You don't know what you have until you lose it: what /lu:z/ can tell us about /hæv/

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1 MacMillan Dictionary: lose = stop having something

According to dictionaries, a sentence like (1) means that the subject has her wedding ring until 8:08 pm but does not have it from then on.

(1) Sophia Loren loses her wedding ring at 8:08 pm.

That she has her wedding ring until 8:08 pm would be a **presupposition**, that she does not have it from then on would be the **assertion**.

This could be the rudiment of a reductory analysis of *lose* in terms of *have*:

(2) $$[\![\,\text{lose}\,]\!]^w = \lambda x \lambda y\, \lambda e : \exists\, s\ s \asymp e \wedge have_w(y)(x)(s)\,. \\ \exists\, s'\ e \asymp s' \wedge \sim have_w(y)(x)(s')$$

But this is only helpful if we know what *have* as a transitive verb means – and there is not even a consensus that *have* is a transitive verb.

According to Bassaganyas (2017), it is, but

- according to Myler (2016), it denotes a type-neutral identity function,
- according to Le Bruyn, de Swart and Zwarts (2016), it selects a (relational) predicate, and
- according to Sæbø (2009), it selects a (small) clause.

There is little to indicate, though, that *lose* isn't a transitive verb: unlike *have*, it does not allow for a bare count object in languages like Catalan,

(3) Du har giftering. Er du gift? (Norwegian)
you have wed ring are you married

(4) Har du mista {#(en)} giftering{#(en)}?
have you lost {#(a)} wed ring{#(the)}

and unlike *have*, it does not seem to allow for a SC complement:

(5) a. Stone had his song high on the blues charts for months.
b. #Stone lost his song high on the blues charts in December.

One might conjecture that to lose only means to stop having when have is indeed transitive, and that *lose* drives a wedge between two senses of *have*, light and heavy, say. But below, I will show that that would be premature.

2 Love's labour's lost, or: two ways to lose your lover

I will argue from cases where the object is built around a relational noun whose internal argument is explicitly or implicitly bound by the subject.

(6) Schigolch (turning away from Alwa): She should not go together with Geschwitz. She will lose all her clients.[1]

There is a way of reading this sentence that licenses the following inference: for all Lulu's clients x, there is a future time when x is not a client of Lulu's, or in other words, when Lulu does not have x as a client.

In fact, this is exactly what the sentence seems to express on that reading – though there are other ways to read it, à la (7), where the natural inference is that another relevant relation ceases to hold between object and subject.

(7) A garbage truck loses its rear axle in downtown Cedarburg.

The rear axle is still the rear axle of the garbage truck after it has been lost, and the persons who are presently Lulu's clients could continue to be.[2]

As demonstrated by Falkum (2017), there is room for considerable variation within the spectrum of such 'non-intrinsic' relations:

[1] Alban Berg: Lulu, Act 3, Scene 2 (English version by Richard Stokes)

[2] Thus if she were a mountain guide or a river guide, losing her clients could mean that they fall overboard or disappear from view.

(8) We lost our crew!

> On 27 January 1967, the command module of the Apollo 1 spacecraft was destroyed by fire during an exercise, killing the three astronauts inside. A control center operator, calling a colleague, utters [(8)]: [...] Given the ambiguity ... of the verb *lose*, the colleague at the receiving end is at first unsure whether he is being told that the crew are simply missing – that they have been unable to find them and so cannot carry out the testing – or if he is in fact telling him that they have all died.

However, the other – and hard – way to lose your lover is for her or him to **cease to be your lover**. The relation between the object and the subject that stops holding comes from the relational noun, as can the relation that holds according to a sentence with a light, maximally meaningless *have*, –

(9) Lulu has somewhere between 20 and 30 clients.

– and the challenge is to make this connection through an analysis of *lose* in terms of not having anymore.

3 As a lover

A first thing to note is that *lose* does seem to allow for a SC complement, provided the SC predicate is an *as* phrase.

(10) I'm going to lose my boyfriend as a neighbor.

This case does not fit smoothly into the 'landscape of English *as*-phrases' surveyed by Zobel (2016: 285ff.). It may seem to fall between her Class 1, which could be exemplified by (11), where the *as*-phrase contributes a role or function that the associated entity assumes as a result of the eventuality described by the verb (identified by Moltmann (1997: 45ff.) as intensional), and her Class 3, which could be exemplified by (12), where the *as*-phrase contributes a role or function restricting the validity of the ascription of the property expressed by the verb to the associated entity.

(11) For a female butterfly, a male has to look and smell right before <u>she will choose him as a mate</u>.

(12) Melville did not worship Shakespeare, but <u>loved him as a mate</u>, his only peer, and it is ...

As a matter of fact, (10) seems to be paraphrasable by (13):

(13) My boyfriend and I are not going to be neighbors anymore.

4 Lose in the light of Le Bruyn, de Swart and Zwarts (2016)

Le Bruyn, de Swart and Zwarts (2016) (henceforth LeBdeSZ) assume that *HAVE* has this meaning:[3] [4] [5] [6]

(14) $\lambda P \lambda z\, \varepsilon d_1\, P(\uparrow d_1); \uparrow d_i \cong z$

P is a property, the meaning of a noun with an implicit relational argument, d_i. Dynamic semantics makes it possible to target this relational argument; *HAVE* "selects predicates and probes the relation included in them".

The difference between a noun standardly regarded as relational and a noun rather regarded as sortal like *blog*

> resides in where the information about their relational argument is stored; for relational nouns, this is in their regular lexial entry whereas for non-relational nouns, it is in their *Qualia Structure*.

Because light *HAVE* selects predicates, it would not seem to offer anything to model an analysis of *lose* on. Indeed, in languages where *HAVE* can take a bare singular count noun, *LOSE* cannot, cf. (4).

How about heavy *HAVE*? Heavy *HAVE*

> selects arguments and introduces a contextually defined relation.

LeBdeSZ assume that it has this meaning ($\mathcal{R}$ is contextually defined):

(15) $\lambda y \lambda x\, \mathcal{R}(x)(y)$

But the problem is that in a sentence like (16), on one prominent reading, the subject argument is identical with the relational argument of the noun, and relational noun relations are not among the relations $\mathcal{R}$ ranges over, so light *HAVE* is really what would be needed as a model for *lose*.

(16) Poirot loses a client.

I conclude that the theory of LeBdeSZ does not show a way forward.

[3] "We write *HAVE* rather than *have* to indicate that we are not talking about English *have* but rather about a semantic prototype which is instantiated as *have* in English, *avea* in Romanian, etc." Other languages grouped with Romanian are Catalan and Norwegian.

[4] (14) is the result of a purely reductory simplification, collapsing the definition of the meaning of *HAVE* and the definition of the meaning of *EXPL*(P), figuring in the former.

[5] Note that this *HAVE* is the 'light' *HAVE*, as distinct from the 'heavy' *HAVE*, which requires a determiner in languages like Romanian and is analyzed as a transitive verb.

[6] ε, $\cong$ and ; are the dynamic counterparts of $\exists$, $=$, and $\wedge$, respectively, and $\uparrow$ marks a shift from static to dynamic.

5 Lose in the light of Myler (2016)

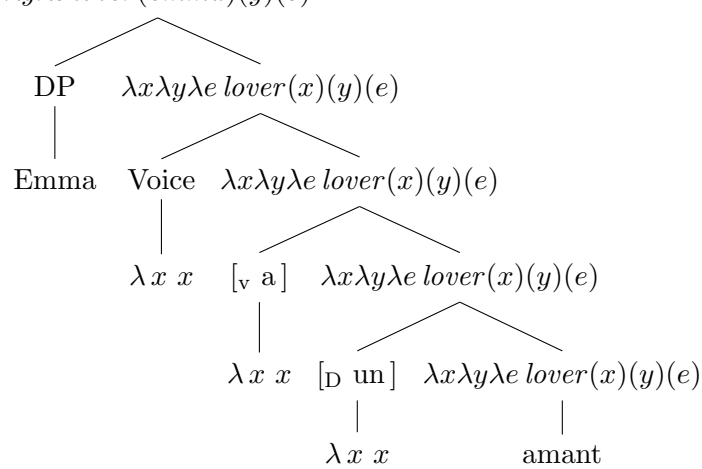
In the theory of Myler (2016), *have* is a **type-neutral identity function**. Its argument can be of type (vt), $e(vt)$ or $e(e(vt))$. This last option is used for 'permanent ownership' cases like (17) and for relational cases like (18), where Voice is assumed to be expletive and semantically vacuous.

(17) Bilbo has a ring.

(18) J'ai un amant! un amant! (Flaubert: Mme Bovary)

Here the meaning of the *have* sentence = the meaning of *have*'s complement. Let us look at the way it is built.

(19) $\lambda y \lambda e\, lover(emma)(y)(e)$



The y argument of the relational noun must be existentially closed off.

Questionable as this theory may be in a number of regards, it is worth noting that it does allow a fair analysis of loss cases like *lose a lover* or *lose a ring*. Specifically, the type $(e(e(vt)))(e(e(vt)))$ meaning of *lose* would be:[7]

(20) $\lambda z_{e(e(vt))} \lambda x \lambda y \lambda e : \exists s\ s \asymp e \wedge z(x)(y)(s) \,.\, \exists s'\ e \asymp s' \wedge \sim z(x)(y)(s')$

But it is more common to use *lose* and *lover* with a possessive determiner, and it is in fact unclear how any other determiner than the indefinite article could help build a sensible semantics for *have* sentences with vacuous Voice. I thus conclude that Myler's theory does not show a way forward either.

[7] Strictly, the s in the presupposition should not be related to the e eventually to be existentially closed off but, to avoid a paradox under negation, to the time of reference.

6 Lose in the light of Bassaganyas (2017)

According to Bassaganyas (2017) (henceforth Bars), *have* introduces an empty relation template $\mathcal{R}$ which must be filled by some relation.

(21) $\lambda x \lambda y \, \exists s \; \mathcal{R}(s) \wedge \mathbf{arg}_1(y)(s) \wedge \mathbf{arg}_2(x)(s)$

Unlike Myler but like LeBdeSZ, Bars assumes that relational nouns are not inherently or notionally relational in the sense of denoting binary relations. But while LeBdeSZ define the meaning of a noun like *sister* as the property (22), Bars gives it the bare meaning (23).

(22) $\lambda x \, \varepsilon d_i \uparrow \mathbf{sister\text{-}of}(\uparrow d_i)(x)$

(23) $\lambda x \; \mathbf{sister}(x)$

However, he supplements this meaning with a meaning postulate, (24).

(24) $\forall x \forall w \; R_w(\mathbf{sister}_k)(x) \rightarrow \exists y \, \exists s \; \mathbf{sib}_w(s) \wedge \mathbf{arg}_1(y)(s) \wedge \mathbf{arg}_2(x)(s)$

This says that any entity that realizes the **sister** kind necessarily stands in a sibling relation to someone.

Now the empty relation template $\mathcal{R}$ in (21) can be filled in various ways. One is to use a postulate like (24) associated with a noun in object position, setting the value to siblinghood. Then *I have a sister* gets the meaning (25).

(25) $\exists s \, \exists f \; \mathbf{sib}_w(s) \wedge \mathbf{arg}_1(\mathrm{I})(s) \wedge \mathbf{arg}_2(f(\mathbf{sister}))(s)$

Another way is for $\mathcal{R}$ to be contextually valued, as it is in this context:

(26) Our board of trustees is truly diverse. We even have a mother.

In that case, its value is not set to siblinghood or to motherhood but to the relation that two entities x and y stand in if x is on y's board of trustees.

Bars has the only theory (disregarding LeBdeSZ's analysis of 'heavy' *have*) where *have* has the same syntax and logical type as, by most signs, *lose* has. As such, it is well suited to describing *lose* in terms of *have*:[8] [9]

(27) $$[\![\text{lose}]\!] = \lambda x \lambda y \, \lambda e : \exists \, s' \; s' \asymp e \; \wedge \; \mathcal{R}(s') \wedge \mathbf{arg}_1(y)(s') \wedge \mathbf{arg}_2(x)(s) \, . \\ \exists \, s \; e \asymp s \wedge \; \sim(\mathcal{R}(s) \wedge \mathbf{arg}_1(y)(s) \wedge \mathbf{arg}_2(x)(s))$$

[8] Strictly, the logical type is a bit different: states s are different from events e – they are both eventualities though – and $\exists \neq \lambda$ – there could be λ in (21) as well, though.

[9] Strictly, the s in the presupposition should be related to the time of reference.

7 Lose in the light of Sæbø (2009)

By contrast, the theory of Sæbø (2009), taking *have* to take a set of states, something a SC will denote, would seem ill suited to reducing *lose* to *have*.

(28) $[\![\, have \,]\!] = \lambda\phi_{(vt)}\, \lambda x_e\, \phi$

The reason is that *lose* may have much in common with *have* semantically, but syntactically, it can only sporadically combine with a small clause.

In fact, in addition to the pattern noted in connection with (10),

(10) I'm going to lose my boyfriend as a neighbor.

some cases do occur with small clause predicates other than *as* phrases:

(29) While we are sorry to lose her on the Board, we are thrilled to . . .

(30) Although we are sad to lose her in the Department of Surgery, . . .

It seems to be essential that the DP in the locative PP refers to a group, to which the SC subject DP ceases to belong according to the *lose* sentence.

However, one may try to maximize the parallels between *have* à la Sæbø and *lose* in spite of the syntactic differences.

When *have* embeds a DP, or seems to do so, this DP is really an elliptic SC and must be supplemented by a silent predicate P to denote a set of states. One could now emulate this silent P in the semantics of transitive *lose*:[10]

(31) $[\![\, \text{lose} \,]\!] = \lambda x \lambda y \lambda e : \exists\, s\ s \asymp e \wedge P(x)(s)\,.\, \exists\, s'\ e \asymp s' \wedge \sim P(x)(s')$

P can be valued in various ways, much like the empty relation template $\mathcal{R}$ in the Bars theory. The three examples below suggest three ways:

(32) But old man sorrow. Mount'n' all the way with me.
Tell'n' me that I'm old now. Since I lose my man. (P = *alive*)

(33) If the offender is her husband or partner, she may fear losing him.
(P = *be her husband or partner*)

(34) . . . is definitely one of our best players and he is our captain.
Do I want to lose him? Of course not.
(P = *in our club, West Brom*)

[10] Strictly, the s in the presupposition should not be related to the e eventually to be existentially closed off but, to avoid a paradox under negation, to the time of reference. The evaluation index is omitted for simplicity.

The attentive reader will have noticed that λy abstracts vacuously in (31). As a matter of fact, this is as it should be: it reflects a parallel situation in the analysis of *have*, where the subject will be redundant unless it binds a variable in the small clause; this ensures that it does bind a variable there.

Here, the subject will be redundant unless $P(x)$ varies with y, instantiated by the subject, so that the abstraction over y is in effect not vacuous.

So how can $P(x)$ vary with y? One way is for x to depend on y, as in (32); another is for P to depend on y, as in (33), where $P =$ the husband of y, and (34), where $P =$ under contract with the club whose manager is y.

8 Conclusions

The

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