intends to be speaking the language, and **asserts that  $P$**  if she is speaking literally, and believes that  $P$  if she is speaking sincerely, and is lying if she knows that not- $P$ ...
- ?? (i) We can no longer speak of context-sensitive sentences as being true or false simpliciter, but we can introduce a notion of truth relative to a context. We could say that  $\sigma$  is true relative to  $c$  iff  $|\sigma|(c)$  is true. Or if there is some privileged function  $f$  from contexts to worlds, we could say that  $\sigma$  is true relative to  $c$  iff  $|\sigma|(c)$  is true at  $f(c)$

(Kaplan's approach).

- (ii) An utterance is true (false) iff the proposition expressed by the sentence relative to the context the utterance is in is true (false).
- ?? The argument from  $\{\sigma_1, \dots, \sigma_n\}$  to  $\sigma_{n+1}$  is **valid** iff for every context  $c$ , the argument from  $\{|\sigma_1|(c), \dots, |\sigma_n|(c)\}$  to  $|\sigma_{n+1}|(c)$  is valid.
- Alternative view (Kaplan): the argument from  $\{\sigma_1, \dots, \sigma_n\}$  to  $\sigma_{n+1}$  is **valid** iff for every context  $c$ , if  $\{\sigma_1, \dots, \sigma_n\}$  are all true at  $c$ , then  $\sigma_{n+1}$  is true at  $c$ .

What *are* contexts? Various possible views of this.

- Contexts are just utterances, and the "in" relation is identity. (Or: contexts are ordered pairs of utterances and worlds, and  $u$  is in  $\langle c_1, c_2 \rangle$  at  $w$  iff  $c_1 = u$  and  $c_2 = w$ .)
- Contexts as short ordered sequences (Lewis, early Kaplan?).  $u$  is in context  $\langle c_1, c_2, c_3 \rangle$  at  $w$  iff  $c_1$  is the speaker of  $u$  at  $w$  and  $c_2$  is the [?] time of  $u$  at  $w$  and  $c_3 = w$ .
- Kaplan (later version): ordered sequences (perhaps "gappy" sequences).  $u$  is in context  $\langle c_1, \dots, c_n \rangle$  at world  $w$  iff  $c_1$  is the speaker of  $u$ , and  $c_2$  is the [?] time at which  $u$  is produced, and  $c_3$  is the [?] place at which  $u$  is produced, and  $c_4 = w$ , and  $c_5$  is the object the speaker of  $u$  intends to refer to with occurrences of the word 'that<sub>1</sub>' in  $u$  if there is such an object, otherwise null (and similarly for other non-automatic indexicals).
  - Not all sequences are contexts, for Kaplan: e.g. for  $\langle c_1, \dots, c_n \rangle$  to count as a context,  $c_1$  must be located in  $c_3$  at  $c_2$  at  $c_4$ , and... This makes 'I am here' valid (in Kaplan's sense).
  - Nevertheless, there are contexts that no utterance could be in: e.g. ones where  $c_1$  is not saying anything at  $c_2$  at  $c_4$ . So 'I am speaking' is not valid.
- Stalnaker: contexts are propositions (= sets of worlds).  $u$  is in  $c$  iff  $c$  is the conjunction of all propositions that are *common ground* between the speaker of  $u$  and its intended addressees.

## 6 Some worries about indexicalism

- (i) How do we extend all this utterance talk beyond the paradigm of a speech with a clearly determined audience? Examples to think about: a presidential address; answering machine message ('I am not here now'); highway road sign ('Pennsylvania welcomes you'); writings that take a long time to compose and edit.
- (ii) What do we say about a sentence like 'Everyone waved to everyone'? This can, seemingly, be used literally to assert, e.g., the true proposition that everyone on a certain ship waved to everyone on shore, without asserting any proposition that entails that anyone waved to him or herself. It can, seemingly, be used literally and sincerely by someone who doesn't believe any such proposition. And yet, the argument from 'Everyone waved to everyone' to 'Everyone waved to him or herself' seems *valid*.

First option Deny that the argument is valid.

Second option Reject the very idea of validity as applied to (sentence-)arguments, in favour of validity-in-*c*. Claim that the argument is valid in some contexts, invalid in others.

Third option Claim that the imagined utterance of 'Everyone waved to everyone' does not, after all, count as literal.

Fourth option Introduce a new piece of ideology: a distinction between "uniform" and "nonuniform" contexts. Restrict the quantifiers that appear in the analysis of validity to uniform contexts.

Fifth option Reject the assumption that every utterance is in exactly one context by allowing different parts of an utterance to be in different contexts, or something like that. This raises hard questions: how do we state appropriate amendments to the principles under ??? And what is our new analysis of the "in" relation? (Wouldn't be a problem if we could think of the "parts of an utter-

ance" as just *times during the production of the utterance*, but this seems dubious for many cases, e.g. writing with editing.)

- (iii) How do we associate semantic values with non-automatic indexicals relative to the context of an utterance whose speaker's intentions are not directed in the right way on exactly one property. If it's true that when we assert one proposition we typically assert many, this will be commonplace.
- Even if it isn't true, what are we to say about nonliteral utterances? In the good case, the speaker's plan will involve the audience *first* associating the sentence with some specific proposition (which will turn out to be the one it expresses relative to the context) and only then going on to figure out what's really being communicated. But must it always work like that?
- (iv) Worries about explanatory role.
- Many functions from sentences + contexts to propositions will not correspond to any language that could *possibly* be spoken by creatures of any sort. EG: one where what "tall" contributes relative to a context is *the negation of* whichever property the speaker has the right kind of intention towards. This suggests that [knowledge of] what sentences express relative to contexts is not properly representing a *conventional* element in communication.