External Possession and Possessor Raising

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Abstract. External possession is a phenomenon where a nominal is syntactically encoded as a verbal dependent but semantically understood as the possessor of one of its co-arguments. While the general pattern is crosslinguistically very common, there is much variation in its precise syntax and semantics. In this chapter I review the classic analyses of external possession as possessor raising and possessor binding. The evidence behind these analyses indicates that raising and binding are indeed each appropriate for certain subtypes of external possession, as is an analysis in terms of movement to thematic positions. I propose a novel typology which groups these analyses under the first of two major types of external possession. This first type presents significant parallels to the domain of raising and control, subsuming possessor raising, possessor binding, possessor control and perhaps also a variant of ECM. Examples of this major type are found in Nez Perce, German, Brazilian Portuguese, and English. A second major type of external possession involves subjects only and brings information structural effects. Examples are found in Malagasy, Chickasaw, Tz'utujil, and Japanese.

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1 Introduction

External possession is a phenomenon where a nominal is syntactically encoded as a verbal dependent but semantically understood as the possessor of one of its co-arguments. The phenomenon is very common cross-linguistically. Examples from French and Japanese are given in (1).

(1)   a. Je lui   ai pris la main.
            I 3SG.DAT have taken the hand
            I took his hand.

        b. Mary-ga   kami-ga naga-i.
            Mary-NOM hair-NOM long-be
            Mary's hair is long. (Ura 1996, 100)

The nominals interpreted as possessors in these examples bear markings typical of verbal dependents – the dative case in (1a) and the nominative case in (1b). It is instructive to compare these sentences with their counterparts in (2), where the possessor nominals are encoded syntactically as dependents of the possessum nouns. In introducing the term "external possession" for cases like (1), Vergnaud and Zubizarreta (1992) introduce the term "internal possession" for cases like (2).

(2)   a. J'ai   pris sa main.
            I-have taken his hand
            I took his hand.

        b. Mary-no   kami-ga naga-i.
            Mary-GEN hair-NOM long-be
            Mary's hair is long. (Ura 1996, 100)

What we see in comparing these groups of examples is that syntactic and semantic argument relations are distributed in different ways. To be understood as a possessor, the referent of a nominal must be related semantically to the referent of another nominal; the possessor nominal is therefore treated as a semantic dependent of the possessum. In (2), the possessor is also a syntactic dependent

of the possessum, and so the syntax and semantics of the possession relation align. The external possession cases in (1) are interesting because syntactic and semantic dependency relations mismatch. On semantic grounds, the possessor behaves as an argument of the possessum noun; on syntactic grounds, it behaves as an argument of the verb.

This mismatch between syntactic and semantic argumenthood brought external possession to the attention of generative linguists starting in the late 1960s, and it has generated considerable interest ever since. Theoretical discussions begin by asking: what is the syntactic structure of clauses with external possession? How does this relate to the structure of clauses with internal possession? There are two kinds of factors that deepen the puzzle and complicate the response. First, some of the most important analytical choices turn on arguments which are not narrowly syntactic, but at the syntax-semantics interface. This makes it crucial to appreciate the semantic profile of external possession along with its syntax. Second, neither the syntax nor the semantics of external possession is entirely constant crosslinguistically. The analysis of external possession is thus very much an exercise in comparative grammar, and accordingly, an opportunity to discover the parameters which define and rein in linguistic variation.

This chapter first surveys some of the history of generative studies in external possession. At the core of this history is the notion of *possessor raising* – an idea originally developed in transformational grammar in the 1960s and continually refined in various frameworks through to the present day. Like many of the central analyses of the generative program, the possessor raising analysis began to be widely applied to a large range of unrelated languages in the late 1970s and the 1980s, and this broadening of the empirical base brought into view linguistic variation that had not been properly recognized before. Comparative and typological questions came to the forefront of investigation.

In the last three sections of this chapter I advance a particular view of how these questions might be answered. External possession constructions are divided into two types. Type A is analyzed with tools familiar from the syntax of infinitivals: control and raising. Type B calls for a blend of the ingredients to A- and Ā-dependencies.

2 The classic analysis: possessor raising and its heirs

The earliest generative studies of external possession center on two main ideas:

 i. External possession is derived from internal possession via a syntactic rule.

 ii. Therefore, external possession and internal possession are semantically equivalent.

In the simplest case, exactly one type of rule of the relevant sort would be made available by Universal Grammar. Starting in the 1970s, attempts to explicitly characterize such a rule were made across a series of generative frameworks. I will refer collectively to these approaches as 'the classic analysis'.

2.1 Possessor Raising and Ascension

The first steps were taken by linguists working in the framework of transformational grammar (Fillmore 1968, §5; Langacker 1968; Keenan 1972; Kuno 1973, p 71). In one of the more explicit proposals, Keenan (1972) proposed a transformational analysis of the relationship between Malagasy sentences like (3) and (4).

(3) Nantsoin -dRakoto ny anaran'   ny olona
     called   Rakoto   the names-of the people
     The names of the people were called by Rakoto.

(4) Nantsoin -dRakoto anarana ny olona
     called   Rakoto   name   the people
     The people were name-called by Rakoto (i.e. called by name)

Example (3) is a passive with *ny anaran' ny olona* 'the names of the people' as its subject. This contrasts with (4), where only *ny olona* 'the people' is subject. Keenan proposed to relate the two sentences by means of a movement rule called "POSS-RAIS". The POSS-RAIS transformation takes (3) as input and moves the possessor phrase into the subject position, producing (4).

(5)
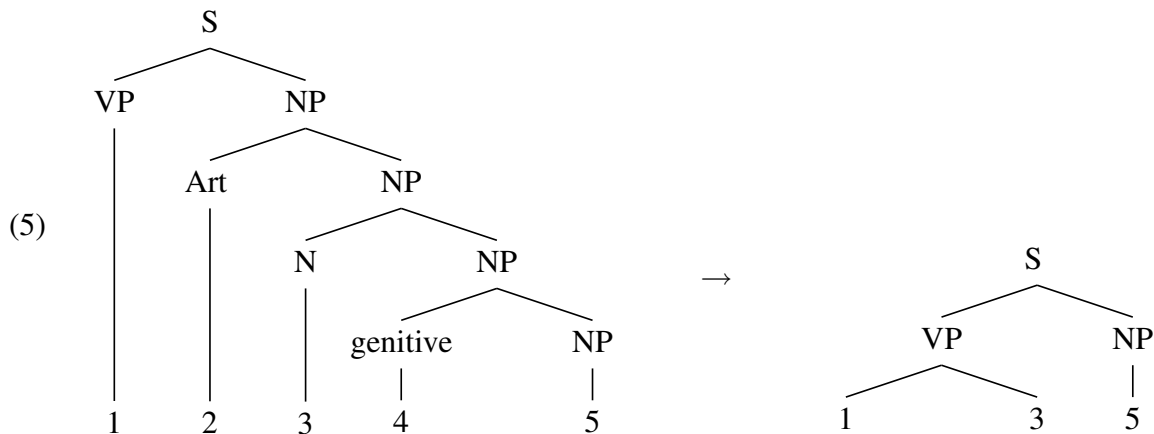
This transformation feeds Ā processes which apply only to subjects. Since the subject position in Malagasy is sentence-final, it produces no change to the surface order of the sentence.

Keenan's analysis came to the attention of transformational grammarians at an important time. Starting with Perlmutter and Postal 1983 [1972], a new strand of thinking began to develop in the mid-1970s concerning the various raising transformations; this work eventually crystalized into a new framework, Relational Grammar (RG). Perlmutter and Postal's discussion of the Malagasy facts in their seminal 1983 [1972] paper set the stage for a series of discussions of external possession within RG (Bell 1976, 1983, Harris 1976, 1981, Aissen 1979, 1987, Kimenyi 1980, Hubbard 1985, Davies 1986, Choi 1988, Allen, Frantz, Gardiner, and Perlmutter 1990). The RG approach carried over from its transformational antecedent the idea that sentences with external possession, like (4), are ultimately derived from counterparts with internal possession, like (3). The notion of derivation, however, was understood in a new way. Instead of relating internal and external possession sentences via a movement rule applying to constituent structure, relational grammarians proposed a rule which applied directly to an abstract level of grammatical relations. These relations were understood as primitive elements, independent of particular phrase-structural realizations. External possession is produced by a rule of *possessor ascension* which alters the possessor's relational status, providing it with a grammatical relation to the verb.

The essence of the RG analysis can be appreciated via Aissen (1987)'s study of external possession in Tzotzil. The phenomenon is exemplified by (6); note that the first-person possessor of the object is encoded by first-person verbal agreement as though it were a verbal argument.

(6) Ch-i-s-toyilan-be   j-jol
  ASP-1ABS-3ERG-keep.lifting-IO 1GEN-head
  He kept lifting my head. (Aissen 1987, 126)

The sentence is analyzed as starting from an underlying representation in which the possessor is in no way a verbal dependent. 'My head' is direct object at the most basic level; 'he' is subject; the possessor receives no grammatical relation from the verb. A rule of possessor ascension applies, altering the assignment of grammatical relations. 'My' becomes indirect object; the direct object is now merely 'head'. Finally, an independent rule of Tzotzil grammar applies, promoting to direct object the indirect object which has been created by possessor ascension. This rule is associated with the appearance of the verbal suffix *-be*. The previous direct object assumes the special status of *chômeur*, characteristic of nominals which have lost a grammatical relation in the course of a derivation. Schematically:

(7)

	keep lifting	*head*	*my*	*he*
Level 1	verb	direct object		subject
Level 2	verb	direct object	indirect object	subject
Level 3	verb	chômeur	direct object	subject

Possessor ascension takes place here between levels 1 and 2.

 Both the transformational and relational approaches lead to the expectation that internal and external possession will be semantically equivalent. This follows in each framework from the fact that the two structures are related by a syntactic rule. For Tzotzil, Aissen (1979) argues that the external possessor need not be interpreted as an underlying indirect object would be – that is, as a benefactive. While benefactives may not be inanimate, inanimates may serve as external possessors in Tzotzil. External possession in the key examples, like (8), is diagnosed primarily through the appearance of the suffix *-be*. The external possessor here is *li kaxlan vaj* 'the bread'.

(8) Bu ma ch-a-ta-be   s-tojol li kaxlan vaj?
  where PARTICLE ASP-2ERG-find-IO 3GEN-price the bread
  Where in the world do you find the bread's money? (i.e. the money for the bread)

Munro (1984) provides arguments to the same effect for Choctaw external possession, analyzed as possessor ascension by Davies (1986). Certain Choctaw verbs allow external possession constructions but not benefactive constructions, and vice versa, suggesting that external possessors are not underlyingly benefactive arguments. Most tellingly, Munro shows that certain possessive constructions which are interpreted idiomatically retain their idiomatic interpretation under external possession. Compare the (a) and (b) examples in (9) and (10), which differ in whether possessum or possessor bears nonsubject (NS) case-marking.

(9) a. [Naahollo i-tobi-ya] apa-li-tok
    Anglo III-bean-NS eat-1SI-PT
    I ate the green peas.

  b. [Naahollo-ya] [tobi] im-apa-li-tok
    Anglo-NS bean III-eat-1SI-PT
    I ate the green peas.

(10) a. [Tali i-hina-ya] ayska-li-tok
    rock III-road-NS fix-1SI-PT
    I fixed the railroad track.

  b. [Tali-ya] [hina] im-ayska-li-tok
    rock-NS road III-fix-1SI-PT
    I fixed the railroad track.

The expression *naahollo i-tobi* 'Anglo's bean' is interpreted idiomatically to mean 'green peas'. That idiomatic interpretation is present both under internal possession (9a) and external possession (9b). The same goes for *tali i-hina* 'rock's road' in (10); in both internal and external possession, the idiomatic meaning of 'railroad track' is permitted. As expected, internal and external possession behave the same way semantically. If idiomatic expressions must form underlying constituents, these facts make a clear case for the derivation of external possession from internal possession. Only in internal possession is the idiom a syntactic constituent, and thus the external possession structure must obtain its idiomatic reading via an underlying structure of internal possession.

2.2 Possessor Government

The classic analysis continued into the Government and Binding (GB) literature most prominently in the work of Massam (1985) and Baker (1988). On these proposals, the key ingredient for an analysis of external possession lies in the theory of government: possessors behave as verbal arguments in external possession because they are governed by V. The analysis is stated in terms that do not reference grammatical functions directly, as on the transformational analysis. Yet in accounting for the relationship between the verb and the external possessor without invoking structural movement of the possessor phrase, this analysis carries over a central aspect of the relational approach.

On Massam's view, external possession may arise in an entirely base-generated structure. It is essentially an NP-internal version of ECM: the verb governs into its complement and assigns Case to that complement's specifier.

(11) "NP/ECM": $[_{VP} \quad V \quad [_{NP} \quad NP_{possessor} \quad N']]$

By contrast, on Baker's view, movement is typically involved in external possession, but it is not the possessor phrase that moves. What is key is movement of the possessum head noun, and in particular, incorporation of this noun into V.

Evidence for this proposal comes from Mohawk, Oneida, West Greenlandic and Southern Tiwa, languages with noun incorporation. Incorporation of the possessum object may strand its possessor; the possessor then behaves as a verbal argument, controlling agreement. Mohawk (12) below is an example of internal possession, and the verb agrees in gender with the possessum (neuter). (13) is its counterpart with external possession; note that the possessum is incorporated, and the verb and the possessor agree in gender (masculine).

(12)	Ka-rakv ne sawatis hrao-nuhs-aʔ	(13)	Hrao-nuhs-rakv ne sawatis
	3N-white John 3M-house-SUF		3M-house-white John
	John's house is white.		John's house is white.

The verb may agree with the object possessor in Mohawk only if the possessum incorporates. This leads Baker to propose that the verb does not automatically govern the possessor position inside its complement NP; it governs this position only upon incorporation of the possessum noun. The relationship between incorporation and government is expressed by the Government Transparency Corollary (Baker 1988, 64):

(14) A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position.

Internal possession examples like (12) are given a structure as in (15). The possessor is governed by the possessum noun 'house', rather than by the verb. Once incorporation takes place, as in (13), structure (16) is produced. Given the Government Transparency Corollary, V now governs the possessor position inside NP. This accounts for the behavior of the possessor as a verbal dependent.

(15) VP
 V — be white
 NP
  NP — John
  N' — N — house

(16) VP
 V
  N — house$_i$
  V — be white
 NP
  NP — John
  N' — N — t$_i$
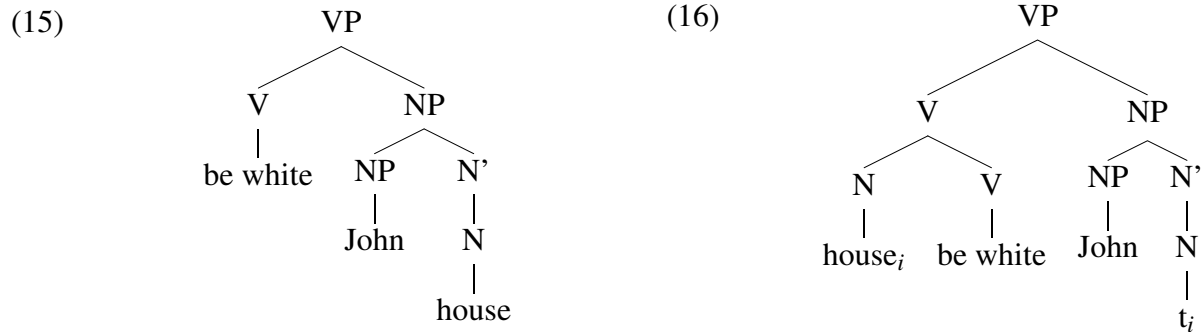
For languages like Chamorro, Chichewa, Kinyarwanda, Choctaw and Chickasaw, which show external possession without noun incorporation, Baker proposes a similar but more abstract process of "N-reanalysis". Once the possessum N is reanalyzed with V, the verb governs the possessor position and the telltale properties of verbal dependency for the external possessor can be accounted for. Reanalysis is thus essentially an abstract counterpart of possessum incorporation.

Baker observes that this approach predicts a key constraint on external possession constructions: external possession should only be possible where it is possible for the possessum noun to incorporate, overtly or covertly, into V. The possibility of incorporation is in turn constrained by the ECP, he proposes, with the result that only underlying objects may incorporate. This explains why external possession is only possible from objects in Chamorro and Chichewa. It also means that the intransitive subject in (13) must be treated as an underlying object in (16). In general, external possession is only expected to be possible from subjects if the verb is unaccusative.

3 Possessor datives, affectedness and binding

The increasingly crosslinguistic scope of the classic analysis began to raise the prospect in the 1980s of an alternative approach to external possession in some well-known languages. The arguments that led to this conclusion are essentially semantic: external possession is not always equivalent in meaning to any internal possession counterpart. Syntacticians concluded that external possession would have to be base-generated, then, as a structure distinct from internal possession. The classic analysis could not be fully maintained.

3.1 Possessor datives and possessor affectedness

Among the languages to which the classic analysis had been applied were European languages showing so-called "possessor dative" constructions, as in (17). These examples feature dative clitics interpreted as possessors but encoded syntactically as verbal dependents.

(17) a. Je lui   ai   coupé les cheveux.   [French]
          I 3SG.DAT have cut   the hair
          I cut his hair. (Guéron 1985)

b. Le   apuntaron el número de Seguro Social.   [Spanish]
   3SG.DAT write.down the number of social   security
   They wrote down her Social Security number. (Kempchinsky 1992, 136)

c. ha-kelev šaxav li   ’al ha-mita.   [Hebrew]
   the-dog lay   1.SG.DAT on the-bed
   The dog lay on my bed. (Borer and Grodzinsky 1986)

On the classic analysis, possessor dative constructions like (17a) would be derived by a syntactic rule from an internal possession structure along the lines of (18) (Langacker 1968):

(18) J'ai   coupé ses cheveux   [French]
      I-have cut   his hair

But that approach left unexplained a crucial semantic difference between the possessor dative construction and its internal possession counterpart – a difference recognized in French linguistics for quite a long time (Bally 1926, Hatcher 1944). In the GB literature, the difference was expressed in terms of the theta theory: in the possessor dative construction, the referent of the dative receives an additional theta-role beyond the role of possessor. This role was typically identified as *benefactive* or *affectee*, the intuition being that the possessor must be affected for the external possession construction to be semantically appropriate. Several related types of facts were assembled to support this characterization.

    First, in order to be affected in the relevant sense, the possessor in a possessor dative construction must meet certain criteria. It must be construed as a living, animate being. Where such a construal is not possible, the possessor dative construction is rejected.

(19)   * Elle lui   a   cassé le pied, à cette table
          She 3SG.DAT has broken the foot to this table
          She broke the table's leg. (French; Barnes 1985, 168)

(20)   * Le   redacté el cuento a Cervantes.
          3SG.DAT edited   the story to Cervantes
          I edited Cervantes' story. (Spanish; Kempchinsky 1992, 136)

In addition to French and Spanish as shown here, this effect also holds in German (Hole 2004) and perhaps also Hebrew (Berman 1981).

    Second, the semantic relationship of possession must be one that ensures that an action on the possessum will affect the possessor, typically physically (Barnes 1985, 170). Possessor dative constructions are possible in French primarily when the possessum is a body part of the possessor. In this circumstance an action on the possessum can scarcely leave the possessor unaffected.

(21) Je lui   ai   lavé le bras / *le fils / *la voiture
      I 3SG.DAT have washed the arm / *the son / *the car.
      I washed his arm/*son/*car.

Berman (1981) reports a looser version of this effect in reference to Hebrew examples like (22): the example is acceptable only if the child is wearing the sweater at the time the mother buttons it, and thus is physically affected by that action.

(22) 'íma kiftera le-dáni 'et ha-svéder
     Mom buttoned to-Danny ACC the-sweater
     Mom buttoned Danny's sweater.

A yet more generalized version of the effect is reported for Spanish by Tuggy (1980). Example (23), he reports, "is appropriate when the possessor is wearing the shoes (in which case he is almost certain to be affected by their being stepped on) and also in any other situation in which he is viewed as affected. For instance, in recounting a list of atrocities which A has committed against B, it would be quite apropos to include [(23)] even if B's shoes were in the closet when A stepped on them."

(23) Le   pisó   los zapatos
     3SG.DAT stepped.on the shoes
     He stepped on his (another's) shoes.

The French version of this constraint on semantic relationships of possession led to possessor dative constructions being described under the heading of "inalienable possession" (Kayne 1975, Guéron 1985, Cheng and Ritter 1987, Yoon 1990, Vergnaud and Zubizarreta 1992). Variation concerning the permissible semantic possession relationships for external possession is therefore sometimes described in terms of variation in which relationships are considered inalienable (Bally 1926, Chappell and McGregor 1996).

Finally, the verb is subject to certain constraints. In French, the verb of a possessor dative construction must describe an action; it cannot describe a state (Barnes 1985, 169, Guéron 2006, 600):

(24) * Je lui   ai   vu   le bras.
       I   3SG.DAT have seen the arm.

(25) * Tu lui   aime les jambes.
       You 3SG.DAT love the legs.

Kayne (1975) influentially connects these facts to possessor affectedness: the stative predicates do not describe eventualities with sufficient impact on the possessor. For Spanish, Tuggy (1980) observes a more fluid effect. Possessor datives are possible with stative experiencer predicates like 'see' to the extent that the seeing has an important effect on the possessor of the seen object. While (26) is degraded, a dishonest bookkeeper might felicitously use (27) to describe an audit.

(26)	* Le vi al hijo.	(27)	Me vieron los libros.
	3SG.DAT saw the son		1SG.DAT saw the books
	I saw his son.		They saw my books.

3.2 From affectedness to binding

The affectedness facts tightly constrained the analyses of possessor dative constructions which were possible within GB. The constraints on possessors, possessive relationships and verbs hold *only* in the possessor dative construction, suggesting that the affectee role is assigned to the possessor not by the possessum noun, but by the verb. In an example like (22), then, the DP *Dani* must occupy a possessum-external position in which the affectee θ-role is assigned. It would not

be possible for the DP to obtain this position by movement from possessor position, as any such movement would violate a central GB tenet:
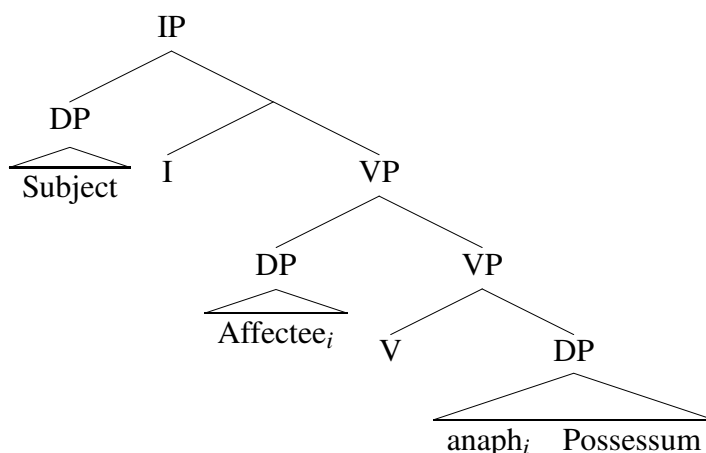
(28) The Theta Criterion (Chomsky 1981, 36)
Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.

If Danny (the individual) is understood both as possessor and as affectee, two separate, co-referential arguments must be present in the structure to receive the possessor and the affectee roles. Abandoning the classic analysis for these cases, the standard GB approach therefore treated the possessor dative construction as an instance of base-generated anaphoric binding.

This analysis is presented in schematic form in (29). The dative argument is base-generated in the verbal spine and assigned the theta-role of affectee. It is obligatorily coindexed with an anaphoric element inside the possessum nominal, which is responsible for the possessor interpretation.

(29)

```
                        IP
                   /         \
               DP              \
              /  \     I        VP
          Subject        /           \
                       DP              VP
                      /  \           /    \
                 Affectee_i         V      DP
                                        /      \
                                    anaph_i   Possessum
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In the GB literature, the crucial anaphoric element is identified variously as a PRO determiner (Guéron 1985, Borer and Grodzinsky 1986), a null operator (Tellier 1991), *pro* (Authier 1991), an unsaturated argument variable (Yoon 1990, Vergnaud and Zubizarreta 1992) or a base-generated NP-trace (Kempchinsky 1992). Later approaches carry over these essential ideas, translating the analysis into HPSG (Koenig 1999), Mapping Theory (Gerdts 1999) and a neo-Davidsonian event semantics (Hole 2005) with the help of a variety of anaphoric devices.

The binding analysis in its various forms drew support from constraints that apply both to possessor dative constructions and to other instances of obligatory anaphoric binding. The possessum must be c-commanded by the possessor dative, Guéron (1985) and Borer and Grodzinsky (1986) observed, just as other anaphoric expressions must be c-commanded by their binders. Borer and Grodzinsky pointed out that if the c-command restriction held at D-structure, it provides an explanation for why Hebrew allows possessor datives with unaccusative and passive verbs.

(30) ha-maftexot naflu li
the-keys   fell   1SG.DAT
My keys fell.

(31) ha-'uga ne'exla li
the-cake was-ate 1SG.DAT
My cake was eaten.

A dative can be construed as a possessor with an unergative verb, by contrast, only when VP internal material is added.

(32)   a. ha-yalda yašva li   *('al ha-kise)
            the-girl sat   1SG.DAT *(on the-chair)

        b. ha-po'alim 'avdu li   *(ba-xacer)
            the-workers worked 1SG.DAT *(in-the-yard)

The contrast follows if subjects of unergatives, but not unaccusatives and passives, are base-generated in a position higher than affectee datives. An anaphoric possessor internal to an unergative subject is too high for the dative to bind it.

    Locality effects like those familiar from anaphora were also observed in the possessor dative construction. The possessor dative must be within the same minimal clause as the possessum (Steriade 1981, Guéron 1985, 48), at least modulo restructuring (Kayne 1975, Lee-Schoenfeld 2006):

(33)   a.   Jean semble lui   avoir lavé   les cheveux
             Jean seems 3SG.DAT to.have washed the hair
             Jean seems to have washed his hair.

        b.   * Jean lui   semble avoir lavé   les cheveux
             Jean 3SG.DAT seems to.have washed the hair
             Intended: Jean seems to have washed his hair.

This, too, followed from the binding analysis, on the assumption that the anaphoric possessor requires binding within a local domain.

4 Between movement and possessor affectedness

4.1 *The theta-criterion and the typology of external possession*

The abandonment of the classic analysis for the possessor dative construction raised important questions about the crosslinguistic typology of external possession. Was the classic analysis indeed correct for Malagasy, Tzotzil, Choctaw and Mohawk, or should those languages be reanalyzed in terms of binding? Affectedness conditions on external possession are extremely common crosslinguistically (see e.g. Shibatani 1994, Payne and Barshi 1999, Haspelmath 1999, O'Connor 2007). Would it be possible, then, for the binding analysis to replace the classic analysis in its entirety?

    In theories adopting the Theta Criterion as in (28), the choice between the binding analysis and the classic analysis for a particular language could be equally well approached from either of two angles. First, one might look for evidence of movement of the possessor phrase from a DP-internal position to a position in the clausal spine. Second, one might look for evidence of an additional theta-role to the possessor in the external possession construction. The two factors are correlated by (28), predicting only three of four possible language types:

(34)   The GB typology of external possession

		Does the possessor phrase move?	
		Yes	No
Does the possessor receive an additional theta-role?	Yes	-	Binding analysis
	No	Classic analysis (raising)	Classic analysis (government)

If the possessor moves out of the possessum DP and into the clause, then by (28), it must land in a position to which no new theta role is assigned. The classic analysis is appropriate (in a variant involving raising). If the possessor receives an additional theta-role in the external possession construction, then by (28), it must occupy a position in the clausal spine to which it could not have moved. The binding analysis is appropriate. If the possessor does not move and does not receive a new theta-role, but nevertheless behaves as a syntactic dependent of the verb, a variant of the classic analysis involving government is appropriate. But there is no fourth option in a theory adopting (28).

In view of the frequent appearance of affectedness conditions in external possession, this line of reasoning led to the extension of the binding analysis to a diverse set of languages. Well beyond European possessor dative constructions, a binding analysis was proposed for "adversative passives" like Mandarin (35) and Japanese (36), which feature affectedness conditions on the possessor (Cheng and Ritter 1987, Huang 1999).

(35)   a.   Ta ba juzi   bo-le   pi
              he BA orange peel-ASP skin
              He peeled the skin from the orange. (Cheng and Ritter 1987, 66)

        b.   Zhangsan bei tufei   dasi-le   baba
              Zhangsan BEI bandits kill-PERF father
              Zhangsan had his father killed by bandits. (Huang 1999, (114))

(36)   John-ga   Mary-ni   kodomo-o sikar-are-ta
       John-NOM Mary-DAT child-ACC scold-PASS-PAST
       John had his child scolded by Mary. (Huang 1999, (116))

On the other hand, this typology raised questions of enormous difficulty for languages which, in spite of evidence for possessor affectedness, nevertheless show evidence of possessor movement. The conflict between these factors set the stage for two important papers in the 1990s which grappled with the choice between the classical approach and the binding alternative. Keach and Rochemont (1994) and Landau (1999) each conclude, with the classic approach, that external possession must be derived syntactically from internal possession; both posit derivations involving possessor movement. Yet they also each observe that internal and external possession are not semantically equivalent. External possession imposes a semantic condition that internal possession does not impose; this condition is naturally described as involving possessor affectedness.

4.2 Movement and affectedness in Swahili

Working in GB theory, Keach and Rochemont (1994) provide a possessor raising analysis of Swahili external possession constructions like (37). Note that the possessor but not the possessum controls noun-class agreement on the verb.

(37)   Juma   a-li-m-kata Asha   kidole
       1.Juma 1-PST-1-cut 1.Asha 7.finger
       Juma cut Asha's finger.

The underlying structure is equivalent, they propose, to that of the internal possession structure in (38). Here noun-class agreement may be controlled by the possessum, but not the possessor.

(38) Juma a-li-(ki-)ata kidole cha Asha
      1.Juma 1-PST-(7)-cut 7.finger 1-of 1.Asha
      Juma cut Asha's finger.

Keach and Rochemont propose that Swahili objects receive Case and trigger agreement from a Spec,VP position. In internal possession (38), the entire object *kidole cha Asha* 'Asha's finger' moves to Spec,VP, but in external possession (37), only the possessor *Asha* does.

   Because the external possession construction is not base-generated, it circumvents a restriction that otherwise limits the valence of Swahili verbs. While Swahili verbs may augment their valence through productive applicative and causative strategies, no base-generated structure may be tri-transitive. It is impossible to add an applicative argument to a ditransitive, for instance, resulting in a structure with three postverbal arguments.

(39) a.   Asha a-li-m-pa   Juma kitabu
            1.Asha 1-PST-1-give 1.Juma 7.book
            Asha gave Juma a book.

      b. * Ali a-li-m-p-e-a   Asha Juma kitabu
            1.Ali 1-PST-1-give-APPL 1.Asha 1.Juma 7.book
            Ali gave [Juma] [a book] [for Asha]

But seemingly tri-transitive structures are possible in external possession:

(40) ni-li-m-chan-i-a   Juma watoto nywele
      I-PST-1-comb-APPL 1.Juma 2.children 9.hair
      I combed the children's hair for Juma.

Keach and Rochemont take this contrast between external possession and benefactive constructions to lend crucial support to the movement analysis.

   Yet Keach and Rochemont also observe a series of constraints on the external possession construction which suggests a semantic difference from internal possession. The findings make for a clear parallel to the argument for possessor affectedness in Romance possessor dative constructions. As in French, external possession is not acceptable when the possessor is not physically affected, or when the verb is stative:

(41) ni-li-m-vunja Juma   mguu / *kiti   (42) Rosa a-li-nyang'any-wa shuka
      I-PST-1-break 1.Juma 3.leg / *7.chair   1.Rosa 1-PST-rip-PASSIVE 9.shuka
      I broke Juma's leg / *chair   Rosa had her shuka ripped off her.

(43)   * Juma a-li-mw-ona Asha   miguu
          1.Juma 1-PST-1-see 1.Asha 4.legs
          Juma saw Asha's legs.

Adopting (28), Keach and Rochemont are forced to leave as an open puzzle how such facts can be reconciled to their evidence for possessor movement.

4.3 Movement and affectedness in Hebrew

A similar puzzle faces Landau (1999)'s account of the possessor dative construction in Hebrew. Like Keach and Rochemont, Landau proposes that the possessor of a complement DP may leave the possessum and move to Spec,VP; this movement is motivated by Case. The c-command and locality effects which had been marshalled in favor of the binding view are reinterpreted as following from constraints on movement.

The movement account provides a natural explanation for why certain verbs may take dative arguments only when a potential possessum argument is also present.

(44)   Gil axal le-Rina *(et   ha-sendvich)
       Gil ate   to-Rina *(ACC the-sandwhich)
       Gil ate Rina's sandwich.

On the binding account (29), various special mechanisms are required to handle this relationship: the dative and the anaphoric possessor must, for instance, jointly satisfy the θ-criterion (Guéron 1985). But the connection between the dative and the empty category is accounted for automatically if the empty category is a movement trace. The moved item and its trace stand in the expected mutually entailing relationship.

Evidence favoring movement over binding comes from distinctions among types of PPs embedding the possessum. Landau observes that the possessor dative construction is possible when the possessum is embedded in a locative (45), source, or instrumental (46) PP. It is not possible when the possessum is embedded in a PP expressing cause or benefit (47) or opposition (48).

(45)   Gil yašav le-Rina ba-mitbax.
          Gil sat   to-Rina in-the-kitchen
          Gil sat in Rina's kitchen

(46)   Gil hitkaleax le-Rina im   ha-sabon.
          Gil bathed   to-Rina with the-soap
          Gil took a shower with Rina's soap

(47)   * Gil pitpet   le-Rina biglal/lema'an ha-hofa'a.
          Gil chatted to-Rina because/for   the-performance
          Gil chatted because of/for the benefit of Rina's performance

(48)   * Gil azav le-Rina lamrot ha-'iyumim
          Gil left   to-Rina despite the-threats
          Gil left despite Rina's threats

Landau proposes to bring this pattern under the rubric of island effects. Locative, source and instrumental PPs are treated as argumental; these PPs are transparent for extraction. Real adjunct PPs are islands for movement, accounting for the ungrammaticality of (47) and (48). This pattern, too, remains difficult to explain on the binding analysis, Landau argues, but falls naturally in line in a theory postulating possessor movement.

What this line of reasoning leaves open is, again, how the semantic relationship between internal and external possession can be explained. Following previous work, Landau grants that the two constructions are not semantically equivalent (p. 3); only external possession necessarily implies that the possessor is an affected party. Given (28), this fact is at odds with the diagnosis

of movement. And thus a central premise of the GB and early Minimalist frameworks rendered inexplicable a crucial aspect of the syntax-semantics interface in external possession.

5 The parallel to control and raising

The key idea that made it possible to break this impasse did not come from studies of external possession. In the late 1990s, Hornstein proposed a movement analysis of control structures like (49) (Hornstein 1999):

(49)   Robin wanted $[_{TP}$ t to win]
       └──── Movement ────┘

Such an analysis is incompatible with the Theta Criterion as in (28), and Hornstein indeed proposed that this criterion be abandoned. That abandonment makes it possible for the theory to countenance movement between thematic positions. Control and raising can then both be treated as movement, with the difference being whether this movement targets a thematic position (control) or an a-thematic one (raising).

   The theoretical revision behind this proposal has an immediate consequence for the predicted typology of external possession. I want to propose that the new typology is the right one for a major external possession type (Type A). A fourth variety of language is now predicted possible:

(50)   A typology of external possession without the theta-criterion (Type A languages)

		Does the possessor phrase move?	
		Yes	No
Does the possessor receive an additional theta-role?	Yes	Hybrid analysis: movement to a θ-position	Binding analysis
	No	Possessor raising analysis	Possessor government analysis

The newly recognized 'hybrid' language type is precisely one in which possessors both move syntactically and are interpreted semantically with additional theta-roles in external possession. Analyses of this type have been explored over the last decade for several languages (Lee-Schoenfeld 2006, Rodrigues 2010).

   It should be noted that the viability of the hybrid analysis for external possession does not depend directly on the proper analysis of control infinitivals. These analyses and Hornstein's analysis of control infinitivals each depend crucially on a rejection of (28). But the approach to external possession as movement between thematic positions and the parallel approach to control infinitivals do not logically depend on one another. Any theory recognizing movement between thematic positions must tightly constrain the circumstances under which it is possible. In principle, it could be that such movement is not possible in the case of control infinitivals (meaning that Hornstein's particular analysis would need to be abandoned), but is possible in the case of external possession.

   It is nevertheless instructive to make a connection between external possession constructions and varieties of infinitival embedding for typological purposes. One might set up a typology similar to (50) to describe the possible cross-clausal dependencies for a DP originating in an infinitival clause:

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(51) Types of dependencies into infinitival TPs

		Does the DP move?	
		Yes	No
Does the DP's referent receive an additional theta-role?	Yes	Control *John wanted t to win*	Base-generated binding *John expected himself to win*
	No	Raising *John seemed t to win*	ECM *John expected Sue to win*

At least three of these four dependency types have clear correlates in the realm of external possession.
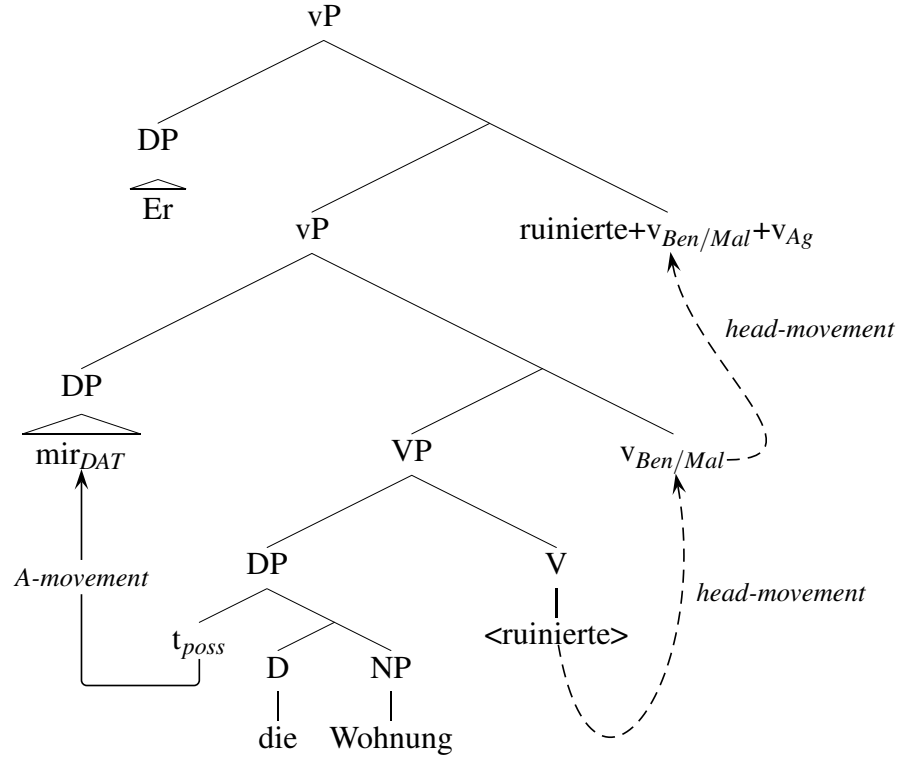
5.1 External possession as control

An initial articulation of the view that external possession can be treated as movement between thematic positions is found in Lee-Schoenfeld (2006)'s study of German possessor dative constructions like (52).

(52) Er ruinierte mir   die Wohnung.
     he ruined   me.DAT the place
     He ruined my place.

Like its counterpart in Hebrew, the German construction has been analyzed both on the classic analysis (Gallmann 1992) and on the binding analysis (Hole 2004). The hybrid analysis combines ingredients from both antecedents. The same syntactic effects which led Landau (1999) to posit movement for the Hebrew possessor dative construction can be reproduced in German; this suggests that the possessor phrase indeed moves out of its original DP-internal position. The same semantic effects which led Berman (1981) to a diagnosis of possessor affectedness in Hebrew can be called up in German as well; this means that possessor movement must target a thematic position. Lee-Schoenfeld identifies the landing site as the specifier of a head $v_{Ben/Mal}$ which assigns the affectee role and the dative case.

(53)

vP
├─ DP
│ └─ Er
└─ vP ... ruinierte+$v_{Ben/Mal}$+v_{Ag}
   ├─ DP
   │ ├─ mir_{DAT}
   │ │ *A-movement*
   │ └─ VP ... $v_{Ben/Mal}-$
   │   ├─ DP
   │   │ ├─ t_{poss}
   │   │ └─ D ... NP
   │   │   die   Wohnung
   │   └─ V
   │   <ruinierte>
   head-movement

In treating the landing site of movement as a thematic position, this analysis accounts for the puzzle facing Keach and Rochemont's and Landau's earlier movement approaches. Movement of the possessor phrase no longer implies synonymy between internal and external possession.

The same style of analysis is extended by Rodrigues (2010) to cases of external possession in Brazilian Portuguese as in (54). Note that the subject is interpreted as the possessor of the object.

(54) o João encontrou o irmão no   supermercado
      the João met   the brother in.the supermarket
      João$_1$ met his$_{1/*2}$ brother in the supermarket.

Rodrigues observes that the relationship between the subject/possessor and the possessum shows island effects indicative of movement. The two may not be separated by a relative clause boundary, for instance.

(55) * A Maria$_1$ viu a   menina que beijou [o   namorado e$_1$]
        the Maria   saw the girl   that kissed the boyfriend
        Intended: Maria$_1$ saw the girl that kissed her$_1$ boyfriend.

Nor may the possessum be coordinated with another DP that does not receive a corresponding anaphoric possessor interpretation; this recalls the coordinate structure constraint.

(56) * O Pedro$_1$ encontrou [a irmã de   João] e [a mãe   e$_1$]
        the Pedro met   the sister of.the João and the mother
        Intended: Pedro$_1$ met João's sister and his$_1$ mother.

(57) O Pedro$_1$ encontrou [a irmã e$_1$] e   [a mãe   e$_1$]
      the Pedro met   the sister   and the mother
      Pedro$_1$ met his$_1$ sister and his$_1$ mother.

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Bringing these indications of movement together with the thematic content assigned to the possessors *qua* subjects, Rodrigues proposes that possessor phrases initially receive the possessor role inside the possessum DP, and subsequently move to a thematic position in vP. This is the position in which an external thematic role is assigned in (54). Thus the hybrid analysis of external possession is extended beyond cases in which the possessor is assigned the particular thematic role of affectee.

5.2 External possession as base-generated binding

In proposing hybrid analyses for external possession, Lee-Schoenfeld and Rodrigues each find cause to recognize alternative constructions which should indeed be analyzed in terms of base-generated binding. Lee-Schoenfeld proposes a base-generation analysis for examples like (58), where a possessive pronoun appears inside the possessum DP. The dative phrase is an ethical dative base-generated in VP and co-indexed with a pronoun that is syntactically independent of it.

(58)   Mein Bruder had der Mami$_1$ leider   [ihr$_1$ Auto] zu Schrott gefahren.
       my   brother has the mom.DAT unfortunately her   car   to scrap   driven.
       Unfortunately my brother totaled mom's car.

This is distinguished from the possessor dative construction proper, where a trace, not an independent pronoun, occupies possessor position.

(59)   Mein Bruder hat der Mami$_1$ [t_1 das Auto] zu Schrott gefahren.
       my   brother has the mom.DAT   the car   to scrap   driven.
       My brother totaled mom's car.

Rodrigues extends a similar analysis to the distinction between examples like those in (60). Movement to a thematic position is involved in (60b), but (60a) involves base-generated binding.

(60)   a. A   Maria$_1$ cortou [as unhas dela$_1$]
          the Maria   cut   the nails of.she
          Maria$_1$ cut her$_1$ nails.

       b. A   Maria$_1$ cortou [as unhas t_1]
          the Maria   cut   the nails t
   Maria$_1$ cut her$_1$ nails.

Rodrigues shows that island effects and other characteristics of movement do not apply to the dependency in (60a). This is simply a case where a subject happens to be coreferential with a syntactically independent possessor pronoun.

5.3 External possession as raising

Lee-Schoenfeld's and Rodrigues's studies fill in two of the three expected cells of the typology in (50). One of the remaining cells should be filled by a language that does arrive at external possession syntactically through possessor movement, but does not connect this movement to a new thematic role for the possessor. This is the type of analysis that Deal (2013) pursues for Nez Perce constructions like (61).

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(61) *pro*   'e-ex-ney'-se-∅   tewliki-ne saq'is
      pro   3OBJ-see-*μ*-IMPERF-PRES tree-OBJ   shadow.NOM
      I see the tree's shadow.

Lacking a source for Case DP-internally, the possessor phrase moves from a DP-internal position to the specifier of a Case-assigning head *μ*. In this position, the possessor can receive Case from *v* while the possessum receives Case from *μ*. The *μ* head itself is realized as a suffix on the verb.

(62)
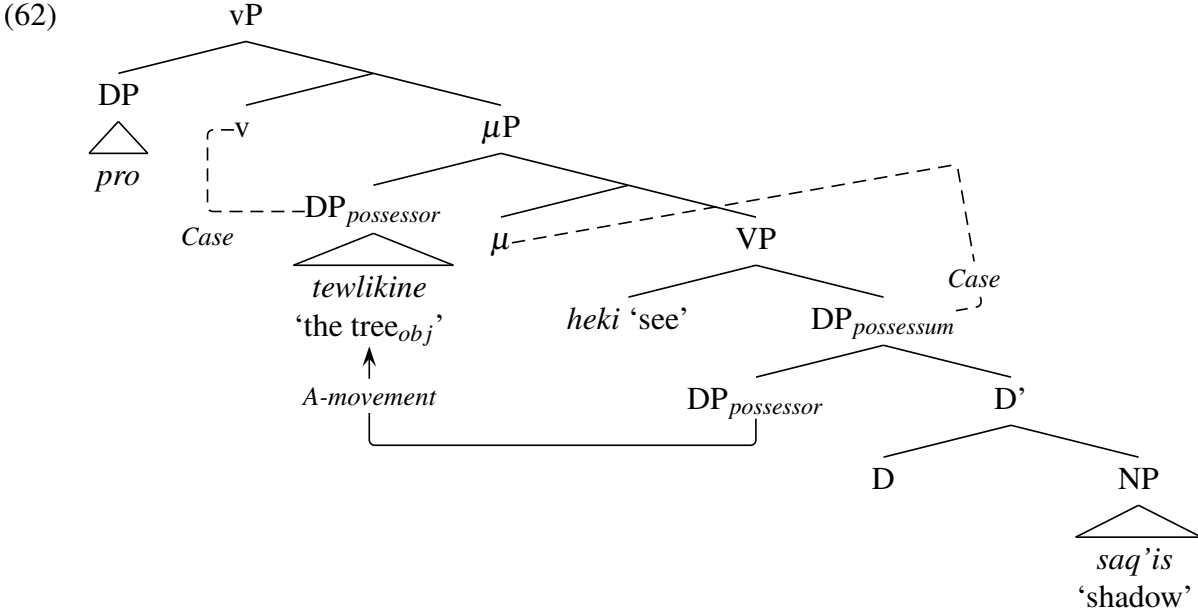
The involvement of movement in Nez Perce external possession is supported by locality effects of a familiar type. In a ditransitive construction, where the goal is generated higher than the theme, the possessor may be raised from within the goal DP. It may not be raised from within the theme DP, however.

(63) 'aayat-om   hi-kiwyek-ey'-se-∅   'iin-e   picpic cuu'yem.
      woman-ERG   3SUBJ-feed-*μ*-IMPERF-PRES 1SG-OBJ cat.NOM fish.NOM

      a.   The woman fed my cat the fish.
      b. * The woman fed a/the cat my fish.

This effect may be understood in terms of intervention–a factor which routinely shows its face in movement, but not in binding. On parse (63b), the goal DP intervenes in movement of the theme possessor DP to *μ*.

The proposed Nez Perce structure (62) differs from its counterpart in German, (53), in the nature of the head to which the possessor phrase raises. Deal argues that the head involved in Nez Perce external possession assigns the possessor no new theta-role. The major factors which allow possessor affectedness to be diagnosed in languages like German are notably absent in Nez Perce. The possessor need not be animate, as (61) shows, and the possessive relationship need not be inalienable, as (63) shows. The verb need not be eventive, as (61) shows as well. Also striking is that external possession is generally obligatory in Nez Perce, regardless of the possibility of possessor involvement. Even when the possessor is long deceased, the external possession structure must be used.

(64) a. Weet *pro* ’e-cukwe-ney’-se-∅   Luk-ne$_i$ [<DP$_{poss'r_i}$> tiim’es   ] ?
         Y.N   *pro* 3OBJ-know-μ-IMPERF-PRES Luke-OBJ [book.NOM]
         Do you know the book of Luke?

      b. * Weet *pro* ’e-cukwe-ce-∅   [Luk-nim   tiim’es-ne] ?
         Y.N   *pro* 3OBJ-know-IMPERF-PRES [Luke-GEN book-OBJ]

The absence of an alternation between internal and external possession further suggests that there is no optional semantic content conveyed by the choice of the external possession structure in particular.

5.4 External possession as ECM?

There is one type of language predicted by the typology in (50) that has not yet been discussed. This is a language where external possession brings neither possessor movement nor possessor affectedness – a language, in short, where analyses along the lines of Massam (1985) or Baker (1988) might be maintained. The particular analyses can in principle be carried over into a contemporary theoretical setting; Assmann, Georgi, and Weisser 2011 show how this can be done for Baker's account of Mohawk. What needs to be shown is that this analysis best matches the empirical facts on external possession in some language. An external possession construction must be found in which the possessor need not be interpreted as affected and need not move out of DP, but nevertheless takes on the syntax of a verbal dependent.

I am not aware of any language having been convincingly shown to fit this profile. Like any typological gap, this gap could be principled, but it could also be accidental, resulting from our limited knowledge of the semantics of external possession. Many of the languages featured in the ECM-style accounts by Massam and Baker have not been closely investigated from a semantic point of view, making it difficult to know whether affectedness conditions are indeed imposed in external possession. Further research is required, then, to learn the fate of external possession which behaves as a DP counterpart of TP-ECM.

5.5 Type A external possession: parametric implications

These studies suggest three major parameters at the core of Type A external possession:

The first (as foreseen by Ura 1996) has to do with whether it is possible for a possessor to be generated in DP without receiving Case there. If possessors invariably receive Case inside the possessum DP, as they plausibly do in English, external possession will be possible only via base-generated binding. This requires no special syntax; it arises when an independent DP happens to bind a pronominal in possessor position.

(65)   Beth$_1$ asked me if I would take a look at her$_1$ car.
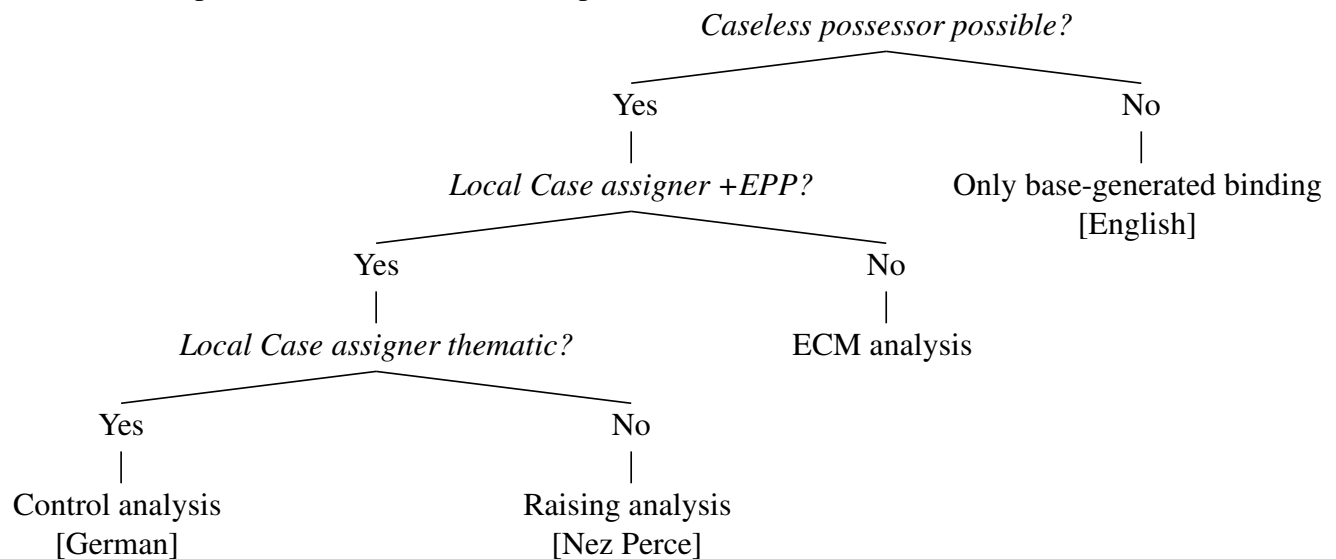
If a language allows possessors to avoid DP-internal Case assignment, this opens the door to additional types of external possession. Further parametrization depends on the properties of DP-external heads that may assign Case to possessors.

The second parameter concerns whether local DP-external heads may assign Case to possessors in situ, without requiring them to move. This can be described in terms of whether these heads necessarily bear a feature [EPP]. If the local Case assigner bears no EPP feature, an ECM analysis

can be expected: the Case assigner provides Case to the possessor in its base position via Agree. If the local Case assigner bears [EPP], on the other hand, the possessor will have to move outside DP.

The final parameter depends on the semantics of the head responsible for possessor Case and possessor movement. If this head has a theta-role, the possessor moves into a thematic position. This is the analysis just reviewed for German. If, finally, the head is athematic, serving a strictly syntactic function, possessor movement is akin to raising. This is the analysis just reviewed for Nez Perce.

(66) Three points of variation in external possession

Caseless possessor possible?

Yes — *Local Case assigner +EPP?*

No — Only base-generated binding [English]

Local Case assigner +EPP?

Yes — *Local Case assigner thematic?*

No — ECM analysis

Local Case assigner thematic?

Yes — Control analysis [German]

No — Raising analysis [Nez Perce]

This typology raises a difficult question concerning the level of parametrization. Individual languages typically have a mixture of control, raising, and ECM. Why should it be that individual languages do not typically have a mixture of control-, raising- and ECM-like external possession?

6 Pushing on the A/Ā distinction

6.1 An additional type of external possession

There are several reasons to think that the typology in (50) does not exhaust the variety of external possession. To wit:

Subject requirements. Raising, control and ECM are found in infinitivals in complement position; infinitivals in subject position do not allow their subjects to depend on the embedding clause for Case. Yet external possession constructions in some languages are not only possible for subject possessa, they are *restricted* to subject possessa. Consider the 'multiple nominative construction' in Japanese. Both the possessor and the possessum are marked with the nominative case in (67).

(67) a. John-ga   musuko-ga (butai-de) odot-ta
         John-NOM son-NOM   stage-at   dance-PAST
         John's son danced at the stage. (Ura 1996)

    b. John-ga   musuko-ga hito-o   korosi-ta
       John-NOM son-NOM   person-ACC kill-PAST
       John's son killed a man. (Ura 1996)

This type of external possession is possible only for nominative possessa. Japanese allows no multiple accusative constructions, for instance, when the possessum is in object position.

(68)   * John-ga   Mary-o   atama-o nagut-ta
        John-NOM Mary-ACC head-ACC hit-PAST
        John hit Mary's head. (Ura 1996)

If external possession as in (67) arises via possessor movement, as Kuno (1973) and Ura (1996) propose, that movement must be distinguished from the types of movements which connect infinitival arguments to embedding clauses. The same can be said for external possession in other languages showing subject requirements, e.g. Cebuano (Bell 1983), Tz'utujil (Aissen 1999), Chickasaw (Munro 1999) and Nuu-chah-nulth (Ravinski 2007).

    Iterativity. Raising, control and ECM are limited by the distribution of Case. In raising, for instance, only one argument may raise to the embedding clause; there would not be a source for Case there for any others. But external possession is not always limited in a parallel way. More than one possessor may be external in a given sentence. Consider Chickasaw (69). Example (69a) presents internal possession; subject case marking appears only on 'leg'. In (69b), subject case marking appears on both 'leg' and 'table'; in (69c), it spreads to 'Jan' as well.

(69)   a. Jan im-aaimpa' iyy-at   oppolo
       Jan 3III-table   leg-SUBJ broken
       Jan's table's leg is broken.

     b. Jan im-aaimp-at   iyy-at   oppolo
        Jan 3III-table-SUBJ leg-SUBJ broken

     c. Jan-at   im-aaimp-at   iyy-at   oppolo
        Jan-SUBJ 3III-table-SUBJ leg-SUBJ broken

Munro (1999) reports that there is no upper limit on the number of possessors that may be external in Chickasaw. This makes for a pattern strikingly unlike what is found in infinitival dependencies.

    Discourse conditioning. Raising, control and ECM are driven by Case and thematic interpretation; but external possession in some languages is driven by factors of a more information-structural flavor. In Japanese, for instance, multiple nominative constructions are well-known to exhibit subtle changes in focus structure vis-à-vis their internal possession counterparts. Kuno (1973) records the special interpretation of the external possessor with a feature [+exhaustive]. In internal possession, this feature accrues to the entire possessive DP; in external possession, it accrues to the possessor only.

(70) [Kono class-no   dansei-ga]$^{[+exhaustive]}$ yoku dekiru
      this   class-GEN male-NOM   well are-able
      It is the boys of this class that do well. (Kuno 1973, p 72)

(71) [Kono class-ga]$^{[+exhaustive]}$ [dansei-ga] yoku dekiru
      this   class-NOM   male-NOM well are-able
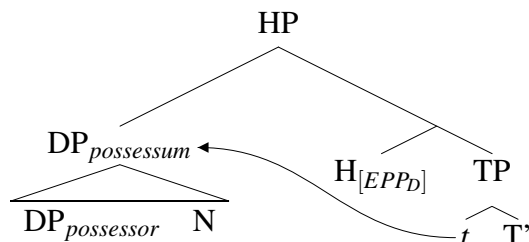   It is this class that the boys do well in. (Kuno 1973, p 73)

Similar types of effects are found in many languages. For Cebuano, Bell (1983) reports a topicality condition on external possession. Munro (1999) reports for Chickasaw that the possessor must be more salient in the discourse than the possessum. For Tz'utujil and Malagasy, Aissen (1999) and Keenan and Ralalaoherivony (2001) report that the possessor must be construed as the subject of a categorial judgment or stable, individual-level predicate – a further type of decidedly information-structural effect.

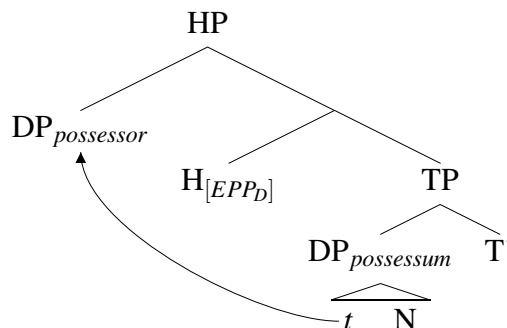## 6.2 Type B external possession: toward an analysis

The repeated confluence of these factors in a number of unrelated languages points to an alternative major type of external possession construction–one that combines ingredients to A- and Ā-dependencies. This second major type (Type B) is less readily assimilated to counterparts outside the possessive domain.

Consider the well-studied case of Japanese. Ura (1996) proposes that the possessor in a possessive multiple nominative construction moves out of the possessum DP driven by a need for Case. This proposal in turn suggests the existence of a head H commanding the subject which behaves as a trigger for movement. Such a head, in featural terms, would need to possess the feature [EPP$_D$]; this would cause it to attract the closest accessible DP. The subject possessor and the subject itself are presumably equidistant from such a head, as one occupies the specifier of the other. We might suppose that either one may move to the specifier of H. The nominative case is assigned to the moving DP.

(72) a.   Possessum DP moves (70)   b.   Possessor DP moves (71)

[Tree diagram (a): HP dominating DP$_{possessum}$ (itself dominating DP$_{possessor}$ and N) and H$_{[EPP_D]}$ TP, with TP dominating t T'; arrow from within TP to DP$_{possessum}$.]

[Tree diagram (b): HP dominating DP$_{possessor}$ and H$_{[EPP_D]}$ TP, with TP dominating DP$_{possessum}$ (itself dominating t and N) and T'; arrow from DP$_{possessum}$ to DP$_{possessor}$.]

The central puzzle of this type of external possession is the precise identity of H.

On one hand, H behaves as part of the A-system; this explains its ability to assign Case. Whereas heads in the Ā system typically attract operator features (e.g. focus features, wh-features) which need not be located on the highest DP in the clause, H and other heads in the A system are constrained to attract the closest DP, regardless of its particular featural profile. This property, recorded in the feature [EPP$_D$], derives the fact that only subject possessors may interact with H; the subject intervenes in any potential dependency between H and the object possessor.

On the other hand, H behaves in striking respects like part of the Ā system. It contributes semantic content of an information structural flavor, first of all, and it is apparently located at the left periphery. The possibility of iterative external possession in languages like Chickasaw suggests the possibility of iteration of H heads. This recalls Rizzi (1997)'s proposal for aspects of the extended CP domain. Notably, there does not seem to be any counterpart head lower in the clause, giving rise to an external possession construction which (i) targets only objects, (ii)

allows for unlimited iteration, and (iii) gives rise to information-structural effects, rather than (say) implications of possessor affectedness.

7 Conclusions

The study of external possession has come a long way from its transformational beginnings. The empirical basis has expanded enormously; our ability to account for certain particular types of external possession in theoretical terms has also grown. These factors together make it possible to theorize about the typology of external possession in a way that would have been much less straightforward before.

Two major types of external possession constructions have emerged from this study, along with various subtypes:

(73)　Type A: external possession is akin to raising/control/binding/ECM

 i. External possession is akin to raising: A-movement to an athematic position (Nez Perce)

 ii. External possession is akin to control: A-movement to a thematic position (German, Brazilian Portuguese)

 iii. External possession is akin to binding: base-generated anaphora (English)

 iv. External possession is akin to ECM

 Type B: external possession combines ingredients of A- and Ā-dependencies (Japanese, Chickasaw, Tz'utujil, Nuu-chah-nulth)

Constructions of Type A target possessives in verb complements, much as A-dependencies in infinitivals do. Three of the four expected Type A subtype analyses have been proposed for external possession in various languages. The ECM subtype has been proposed for a variety of languages by Massam (1985) and Baker (1988); it remains to return to these proposals and discern whether that analysis or one of its competitors best fits the syntactic and semantic facts.

Constructions of Type B target subject possessives. The analysis of these cases poses unsolved theoretical puzzles that future work must explore.

Interesting empirical questions also remain open. External possession in Korean, for instance, has seen analyses which suggest the imposition of a possessor affectedness condition (Yoon 1990, Tomioka and Sim 2007), and thus a Type A approach, but also analyses which suggest a connection to focus structure (Kim 2000), and thus a Type B approach. Many languages that have received far less theoretical attention are ripe for renewed approaches that take both the syntax and the semantics of external possession into consideration. It is to be hoped that the new discoveries that will be made in this area will shed light not only on the syntax of possessive and clausal structures but also on important aspects of the syntax-semantics interface.

SEE ALSO:
Accusative Plus Infinitive Constructions in English; Affectedness; Chinese *ba*; Double Nominatives in Japanese; Control Phenomena; Inalienable Possession; Noun Incorporation

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