

Possessives, *favorite*, and Coercion

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1. Possessives: the challenge.

Possessive constructions like *John's teacher*, *John's team*, *John's cat*, *friend of John's* offer an interesting test-bed for the argument-modifier distinction in NPs, both in English and cross-linguistically. Many, perhaps all, possessives seem to have some properties of arguments and some of modifiers, but some seem more argument-like and some more modifier-like. Recent proposals by Jensen and Vikner (1994), Vikner and Jensen (1999), Partee and Borschev (1998), Borschev and Partee (1999a,b) analyze *all* possessives as argument-like, a conclusion we are no longer sure of for English (see Partee and Borschev, in press). But while we now doubt that such an analysis is correct for all kinds of possessives in all languages, we believe that it is correct for some kinds of possessives in some languages, and that it represents a promising approach to other constructions as well, including the behavior of the relational adjective *favorite*. In this paper we focus on this kind of uniform analysis, and on the coercion principles required to shift the argument structure of lexical items to meet the demands imposed by the construction. We first discuss our central question about possessives and then turn to more specific questions about the role of coercion in the possible uniform analysis of possessives and an analogous possible uniform analysis of *favorite*. One of our principal conclusions is that our earlier view of coercion with possessives as principally a triggering of type-shifting operations has to be refined, as speculated by Partee and Borschev (1998) and urged by Vikner and Jensen (1999), to accommodate finer-grained sort-shifting.

1.1. Possessives/genitives and related constructions.

The terminology surrounding “possessives” and “genitives” is confusing, since the correspondences among morphological forms, syntactic positions, grammatical relations, and semantic interpretations are complex and debated, and vary considerably across languages. For clarification, let us distinguish at least the following:¹

- a. Possessive pronouns: E. *my*, *his*; R. *moj* ‘my’, *ego* ‘his’; E. predicative forms *mine*, *his* and postnominal forms *of mine*, *of his*.
- b. English “Saxon genitives”: *John's*, and the postnominal Saxon genitive *of John's*.
- c. English PP with *of* + Acc.
- d. Russian postnominal genitive NP: *Mendeleeva* ‘of Mendeleev’, *tigra* ‘of a/the tiger’
- e. Russian prenominal possessive: *Mašin dom* ‘Masha's house’.

Some of the problems of the semantics of possessives affect all of these, while some of the problems require making distinctions. Very similar problems arise in corresponding constructions in many other languages, and related problems arise with the English verb *have* and its lexical and constructional counterparts in other languages (Bach 1967, Freeze 1992, Landman and Partee 1984, Szabolcsi 1994, Jensen and Vikner 1996, Partee 1999). The present work concerns principally the analysis of possessives as (type-lifted) arguments; we return in the later sections to the issue of the argument-modifier distinction.

One starting point is the following data from Partee (1983/97: 464):

- (1) a. John's team
b. A team of John's
c. That team is John's
- (2) a. John's brother
b. A brother of John's
c. (#) That brother is John's
- (3) a. John's favorite movie
b. A favorite movie of John's
c. (#) That favorite movie is John's

Informally, a unified interpretation of genitive phrase “John's” that applies to all of these cases is that the genitive phrase always expresses one argument of a relation, for which we will use the descriptive term “genitive relation”, following Jensen & Vikner (1994). But the relation can come from any of three sources: (i) the context, as in (1) (“plays for”, “owns”, “is a fan of”, etc.); this happens when the noun is a plain 1-place predicate; (ii) an inherently relational noun like “brother”; (iii) an inherently relational adjective like *favorite*. The puzzles include these: can (and should) examples (1a) and (2a) be given a uniform analysis, and if so, how? Or does the genitive construction combine differently with plain and relational nouns, and if so, are these differences predictable from some general principles? Should the first case be split into two distinct cases, one being a default preference of the “genitive” construction itself for a genitive relation in the family of “owns”, “possesses”, “controls”, possibly with a distinct syntactic source? The examples in (3) show that argument-like genitives cannot always simply be analyzed as complements of a lexical noun, since it is the whole N-bar *favorite movie* that provides the relation of which *John* is an argument.

The Russian “genitive modifier” (GM) construction exemplified in (4) and studied by Knorina (1985, 1988, 1990), Borschev and Knorina (1990), Babby (1997), and others, presents similar challenges, showing a similarly diverse range of “genitive relations”, with a similar range of relational and non-relational nouns, although there are interesting differences between English and Russian to account for as well.

- (4) a. *ljubitel' košek*
lover-NOM-SG cat-GEN-PL
'lover of cats, cat-lover'

- b. *noňka stola*
leg-NOM-SG table-GEN-SG
'leg of the table, table leg'
- c. *stakan moloka*
glass-NOM-SG milk-GEN-SG
'glass of milk'
- d. *portret Peti*
portrait-NOM-SG Petja-GEN
'picture of Petja'
- e. *sled tигра*
track-NOM-SG tiger-GEN-SG
'track of the/a tiger'
- f. *sobaka do...eri*
dog-NOM-SG daughter-GEN-SG
'the daughter's dog'
- g. *nebo Andreja Bolkonskogo*
sky-NOM-SG Andrej-GEN Bolkonsky-GEN
'Andrej Bolkonsky's sky'

In the case of Russian, the question of whether the examples in (4) are all instances of a single construction is even more difficult than in the case of English, since the uses of the Russian genitive NP cover uses analogous to both the English Saxon genitive in (1-3) and English PPs with *of* + Acc.

At a descriptive level, virtually all authors who have grappled with the semantics of genitive constructions are agreed that in some cases the genitive NP seems argument-like and in other cases it seems modifier-like. The "argument" nature of at least some genitives is clearest in the case of some deverbal nouns, those called "Complex Event Nominals" by Schoorlemmer (1995), "Derived Nominals" by Babby (1997), and "process nominals" by Rappaport (1998).

To be slightly more precise about our relatively neutral assumed syntax for the first of these constructions, and for the Russian postnominal genitive construction, we represent the syntactic structure as in (5) below, a linearized form of the schematic phrase structure tree of Borschev and Partee (1999b):

- (5) $[_N \ N \ NP_{GEN}]$, where N is a cover term for N^0 and non-maximal N-bar (Montague 1973's CN and CNP), and NP is a cover term for both N^{MAX} and DP.

The semantic question is: do the possessive constructions $[_N \ N \ NP_{GEN}]$ have a uniform compositional interpretation? There are in principle three possibilities. (i): Assimilate all cases to the "free R" reading. That option was proposed by Hellan (1980). Partee (1983/97) argued against it on the basis of the contrast among the (c) examples in (1-3). (ii) Posit two different possessive constructions, treating "inherent R" possessives as type-raised arguments and "free R" possessives as (intersective) modifiers (Partee 1983/97). (iii) Assimilate all cases to the "inherent R" reading. This option was introduced by Jensen and Vikner (1994), and further explored in Partee and Borschev (1998), Borschev and Partee (1999a,b), and Vikner and Jensen (1999).

1.2. Two theories of possessives.

Partee (1983/97) proposed two distinct genitive constructions with relational and non-relational nouns, the latter incorporating a “free relation variable R ” whose value must be supplied by context. On the other hand, (a modified version of) Jensen and Vikner (1994) offers a uniform interpretation of the genitive, with coerced type-shifting of the N-bar to a relational reading when necessary. The investigation of the differences between these two approaches, in part through an ongoing dialogue which Borschev and Partee have been carrying on with Jensen and Vikner over the past two years, has led us to an appreciation that the problem of the semantics of the genitive construction(s) is a much richer domain of inquiry than we had originally imagined, and to convergence on some issues and new questions on others.

A note about notation: In what follows we use CN for a (“plain”) N-bar of type $\langle e, t \rangle$ (one-place predicate, with only a “referential” 2-role (Williams 1981; the R role of Babby 1997), and TCN for a (“transitive” or “relational”) N-bar of type $\langle e, \langle e, t \rangle \rangle$ like *father*, *favorite movie*.

The analysis of Partee (1983/97) posits an ambiguity in the construction, with the N-bar supplying the relation if it is relational, and with the construction supplying a “free relation variable” if the N-bar is not relational. We illustrate the postnominal genitive, as in (1b), (2b), (3b), which Partee (1983/97) analyzed as a modifier, treating the prenominal genitive in (1a), (2a), (3a) as a composition of the postnominal genitive with an implicit definite determiner.

Postnominal genitive (of John’s): combines with CN or TCN to make a CN.

When genitive NP combines with a plain CN, type $\langle e, t \rangle$: the construction provides a “free R ”.

- (6) *of John’s*: $\mathbf{I} \mathbf{P} \mathbf{I} x [P(x) \ \& \ R_i(\mathbf{John})(x)]$
team of John’s: $\mathbf{I} x [\mathbf{team}(x) \ \& \ R_i(\mathbf{John})(x)]$

When genitive NP combines with a TCN, type $\langle e, \langle e, t \rangle \rangle$, the TCN provides its “inherent R ”.

- (7) *of John’s*: $\mathbf{I} \mathbf{R} [\mathbf{I} x [\mathbf{R}(\mathbf{John})(x)]]$ or equivalently, $\mathbf{I} \mathbf{R} [\mathbf{R}(\mathbf{John})]$
teacher of John’s: $\mathbf{I} x [\mathbf{teacher}(\mathbf{John})(x)]$

Jensen and Vikner (1994) propose that an analysis which incorporates coerced type-shifting in the sense of Partee (1987) should be able to do without two separate rules for the genitive. They present an alternative analysis, building on the framework of Pustejovsky (1993, 1995): the genitive must always combine with a relational common noun (phrase), coercing a one-place predicate noun to a two-place relational meaning (“team” to an appropriate sense of “team-of”). Their analysis corresponds to the “inherent R ” case of Partee (1983/97), and with a relational noun like *teacher* the two analyses agree. The difference arises with a plain one-place CN like *chair* or *team*, which on their analysis is coerced to a TCN interpretation. Jensen and Vikner follow Pustejovsky in appealing to the *qualia structure* of the lexical entry to guide the coercion, so that for instance the

telic role of *chair* (“chairs are to sit in”) licenses the shift of CN *chair* to TCN *chair* illustrated below.

- (8) **CN *chair*:** $\mathbf{1x[chair(x)]}$
TCN *chair*: $\mathbf{1y1x[chair(x) \ \& \ sits-in(x)(y)]}$

Initially we had some important differences with Jensen and Vikner concerning the degree to which lexical meaning drives coercion. In their current work and our most recent published work, we are agreed that on the most general version of their approach, the genitive construction should always demand a TCN to combine with, and if it finds instead a CN it will coerce it by whatever means are available and “natural”, sometimes lexical, sometimes pragmatic. (We make a less sharp distinction between lexically and contextually supplied shifted meanings than Jensen and Vikner do, because of the outlook on the integration of information from lexical and other sources described in Partee and Borschev 1998, Borschev and Partee 1998). A “pragmatic” coercion is seen as shifting the noun to a relational reading that incorporates the “free relation variable” of Partee (1983/97) into the shifted noun meaning.

- (9) **TCN *team*:** $\mathbf{1y1x[team(x) \ \& \ R_i(x)(y)]}$

As in Partee’s analysis, a felicitous use of an expression with a free variable requires that the context make a particular choice of value for the variable salient.

One main difference between the two approaches is then in *where* a “free relation variable” is added in a case where context is driving a pragmatically based coercion. Let’s suppose that *team of Mary’s* is such a case.

- (10) **Jensen and Vikner:**
of Mary’s: $\mathbf{1R[1x[R(Mary)(x)]]}$
 (shifted) *team:* $\mathbf{1y[1x[team(x) \ \& \ R_i(y)(x)]]}$
team of Mary’s: $\mathbf{1x[team(x) \ \& \ R_i(Mary)(x)]]}$

- (11) **Partee (1983):**
of Mary’s: $\mathbf{1P1x[P(x) \ \& \ R_i(Mary)(x)]}$
 (non-shifted) *team:* **team**
team of Mary’s: $\mathbf{1x[team(x) \ \& \ R_i(Mary)(x)]]}$

The final result is the same; but for Jensen and Vikner the free relation variable comes in as part of the meaning of the shifted noun, while for Partee (1983/97) it comes in as part of the meaning of the genitive construction itself. Does this difference in “where” the free relation variable is situated ever make a detectable difference? Yes.

Partee and Borschev (1998) discuss the problem of choosing between these empirically almost equivalent approaches. There we propose extensions to Jensen and Vikner’s coercion approach to cover also the “contextual” cases. There also we point to a need for more fine-grained coercion principles to cover phenomena involving the relational adjective *favorite* and the difference in “most

likely relation” in the interpretation of examples like *John’s movie* and *John’s favorite movie*, an issue we return to in section 2 below.

That paper concludes in favor of the extended version of Jensen and Vikner’s approach, the most critical argument coming from examples like *Mary’s former mansion* (an example suggested to us by Norvin Richards). A compositional semantics should be able to account for two possible interpretations, one on which some “former mansion” is “Mary’s”, and another on which the referent was formerly “Mary’s mansion”. Partee’s analysis generates only the former reading, while Jensen and Vikner’s approach can in principle account for both.

More recently we have returned to the problem of the predicate possessives in (1c), (2c), (3c), and have argued in Partee and Borschev (in press) that in English there are instances of predicate possessives which are true predicates, and not arguments of a ‘missing’ head noun. In that paper we suggest that the uniform Jensen and Vikner approach may be correct for Russian genitives, which do not occur as predicates, while the English possessive construction may indeed be ambiguous between an ‘argumental’ construction and a modifier construction. Trying to settle the matter for all kinds of possessives in all languages is evidently too simplistic. In section 2 of this paper we consider further ramifications of a coercion approach, in particular the differences between possessives and the adjective *favorite* which a coercion analysis would need to capture to treat each of them uniformly. In section 3 we briefly discuss the problems for a unified approach to English possessives raised in Partee and Borschev (in press), and in section 4 we conclude with some speculative hypotheses.

2. Exploring coercion principles: possessives vs. *favorite*.

Trying to decide between the two theories of the genitive leads to interesting questions about the meaning and “valency” of the adjective *favorite*, and about the interaction of compositional and lexical semantics.

2.1. *Two theories of favorite*.

On the analysis of Partee (1983/1997), *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.

- (12) a. $[[\textit{favorite}_1]_{\text{TCN/CN}}] = \mathbf{1P}[\mathbf{1y}[\mathbf{1x}[\mathbf{P}(x) \ \& \ y \ \textit{likes} \ x \ \textit{best} \ \textit{out} \ \textit{of} \ P]]]]$
 b. $[[\textit{favorite}_2]_{\text{TCN/TCN}}] = \mathbf{1R}[\mathbf{1y}[\mathbf{1x}[\mathbf{R}(y)(x) \ \& \ \textit{favorite}_1'(\mathbf{R}(y))(x)]]]]$

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

Favorite may be the only adjective which obligatorily produces a TCN output. It was initially not clear which of its types on the Partee 1983 analysis should be considered basic. But it would seem natural to suppose that its more marked type, TCN/CN, should be the basic lexical type for *favorite*, a marked sort of adjective, with its more unmarked type TCN/TCN derived as a natural alternative. And if we accept the “Type-Range Preserving” constraint proposed for type-shifting rules by Bittner and Hale (1995), the type TCN/CN would not in fact be possible as the output of a type-shifting rule unless there were elements whose basic meaning were of that type. If there are any such, *favorite* is a top candidate to be one of them.

For Jensen and Vikner it would be reasonable to exclude the type TCN/CN altogether, and make *favorite* uniformly of type TCN/TCN. For then it would be possible to impose the very plausible requirement that all adjectives be endocentric (i.e. of some type X/X). On such an analysis, *favorite*, like the genitive construction, would trigger coercion of any CN that it applies to shift to become a TCN. We therefore suggested in Partee and Borschev (1998) that Jensen and Vikner should prefer to have just one meaning for *favorite*, of type TCN/TCN, just as they favor a uniform treatment of the genitive. This suggestion was adopted and worked out in Vikner and Jensen (1999).

2.2. Against coercion with *favorite*.

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* was of type TCN/CN.

As noted above, a uniform genitive with coercion suggests that we also treat *favorite* uniformly as type TCN/TCN, letting it coerce a plain noun to a relational noun just as the genitive does.

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 (13a) and (13b).

- (13) a. *Mary's favorite movie*
b. *Mary's movie.*

Example (13a) 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*²), 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.

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

Partee and Borschev (1998) suggested that Jensen and Vikner’s analysis might be defended from the problem apparently posed by the difference in behavior between genitives and *favorite* if it could be argued that coerced shifting involves more than just **types**. Vikner and Jensen (1999) have followed up on that suggestion and have argued that the coercions triggered by *favorite* and by the genitive construction, while identical at the level of types, do indeed 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. These restrictions are not absolute, and contextual salience plays a role; a very strong context can probably impose *any* relation in either construction. The differences in ‘preference’ are visible primarily when there are several different choices of relations roughly equally salient in a relatively neutral context.

This difference is particularly clear in the following pair, noted by Ekaterina Rakhilina (p.c.):

- (14) a. Mary’s poem
- b. Mary’s favorite poem

Example (14a) is from Vikner and Jensen (1999); 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 default for (14b) is one in which Mary is a reader (or hearer) of the poem; this can be taken as an instance of the “telic” relation, since “poems are to read”. (Cf. the similar telic preference in *Mary enjoyed the poem*, a kind of case discussed by Pustejovsky 1995, and by Copestake and Briscoe 1995.)

The idea that (14b) 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). 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 (14b), 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 (14a,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”.

2.4. *Fine-grained coercion differences between possessives and favorite.*

Vikner and Jensen (1999) use differences like those cited in the previous section to further support the proposal that the qualia structure of Pustejovsky (1993, 1995) plays a systematic role in coerced type-shifts. They extend and modify their earlier analysis of genitives to argue that when the genitive construction coerces a non-relational noun to shift to a relational reading, then in the absence of overriding contextual influences, certain sorts of lexical shifts are preferred. Which of these lexical shifts will be preferred in a given case depends in part on the salient qualia structure of the head noun and the satisfaction of associated selectional restrictions by the NP in the genitive. The predictions of their analysis for possible lexical (non-“pragmatic”) interpretations of the prenominal genitive construction are given in Table 1 below (Vikner and Jensen’s Table 2).

N₂		N₁	Interpretation
Relational		Meets selectional restrictions of N ₂ -relation	Inherent relation
Non-relational	Marked as possible part in Constitutive role of N ₂	Meets restrictions on whole in Constitutive role of N ₂	Part-whole relation
	Artifact	Meets selectional restrictions on agent position in N ₂ 's agentive relation	Agentive relation
	Physical object	Animate	Control relation

Table 1: Possible lexical interpretations of prenominal genitive constructions on the analysis of Vikner and Jensen (1999).

Vikner and Jensen (1999) thus posit three preferred relations for genitive-coerced shifts. One is the part-whole relation, related to the “Constitutive” role in the qualia structure of the head noun. Jensen and Vikner part company with Pustejovsky in locating the information that a nose is a part of a person in the lexical entry for *nose* rather than in the lexical entry for *person*. Otherwise it would not be the head noun whose sortal information is central in choosing the relation it should incorporate when it shifts.

The second preferred relation is the agentive relation, often the creator or producer of an artifact.

The third is the one they call the “Control” relation; this is close to what many refer to as the “Possession” relation, a term Jensen and Vikner prefer to avoid.³ It is interesting to note that the “Control” relation is specified differently from the other two; 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.) This is the case which probably deserves the most scrutiny in the issue of whether the genitive should be treated as uniformly coercing the noun to a relational reading; if there is a separate “predicate genitive” (see Partee and Borschev (in press)), which is not linked to any argument structure in the head noun, this is it.

In contrast to these three favored lexical shifts with the genitive, Vikner and Jensen argue that *favorite* triggers coercion favoring what Pustejovsky calls the “telic” role of a noun: this is a role found in the lexical entry of most artifact

nouns, some human ‘role’ nouns, and probably some other nouns, specifying the “function” of the noun, what it is typically intended to be used for.

Vikner and Jensen (1999) 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:

$$(15) \textit{ favorite}' : \lambda R[\lambda y[\lambda x[R(y)(x) \ \& \ \forall z[(R(y)(z) \ \& \ z \neq x) \rightarrow \textit{prefer}'(R(y)(z)) (R(y)(x)) (y)]]]]]$$

The fact that *favorite* prefers to coerce with the *telic* role-based shift is then plausibly derivable from the semantics of the relation *prefer*. Jensen and Vikner 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 Jensen and Vikner 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:

(16) What’s your favorite cigarette? – I don’t smoke.

Two of the interesting challenges raised and addressed by Jensen and Vikner in connection with their discovery of these fine-grained differences in the coercion-preferences of genitives and *favorite* are these. (1) How do we specify that *favorite* “has access to” the telic-role-based shifting operator, but the genitive does not, and similarly for the other differences between them? (2) Sometimes the genitive or *favorite* is in construction with a whole common noun phrase, not just a lexical common noun; how can the shifting operators “see” the relations embedded in the qualia structure of the lexical noun and yet operate on the whole composed common noun phrase? Section 5 of their paper offers some first steps at answers to these very interesting questions, discussion of which would take us beyond the scope of this work.

3. Remaining problems for a unified approach to possessives.

The “one genitive” approach has considerable theoretical appeal, and it seems better able to solve the problem of *Mary’s former mansion* than the approach of Partee (1983/1997). And the problems raised by the different behavior of coercion by genitives and coercion by *favorite* appear to have appealing solutions that will, when we understand them more fully, advance our understanding of the role of lexical information in fine-grained sort-shifting under the coercing influence of different operators. Nevertheless, in spite of our conviction that coercion is a robust phenomenon, we are still not convinced that a uniform analysis is correct

for English genitives. Interestingly, the arguments against a uniform analysis for English genitives do not apply to Russian genitives; Russian seems to show a clearer split between a genitive construction which is uniformly argumental and a prenominal possessive which is more modifier-like. We discuss these differences between English and Russian in Partee and Borschev (in press), concentrating on arguments from predicate possessives sketched very briefly in Section 3.1. below. Another reason for doubting that English genitives uniformly occur in construction with argument-taking nouns comes from early stages of language acquisition, as noted in Section 3.2.

3.1. *Predicate possessives.*

In spite of the theoretical appeal of the “one genitive” approach and its ability to solve the problem of *Mary’s former mansion*, we are still not convinced that it is correct. One of our main worries concerns the predicate genitives. In addition to the “free R” readings we have talked about, they seem to have a favored or default reading that is something like “possession” in some broad sense – this is presumably why the terms “possessives” and “possessive pronouns” are commonly used for forms like *John’s, my, mine*. This is related to Vikner and Jensen’s discussion of *control*, and the fact that of their shifting rules, the “control”-based shift is the only one (other than the “pragmatic” shift) that brings in an “external” relation rather than “finding” a relation in the qualia structure of the head noun.

Partee and Borschev (in press) point out that Jensen and Vikner’s approach requires that the apparent predicate possessives in (1c), (2c), and (3c) of Section 1 would have to be remnants of elliptical full NPs. That might not be impossible to maintain for English, but we give arguments from German, Russian, and Polish to show that in those languages, one can sometimes find a clear distinction between predicate possessive pronouns that are elliptical NPs and ones that are not. We put those facts together with some suggestive data from English to argue that English predicate possessives are also not always elliptical full NPs, but may sometimes be simple predicates. And if they can be simple <e,t>-type predicates, then we believe they can also occur inside NPs as modifiers, just as almost all simple <e,t>-type adjectives can also occur as predicate modifiers.

3.2. *Acquisition.*

A second and related worry concerns acquisition. Children seem to acquire some kinds of possessives before they show clear mastery of relational nouns.⁴ If that is so, the uniform-genitive approach would have to posit later reanalysis, while a two-kinds-of-genitives approach would say that that earlier form persists and the relation-seeking genitive is added later. We assume that accretion is easier than reanalysis, so that would be an argument for two kinds of genitives.

In principle, there should also be possible arguments related to processing. Coercion should require a certain “cost”⁵, and if we understood more about it, we might be able to build arguments based on what readings of what sentences are

“easy” or “hard” to “get”. But at this stage we can’t do more than speculate and to ask for help from psycholinguists.

3.3. *What is the semantics of predicative possessives?*

The clearest examples of predicative possessives seem to have meanings that relate to the notional concept of ‘possession’, not to the “free **R**” readings posited as predicative in the early work of Partee. This suggests that we should work with a different basic split:

- (i) predicative readings that have a (possibly extended) meaning of “possession”, a relational notion that comes from the possessive form rather than from a noun;
- (ii) ‘argument’ readings that involve either an inherently relational noun or a plain noun coerced to a relational reading.

This is thus not a return to the early Partee 1983/97 analysis for English, but an analysis that agrees with Jensen and Vikner’s analysis and Partee and Borschev’s extensions of it except for the recognition of a separate predicative “possessive” reading.

4. **Speculative hypotheses, tentative conclusions and remaining puzzles.**

4.1. *Argument genitives*

Argument genitives may be seen semantically as basically type *e* NPs (DPs) which “want to be arguments”. Depending on one’s theory, the genitive phrase may either itself be type-lifted as in Partee (1983/1997) and Jensen and Vikner (1994) so that it in turn takes a relational TCN as its argument; or one could say simply that it stays at type *e* but can only be properly licensed if there is a TCN that can take it as an argument.

How can an argument genitive get such a wide range of possible readings, including “possessive” (as seen in the range of readings of the Russian genitive, for instance)? The answer suggested by the work of Jensen and Vikner and of Borschev and Partee is that it is by the flexibility of possible ‘coerced’ readings of the head noun.

But this in turn raises the following puzzle: Why is it that nouns so easily extend their (‘weak’) argument structure and verbs much less easily? Perhaps it is because in some sense *all* arguments to nouns are somewhat modifier-like, serving to add restrictive modification in the form of some relational property?

4.2. Modifier possessives

Modifier possessives may be seen as basically predicates of type $\langle e,t \rangle$, which may, like adjectives, also occur in attributive position. Whether their most basic interpretation should be seen as involving a “free R” or a broad notion that can be labelled “possession” (or “control”) requires further study. Cross-linguistic work (e.g. Heine 1997) indicates that different languages are not all alike as to what kinds of relations can “count” as “possessive”. But the possibility that very “argument-seeming” relations could be reanalyzed as predicative ones (as well as vice versa) is already attested in for instance the wide variation in the structure and use of the analogs of English “by-phrases”, which may be subject-like or agent-like and may be licensed and interpreted in rather indirect ways in a number of languages and constructions. Further study of ‘adjectival arguments’ as in *American invasion* is also clearly relevant to this issue.

4.3. Closing remarks

In Partee and Borschev (in press), we offered the following tentative conclusions, some with arguments and some more speculative.

1. The English *of* + NP_{ACC} construction (*portrait of John*) is strictly argumental.
2. The English Saxon genitive (*John's*) can be used as a predicate, type $\langle e,t \rangle$.
3. The English *of* + NP's construction (*portrait of John's*) is either uniformly non-argumental or ambiguously argumental/non-argumental (not sure yet). But in particular, it is not always argumental.
4. The English prenominal NP's neutralizes the distinction between postnominal *of* + NP_{ACC} and *of* + NP's. So it can be either argumental or non-argumental. [It's conceivable that ‘structurally’ it is never argumental, but we have not tried to argue that.]
5. The Russian genitive (*Maši*), always postnominal, is always an argument. It can never be used as a predicate. (But it can be used with ‘plain nouns’ to express all kinds of relations including possession, as predicted by Jensen and Vikner's coercion analysis.)
6. The Russian prenominal possessive (*Mašin, -a*) can be used as a predicate, has certain limitations on its use as an argument, and is either sometimes or never structurally an argument, although it can certainly fill argument-like roles.

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 (1997, 1999) 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 possessive construction contributes a “possessive” relation and a theory in which the possessive 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. Possessives/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.

Endnotes

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¹ We use English and Russian for illustrative purposes, abbreviated below as E and R.

² Robin Cooper suggested this example and was the first to suggest that examples of this sort raise problems for our claims.

³ We agree with the motivation for invoking a relation like “Control” in the case of the verb *have*, discussed by Jensen and Vikner (1996). But we believe that there is a difference between the typically stage-level relation found with *have* (Schafer 1995) and the typically individual-level relation found with genitives; a clear contrast is noticeable when both co-occur as in (i).

(i) Sandy has Tony’s car.

We would thus prefer to use a term like “possession” for the third type of coerced interpretation of possessives, in spite of its vagueness, and reserve the term “Control” for the similar but not identical preferred relation with *have*.

⁴ We are not completely sure of the facts here, and rely in part on anecdotal evidence. We are thinking of the frequency of ‘possession arguments’ among very small children (*That’s mine! No, it’s mine!*), as well as classic examples of two-word utterances like *Mommy sock*. Further investigation is needed to confirm or disconfirm our impression that such utterances, with ‘possession’ relations or contextually driven ‘pragmatic’ relations, precede the mastery of genuinely relational nouns in their relational senses, like *Johnny’s sister*. (Note that apparently early-appearing relational nouns like *Daddy* are usually first used as proper names, later perhaps as sortal common nouns, often with ‘erroneously’ inferred meanings like ‘man with a beard’, and only later as genuinely relational nouns.)

⁵ Thanks to Bill Philip for suggesting that an argument of this kind might be constructed against the uniform analysis.

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