

**Quantifier domain restriction and
cross-contextual assessments
of truth value**

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**Are there
any philosophers?**



Alma

*...at a coffee-break
at this conference...*

**Yes, though most people
are logicians or linguists.**



Bruce

What is this talk about?

Contextual restriction of quantifier domains.

Why domains?

Despite of being well known and widely discussed, it remains one of the most controversial topics.

It is also one where philosophy of language and semantics connect with logic.

Plan

- a puzzle involving quantifiers and context
- the two most plausible solutions
- some additional cases supporting my preferred solution, involving cross-contextual assessments

Part I

the puzzle:

true premises,
false conclusion,
yet valid



Chris

**Everyone is
a linguist.**

*... during a dinner at
which there are only
linguists...*



Alma

**Brigitte Bardot
is a linguist.**

(i) "Everyone is a linguist. Therefore, Brigitte Bardot is a linguist" is an instance of the rule of universal instantiation, $\forall xFx \vdash F[x/b]$.

(ii) Intuitively, what Chris says is true. If S_1 is (the formal representation of) the sentence he utters, if c_1 is the context in which he says it, and s_1 the circumstances (world, time, etc.) then we ought to have $[[S_1]]_{c_1 s_1} = \text{True}$.

(iii) Intuitively, what Alma says is false. If S_2 is (the formal representation of) the sentence she utters, if c_2 is the context in which he says it, and s_2 the circumstances (world etc.) then we ought to have $[[S_2]]_{c_2 s_2} = \text{True}$.

(iv) Chris' and Alma's utterances are made in the same context, and the circumstances relevant to determining their truth values are the same, too.

claim: (i)-(iv) lead to contradiction.



Chris

**Everyone is
a linguist.**



Alma

**Brigitte Bardot
is an actress.**

**Everyone is
a linguist.**



Bruce

A version of the puzzle involves violation of the structural rule of adding additional premises to a valid inference:

Part II

two promising solutions:

a hidden argument in the syntax vs.

a parameter of evaluation

The hidden-argument (or “mainstream”) strategy rejects (i)

$[\forall x: \text{Human}(x) \wedge \pi(x)]$
Linguist (x)

**Everyone is
a linguist.**



Chris



Alma

**Brigitte Bardot
is a linguist.**

The hidden-argument strategy covers a whole family of views, depending on whether the hidden argument is associated with the determiner or with the noun-phrase, and on the nature of the argument itself (second order predicate variable, etc.)

Some options for “Everyone is a linguist”:

- $[\forall x: \text{Human}(x) \wedge \pi(x)] \text{Linguist}(x)$
- $[\forall x: \text{Human}(x) \wedge x \in Y] \text{Linguist}(x)$
- $[\forall x: \text{Human}(x) \wedge x \in f(y)] \text{Linguist}(x)$
where f is a domain fixing function and y an anchor

etc.

The parameter-of-evaluation strategy starts from the idea the role of supplying semantic values for indexicals and implicit arguments is only one of the two roles that the parameter of context plays in Kaplanian theories, the other role being that of determining the circumstances of evaluation that will, in turn, determine the truth value.

Example: the context-sensitivity, *qua* world-sensitivity, of:



**There are over
thousand
individuals.**

The parameter-of-evaluation strategy keeps syntax intact and locates domain-sensitivity in the circumstances of evaluation.

Two options:

- no new parameter, but tinker with some existing parameter (e.g. replace possible worlds by situations)
- add a domain-parameter, side by side with worlds, times, standards, and other parameters of evaluation

(Stojanovic 2012, “Domain-Sensitivity”, *Synthese* 184: pp. 137-155)

How the two strategies handle the initial puzzle



Chris

Everyone is a linguist.



Alma

Brigitte Bardot is a linguist

Hidden-argument s.: reject (i): it isn't a valid inference since BB doesn't satisfy the implicit restriction on 'everyone'.

Parameter-of-eval. s.: reject (iv): but the premise and the conclusion are interpreted w.r. to different domains

(i) "Everyone is a philosopher. Therefore, Brigitte Bardot is a philosopher" is an instance of the rule of universal instantiation, $\forall xFx \vdash F[x/b]$.

(ii) Intuitively, what Chris says is true. If S_1 is (the formal representation of) the sentence he utters, if c_1 is the context in which he says it, and s_1 the circumstances (world, time, etc.) then we ought to have $[[S_1]]_{c_1 s_1} = \text{True}$.

(iii) Intuitively, what Alma says is false. If S_2 is (the formal representation of) the sentence she utters, if c_2 is the context in which he says it, and s_2 the circumstances (world etc.) then we ought to have $[[S_2]]_{c_2 s_2} = \text{True}$.

(iv) Chris' and Alma's utterances are made in the same context, and the circumstances relevant to determining their truth values are the same, too.

claim: (i)-(iv) lead to contradiction.

Part III

a further puzzle:
cross-contextual assessments
("that's no longer true")

Retrospective assessment with domains



Chris

**Everyone is
a linguist.**

*...after Brigitte
Bardot joins the
dinner party...*



Alma

**That's no
longer true.**

Several ways of interpreting “*That's no longer true.*”

i: the utterance itself (made by Chris) used to be true, e.g. at the time it was made, but is no longer true at this time.

ii: the content expressed by Chris's utterance used to be true, e.g. at the time of the utterance, but is no longer true at this time.

iii: the sentence utterend used to be true, e.g. when it was interpreted in the context in which it was uttered, but is no longer true in the context of reassessment.

“That's no longer true.”

✗ i: the utterance itself (made by Chris) used to be true, e.g. at the time it was made, but is no longer true at this time.

ii: the content expressed by Chris's utterance used to be true, e.g. at the time of the utterance, but is no longer true at this time.

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Compare:

"This dinner is boring." - "That's no longer true."

It works only if the same dinner ceases to be boring; but it doesn't work if a different dinner becomes salient in the context. :

✘ **i:** the utterance itself (made by Chris) used to be true, e.g. at the time it was made, but is no longer true at this time.

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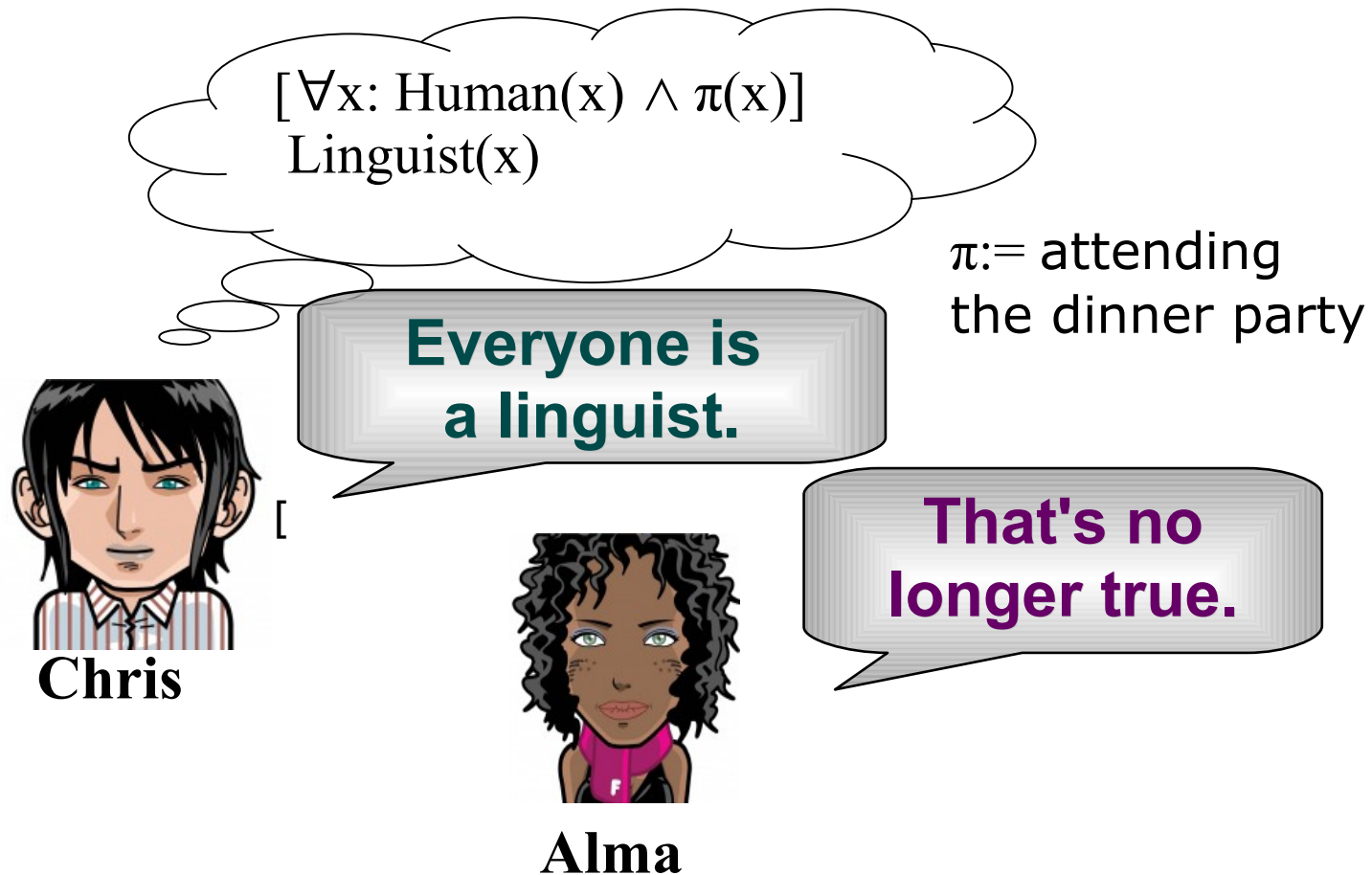
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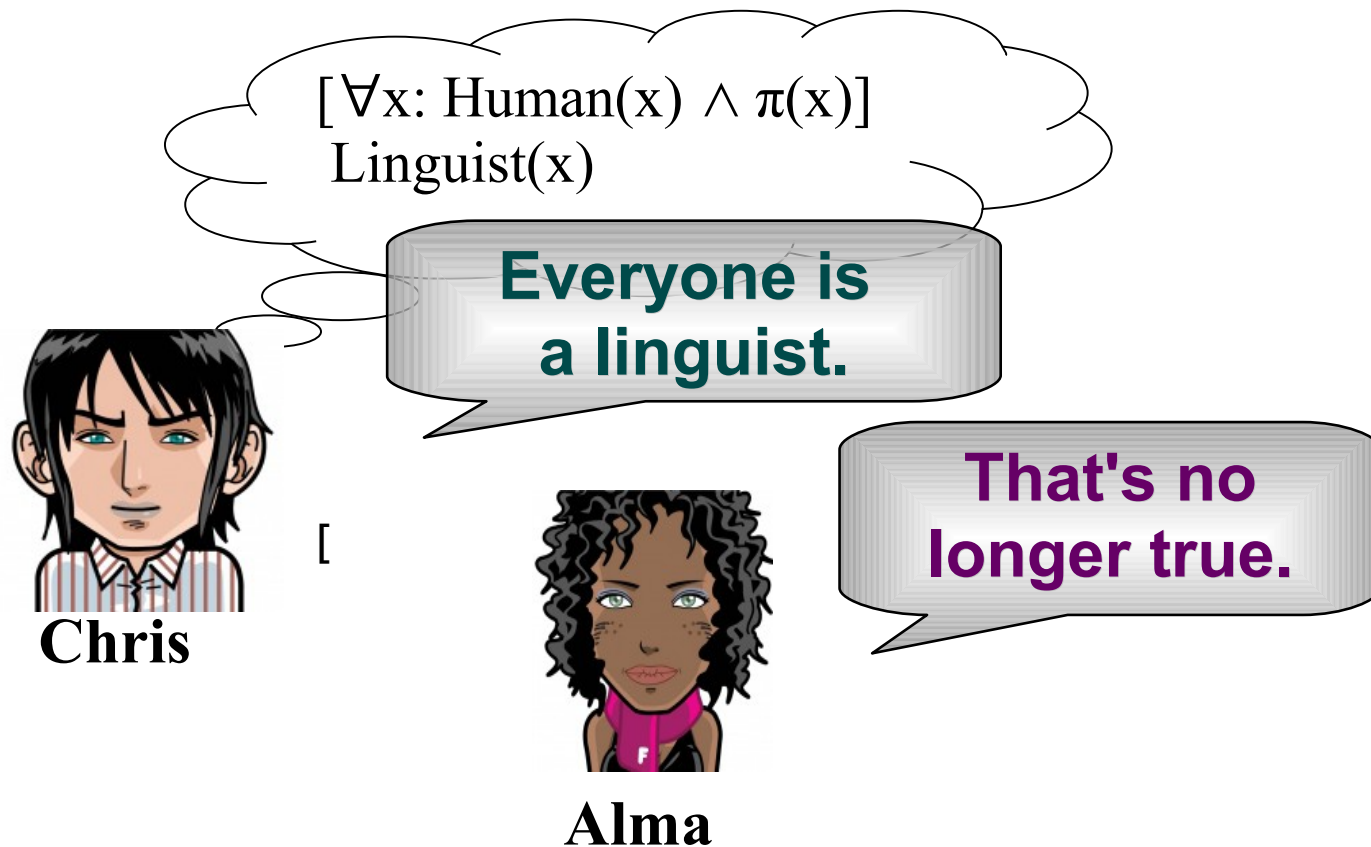
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iii: the sentence utterend used to be true, e.g. when it was interpreted in the context in which it was uttered, but is no longer true in the context of reassessment.

the hidden-argument strategy can handle some aspects of retrospective assessment;



the problem is that there are two equally plausible candidates for π , viz. attending the dinner party vs. now attending the dinner party, and no principled reason that the speaker would intend one rather than the other



The parameter-of-evaluation strategy can handle retrospective assessment better. Here's an analogy:

Kyoto is the capital of Japan.

- That was true a few centuries ago, but it is no longer true.

Everyone is a linguist.

- That's true at this dinner, but it wasn't true at all the workshop dinners that I've ever attended.



**Everyone is
a linguist.**

“That's no longer true” as a conjunction:
That used to be true.
That isn't true now.

We get a true reading if evaluate the two conjuncts at two different domains (one of linguists and another w/ BB).

By way of concluding remarks

- quantifiers raise important issues that have long been of interest to logicians, yet exhibit forms of context-sensitivity that have long been ignored by logicians
- the context-dependence of quantifier domain restriction can't be just assimilated to indexicality
- the topic allows for fruitful interactions among linguistics, philosophers and logicians

THANKS



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