Why *have* can take bare nominals

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My worry

Bare nominals

= singular count nouns appearing without overt determiner in argument position

> Certain types of verbs

Existential constructions

Intensional verbs

Have verbs

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Existential constructions

Statement of instantiation of a property.

No surprise here…

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Intensional verbs

Lack of existential claim.

No surprise here…

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Have verbs

??

> No answer in recent literature…

Borthen (2003), Dobrovie-Sorin, Bleam & Espinal (2006) and Espinal & McNally (2011) develop detailed analyses but don't tell us why *have* verbs are special.

> Not irrelevant though...

If we want to get from descriptive to explanatory adequacy, we need the answer.

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Goals of this talk

Goals

The more ambitious goal

To answer the question in the title: why is it *have* can take bare nominals.

The more realistic goal

To bring together two areas of research in semantics that (as far as I know) haven't been connected: bare singulars with *have* verbs and relational HAVE.

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Relational HAVE

Relational HAVE

Mary has a brother.
John has a friend.

a: relational, indefinite (= a determiner that is not positive strong)

> The gist of the literature on relational HAVE is that one should try and get around the presence of the indefinite article.

> If we're dealing with the same *have*, the literature on relational HAVE might then contain a straightforward answer to the question why *have* can take bare nominals.

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Why relational HAVE doesn't like *a*

Mary has a brother.

Relational semantics for *brother*: λxλy(brother of(y,x)) <e,<e,t>>

Standard semantics for *a*: λPλQ∃x(P(x)&Q(x)) <<e,t>,<<e,t>,t>>

The challenge

We would like to combine *brother* with *Mary* before combining with *a*.

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Partee (1999)

Gist of the analysis

Direct connection between *brother* and *Mary* through quantifying-in.

Mary — have — a — brother — z

have: λv(exist(v))

brother: λxλy(brother of (y,x))

λy(brother of (y,z))

∃y(brother of (y,z)&P(y))

λz∃y(brother of (y,z)&exist(y))

∃y(brother of (y,m)&exist(y))

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Landman (2004)

Gist of the analysis

Direct connection between *brother* and *Mary* by:
> adopting a modifier semantics for *a*
> analyzing *have* as a verb that selects relations and binds their internal argument

Mary have a brother

λ**R**λpλq(**R**(p)(q)) λxλy(brother of (y,x))

λxλy(brother of (y,x))

λpλq(brother of (q,p))

λq(brother of (q,m))

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Summary and evaluation

> Both analyses make sure the indefinite article and *have* don't stand in the way of *Mary* and *brother*.

> Existential quantification in Partee's analysis comes from the indefinite article. This is less easily transposable to constructions without indefinite article.

> Landman's analysis puts the existential quantification at the level of the verb. I will - for the moment - follow his insight that *have* is a verb that mediates between relations at the nominal level and the verbal level.

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Putting things together

Putting things together

My worry about *have* verbs was that I didn't understand why they take bare nominals.

It turns out though that a potential answer has been in the literature on relational HAVE all along:

As a mediator between relations at the nominal and the verbal level, HAVE doesn't select normal arguments but relational predicates. The fact that the indefinite article can be absent is consequently expected.

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Putting things together

Problem

If the *have* we find with bare nominals is indeed a mediator between relations at the nominal and the verbal level...

... we would predict relational nouns to be the preferred class of nouns to occur bare with *have*.

This prediction is not borne out.

> The nouns that combine (and combined) with *tener* in Spanish e.g. don't exhibit a clear relational bias.

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Probing the analysis further

A new proposal

Landman's proposal

Relational HAVE selects relations and consequently mediates between relations at the nominal and the verbal level.

The new proposal

Relational HAVE is not a mediator between relations but rather a relation builder.

$\lambda P \lambda z \exists n(\text{transitivize}(P)(z)(n))$

It selects a one-place predicate and returns a two-place predicate with an existentially quantified internal argument.

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A new proposal

The new proposal

Relational HAVE is not a mediator between relations but rather a relation builder.

> If this is the correct analysis we no longer expect to find relational nouns to be the preferred class of nouns to occur bare with *have*.

Apparent problem

If the new proposal is on the right track, it predicts that we cannot directly combine relational expressions with relational HAVE, jeopardizing the main intuition underlying Landman's analysis.

Rather than a problem, this turns out to be an advantage.

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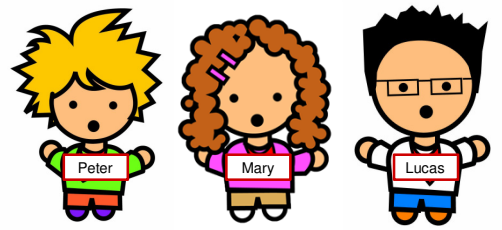
The data



Mary has the nicest **brother.**

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The mediator analysis (1)

> We assume Landman's analysis of *have*, *viz.* that of a verb that selects relations and existentially binds their internal argument.

$\lambda \mathbf{R} \lambda p \exists q(\mathbf{R}(p)(q))$

> We furthermore assume a relational semantics for *brother* that can directly combine with HAVE on its mediator analysis:

$\lambda x \lambda y(\text{brother of } (y,x))$

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The mediator analysis (2)

Propose a modifier semantics for *the*.

for non-relational predicates

the man

$\lambda x \ (\text{man}(x) \ \& \forall y(\text{man}(y) \rightarrow y=x))$

for relational predicates

the brother

$\lambda z \lambda x(\text{brother of } (x,z) \& \forall y(\text{brother of } (y,z) \rightarrow y=x))$

$\exists x(\text{brother of } (x,m) \& \forall y(\text{brother of } (y,m) \rightarrow y=x))$

problematic!!!

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The mediator analysis (3)

Le Bruyn, de Swart & Zwarts (submitted) argue that the same problem pops up in all classical analyses of relational HAVE (Partee 1983, Landman & Partee 1987, Szabolcsi 1994, Landman 2004, Saebo 2009)

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The relation-building analysis (1)

> We assume the relation-building analysis of HAVE.

λPλzλn(transitivize(P)(z)(n))

> Instead of assuming that *brother* has its 'classical' relational semantics...

λxλy(brother of (y,x)) **<e,<e,t>>**

... we assume it has a non-relational semantics that can directly combine with HAVE on its relation-building analysis.

λyλx(brother of (y,x)) **<e,t>**

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The relation-building analysis (2)

brother brother **<e,t>**

the brother THE brother **<<e,t>,t>**

have the brother

<<e,t>,<e,t>> have THE brother <<e,t>,t>

type-clash > apply BE

<<e,t>,<e,t>> have BE(THE brother) <e,t>

have(BE(THE brother)) **<e,t>**

Mary have the brother

have(BE(THE brother)) m **t**

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The relation-building analysis (3)

The transitivization step in general

input: a set of individuals

ex. λx(book(x))

↓

output: the set of pairs of which the first member...

1) ... belongs to the input set
2) ... stands in a pragmatically inferred relation to the second member

ex. λwλx(book(x) & belonging to (x,w))

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The relation-building analysis (3)

The transitivization step for *brother*

input: a set of individuals

the set consisting of the unique person who stands in the brother relation to someone

↓

output: the set of pairs of which the first member...

1) ... belongs to the input set
2) ... stands in the brother relation to the second member (= lexico-pragmatically inferred relation)

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The relation-building analysis (4)

The final truth conditions

There is an x who stands in the brother relation to Mary and who is moreover the only person who stands in the brother relation to someone.

∃x(∃y(brother of(x,y))&∀z(∃v(brother of(x,v))→z=x)& brother of (x,m))

This is exactly what we need it to be!!!

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Wrapping up

Wrapping-up

- I have sketched an analysis of relational HAVE as a relation building verb.
- I have argued that it gives us a better account of relational HAVE than other analyses.
- With this analysis in place, we have an answer to the question why *have* is more prone to combine with bare nominals - 'relational' or not - than other verbs.

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Wrapping-up

- Relational HAVE selects expressions of type <e,t> and turns them into expressions of type <e,<e,t>> and then <e,t>.
- This doesn't mean that it cannot combine with argumental types but it does mean that these would have to be shifted to type <e,t> first.
- Given that A and BE neutralize each other, the addition of the indefinite article is nothing more than a complication of the semantics.

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weak referentiality