Lecture 3. (1) Genitives and \textit{Favorite}: Sort-shifting, Coercion, and Constrained Relation-variables. (2) Towards a unified analysis\footnote{Acknowledgements. This work was supported by the National Science Foundation under Grant No. BCS-9905748. We thank many colleagues for suggestions and discussion, especially Carl Vikner, Per Anker Jensen, Elena Puducheva, and Ekaterina Rakhilina. Parts of this material were presented by one or both authors in graduate courses in Leipzig, Potsdam, Kolding, Moscow, and Prague, at UMass Amherst, and in lectures in Berlin, Munich, Kleinwalsertal, Austria, ESCOL 1999, Tel Aviv, and Stanford. We are grateful to members of those audiences and seminars for useful suggestions.}

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1. Theories of \textit{favorite} and adjective types.

1.0. Summary notes about \textit{favorite}.

(Preview summary of Sections 1.1, 2.)

Old Partee analysis (1983): two types for \textit{favorite}; the result is always relational, but the “input” noun may be either relational or not. Basic type: TCN/CN; shifted type TCN/TCN.

The combinations \textit{favorite team}, \textit{favorite sister} always act like TCN’s. “x’s favorite team” is the team that x likes best out of all teams; “x’s favorite sister” is the sister of x’s that x likes best out of all sisters of x.

A natural alternative for Jensen and Vikner to take, suggested in Partee and Borschev (1998) and worked out in Vikner and Jensen (2002), is to say that \textit{favorite} is only of the endocentric type TCN/TCN, and if you combine it with a plain CN, that plain CN is coerced to become a TCN.

Objection to that approach raised by Partee and Borschev: shouldn’t coercion predict that we would get the same relational reading for a given CN when it is coerced to become a TCN, whether it is coerced by the genitive construction or by \textit{favorite}?

But the coerced relations are clearly sometimes \textit{not} the same:

(1) (a) Mary’s favorite poem (from Ekaterina Rakhilina, p.c.)

(2) (a) Mary’s favorite movie

(b) Mary’s movie.

Jensen and Vikner’s response, which we agree with: there is more to coercion than just shifting the \textit{types}. The semantics of the functor words that are doing the coercing can influence more than just the \textit{type} of the shift. For instance,

-- the genitive “likes” Agentive, Part-Whole, and Control relations;

-- \textit{favorite} “likes” Telic relations, likes to add an ‘experiencer’ or ‘beneficiary’.

Furthermore, \textit{sortal} properties of the head noun play a large role in constraining and influencing the possible shifts of a noun to relational readings. The role of the sort of the noun is explored in Borschev and Partee (1998, 1999, 2004) (see Lecture 2), following earlier related work by Borschev and Knorina.

So as we study coercion in the context of genitives, relational and non-relational nouns, and \textit{favorite}, we move from a largely “structural” study of type-shifting to a more fine-grained study of “sort-shifting” and the interaction of lexical and compositional semantics. Shifts in meanings of other adjectives can also be fruitfully reexamined in this light.

Trying to decide between the two theories of the genitive leads to interesting questions about the meaning and “valency” of the adjective \textit{favorite}, and about the interactions of compositional and lexical semantics.

1.1. Partee 1983: non-uniform \textit{favorite} with simple “likes best”

On the analysis of Partee (1983), \textit{favorite} can combine with either a TCN or a CN, always resulting in a TCN. The basic meaning appears to be the one that combines with a plain CN, the other is derivable by what is probably a general type-shift rule.

\begin{align}
(3) & \quad \text{[\textit{favorite}]:} & \text{TCN/TCN} & = & \text{8}\{\text{8}\{[\text{\textit{y}}] [\text{\textit{P}(\text{x})} \& \text{y} \text{ likes } x \text{ best out of } \text{P}]\}}
\end{align}

The effect of these two interpretations is that \textit{Mary’s favorite}, with CN movie, will pick out the movie that Mary likes best out of all movies, whereas \textit{Mary’s favorite teacher}, with TCN teacher, will pick out the teacher that Mary likes best out of all of Mary’s teachers.

1.2. “Possible Jensen and Vikner” analysis: uniform \textit{favorite} with coercion.

\textit{Favorite} may be the only adjective which obligatorily produces a TCN output. It was not clear which of its types on the Partee 1983 analysis should be considered basic. Probably its more marked type, TCN/CN, should be the basic lexical type for \textit{favorite}, a marked sort of adjective, with its more unmarked type TCN/TCN derived as a natural alternative. The Bittner and Hale constraint (no shifts into otherwise unattested category-type pairings) would in fact require this choice.

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For J&V it would be reasonable to exclude the type TCN/CN altogether, require all adjectives to be endocentric (i.e. of some type X/X), and let favorite trigger coercion of the CN that it applies to form a TCN. We will therefore assume that J&V would prefer to have just one meaning for favorite, of type TCN/TCN, just as they favor a uniform treatment of the genitive.

This was suggested in Partee and Borschev (1998); and carried out in Vikner and Jensen (2002).

1.3. Coercion analysis: effects on analysis of other adjectives and type-shifting.

The analysis of such inherently relational adjectives as favorite suggests taking a second look at traditionally CN/CN adjectives like new. We can distinguish four separate (but related) types for new.

(4)(a) [new1]e: "hasn't existed long" (a new movie)
(b) [new2]CN: "hasn't been a CN long" (a new movie star)
(c) [new3]TCN: "hasn't been TCN-of long" (my new friend)
(d) [new4]TCN: "hasn't been (free) R-of long" (John's new car is an old car.)

The TCN/CN version, new4, is definable from the TCN/TCN version and a free R:

(5) new4! = B[R[8]x(P(x) & new3(R)(y)(x))]

The coercion idea of Jensen and Vikner suggests the possibility of eliminating the TCN/TCN version of new altogether and accounting for it via coercion of the noun instead; this would be desirable insofar as CN/CN and TCN/TCN are both natural types (endocentric modifiers), and TCN/CN a marked type which should be used, if at all, only for lexically basic meanings like the meaning of favorite.

In the example of (4d), then, the genitive would force the whole CN new car to become TCN, and the adjective and noun would then most naturally be construed as TCN/TCN and TCN respectively.

We can then suggest some natural generalizations about adjective meanings and adjective meaning-shifts.

(6) (a) Basic types for adjectives: t/e (e 6 t) and CN/CN ((e 6 t) 6 (e 6 t)).
(b) Natural shifts:
   (i) from t/e: by conjunction only.
      t/e to CN/CN: B[R[8]x(P(x) & ADJ1(x))]
      t/e to TCN/TCN: B[R[8]x(P(x) & ADJ1(x))]
   (ii) from CN/CN
      to t/e: ADJ1(x) = ADJ1(x)
      to TCN/TCN: ADJ1(R)(y)(x) = ADJ1(R)(y)(x)

2. Exploring coercion principles: genitive vs. favorite. Different "preferred relations?"

Partee (1983/97) had two types for favorite and two types for John’s, depending on whether they were combining with a plain CN or a relational TCN. In favorite brother, favorite is the type that we are abbreviating (using categorial grammar terminology as a shorthand) as TCN/TCN. In favorite movie, favorite is of type TCN/CN.

As we noted above, a uniform genitive with coercion suggests that we also treat favorite uniformly. Instead of analyzing Mary’s favorite movie with a TCN/CN type of meaning for favorite, we could rule out the type TCN/CN as a possible adjective type altogether. We could then treat favorite uniformly as type TCN/TCN, letting it coerce a plain noun to a relational noun just as the genitive does.

2.1 Against coercion with favorite.

But on second look, it does not seem right after all to treat favorite uniformly as TCN/TCN with the same kind of coercion of a CN argument as occurs with the genitive. The reason for not wanting to coerce the CN to a TCN comes from examples like (2a) and (2b).

(2) (a) Mary’s favorite movie
    (b) Mary’s movie.

Example (2a) has a very clear meaning that hardly seems context-dependent at all. It would take a very strong context to get it to mean anything other than simply “the movie Mary likes best”, with its domain parameter understood simply as the set of all movies, or all movies in some contextually delimited set. No particular relation between Mary and movies is suggested or required; movie does not seem to be coerced to any TCN reading.

But Mary’s movie is quite a different matter. There is no most obvious lexical relation that would trigger lexical coercion, but the possibilities would include such things as “acted in”, “directed”, “rented from the video store”, “reviewed for the local paper”, etc.

The main difference between the two cases is that there need be no shift to any such relation in interpreting Mary’s favorite movie. It may happen, e.g. if we replace the “neutral” name Mary by the name of a known director, actor, movie critic, etc., (as in Fellini’s favorite movie), that contextual knowledge might indeed favor a shift from simply “likes best as a movie (to watch) out of the set of all movies” to “liked best (to direct?) out of the set of all of his (directed by him) movies”. But even in such a case the shift is not required; Fellini’s favorite movie can also simply mean the movie he liked best, which need not be one of “his” movies.

2.2. In favor of coercion with favorite, looking at more than just types.

But on third look, as Vikner and Jensen (2002) have noted, one can argue that shifting probably more than just types, and it is very likely that the coercions triggered by favorite and by the genitive construction, while identical at the level of types, show fine-grained semantic distinctions in the nature of the relation they “want” the noun to have.

Both genitives and favorite occur with many sorts of inherently relational nouns (“TCNs”), subject to the restriction that for favorite, the “possessor” term of the relation must be approximately animate. But when they “coerce” a plain CN to take on a relational interpretation, favorite “likes” “telically-oriented” relations, whereas genitive “prefers” “agentive” relations, “possession/control” relations, and “part/whole” relations.

This difference is particularly clear in Ekaterina Rakhilina’s (p.c.) pair, noted earlier:

(1) (a) Mary’s favorite poem
    (b) Mary’s poem
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Example (1b) is from Vikner & Jensen (2002); they note that the default interpretation is one in which Mary is the author (a case of “agent”) of the poem. Rakhilina observes that the clear meaning is in a sense more “external” and does not come from any qualia role in the meaning of the noun. The predicate “control” carries presuppositions that x and y are such that x (typically animate) is able to “control” (possibly but not necessarily own or possess) y (possibly but not necessarily an artifact.)

\[ Ctr(W) = \lambda y \left[ \lambda x \left[ W'(x) \& \text{control}'(x)(y) \right] \right] \]

The genitive may trigger any of coercions Co, Ag, Ctr. Favorite triggers coercion Te. In order to have a uniform treatment of the genitive while maintaining their distinction between “lexical” and “pragmatic” coercion, they introduce an additional meaning-shifting operator Prag.

\[ Prag(W) = \lambda y \left[ \lambda x \left[ W'(x) \& related-to'(y)(x) \right] \right] \]

(We prefer a free variable \( R \) where they have “related-to”, but we’re not discussing that here.)

The meaning of favorite: Vikner and Jensen (2002) propose that instead of the simple “likes best” of Partee and Borschev, the meaning of favorite involves the predicate “prefers”, a predicate that takes states of affairs rather than entities as arguments. Their suggestion for a uniformly relation-seeking meaning of favorite is:

\[
(7) \text{favorite}: \quad \lambda R[\lambda y] [\lambda x \left( R'(y)(x) \& \forall z \left( R'(y)(z) \& z \neq x \rightarrow \text{prefer}'(R(y)(x)) (R(y)(x))(y) \right) \right)]
\]

The fact that favorite prefers to coerce with the telic role-based shift is then plausibly derivable from the semantics of the relation prefer. J&V note that nouns denoting jobs, like teacher and waiter, have natural telic roles that surface in the meanings of Anne’s favorite waiter, etc. Some nouns like color have no lexical telic role, and for these, pragmatic shifts are required, still constrained by the need to make contextual sense of the “prefer” in the meaning of favorite.

One nice piece of evidence given by J&V for the claim that favorite is connected to the telic role of nouns it combines with is the fact that dialogues like the following are coherent and natural:

The “control” relation (which they prefer to the notion of “possession”) is specified differently; its meaning is in a sense more “external” and does not come from any qualia role in the meaning of the noun. The predicate “control” carries presuppositions that x and y are such that x (typically animate) is able to “control” (possibly but not necessarily own or possess) y (possibly but not necessarily an artifact.)

The idea that (1a) may be an instance of a telic relation, with Mary as something like a beneficiary or experiencer, is different from the view expressed in Partee and Borschev (1998) (see section 2.1 above). At that time, we did not see movie as “becoming relational” at all when it combines with favorite. There we just thought of favorite as adding a relation, as if favorite movie meant simply movie that __ likes best.

Does favorite really coerce a CN to a TCN meaning or not? Does the relation of a poem to its reader or hearer become part of a shifted TCN-type meaning of poem in (1a), or is that relation just something salient in the context but not literally part of the meaning? So far, we seem to lack clear ways to argue this issue one way or the other.

The contrast is not often as clear-cut as with (1a,b). But the existence of such contrasts dispels the otherwise reasonable supposition that type shifting is just a matter of “find the most salient possible relational reading of the given noun”.

2.3. Jensen and Vikner’s coercion principles for genitives and for ‘favorite’.

See the sample (partial) lexical entries given in J&V’s example (M) in the Appendix, with both relational and non-relational nouns and with illustrations of “telic” and “agentive” roles in the qualia structure; later examples also include part-whole words like note with a relevant “constitutive” role in its qualia structure.

Corresponding type-shifts induced by genitive.

Items with inherent relations don’t need to shift.

The Co shift, which endows a word with the relation that comes from its Constitutive role. (See J&V’s discussion about their disagreement with Pustejovsky about whether the Constitutive role should specify what parts an object has (Pustejovsky) or what kind of object it is or may be a part of (J&V).) In these shifting principles, W is a sortal noun and W’ is the one-place predicate which forms the core of its lexical meaning. Qc(W), Qa(W), Qt(W) stand for the relations specified in the constitutive qualia role, the agentive qualia role, and the telic qualia role for the given noun, respectively.

\[
\begin{align*}
\text{Co}(W) &= \lambda y \left[ \lambda x \left[ W'(x) \& Qc(W)(y)(x) \right] \right] \\
\text{Ag}(W) &= \lambda y \left[ \lambda x \left[ W'(x) \& Qa(W)(y)(x) \right] \right] \\
\text{Te}(W) &= \lambda y \left[ \lambda x \left[ W'(x) \& Qt(W)(y)(x) \right] \right]
\end{align*}
\]

Note: the order of arguments of Qc(W) is opposite to the order in the other cases; this may or may not be significant. We could make the order uniform by redefining the “Constitutive” qualia role as the converse of the one used by J&V. We have no empirical arguments concerning this point.

3. A possible “modifier-only” unified approach, and problems
3.1. Steps toward a uniform modifier analysis.

Suppose we would like team of Mary’s, teacher of Mary’s, brother of Mary’s, height of Mary’s, sky of Mary’s all to look like instances of intersective modification by an <e,t> predicate. Then we might represent them as in (1); but then more must be said about how the formulas in (1) are to be interpreted.

(1) a. \(\lambda x[\text{team}(x) \land \text{RGen}(\text{Mary})(x)]\)  
b. \(\lambda x[\text{teacher1}(x) \land \text{RGen}(\text{Mary})(x)]\)  
c. \(\lambda x[\text{brother1}(x) \land \text{RGen}(\text{Mary})(x)]\)  
d. \(\lambda x[\text{height1}(x) \land \text{RGen}(\text{Mary})(x)]\)  
e. \(\lambda x[\text{sky}(x) \land \text{RGen}(\text{Mary})(x)]\)

In this case, the basic intersective meaning of (of) Mary’s would be as in (2).

(2) \(\lambda x[\text{RGen}(\text{Mary})(x)]\)

And suppose we want axioms such to tell us what sorts of relations can be ‘genitive relations’. We sidestep this important issue here, and simply make the assumption that teacher2 can be an appropriate value for RGen. (3)

(3) teacher2 can be RGen

Then we have to answer several questions. One concerns the interpretation of the one-place predicates in the representations above; another is the nature of RGen and its place in the grammar. A third is the question of compositionality: how are such meanings derived from the meanings of the parts? Let us try to answer these questions in several steps.

Step 1: Let’s pay more attention to the sortal part of the meaning of a relational noun. We can exploit the fact that every noun has a basic sortal part in its meaning. We can define it, at least in default cases, as the projection onto the \(x_e\)-axis of the ‘whole’ meaning of the noun, where the \(x_e\)-argument is the “external” argument, the “referential” argument. Note that this can be done whether or not the noun can ever be used as a plain sortal noun (as teacher, nose, portrait easily can be, and brother, favorite movie, edge normally cannot be), since even those for which an internal argument is obligatory still have this sortal part of their meaning. For “plain” (sortal) nouns, the sortal part of the meaning is the whole meaning.

The one-place predicate teacher2, in its most basic use does not seem to be elliptical (as one-place friend, usually seems to be), and is not simply the first projection of the TCN teacher2, but rather the name of a profession, much like surgeon, actor.

Step 2: We need to think about how to compositionally derive the sortal part of the meaning of a phrasal NP (CNP). In simple cases it will just be the sortal part of the meaning of its head noun, but more work is needed to identify the principles which specify the effects of non-subsective adjectives and of adjectives like favorite. Modifiers may also further specify sortal information by way of their selectional restrictions and/or their content. As a first approximation, but not an adequate general account, it is probably reasonable to assume (7)

(7) \(\text{Sort}_{\text{CNP}} = \lambda x . \exists y (\text{CNP}'(y)(x)) = \text{first projection of CNP}^{7}\)

Step 3: In order to unify the combination of a genitive phrase with CN and TCN, we need to assume a natural kind of ‘polymorphism’, something we need for all sorts of noun-modifiers and verb-modifier. We want to be able to say that adnominal (of) Mary’s can take any kind of a CNP as argument, whether 1-place or 2-place or in principle n-place. The proposal just below does not generalize to 0-place without more work, i.e. does not immediately generalize to predicate

\[\text{Sort}_{\text{CNP}} = \lambda x . \exists y (\text{CNP}'(y)(x))\]

\[= \text{first projection of CNP}\]

We suggest that the one-place predicates in (5) are related to the basic noun meanings as follows:

b. Many mothers voted for John.  
c. Many parents voted for John.  
d. # Many brothers voted for John.  
e. # Many uncles voted for John.

We will refer to this definable kind of sortal meaning as the first projection of the relation denoted by the relational noun:

\[\text{Sort}^{\lambda x . \exists y (\text{brother2}(y)(x))}\]  

\[= \text{first projection of brother2}\]

Two important parameters of semantic differences among relational nouns are the following: (a) whether the noun has a “normal” independent use as a plain sortal noun1, (of course in strong enough context, any noun can have a one-place use), and (b) if so, whether the sortal (one-place) variant of the noun has a meaning which amounts to more than just the first projection of the relational meaning as (of) John’s (as teacher, lawyer does and brother does not).

Earlier examples suggested if the meaning of a relational noun’s one-place variant was “nothing more than” the first projection of its relational meaning, then that noun would not normally be usable as an independent one-place predicate. But further examples make it clear that even “mere” first projections can be used independently if that property has cultural importance. In our society, being a mother or a parent is important, being a brother or an uncle is not. It is not only for nouns like teacher that sentences like (5a) are good; (5b,c) are also fine, but (5d,e) are not.

1 We use subscripts 1 and 2 to represent the 1-place predicate and 2-place relation versions of nouns. Thus teacher1 is of type <e,t>, while teacher2 is of type <e,<e,t>>. We discuss the meanings of 1-place versions of normally 2-place nouns below.

7 Thanks to Ash Asudeh for examples with teacher which first brought a number of these issues to our attention.
genitives, but see below for a proposal for them. The essence of the analysis will then be as in
(8-9) (using N as a cover variable for any lexical or phrasal CN(P) or TCN(P)):

(8) The genitive modifier (of) Mary’s takes any N-type argument, keeps the sortal part of
the N meaning and adds a free RGEn for the relation.

(9) of Mary’s: \( \lambda N \cdot N \) is a noun-meaning \( \lambda x. [Sorts(x) \& RGEn(Mary)(x)] \)

To further generalize this polymorphic operator to the 0-place case, we can follow the strategy
of Montague (1970) and treat predicates as though they are modifiers of an empty noun entity.
Since entity denotes a predicate true of everything in the domain, the predicative meaning given
in (10) is reducible to that given in (11). This is one normal way for adjectives not originally of
interjective type to shift to interjective modifiers.

(10) \( \lambda x. RGEn(Mary)(x) \)

(11) \( \lambda x. RGEn(Mary)(x) \)

For a plain CN(P), the sortal part of the meaning is simply the meaning; for a TCN(P), it is the
sortal "part" of the meaning as discussed above.

Step 4: In the fourth step we are influenced by optimality theory and by the work of Dölling
(1992, 1997), Bierwisch (1989), and Hobbs et al (1993). What we need are principles that say
that if the noun already had a relational part of its meaning, then that should normally be used,
and the more 'obligatorily relational' the noun is, the more strongly that inherent relation
is preferred. There should be such a principle in some very general terms, something about "using
all the meaning" or at least using all the "relevant" parts of the meaning.

There are also principles like those proposed by Frosch (1999) about RGEn being salient,
being 'shared information', having suitable uniqueness properties. And there are principles
relating to the content of the Genitive relation, explored by Jensen and Vikner (1994, 1996),
Vikner and Jensen (2002), and Borschev and Partee (2001) – RGEn likes to be onerative, it likes
to be part-whole, it doesn’t like to be telic in the sense of Pustejovsky 1995.

3.2. Compositionality issues.

If we put together the meaning of brother of Mary’s on this view, what is going on? Perhaps we
are moving toward a view that blends unification with ordinary function-argument application.
If the meanings of brother of Mary’s are as in (12a,b), function-argument application would
give (12c), and (i) an axiom analogous to that in (3) would tell us that an available value for the
variable RGEn is brother2, and (ii) there should be a general principle to the effect that if the
sortal part of brother is not a salient property on its own, any value for RGEn other than brother2
will yield an anomalous (or at least very hard to interpret) reading.

(12) a. brother: \( \lambda y \lambda s \lambda s [brother2(y)(s)] \)

Note the contrast between the English of + NPACC construction (portrait of John), which is
strictly argumental, and the postnominal genitive (portrait of John’s), which allows any
relational reading except that expressed by portrait of John. This contrast shows that there are
evidently some “Blocking” principles: the reason that portrait of John’s can’t usually mean what
portrait of John must mean is presumably the very existence of portrait of John with its more
specific meaning. There is no inherent prohibition of such a meaning, or even a dispreference
for it, but it is blocked by the existence of the more specific alternative. One good argument for
this approach to such examples is that there is no such effect in pronominal position (John’s
portrait), where there is no alternative expression.

Such blocking principles need to be explored further as a potentially important part of
the explanation of the typological differences across languages in the range of relations ex-
pressed by the genitive and other constructions in connection with the existence of other
“competing” constructions in the same language. For example, English genitives are not used
for some of the relations expressed by genitives in Russian, apparently because of competition
from the Noun-Noun compound construction in English (see the glosses of the examples in (4)
on p.4.)

Another question: how to do Mary’s former mansion on this approach?

First observation: formerly affords the ‘asserted’ part of the meaning of its modifier and not the
presupposed parts, a distinction we have not been explicitly representing. A former bachelor is
normally interpreted as someone who is still adult, male, human but no longer unmarried.

Suppose also that only lexical nouns can shift from CN to TCN (a welcome assumption, but one
that was violated in the earlier account in section 2). Then relational mansion may be
represented as follows:

(13) \( \lambda y \lambda s [mansion1(y)(s)] \) where the most salient value of RGEn is “possess”

Applying former to mansion could then in principle target either part, depending on what was
presupposed and what was focussed in the given context. Structurally, formerly could always
apply just to the noun, ending up with either “formerly a mansion” or “formerly Mary’s”. But
we are in the early stages of work on this approach, and more work needs to be done.

3.3. Another argument in favor of ambiguity

We continue to wrestle with the issue of whether a unified analysis is really correct for
English genitives. After working that far on a Hellan-style unification, we have come up with
another possible argument in favor of keeping <e,t> possessives and argument-like possessives
distinct.

The strategy behind the search for new evidence: consider contexts that favor ellipsis-of-NP
analysis of bare genitives, and compare the behavior of bare genitives in such contexts with their
behavior in predicate position where we may or may not have ellipsis-of-NP. If the behavior is
systematically different, that could give possible evidence that not all predicate bare genitives in
English are elliptical NPs. The particular evidence we will present, if it holds up, in fact

\( \lambda y [Sort(s) \& RGEn(Mary)(s)] \)}
provides evidence that the genitive relation is located differently in the two cases: as part of the
meaning of possessive Mary’s in the case of an <e,t> possessive (this is the kind of “free R”
that we call \(R_{\text{free}}\), and as part of the noun (possibly after coercion) in the case of “argument”
possessives (this is our “\(R_{\text{GEN}}\)”, whether free (“pragmatic”, “contextual”) or inherent.)

Preliminary “control” case: When the NPs are themselves in argument positions (not predicate
position), then we know that a bare genitive is a remnant of NP-ellipsis.

(1) Sanderson’s portraits are mostly better than his wife’s.

Owner, artist, subject all possible, but must be same in each. That would follow if the
relation is packed into the noun meaning (in at least all cases except the <e,t> possessive\(^2\)) and
there’s a deleted identical noun (whether or not it’s a syntactic deletion; identity of semantic
content is required in any case.) That would NOT follow so clearly if the R was always part of the
meaning the possessive, although it doesn’t directly argue against that, because there could be
“parallel structure” effects.

Hypothesis: When a bare possessive occurs in predicate position, it may or may not be a
remnant of NP-ellipsis (in English). Trying to test:

(2) If Kandinsky’s portraits had all been Gabrielle Münter’s, then I suppose they would all be in
Munich now\(^4\).

[It is not easy to find plausible examples in which we can have potential ambiguity among
possession and some inherent-R reading while having one of the possessives in a predicate
position. We purposely put them in the antecedent of a counterfactural to try to help make
plausible a reading where we can imagine portraits having a different artist or a different subject
in addition to the possibility of different owner, which is the easiest to imagine being different.]

Are we right to think that the predicate possessive in (2) has exactly the following possible
readings?

(a) Independently of how we interpret Kandinsky’s portraits, Münter’s can express
possession (ownership).

(b) If Kandinsky’s is interpreted as one of the inherent relations (artist, subject), then
Münter’s can also express that same relation, but not a different inherent relation. I.e., if we
interpret Kandinsky’s portraits as portraits by Kandinsky, then Münter’s can be interpreted as
portraits by Münter but NOT as portraits of Münter. And conversely.

If that’s correct, it can be accounted for on the following assumptions:

(i) The predicative Gabrielle Münter’s can be either a simple <e,t> predicate or an elliptical NP.

(ii) A simple <e,t> predicate possessive expresses ‘possession’ (in some sense; here we simplify
in just considering choices among three interpretations for the possessive, owner, agent, and ‘the
one portrayed’, assuming that the first of those is a case of ‘possession’ and the other two are
not).

(iii) A prenominal possessive can express either possession or any inherent relation.

(iv) Inherent relations reside in the noun, either lexically or via coercion.

So the choice in (i) leads to two possibilities: possession, or ‘same as the relation expressed in
the antecedent possessive construction’.

Note: If it’s correct that (2) has that ambiguity, then that helps to show that just “parallel
structure” doesn’t force identity of interpretation of the genitive relation, which may give greater
significance to the non-ambiguity of (1).

The data above are new and remain to be verified with other native English speakers. We would
also welcome analogous data from other languages.

4. Speculative hypotheses and remaining puzzles

4.1. Two competing prototypes?

It has often been pointed out that an “Argument” genitive is most like a direct object, an
“internal argument”, most intrinsic to relational nouns. A “Possessor” genitive, on the other
hand, is most subject-like, agent-like, less like an internal argument, more independent; Perhaps
with more work it can be shown to follow that it is hence more easily a predicate. In cases where
we can distinguish all three possibilities of possessor, subject, and object (e.g. John’s portrait),
the possessor seems to be even more external than the subject, as evidenced by well-known
hierarchies of interpretive possibilities of e.g.Russian Mamin portret Ivana ‘Mama’s portrait of
Ivan(‘s)’, where Mama must be higher than Ivan in the hierarchy Possessor > Agent > Theme.

We started our own work from the idea that genitives with relational nouns are basic, and
have been trying to figure out what adjustments take place when a genitive is used with a plain
sortal noun.

Heine (1997) starts from the other end, so to speak, with have sentences as primary con-
cern and predicate genitives as secondary, and adnominal genitives as a tertiary interest.
Inherent relations have a subordinate place in the discussion; various notions of control and
‘possessive’ are at the forefront.

This makes us see genitives as Janus-faced. From our perspective, the deverbal nouns are
in a sense archetypal relational nouns, with genitives more clearly argument-like: John’s arrival,
the city’s destruction. From Heine’s perspective the use of a have-like construction or of a
genitive construction with deverbal nouns is more like the grammaticization of a metaphorical
extension of possession, and inalienables like Mary’s hand are closer to the core. For genitive
constructions which include the kind of possessive predicative readings discussed in Lecture 1,
we believe that they are not to be treated as uniformly argument-like.

We have tried in section 3 to propose a version of the proposal of Hellan (1980) which
preserves many of the properties of Jensen and Vikner’s uniform argument approach within a
uniform modifier approach. It may in the end be preferable for genitive constructions like that in
English to go back to an ambiguity approach, acknowledging that genitives may arise from
either of two different prototypes, though with a wide overlap in the result.
4.2. Puzzles.

The puzzle that emerges is that there seem to be argumental genitive constructions and modifier ‘possessive’ constructions that have a very great overlap in what they can express; if this is correct, it means that we cannot use ‘intuitions’ of argumenthood as a good guide to whether something is ‘really’ an argument at a given level of structure. And Dowty (1999, 2000) has argued that the distinction between modifiers and arguments need not be inherently sharp. Fleshing out more specific proposals about the relevant structures is necessarily a theory-dependent matter and we do not intend to undertake it without the collaboration of syntacticians. There are many different proposals in the literature for different argument and non-argument positions/sources for genitives and other ‘possessives’ in English, Russian, and other languages. The bottom line seems to be that type-shifting and lexical meaning shifts make many compositional routes available to very similar ‘net outcomes’. The line between arguments and modifiers is not intrinsically sharp in terms of ‘what is being expressed’, and can only be investigated in theory-dependent ways. It will be hard to find sharp differences between a theory in which the genitive construction contributes a “possessive” relation and a theory in which the genitive construction causes the head N or N-bar to shift to a relational interpretation possibly involving a “possessive” relation as one of its “preferred” relations. At this point we see more hope for a unified approach which takes all genitives as modifiers than for one which analyzes all genitives as arguments. Genitives are a domain of great semantic flexibility, where we have to find detailed language-particular evidence to try to sort out how lexical semantics, compositional semantics, and type-shifting possibilities are interacting in each particular construction.

References:
Knorina, L.V. (1985) Ob interpretacii genitivnyx konstrukcij. (“On the interpretation of genitive constructions”) Theses of the workshop “Semiotic foundations of intellectual activity”. Moscow, VINITI.
Knorina, L.V. (1989) Genitivnye srazvenija v poezii Pasternaka. (“Genitive similes in the poetry of Pasternak”). In Stilistika i poetica (Stylistics and Poetics), Moscow.
Appendix: from Vikner and Jensen (2002):

Carl Vikner and Per Anker Jensen:
A semantic analysis of the English genitive. Interaction of lexical and formal semantics

(L) Qualia roles
• CONSTITUTIVE: the relation between an object and its constituent parts or between an object and what that object is logically part of;
• FORMAL: that which distinguishes it within a larger domain;
• TELIC: its purpose and function;
• AGENTIVE: factors involved in its origin or “bringing it about”.
(Cf. Pustejovsky 1995: 76, 85-86, 98.)

(M)
girl
Argument structure: \( \lambda x [\text{girl}'(x)] \)
Qualia structure: ...

sister
Argument structure: \( \lambda y [\lambda x [\text{sister}'(y)(x)]] \)
Qualia structure: ...

teacher
Argument structure: \( \lambda y [\lambda x [\text{teacher}'(y)(x)]] \)
Qualia structure:
TELIC: \( \lambda y [\lambda x [\text{teach}'(y)(x)]] \)

poem
Argument structure: \( \lambda x [\text{poem}'(x)] \)
Qualia structure:
TELIC: \( \lambda x [\lambda y [\text{read}'(x)(y)]] \)
AGENTIVE: \( \lambda x [\lambda y [\text{write}'(x)(y)]] \)

car
Argument structure: \( \lambda x [\text{car}'(x)] \)
Qualia structure:
TELIC: \( \lambda x [\lambda y [\text{drive}'(x)(y)]] \)
AGENTIVE: \( \lambda x [\lambda y [\text{construct}'(x)(y)]] \)

Table 1: Different genitive interpretations

<table>
<thead>
<tr>
<th>Partee &amp; Borschev / Barker</th>
<th>Jensen &amp; Vikner</th>
</tr>
</thead>
<tbody>
<tr>
<td>inherent R / inherent relation</td>
<td>lexical interpretation</td>
</tr>
<tr>
<td>lexical possession</td>
<td>part-whole</td>
</tr>
</tbody>
</table>

free R / extrinsic possession
AGENTIVE
control
others
pragmatic interpretation

3.3 Summary

The predictions which our [J&V’s] analysis makes about the possible lexical interpretations of prenominal genitive constructions are summarized in table 2 below.

<table>
<thead>
<tr>
<th>N₂</th>
<th>N₁</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational</td>
<td>Meets selectional restrictions of N₂-relation</td>
<td>Inherent relation</td>
</tr>
<tr>
<td>Non-relational</td>
<td>Marked as possible part in Constitutive role of N₂</td>
<td>Meets restrictions on whole in Constitutive role of N₂</td>
</tr>
<tr>
<td>Artifact</td>
<td>Meets selectional restrictions on agent position in N₂’s agenitive role</td>
<td>Agentive relation</td>
</tr>
<tr>
<td>Physical object</td>
<td>Animate</td>
<td>Control relation</td>
</tr>
</tbody>
</table>

Table 2: Possible lexical interpretations of prenominal genitive constructions.