

Seminar on Context-Sensitivity

Week Two

1 Indexicalism

Posit entities called “contexts”. Introduce a new argument-place to the “semantic expressing” function, to be filled by a context; or (equivalently) let $|\sigma|$ be a function from contexts to propositions. Other new ideology: the “in” relation between utterances and contexts (and languages?). Each utterance is “in” exactly one context.

This lets us hold on to revised versions of some of the connections between “semantic expressing” and other notions.

- 2 Speech acts. If utterance u of σ is in context c , and $|\sigma|_{\mathcal{L}}(u)$ is the proposition that P , then in producing u , the speaker **says that P** if she intends to be speaking \mathcal{L} , and asserts[/intends to communicate/. . .] that P if she is speaking literally, and believes that P if she is in addition speaking sincerely, and is lying if she knows that not- P . . .
- 3 Truth for non-propositions.
 - (i) Necessarily, an utterance is true (false) iff the proposition expressed by the sentence relative to the context the utterance is in is true (false).
 - (ii) We can speak of sentences as being true or false relative to a context. We could say that σ is true relative to c iff $|\sigma|(c)$ is true. Or if each we have a notion of “the world of c ”, we could say that σ is true relative to c iff $|\sigma|(c)$ is true at $f(c)$ (Kaplan).
- 4 Validity. Two possible accounts:

First account: The argument from $\{\sigma_1, \dots, \sigma_n\}$ to σ_{n+1} is valid iff for every [possible] context c , the argument from $\{|\sigma_1|(c), \dots, |\sigma_n|(c)\}$ to $|\sigma_{n+1}|(c)$ is valid.

Second account: The argument from $\{\sigma_1, \dots, \sigma_n\}$ to σ_{n+1} is valid iff [necessarily] for every context c , if $\{\sigma_1, \dots, \sigma_n\}$ are all true at c , then σ_{n+1} is true at c .

If validity-for-propositions is analysed in terms of metaphysical necessity, and $\lceil \text{Actually } \sigma \rceil$ expresses a necessary proposition at c iff σ is true at the world of c , the argument from σ to $\lceil \text{Actually } \sigma \rceil$ is invalid on the first account, valid on the second. But maybe the right account of the validity of this inference involves tying validity to something more like epistemic necessity?

What *are* contexts? Some possible views:

- (i) 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 $c_2 = w$.)
- (ii) Contexts as short ordered sequences, e.g. $\langle \text{time, place, world} \rangle$. u is *in* context $\langle c_1, c_2, c_3 \rangle$ [at w] iff c_1 is the [?] time of u [at w] and c_2 is the place of u [at w] and c_3 is the world of u [$c_3 = w$]. Unless the context-sensitivity of σ is attributable entirely to “automatic” indexicals (I , ‘today’), $|\sigma|$ will have a lot to do with the intentions of the speaker in σ .
- (iii) Contexts as long sequences (perhaps gappy) (see, e.g., Kaplan, ‘Afterthoughts’). 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, 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 ‘that₁’ in u if there is such an object, otherwise null (and similarly for every other non-automatic indexicals).
 - For Kaplan, not every sequence of the right length is a context: 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' come out 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.

- (iv) 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.

One reason not to keep contexts very minimal (Lewis, 'Index, Context, and Content'): we want to give a compositional semantics for expressions like 'Strictly speaking' on which the proposition expressed by 'Strictly speaking, σ ' at c depends on the propositions expressed by σ at contexts that differ from c only in the 'standards of precision' co-ordinate.

- Do we? Or should we treat 'strictly speaking' as a merely pragmatic device for helping hearers to work out what you intend?

2 Some worries about indexicalism

2.1 What are utterances?

How do we extend talk of "utterances" 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.

- A special problem for Lewis-style "short" contexts: what of cases where one produces several utterances of the same sentence simultaneously?

2.2 What if the speaker's doesn't have the right kind of intentions?

How do we associate semantic values with intention-dependent 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 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. Must it always work like that?

2.3 Uniformity and validity

What do we say about a sentence like (*)? (Stanley)

- (*) John saw every picture, but some pictures were not on display.

This can, seemingly, be used literally to assert, e.g., the true proposition that John saw every picture that was hanging in a certain gallery, but that some pictures owned by that gallery were not on display, without asserting any proposition that entails that John saw some picture that was not on display. And yet, the argument from (*) to

- (**) John saw some picture that was not on display

seems *valid*. Options:

- (i) Flatly deny that the argument is valid.
- (ii) Accept that the argument is valid; claim that the imagined utterance of (*) does not, after

all, count as literal.

- (iii) 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.
- (iv) Introduce a new piece of ideology: a distinction between “uniform” and “nonuniform” contexts. Claim that the context of the imagined utterance was nonuniform. Restrict the quantifiers that appear in the analysis of validity to uniform contexts.
- (v) Posit rampant ambiguity. Really there are infinitely many sentences that are pronounced ‘John saw every picture’; we disambiguate by introducing subscripts. ‘John saw every_i picture but some_j pictures were not on display’ entails ‘John saw some_k picture that was not on display’ iff $i = j = k$; otherwise the argument is invalid.
 - This is elegant and orthodox, but it seems like a gigantic kludge.
 - Need for some heuristic for getting from our intuitions about validity and inconsistency for ambiguous “sentences” to claims about validity for disambiguated sentences.
- (vi) Posit moderate ambiguity. There is only one sentence pronounced ‘John saw every picture’, but there are two pronounced like (*). And there are 5 *arguments* pronounced like (*), (**), only one of which is valid.
 - This is nicer.
 - But what does the context-relative assignment of semantics actually look like?
- (vii) 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 connecting semantic value with assertion, literalness, etc.? And what is our new analysis of the “in” relation?
 - These problems would be more tractable if we could just think of the “parts of an utterance” as just *times during the production of the utterance*. But this seems dubious for many cases, e.g. writing with editing, producing several utterances simultaneously.

2.4 Do indexicalist semantic values play the right 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* or *parochial* element in communication.

- Soames: working out the proposition expressed relative to the context of an utterance can’t serve, as it should, as a *premise* in [the rational reconstruction of] the inference to what is being asserted/communicated.¹

¹There are two ways of thinking about the kind of contextual supplementation required by expressions like “John’s car”. (i) They might be treated, along with demonstrative pronouns “he” and “she”, as indexicals the semantic contents of which are simply listed as contextual parameters. In the case of genitives, the designated parameter will include a contextually supplied relation satisfying the constraints semantically encoded by the genitive expression. In the case of “he” or “she”, the designated parameter will be a contextually supplied male or female. On this view, sentences containing these expressions semantically express complete propositions, relative to contexts. As a result, this conception of indexical semantics is useful in codifying logics for indexicals. However, in this sense of “indexical semantics”, contexts themselves are very abstract, and to find out what context (in this sense of “context”) is relevant to understanding a speaker’s remark, one often must first find out what the speaker is saying. As a result, one can’t

- A version of the worry in Lewis's metasemantics: the regularity that we strive to be truthful and trusting in a rich Language with lots of intention-dependent indexicals seems to follow, modulo general knowledge of human nature etc., from the regularity that we strive to be truthful and trusting in at least one of some large collection of poorer languages.

3 Semantic expressing as a one-many relation

Idea: speaking literally merely requires asserting *at least one* of the propositions semantically expressed by the sentence one utters. (And speaking literally and sincerely merely requires *believing* at least one, etc.)

Questions: (Q1) can we recover, in these terms, any link with (more or less intuitive notions of) validity and inconsistency? (Q2) Can we recover any version of the idea that the proposition(s) expressed by a sentence constructed out of smaller sentences is a function of the propositions they express and the way they are put together?

- What are we going to say about sentences like 'Everyone waved to everyone, although not everyone waved to him- or herself' or 'The term isn't long enough, and it is too long', assuming we think they are context-sensitive? Do they (a) semantically express some true and some false propositions, or (b) semantically express only false propositions? Or (c) are they structurally ambiguous between several distinct sentences, some of which semantically express only falsehoods?
- (a) If these sentences express true propositions as well as false ones, then (Q1) we're going to need some new ideology if we're going to forge any kind of connection with (intuitive ideas about) validity and inconsistency. On the other hand (Q2) we might maintain that a proposition is expressed by $\Gamma\sigma$ and τ^{\neg} iff it is a conjunction of a proposition expressed by σ and one expressed by τ , and we might hope to be able to continue in the same vein.²
- (b) If they semantically express only falsehoods, then (Q2) there'll be no reasonable way to determine the set of propositions semantically expressed by a conjunction as a function of the sets of propositions expressed by its two conjuncts, so we're at least going to need some new ideology for the purposes of doing compositional semantics. (Q1) We are free to analyse validity and inconsistency *for single sentences* as 'expressing only necessary truths' and 'expressing only impossibilities'.³
- (c) Rampant ambiguity, present even in simple sentences like 'the term isn't long enough' and 'everyone is happy'. Then clearly we're going to need something other than the sets

explain how speaker-hearers use their knowledge of meaning to interpret what is said by claiming that they apply their knowledge of semantics (in this sense) to the contexts given to them in conversation (since these contexts don't come with labels specifying the contents of expressions). (ii) Alternatively, genitives, along with "he" and "she", could be thought of as semantically constraining (without determining) the contents that occurrences of them are used, as a result of pragmatic supplementation, to express. On this picture, sentences containing these expressions do not semantically express complete propositions relative to contexts. However, speakers' knowledge of semantics in this sense plays a straightforward role in explaining their ability to interpret utterances. To me, this suggests that the second view is the most useful in constructing semantic theories of natural languages.' ('The Gap between Meaning and Assertion', footnote 3).

²One stumbling block: sentences like 'Every philosopher thinks that he is important' and 'Whenever the army arrived in a town, every local bar put up its prices'.

³How do we extend this to validity for *arguments*? Preservation of expressing-only-truths? Then 'John is ready, therefore John is ready for everything' is valid. Preservation of expressing-at-least-one-truth? Then 'John is ready for something or other, therefore John is ready' is valid. What we seem to need is some notion of a sequence of propositions being semantically expressed by a sequence of sentences (or discourse) on which $\langle p_1, p_2 \rangle$ can fail to be expressed by $\langle \sigma_1, \sigma_2 \rangle$ even though p_1 is expressed by σ_1 and p_2 is expressed by σ_2 .

of propositions semantically expressed to do compositional semantics and make sense of validity. ('Everyone₁ is happy' and 'Everyone₂ is happy' express the same range of propositions, but the first entails itself and doesn't entail the second, and the conjunction of the first with its negation expresses a different range of propositions from the conjunction of the second with its negation.) What'll it look like? Semantic values for sentences will be something like functions to propositions from *assignments of admissible semantic values to all index-bearing expressions*.

- We don't have to follow the indexicalist in claiming that every utterance is "in" exactly one such assignment.
- This gives us an elegant theory for context-sensitive expressions that can enter into "binding" relations with higher quantifiers. Here's a made-up case with fake syntax, to give the idea.

$|he_1 \text{ works}|(g) =$ the proposition, concerning $g(he_1)$, that it works.

$|\lambda 1[\text{whistles when } he_1 \text{ works}]|(g) =$ the property of being an x such that x whistles when $g^{x/1}(he_1)$ works = the property of being an x such that x whistles when x works. ($g^{x/1}$ is the assignment that is like g but maps everything indexed '1' to x .)

$|\text{Every dwarf } \lambda 1[\text{whistles when } he_1 \text{ works}]|(g) =$ the proposition that every dwarf is an x such that x whistles when x works.

- (d) Moderate ambiguity, present in 'the term isn't long enough and the term is too long' but not in 'the term isn't long enough'. What we need: (i) a way to indicate the "coindexing" relations in the syntax. (ii) a conception of propositions as having a structure analogous to that of sentences. Then we can say that a proposition is expressed by, e.g., 'Steel is strong enough₁ and concrete is not strong enough₁' iff it is a conjunction of a proposition expressed by 'steel is strong enough' and one expressed by 'concrete is not strong enough', where the constituent corresponding to the linked expressions is the same in each case.
- What about cases of binding? We can do something similar. 'He works' expresses many propositions, which feature different constituents in the position corresponding to 'He'. 'whistles when he₁ works' similarly expresses many properties. But ' $\lambda 1[\text{whistles when } he_1 \text{ works}]$ ' expresses only one property (assuming there's no other relevant context-dependence). It can be derived "algebraically" from each of the many properties expressed by 'whistles when he₁ works', by first "abstracting out" the constituent contributed by 'he', to get a binary relation, and then "reflexivising" the two argument places of that relation, to get a property.

4 Propositional radicals

The picture (relevance theorists, Bach, Soames): what is expressed by 'Steel isn't strong enough' is not a proposition: instead, it is something which admits of being *completed* in different ways to yield different propositions. One speaks literally in uttering the sentence provided one asserts at least one of these completions.

One interpretation: what is semantically expressed is a *relation*; completion is predication. Problem: we may want to put restrictions on what can fill the "slots" to yield a legitimate completion. E.g.: not just *any* proposition of the form 'the car the bears R to John is fast' gets to be a completion of 'John's car is fast'.

Every radical determines a unique set of propositions, its legitimate completions. Does every set of

propositions likewise determine a unique radical? Hard to see why, if propositions are structured, we ever want too radicals associated with the same set!

What's really being evoked by talk of "radicals" and the like is a view about the relation between the range of propositions associated semantically with a sentence and its syntactic structure: one that rejects

Same Structure: 'the propositions semantically associated with a sentence have the same structure as the sentence'.

5 How tightly does syntax constrain the range of propositions semantically associated with a sentence?

The debate is easiest to make sense of against the background of a theory of propositions on which they have a structure comparable to that of sentences.

Putative counterexample to Same Structure) 'Mary is ready', the proposition that Mary is ready to go pole-vaulting.

Two notions of "has the same structure as": 'has all the structure of, and maybe more' versus 'has exactly the structure of'. "Snow is (cold and white)" has the same structure as "Grass is green" in the first sense, not in the second.

If *Same Structure* is understood in the first, weaker sense, the putative counterexample sucks. If it's understood in the second sense, it seems better; but so what?

- Possible defence for the believer in the strong version of *Same Structure*: propositions are finely individuated. The proposition that Mary is ready to go pole-vaulting isn't strictly speaking eligible to be expressed by "Mary is ready", though there's a very similar, necessarily coextensive proposition that is.

NB: The rejecter of *Same Structure* cannot appeal to syntax to run the rampant or moderate ambiguity accounts of arguments like the one from (*) to (**).