

Semantic Plasticity

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The *Patchwork* model

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The *Plasticity* model

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- (1) Five minutes ago, Sally said that salad was delicious

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- (2) If Sally were here, she would say that salad is delicious.
- (3) If we had taken Sally to Giorgio's, she would have asked for some salad.
- (4) If I had had the courage, I would have told them to stop making fun of my baldness.
- (5) No matter which graduate school I went to, I would still have believed that monetary policy can prevent recessions.

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5. Vague *Patchwork*
6. *Multiplicity*

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- Assumption: deterministic classical physics
- Phase space
- The Liouville measure
- The related measure on sets of nomologically possible worlds

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The continuum argument

- Premise 1 (*Non-denumerability*): Γ contains uncountably many propositions.
- Premise 2 (*Parity*): Either each proposition in Γ has zero measure within R , or each proposition in Γ has nonzero measure within R .
- Premise 3 (*Finitude*): At each world in R , only finitely many propositions in Γ are true.
- Conclusion: All the propositions in Γ have zero measure within R .

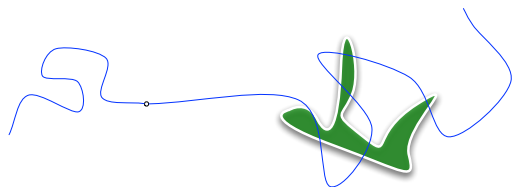
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A compelling instance:

- d : that Nottingham is pretty far from Oxford
- D : all variants of d that strengthen or weaken its truth condition by up to 1km.
- Γ : {that p is asserted at least once: $p \in D$ }
- R : nomologically possible worlds with the same particles as the actual world, the same spatial geometry as the actual world, and total energy less than twice that of the actual world.

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How does the conclusion of the continuum argument pose a problem for counterfactual speech reports?



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Holding fixed semantic facts *de jure* as part of the truth conditions for counterfactuals?

- Story of Fred and Zack.
- 'If Zack had shot at Fred, he would have hit him'

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The 'miracles' account of counterfactuals under determinism (Lewis 1979)

- If I had forgotten to have breakfast this morning, there would have been a local exception to the actual laws of nature.
- Considering how semantic facts work at nomologically possible worlds is irrelevant as regards the evaluation of our counterfactuals, since they take us to nomologically impossible worlds.
 - A toy model of how this could help
 - Why we don't like Lewis's view: Frank and Nancy's debate

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What if...

- the factors that make for plasticity also make for context-sensitivity
 - The relevant kind of context-sensitivity works like that of 'local', in that
 - it allows for *inheritance* and *binding*.
- (6) Frank said he was going to a local bar tonight
 - (2) If we had taken Sally to Giorgio's, she would have said that salad was delicious
 - (7) Each of my brothers said he was going to a local bar tonight
 - (8) No matter which restaurant we had gone to, Sally would have said that salad was delicious

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Why can't we access the false readings that would be generated by a binding-free LF?

- (9) There is a claim, namely that salad is delicious, which Sally feels so strongly about that she would certainly have argued for it no matter which restaurant we had taken her to

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Arbitrariness worries about Patchwork

First arbitrariness worry: why are some possible meanings privileged over others?

- This has more force in the modal case

Second arbitrariness worry: why are the boundaries between semantically homogeneous cells where they are?

- Applies with equal force in the temporal case

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Epistemic worries about Patchwork

Some unfortunates are near the edge of their cell. They will be prone to making false counterfactual/cross-temporal reports. How do we know that we are not like them?

- We could deduce this from a 'principle of humanity', according to which those who are not too dissimilar from us should be interpreted homophonically. But how could we know the principle of humanity?
- If there are any worlds where homophonic interpretation is appropriate, there must be close worlds w_1 and w_2 such that homophonic interpretation is appropriate for w_1 but not for w_2 . Philosophers at w_1 speak falsely when they endorse the principle of humanity.

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Possible responses to the epistemic worry.

- A safety-based account of knowledge. If we are far enough from a cell boundary, we can know that we are not very near a cell boundary.
- This seems too quick. If aliens will invade in 2050, doesn't that undermine our knowledge that they won't invade next year?
- Forget about knowledge: rational high confidence is enough.
- Can this vindicate outright *assertion*?
- If different words shift at different times, homophonic reports even of medium-length speeches from last year are going to be in trouble.

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A hybrid view

Patchwork for non-semantic vocabulary, *Plasticity* for semantic vocabulary.

- This makes it easy to construct a model where no-one at any world speaks falsely when they say "'Salad" means *salad* at all worlds close to ours'.
 - But what about cross-world/cross-time *embedded* attitude reports?
- (9) Yesterday, I told her that Frank said she deserved a vacation.
- (10) If she had walked in, I would have told her that Frank said she deserved a vacation.

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Vagueness as a remedy for arbitrariness

Response to the first arbitrariness worry: although *Parity* is definitely false, no proposition in the relevant family is *definitely* asserted at a positive-measure subset of R.

Response to the second arbitrariness worry: No pair of close worlds/times *definitely* belong to the same cell, or *definitely* belong to the same cell.

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The problem: on such a view, the problematic cross-world and cross-time reports will not be *definitely true*!

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Vagueness + context-sensitivity

Background idea (Raffman, Soames, Fara): vagueness is often partially 'resolved' in context.

The case of 'equally big', 'equally funny', etc..

- They are definitely equivalence relations. So we can't say that any things that differ only minutely in relevant respects are equally big/funny.
- We don't want to have to say that claims of the form 'x and y are equally big/funny' are almost never determinately true.
- The best view: vagueness can be resolved in context so that saliently similar objects determinately belong to the same cell.

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An analogue for semantic vocabulary: the vagueness of 'belongs to the same cell' is often partially resolved in context, so that *saliently* similar worlds get to count as definitely belonging to the same cell.

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The problem: this approach suffers from the same flaw as the 'hybrid' approach considered earlier.

- Utterances of a sentence involving semantic vocabulary in which the vagueness of that vocabulary is resolved in different ways, thanks to different salience facts, will not definitely involve the assertion of the same proposition.
- (11) In August, Sally said that salad was delicious
- September utterance: August/October similarity not salient.
 - October utterance: August/October similarity salient.
- (12) He has twice asserted that in August, Sally said that salad was delicious.

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Multiplicity: Almost always, when one sincerely utters a declarative sentence, one asserts a vast number of propositions.

- We can embrace *Patchwork*: two utterances of the same sentence almost never involve the assertion of *exactly* the same range of propositions, although there is often substantial overlap.
- We can resist the continuum argument, in the cases of interest, by denying *Finitude*. Infinitely many propositions (from the relevant set) are asserted in the actual world.

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Not all ways of endorsing *Multiplicity* actually solve the problem, though.

- A view where the set of propositions asserted includes all logical consequences of the proposition semantically expressed.
- A view where a language has a set of admissible interpretations, such that when one utters a sentence, one counts as asserting *all* the propositions to which it is mapped by any admissible interpretation.

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Suppose that

- at t_1 , no admissible interpretations map 'Salad delicious to p '
- at t_2 , some admissible interpretations map 'Salad is delicious' to p and also map 'assert' to the relation of *assertion*

t_1 : Sally utters 'Salad is delicious'

t_2 : Tom utters 'Sally asserted that salad is delicious'

- On the envisaged model, Tom asserted the false proposition that at t_1 , Sally asserted p .

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What's needed? A less mechanical account of the range of propositions that get asserted on a given occasion.

- A model: there is a set of admissible interpretations, as before. But this merely *constrains* what can be asserted on a given occasion.
- When there are substantial differences in plausibility within the set of admissible interpretations, speakers who are appropriately sensitive to these differences will be able to utter the sentence while asserting only some of the more plausible members of the set.
- We need an account of assertion and belief that lets us make sense of such sensitivity. Nothing like the popular *belief box* model of belief will work!

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