Puzzles of Predicate Possessives[1]

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1. Background: Possessives and the argument-modifier distinction in NPs.

The argument-modifier distinction is less clear in NPs than in VPs; nouns do not typically take arguments. Clearest cases of arguments in NPs: some nominalizations (Grimshaw 1990). Non-deverbal relational nouns: *sister, mayor, enemy, picture, edge, height*: in some sense these seem to take arguments. C.L.Baker (1978) proposed a test using English *one* anaphora: *one* substitutes for N-bar, which obligatorily includes all of a noun's arguments. By that test, (0a) *to Oslo* is a modifier, while *of Boston* in (0b) is an argument. But neither this nor any other known test has seemed conclusive, and the question of whether and in what sense "true nouns" take arguments remains controversial.

(0) a. The train to Oslo takes longer than the one to Stockholm.
    b. *The mayor of Boston has more power than the one of Baltimore.

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, possessors 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 (2002) and Partee and Borschev (1998) analyze *all* possessors as argument-like. Partee and Borschev (2001) argue that the uniform analysis may be correct for ("normal") Russian genitives, but incorrect for English.

The main issue to be addressed is the question of whether all, some, or no possessives are best treated as arguments of nouns, and if so which ones? and how can we tell? The question will be examined from several perspectives, including cross-linguistic perspectives, but will not be settled.

1.1. Possessives/genitives and related constructions.

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.

In the possessive construction *John's team*, we call *John* the possessor, *John's* a possessive, and *team* the possessum.

Interpretation of possessives:

(1) Mary's newspaper: the newspaper that Mary is reading/ that Mary reads regularly/ that Mary writes for/ that Mary owns / that Mary is defending in a trial / that Mary is sitting on / …

(2) Could it ever mean "the newspaper that Mary does not own"? Some argue "no", some say "yes, if the context is unusually rich",

(3) "Mary's son": seems much less ambiguous, effectively unambiguous. Why the difference?

(4) *son* is an **inherently relational noun. x is son of y.**

(5) (a) "Plain nouns": *car, team, newspaper, sky, cat, school*
     (b) "Relational nouns": *mother, son, teacher, owner, lover, edge, end, diameter, top*
     (c)   "Intermediate or disputable or shiftable cases" – many – *nose, team?, essay*

Some basic data
(6) (a) John's team
     (b) A team of John's
     (c) That team is John's.

(7) (a) John's brother
     (b) A brother of John's
     (c) #That brother is John's

(8) (a) John's favorite movie
     (b) A favorite movie of John's
     (c) #That favorite movie is John's

Informal unified interpretation of the Saxon genitive *John's*: the possessor always expresses one argument of a relation, and the Saxon genitive as a whole forms a restrictive modifier of the head noun. But it seems that the relation can come from any of three sources:
     (i) the context, as in (6) ("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*, as in (7).

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(iii) an inherently relational adjective like *favorite*, as in (8).

Call case (i) the "free R" ("free relation") reading, cases (ii) and (iii) "inherent R" readings. Then the semantic question is: do the possessive constructions [N(P) + *of John's*] and [*John's* + N(P)] have a uniform compositional interpretation?
    In our earlier work we considered that there were in principle three possibilities.

- (i): Assimilate all cases to the "free R" reading, an option proposed by Hellan (1980). Partee (1983/97) argued against it on the basis of the contrast among the (c) examples in (6-8).
- (ii) Posit two different possessive constructions, treating "inherent R" possessors as type-raised arguments and "free R" possessors as (intersective) modifiers (Partee (1983/97).
- (iii) Assimilate all cases to "inherent R" reading. This option was introduced by Jensen and Vikner (1994), further explored in Partee and Borschev (1998), Vikner and Jensen (2002), Jensen and Vikner (2004).
- Challenge the presuppositions on which the preceding alternatives are based. We'll do that too as we progress, ending up with a different basic split in semantic types of possessives, one modificational type with notional 'possession' as its core meaning, and a quasi-argumental type that includes both "inherent R" and some "free R" cases.

Another important distinction: "kind" modification vs. the normal "referent-specifying" possessives (Munn 1995, Strauss 2004; similarly Kolliakou 1999 for French). Munn argued that in addition to idiomatic compounds like *men's room, girls' school*, there are productive syntactic possessive constructions at the common noun level, so that *men's shoes*, for instance, is ambiguous.

(9) (a) This men's shoe was on the wrong shelf. (Kind-modifying only)
    (b) Two men's shoes were on the floor. (Ambiguous: two shoes, or shoes of two men)
    (c) One man's shoes were on the floor. (Must be shoes of one man)

Further evidence that these are distinct constructions: Russian uses genitive for the "referent-specifying" reading, but not for the "kind-modifying" reading: there one uses a denominal adjective instead.

(10)(a) *Tufli*   *mužčin*   *byli*   *na polu.*
       Shoes-NOM.PL men-GEN.PL were-PL   on floor
       There were men's shoes on the floor *or* Men's shoes were on the floor.

       <u>Unambiguous</u>: the shoes must belong to some men

   (b) *Mužskie*   *tufli*   *byli*   *na polu.*
       Men-ADJ-NOM.PL   Shoes-NOM.PL were-PL   on floor
       Mens' shoes were on the floor.

       <u>Unambiguous</u>: A kind of shoe, shoes 'for' men.

We will not discuss the kind-modifying construction further here; we also omit discussion of *sortal specifications* in the lexical semantics of nouns and their role in the interpretation of possessives and making sense of the fuzzy boundary between relational and non-relational nouns (Borschev and Partee 1999a,b, 2001, 2004). We concentrate here on the issue of the argument/modifier distinction within the referent-specifying ('normal') type. Within the "argumental" type, we have also worked on

1.2. Related issues in Russian.

Russian has at least two different constructions that overlap with the English constructions illustrated above. (i) A head noun may be followed by a genitive NP (or DP), as in (11) below; as the glosses illustrate, these may correspond either to the English construction 'N of NP's' or to 'N of NP'. (ii) There is a prenominal construction with quasi-adjectival morphology, of limited productivity, studied by Koptjevskaja-Tamm and Šmelev (1994) and by Babyonyshev (1997), illustrated in (12) below; they convincingly show that the semantics of these constructions is like that of an English prenominal genitive, not like that of an adjective: (12a) means 'the [specific] neighbor's story about her problems', while (12b) means something like 'a story about one's problems, typical of neighbors'. Both languages also have possessive pronouns, which we are not separately addressing, although they deserve separate attention (partly because in Russian possessive pronouns can occur predicatively and genitive NPs cannot; also see Paducheva 1984).

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

　　　　　(b)　*nožka*　　　*stola*
　　　　　　　leg-NOM.SG　table-GEN.SG
　　　　　　　'leg of the table, table leg'

　　　　　(c)　*portret*　　　*Peti*
　　　　　　　portrait-NOM.SG　Petja-GEN
　　　　　　　'picture of Petja'

　　　　　(d)　*sled*　　　　*tigra*
　　　　　　　track-NOM.SG　tiger-GEN.SG
　　　　　　　'track of the/a tiger'

　　　　　(e)　*sobaka*　　　*dočeri*
　　　　　　　dog-NOM.SG　daughter-GEN.SG
　　　　　　　'the daughter's dog'

　　　　　(f)　*nebo*　　　*Andreja*　　*Bolkonskogo*
　　　　　　　sky-NOM.SG　Andrej-GEN Bolkonsky-GEN
　　　　　　　'Andrej Bolkonsky's sky'

(12)　　　(a)　*sosedkin$_i$*　　　　　*rasskaz*　*o*　　*svoix$_i$*　*problemax*
　　　　　　　neighbor(f)-poss-m.sg　story　　　about self$_{POSS}$　problems
　　　　　　　'[my] neighbor's story about her problems'

　　　　　(b)　?*sosedskij$_i$*　　*rasskaz*　*o*　　*svoix$_{*i}$*　*problemax*
　　　　　　　neighbor$_{ADJ}$-m.sg　story　　about　self$_{POSS}$　problems
　　　　　　　'a story about one's problems, typical of neighbors'

In the case of Russian, the question of whether the examples in (11) 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 (6-8) and English PPs with *of* + Acc. We return to the contrast between the constructions in (11) and (12) in Section 3.1.1.

- **Basic syntactic structure.** We will neither presuppose nor discuss details of syntactic analysis, although the syntactic questions are also very interesting. But it will be useful to

have a very rough syntactic skeleton to pin our semantics onto in the following discussion, so we introduce a minimum of syntax here.
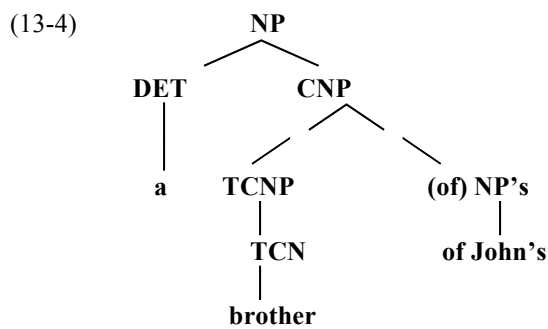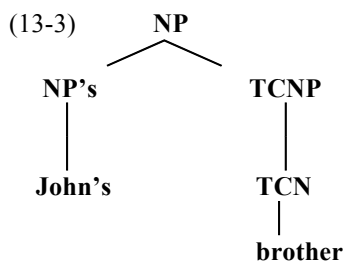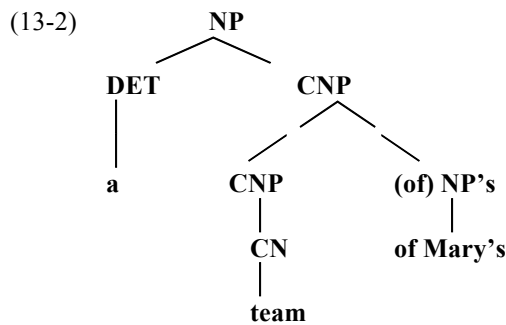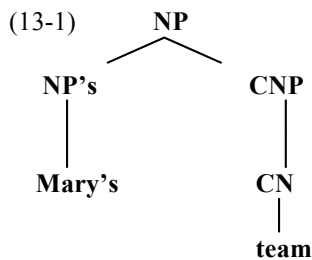
<u>Syntactic categories in the trees below:</u>
  N(P):   Noun (phrase). (Called D(P) (Determiner (phrase)) in much syntactic literature)
  CN(P): Common noun (phrase). Often called N(P): noun (phrase).
  TCN(P): "Transitive" common noun (phrase).
  NP's: Our neutral label for the category of "Possessive phrase".

(13-1)
```
           NP
         /    \
     NP's      CNP
      |          |
    Mary's      CN
                 |
                team
```

(13-2)
```
              NP
           /     \
        DET       CNP
         |       /    \
         a     CNP    (of) NP's
                |         |
               CN      of Mary's
                |
               team
```

(13-3)
```
          NP
        /    \
    NP's      TCNP
     |          |
   John's      TCN
                |
              brother
```

(13-4)
```
             NP
          /     \
       DET       CNP
        |       /    \
        a     TCNP   (of) NP's
               |         |
              TCN     of John's
               |
             brother
```

- **Informal description of some facts about these constructions.**

(14) The relation between preposed *Mary's* and postposed *of Mary's*: Implicit *the.*

(15) When the noun is relational (TCN), the genitive relation is normally the relation determined by the noun (*brother*, etc., the "inherent R" case). When the noun is not relational (CN), the genitive relation is normally "free" (the "free R" case).

(16)   Predicate genitives ("is John's"): free R only (with caveats, to be discussed).

(17) Strong context can override inherent R: *Rodin's lovers, John's parents,* 'alienable' *nose.*

    The two Russian constructions overlap with the English constructions illustrated above. When we consider semantically related constructions in the two languages, we are led to also consider denominal adjectives (*the American invasion*, *tigrinye sledi* 'tiger(s') tracks'), English noun-noun compounds, and possibly more. The fact that there is not a one-one correspondence between the Russian constructions and the English ones makes it clear that the semantics of possessives/genitives is not simply universal; the existence of language-particular restrictions together with the great versatility and range of possible meanings of the genitive construction(s) pose a considerable challenge.

2. Two theories of possessives.

2.1. Partee 1983/1997: Non-uniform possessive, type multiplicity.

The analysis of Partee (1983/1997) posits an ambiguity in the construction, with the head noun (TCN) supplying the relation if it is relational, and with the construction supplying a "free relation variable" if the noun is not relational (CN).

We illustrate the postnominal possessive, as in *team of John's,* which we analyze as a modifier; the prenominal possessive in *John's team* incorporates a definite determiner meaning.

Postnominal possessive (*of John's*): combines with CN or TCN to make a CN.
(i) possessive combining with a plain CN: the construction provides a "free R".
> *team of John's:* $\frown x[team(x) \ \& \ R(John)(x)]$ (*team* that bears free relation R to John)

(ii) possessive combining with a TCN: the TCN provides its "inherent R".
> *teacher of John's:* $\frown x[teacher(John)(x)]$ (individual that is *teacher-of* John)

2.2. Jensen and Vikner (1994): Uniform possessive, type coercion of CN to TCN.

Jensen and Vikner (1994) present an alternative proposal: the possessive must always combine with a relational common noun (phrase). If a possessive occurs with a plain noun, the plain noun *shifts* its meaning to become relational. The possessive construction *coerces* the shift.
Their analysis corresponds to the "inherent R" case of Partee (1983/1997).

(20) *teacher of John's:* $\frown x[teacher(John)(x)]$

Coercion: a plain CN like *chair* or *team* is coerced to a TCN interpretation. Jensen and Vikner follow Pustejovsky (1993) in appealing to the *qualia structure* of the lexical entry (details omitted here) to guide the coercion as in the shifted readings for *chair, leg, poem* below; Partee and Borschev (1998) have suggested extensions of their work to allow for the context to play a role in the general case, as in the "free R" shift for *team* below for Jensen and Vikner's "pragmatic" reading.

CN *chair*:	$\lambda x[chair(x)]$	
TCN *chair*:	$\lambda y \lambda x[chair(x) \ \& \ sits\text{-}in(x)(y)]$	[shift based on 'telic role' of *chair*]
TCN *leg*:	$\lambda y \lambda x[leg(x) \ \& \ part\text{-}of(y)(x)]$	[shift based on 'constitutive role' of *leg*]
TCN *poem*:	$\lambda y \lambda x[poem(x) \ \& \ created(x)(y)]$	[shift based on 'agentive role' of *poem*]
TCN *team*:	$\lambda y \lambda x[team(x) \ \& \ R(x)(y)]$	["pragmatically based" shift – "free R"]

2.3. What's the difference? What evidence could decide?

The main difference between the two approaches is 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.

(21)

```
                              NP
                           /      \
                      DET          CNP
                       |          /     \
                       a    →   CN       (of) NP's  < Partee:  free relation HERE
J&V: Shift CN to TCN HERE       |           |
                              team       of Mary's
```

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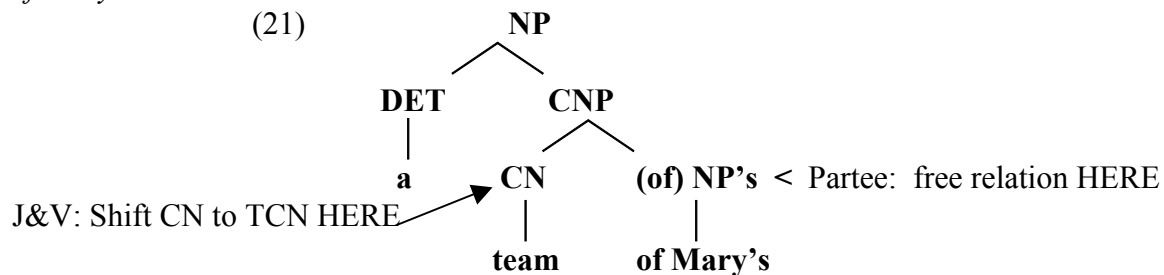
Jensen and Vikner:

of Mary's:	$\lambda R[\lambda x[R(\text{Mary})(x)]]$
(shifted) *team:*	$\lambda y[\lambda x[\text{team}(x)\ \&\ R_i(y)(x)]]$
team of Mary's:	$\lambda x[\text{team}(x)\ \&\ R_i(\text{Mary})(x)]]$

Partee(1983):

of Mary's:	$\lambda P\lambda x[P(x)\ \&\ R_i(\text{Mary})(x)]$
(non-shifted) *team:*	**team**
team of Mary's:	$\lambda x[\text{team}(x)\ \&\ R_i(\text{Mary})(x)]]$

The final result is the same; but for J&V 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 possessive construction. Can this difference ever lead to different results? Yes: see Section 2.4.

2.4. In favor of (modified) Jensen and Vikner approach: Mary's former mansion.

Assumptions:
i)   *mansion* is lexically a 1-place noun.
ii) *former* is an endocentric modifier, lexically a CN/CN, shiftable to a TCN/TCN.
     a) *former* as CN/CN: *former monastery, former dancer.*
     b) *former* as TCN/TCN: *former owner, former friend.*
iii) The "free relation" variable in this case has as one of its most salient values something like "owns" or "lives in".
iv) *Mary's former mansion* has two readings:
     (A) a former mansion (perhaps now just a ruin) that is (now) Mary's. I.e., now Mary's, formerly a mansion.
     (B) what was formerly Mary's mansion; it may still be a mansion, but it's no longer Mary's.

Argument:
On the old Partee account, there is no motivation for type-shifting to occur, and the "free R" "owns" will be introduced with the possessive *Mary's,* after *former* has combined with *mansion*.

Then the free relation ("owns") in the interpretation of the possessive *Mary's* will never be under the scope of *former*. As a result, Partee (1983/97) can derive reading **(A)**, but not reading **(B)**. See tree (22)

Compositional structure of *Mary's former mansion* on the account of Partee (1983/97):

(22)

free R introduced here
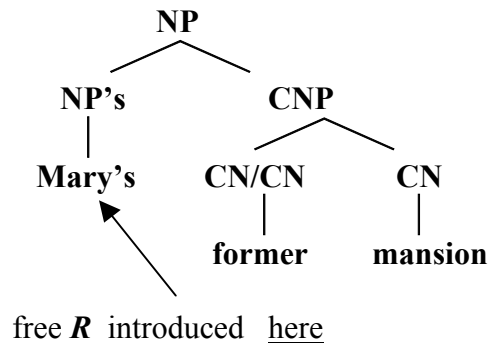
But Jensen and Vikner's account, with coercion of CN to TCN, *does* provide derivations for both readings, and is therefore better.

Jensen and Vikner's account.

For Jensen and Vikner, *Mary's* coerces *former mansion* to a relational TCN. Given our assumptions, there are two ways that *former mansion* could shift to a TCN.

1) Initially leave *mansion* as a CN, treat *former* as CN/CN, combine them to form a CN, as on Partee account; then shift that CN to a TCN, bringing in the free variable at that stage to get the shifted meaning of *former mansion* shown below:

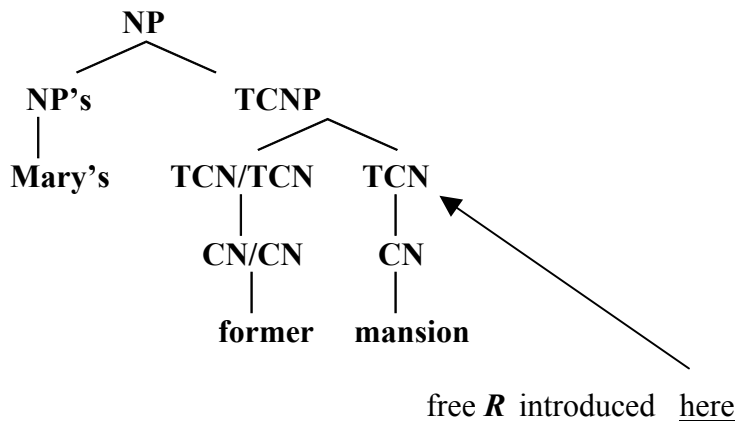$$\lambda y[\lambda x[\textbf{former(mansion)}(x) \ \& \ R(y)(x)]] \ [R: \text{"is owned by"}]$$

This corresponds to reading **(A)** above, with the free **R** introduced at the point where the CNP shifts to become a TCNP.

2) Shift *mansion* to a TCN, and *former* to a TCN/TCN, combine them to form a TCN:

$$\lambda y[\lambda x[\textbf{former(mansion-of)}(x)(y)]] \text{ , where \textbf{mansion-of} is an abbreviation for}$$
$$\lambda y[\lambda x[\textbf{mansion}(x) \ \& \ R(y)(x)]]$$

This corresponds to reading **(B)** above.

(23)

free **R** introduced <u>here</u>

3. Different kinds of genitives/possessives: why Jensen and Vikner may be right for Russian genitives but not for all English genitives.

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 for English; 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.

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.

3.1. Predicate possessives: a problem for the "one genitive" approach?

One of our main worries about the "one genitive" approach concerns predicate possessives. Predicate possessives seem to favor "free R" interpretations; and they are not in an argument position unless one posits an empty head noun accompanying all predicate possessives. Both of these factors support the treatment of predicate possessives in Partee (1983/97) as type <e,t>, "free R" only.

In Partee and Borschev (2001, 2003), we present evidence about predicate possessives in English, Dutch, Russian, German, and Polish. The evidence supports the idea of two semantically different kinds of possessives, with some forms, like English *John's*, used for both.

One kind are argument possessives, which fit the Jensen and Vikner analysis; these occur in construction with a relationally interpreted noun (or with an adjective like *favorite*). If they occur alone in the predicate, they are interpreted as elliptical NPs with a relational noun implicitly understood. The Russian genitive appears to be of this type, and we consider the Jensen and Vikner analysis correct for the Russian genitive construction.

The other kind are predicative possessives, of type <e,t>, interpreted as in the corresponding analysis of Partee (1983/97), but with the "free R" preferentially interpreted as some kind of "possession" or "control": so we will stop referring to the "free R" and refer instead to R_{Poss}. This kind of possessive occurs inside an NP, it is a modifier rather than an argument.

Below we present our evidence, and conclude that the "one genitive" approach cannot be uniformly correct. But we will be left with a puzzle concerning the large proportion of cases which could seemingly be analyzed either way: are they all "ambiguous"?

3.1.1. Russian prenominal possessives vs. genitives.

In Russian, possessive pronouns and the normally prenominal quasi-adjectival possessive forms can occur in predicate position but genitive NPs cannot [caveats]. This suggests that Russian *genitive* NPs may always be argument-like, and that the Jensen & Vikner uniform analysis with coercion of CNs to TCNs (extended to Russian in Borschev and Partee 1999a,b) is correct for the Russian *genitive* construction. It also suggests that the Russian *prenominal* possessive forms, and possessive pronouns (see 3.1.3), are at least sometimes modifier-like.

3.1.2. German possessive pronouns.

Tony Kroch (p.c.) suggested that we look for languages that would given evidence from agreement behavior as to whether predicate possessives are more like simple (adjectival) predicates or more like full NPs. Sten Vikner (p.c) observed that German is a language that gives some evidence: Predicate adjectives in German do *not* agree with subjects, but predicate possessives *do*, suggesting that predicate possessives are indeed more like elliptical NPs than like simple <e,t> predicates[2].

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[2] Further evidence that these predicate possessives are elliptical NPs was provided by Sigrid Beck and Irene Heim (p.c.): the possessive pronoun in (27) can be followed by adjectives (i.e. there can be ellipsis of just the head noun), while the adjective in (26) and the adjective-like possessive pronoun in (28b) cannot be.

> (i)   Diese   Bücher   sind meine   alten.
>   These-n.pl. book-n.pl are   my-n.pl. old-n.pl.
>   'These books are my old ones.'
> (ii)   * Diese   Bücher   sind teuer   neu(en).
>   These-n.pl. book-n.pl. are expensive new
>   'These books are expensive new ones.'

(26) *Diese   Bücher   sind alt/ *alte.*
These-N.PL books- N.PL are old/ *old- PL
(27) *Diese   Bücher sind meine/ *?mein*
These-N.PL books   are   mine- PL/ *mine

But it was further observed by Hans Kamp (p.c.) and others that actually, the non-agreeing form can sometimes be used. It is used only in "standard", not colloquial German, and has an "archaic" flavor. Most interestingly, there are semantic differences between the agreeing and the non-agreeing predicate possessive.

(28) (a) *Diese   Bücher   sind meine*: can be any relation.
These- N.PL books- N.PL are   mine- PL
      (b) *Diese   Bücher   sind mein*: (archaic) "Possession" only.
These- N.PL books- N.PL are   mine (no agreement)

Further examples are given in (29) and (30). A newly naturalized citizen might say (29a), but (29b) suggests a conqueror is speaking. Any relation is possible in (30a), with the most likely possibility being the parent-child, but (30b) suggests a custody fight, i.e. a dispute about who is to be in 'possession' of the children.

(29) (a) *Das   Land   ist (jetzt) meins.*
The-N.SG land-N.SG is (now) mine-N.SG
      (b) *Das   Land   ist jetzt   mein.*
The-N.SG land- N.SG is now   mine
(30) (a) *Die Kinder   sind meine.*
The children are   mine-PL
      (b) *Die Kinder sind mein.*
The children are mine.

In all of (28b), (29b), (30b), the non-agreeing (adjective-like) form is limited in its interpretation to "possession". In other words, the form in which the possessive pronoun appears to be a simple predicate of type <e,t> is interpreted in terms of a "possession" relation rather than like an argument of any governing noun.

In contrast, the forms which appear to be elliptical NPs have a range of interpretations including possession but also including relations typical of 'argument' genitives, where the relevant relation is determined principally by the noun to which the genitive supplies an argument. Typical choices for the 'genitive relation' for the 'argument' genitive interpretations in (28a), (29a), (30a) might be authorship, citizenship, and the parent-child relation, respectively.

Of course "possession" itself can have metaphorical extensions, so the "possession" cases do not always have to be about ownership in a literal sense. But if these distinctions are correct, this is important evidence for the idea of two distinct genitives[3].

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[3] We thank M. den Dikken for pointing out that Dutch is a language which clearly distinguishes elliptical from non-elliptical predicate possessives. In Dutch, when the subject is unambiguously relational, the d-word *die*, signalling the presence of nominal structure, is obligatory in a predicate possessive, as shown in (i).
(i)   *Die docent is *(die) van Jan.*
That teacher is *(that) of   Jan
'That teacher is Jan's.' (i.e., unambiguously 'That teacher is Jan's teacher.')
By contrast, in (ii) both options are possible.
(ii)   *Die   auto is (die) van Jan.*
That car   is (that) of Jan
'That car is Jan's.' (i.e., may be either 'That car is Jan's car' or simply 'That car is Jan's'.)

3.1.3. Polish possessive pronouns.

In Polish NP - be - NP requires Instrumental on the predicate NP, NP - be - Adj requires Nominative on the Adjective.

The relevant Polish data are as follows[4].

(31) (a) *Ten   kraj   był   kiedys' moim.*
       That-M.NOM.SG country-M.NOM.SG was-M.SG   once   my-M.INSTR.SG
       'That country was once mine' ['possession' or citizenship]

     (b) *Ten   kraj   był   kiedys' moim   krajem.*
       That-M.NOM.SG country-M.NOM.SG was-M.SG once   my-M.INSTR.SG   country-M.INSTR.SG
       'That country was once mine' ['possession' or citizenship; citizenship preferred.]

(32) (a) *Ten   kraj   był   kiedys'   mo'j.*
       That-M.NOM.SG country-M.NOM.SG was-M.SG   once   my-M.NOM.SG
       'That country was once mine' ['possession' only]

     (b) **Ten   kraj   był   kiedys' mo'j   kraj.*
       That-M.NOM.SG   country-M.NOM.SG was-M.SG once   my-M.NOM.SG   country- M.NOM.SG
       'That country was once my country' [ungrammatical]

The Polish data confirm the hypothesis that when a predicate possessive pronoun allows an "argumental" reading, it is the remnant of an elliptical NP, and when it doesn't, it isn't. The "possession" reading, which seems to be emerging as the clearest case of a non-argumental, or modifier, reading, can show up either in a remnant of an NP or as a bare $\langle e,t \rangle$ predicate. This reinforces the idea that a possessive inside an NP can be either an argument or a modifier. But a possessive which is an $\langle e,t \rangle$ predicate in a predicational construction cannot be an argument, presumably because it is not in construction with a head of which it could be the argument.

3.1.4. A note about English.

The nature of predicate possessives is less clear in English than in some other languages. It is difficult to be sure whether an apparent predicate possessive like *John's* in (6c) above is a simple one-place predicate with an R_{POSS} or "possession" reading, or is an 'argument genitive' occurring as part of an elliptical NP, i.e. with *John's* implicitly in construction with another occurrence of *team*. But given the data from Russian, German, Polish, and Dutch, it seems reasonable to conclude that English has both possibilities. Further evidence to the same conclusion will be given in Section 4 below. A new piece of evidence for the possibility of simple predicative possessives inside English NPs comes from some recent observations of Kate Kearns (p.c.) concerning examples like the (33) as they occur in expressions like those in (34):

(33)   a.   what of Mary's
       b.   everything/nothing/something of Mary's
(34)   a.   What of Mary's is left to pack?
       b.   I have everything/nothing/something of Mary's in this suitcase.

Typical relational nouns that combine with animate possessors are kinship terms like *mother, brother* and nouns like *friend, enemy, roommate, neighbor.* These can never show up in answers

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to questions about *what of Mary's* nor are they quantified over by expressions like *nothing of Mary's*. Perhaps that's only because of animacy; but if one tries to replace the given expressions by *who of Mary's, everyone of Mary's, no one of Mary's, someone of Mary's*, those all just sound ill-formed, and even if you can process them, it sounds like you're talking about slaves or servants or employees, people owned or 'controlled' by Mary, and *not* about relatives, friends, enemies, neighbors or any of the common relational-noun relations.

3.2. Conclusions about predicate possessives.

So we are now inclined to believe that some predicate possessives really are plain <e,t> predicates, and that those have just a possession/control reading, which we take to be the semantics of the <e,t> possessive, as shown in (33) below. And other predicate possessives may be elliptical NPs, and their interpretation may have the full range of possibilities that would be displayed by a full NP with a prenominal genitive occurring in such a position.

(33) $[John's]_{PRED}$: $\lambda x[R_{POSS}(\textbf{John})(x)]$ **type**: <e,t>

In the next section, we describe a newer argument supporting this ambiguity claim (P&B 2003).

4.   Another argument in favor of ambiguity

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 vs. in predicate position where we may or may not have ellipsis-of-NP. If the behavior is systematically different, that could give evidence that not all predicate bare genitives in English are elliptical NPs. The examples we present here provide 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 our R_{Poss}), and as part of the noun (possibly after coercion) in the case of "argument" possessives, 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.

(34)   Sanderson's portraits are mostly better than his wife's.

Owner, artist, subject all possible, but must be same in each. That follows if the relation is packed into the noun meaning (in at least all cases except the <e,t> possessive[5]) 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 if the R was always part of the meaning the possessive. (It doesn't conclusively argue against that, because there could be "parallel structure" effects. But the ambiguity of (35) belows argues against "parallel structure" effects.)

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[5] We assume that an <e,t> possessive can act as an ordinary intersective modifier in an NP; in that case the N may stay one-place and not shift to a 'transitive' reading. So if *Sanderson's* is an <e,t> possessive, deletion of an identical one-place noun *portraits* will mean that *his wife's* can also only be an <e,t> possessive. And in all the other cases, the meaning of some particular relation will be packed into the noun *portraits*.

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

Test:

(35)   If Kandinsky's portraits had all been Gabrielle Münter's, then I suppose they would all be in Munich now[6].

An informal survey supports our intuition that that the predicate possessive in (35) 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.

That can be accounted for on the following assumptions:
- The predicative *Gabrielle Münter's* can be either a simple <e,t> predicate or an elliptical NP.
- 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.).
- A prenominal possessive can express either possession or any inherent relation.
- Inherent relations reside in the noun, either lexically or via coercion.

So for *Munter's* there are two possibilities: possession, or 'same as the relation in the antecedent'. This strongly supports the ambiguity hypothesis.

Note: The ambiguity of (35) also shows that "parallel structure" doesn't force identity of interpretation of the genitive relation, which gives greater force to the non-ambiguity of (34).

5.   Two competing prototypes; remaining puzzles

Now we see genitives as Janus-faced. From one perspective, the deverbal nouns are in a sense archetypal relational nouns, with genitives most clearly argument-like: *John's arrival, the city's destruction.* From another 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. Genitives with "possession" readings are least argument-like.

We explored in Partee and Borschev (2002) a version of the uniform modifier approach of Hellan (1980) which preserves many of the properties of Jensen and Vikner's uniform argument approach. But we have now gone back to an ambiguity approach (considerably modified in the

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[6] Kandinsky and Münter were both artists, both did some portraits of each other and occurred in portraits by other people as well, and he left a lot of paintings with her when he left Munich, and she eventually gave those paintings to the city of Munich. So we hope that all sorts of counterfactuals involving who painted what and of whom, and who was in possession of whose paintings, might all be pragmatically reasonable. (Some of the paintings were sufficiently abstract that one could also imagine there being uncertainty as to who was the one portrayed, if anyone. We don't think there's actually any confusion about that, but it's not unimaginable.)

light of the insights of Jensen and Vikner), acknowledging that genitives may arise from either of two different prototypes, though with a wide overlap in the result.

The puzzle is the very great overlap in what the two kinds of genitives can express. And if we are correct, it also 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.

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 (see, for instance, Dowty 1993, 1997, 2003; Grimshaw 1990; Kolliakou 1999). 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.

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