

# Possessor Raising

*Amy Rose Deal*

Various languages allow instances of external possession—possessive encoding without a possessive structure in DP. The analysis of these cases has long been a battleground of raising versus control. I provide a new argument from Nez Perce in support of possessor raising of a type thematically parallel to raising to subject. The possessor phrase moves from a possessum-DP-internal position to an athematic A-position within vP. Like raising to subject, this movement is obligatory and does not result in the assignment of a new  $\theta$ -role to the moving element. A case-driven treatment of possessor raising is proposed.

*Keywords:* A-movement, control, raising, object shift, external possession, Nez Perce

## 1 Introduction

The expression of possessive relationships in natural languages is strongly associated with complex DP/NP structure. We see this in English DP possessives like *Beth's house* and NP possessives like *friend of mine*, in French *son père* 'his father' and *l'idée du fils* 'the son's idea' and in a similar way in all or nearly all human languages that have been described. What sort of universal could be behind these facts? In the simplest case, the connection between possessive semantics and nominal syntax would be quite direct. The possessor  $\theta$ -role is assigned inside nominal projections, and it is not assigned anywhere else.

The challenge from this perspective is to account for a series of exceptions to the pattern connecting possessive semantics and nominal syntax. In certain cases, possessor-denoting phrases surface external to possessum DPs, and in the most challenging of these, this occurs without the presence of any type of possessive verb (e.g., *have*, *own*). Payne and Barshi (1999a) group these exceptions under the heading of *external possession*. A well-known type of example, the "possessor dative construction" in German, and a less-well-known example drawn from Nez Perce (Sahaptian; USA) appear in (1) and (2), respectively.<sup>1</sup>

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<sup>1</sup> Abbreviations in Nez Perce glosses are as follows: 3/3 = 3rd person subject / 3rd person object portmanteau agreement, 3OBJ = 3rd person object agreement, 3SUBJ = 3rd person subject agreement, APPL = applicative, EMPH = emphatic, ERG = ergative case, GEN = genitive case, HAB.PRES.PL = present habitual with plural subject, IMPER = imperative, IMPERF = imperfective aspect, IMPERF.PL = imperfective aspect with plural subject, INFER = inferential evidential, INST = instrumental case, LOC = locative case,  $\mu$  = object possessor-raising suffix, NOM = nominative case, OBJ = objective case, O.PL = plural object agreement, P = P aspect (perfect/perfective), PL = plural, PRES = present tense, PROSP = prospective aspect, REC.PAST = recent past tense, REM.PAST = remote past tense, SG = singular, Y.N = yes/no question particle.

- (1) Tim hat **der Nachbarin** das Auto gewaschen.  
 Tim has **the neighbor.DAT.FEM** the car washed  
 ‘Tim washed *the neighbor’s* car.’  
 (German; Lee-Schoenfeld 2006:102)
- (2) Haama-pim hi-nees-wewkuny-e’ny- $\theta$ -e **ha-haacwal-na** lawtiwaa.  
 man-ERG 3SUBJ-O.PL-meet- $\mu$ -P-REM.PAST **PL-boy-OBJ** friend.NOM  
 ‘The man met *the boys’* friend.’  
 (Nez Perce; field notes)

Of central concern here are the phrases in boldface. These are interpreted as denoting possessors; yet in both cases, syntactic facts point to a structure that treats them as syntactic dependents of the *verb*, rather than of the possessum noun. In German (1), the possessor phrase marks the dative case, rather than the genitive; the possessum and possessor phrases do not behave as a constituent for topicalization (Lee-Schoenfeld 2006:104). In Nez Perce (2), the possessor phrase marks the objective (accusative) case, rather than the genitive, and controls plural object agreement. This mismatch between the clausal-argument syntax of these phrases and their nominal-argument semantics is the classic conundrum of external possession.

The universal we are entertaining limits the options available for resolving the conundrum. If the boldfaced phrases in (1) and (2) are assigned a possessor  $\theta$ -role, this can only be because there is a referential dependency between these phrases and some element occupying a possessum-phrase-internal possessor position. In principle, possibilities for this dependency ought to mirror those applying over the edge of nonfinite TP: raising, or some type of control. It is straightforward to imagine how raising- and control-like external possession could be derived. Raising involves movement, and this movement targets a position that does not receive a  $\theta$ -role. External possession may be derived in a way precisely parallel to ordinary raising by possessor phrase movement out of the possessum to an athematic A-position in the clausal spine.

- (3) a. *Subject raising*  
 [<sub>DP</sub> The buffalo] seemed [<sub>TP</sub> ~~the buffalo~~ to impress Martin]
- b. *Possessor raising (pseudo-Nez Perce (2))*  
 The man met [<sub>DP</sub> the boys]<sub>possessor</sub> [<sub>DP</sub> ~~the boys~~ friend]

Control dependencies differ from their raising counterparts at least in that a  $\theta$ -role is assigned in the higher position of the dependency. External possession may be derived in a way parallel to ordinary control when the possessor phrase occupies an A-position in the clausal spine that is associated with a  $\theta$ -role, perhaps *affectee*. The name *control* nowadays subsumes two distinct approaches to the relationship between this position and something lower.<sup>2</sup> On theories that eschew movement between thematic positions (see, e.g., Chomsky 1981), the overt possessor phrase

<sup>2</sup> See Hornstein 1999, 2001, Culicover and Jackendoff 2001, Polinsky and Potsdam 2002, Boeckx and Hornstein 2003, 2004, 2006a,b, Landau 2003, 2007, Bowers 2008, Bobaljik and Landau 2009, Hornstein and Polinsky 2010, Modesto 2010, Ndayiragije 2012, Wood 2012.

would have to be generated in the affectee position; a relationship of binding links this phrase to a PRO possessor inside the possessum DP. On theories that permit such movement (see, e.g., Hornstein 1999), the affectee position could be obtained by movement; the possessum phrase contains a copy just as it would on a raising analysis.

(4) a. *Control into TP*

[<sub>DP</sub> Sarah]<sub>experiencer</sub> hopes [<sub>TP</sub> PRO/Sarah<sub>agent</sub> to buy the house]

b. *Control into DP (pseudo-German (1))*

Tim washed [<sub>DP</sub> the neighbor]<sub>affectee</sub> [<sub>DP</sub> PRO/~~the neighbor~~<sub>possessor</sub> the car]

Given a view like Hornstein's, then, two forms of possessor phrase movement could be distinguished: one that is properly possessor *raising* (i.e., movement into a nonthematic position) and one that is movement but not raising in the strict sense, since a thematic position is the landing site.

What should we expect external possession in actual languages to be like, given this range of choices? The naturalness with which both raising- and control-style external possession can be described leads us to expect that natural language grammars should in principle countenance both. Indeed, given the large number of languages showing external possession constructions of some form or another (as documented, e.g., in Payne and Barshi 1999a), it seems in fact plausible that both options are instantiated in actual grammars. I contend that this is true. This is the major empirical contention of this article.

I cannot, however, contend that the existence of both types of external possession is a truth that is obvious. Several decades of research into external possession constructions have uncovered numerous examples of languages where external possession behaves like control, and extraordinarily few clear cases where it behaves like raising. The control-style analysis applies in a straightforward way to a language like German. As in a striking majority of European languages, external possession in German is associated with a requirement of possessor affectedness.<sup>3</sup> Possessor dative sentence (1) is infelicitous, even morbid, if the neighbor is dead; the possessor phrase *der Nachbarin* 'the neighbor' is assigned an additional affectee  $\theta$ -role in the possessor dative construction. Analyses of German possessor dative constructions respond to this semantic fact in ways that closely mirror approaches to cross-clausal control. This means either binding of a silent possessor element from a thematic position in the clausal spine, as in Hole 2005 (in the spirit of Chomsky 1981), or movement from possessor position into a clausal thematic position, as in Lee-Schoenfeld 2006 (in the spirit of Hornstein 1999). In response to similar facts, similar proposals have been widely explored in the analysis of French (Guéron 1985, 2006, Tellier 1991, Vergnaud

<sup>3</sup> On this areal trend, see König and Haspelmath 1998:sec. 2 and Haspelmath 1999. In languages where external possession is found predominantly with body-part possessa (e.g., French), it is sometimes also reported that external possession requires that the *possessum* be affected (Cheng and Ritter 1987). These notions are clearly related: when the possessum is part of the possessor's body, an effect on the possessum is an effect on the possessor.

and Zubizarreta 1992, Koenig 1999, Nakamoto 2010), Spanish (Kempchinsky 1992, Sánchez López 2007), Mandarin (Huang 1999), and other languages.

The case for the raising-style analysis has invited more skepticism. Given the possibility of a movement approach to control-like external possession, the major way in which a raising diagnosis can be established is by showing that the possessor phrase fails to receive a new  $\theta$ -role (e.g., affectee) under external possession. Evidence of possessor phrase movement is necessary to establish raising, but it is not sufficient. It is notable, in this connection, that in spite of a rich debate over possessor phrase movement for many languages, very little attention has been focused on external possessor phrases that are not required to be affectees. The few examples that have been discussed hail for the most part from languages that remain understudied, and explicit raising analyses along these lines have been very few.<sup>4</sup> The clearest purported cases of athematic external possession from A-positions come from Tzotzil (Mayan), analyzed in *Arc-Pair Grammar* by Aissen (1987:chap. 8); from the Western Muskogean languages Choctaw and Chickasaw, the former analyzed in *Relational Grammar* by Davies (1986:chap. 3) and the latter discussed by Munro (1984); and perhaps also from Malagasy (Austronesian), described in detail by Keenan and Ralalahoerivony (2001). Within transformational grammar, work on Hebrew by Landau (1999) and on Nuu-chah-nulth by Ravinski (2007) is notable in explicitly advocating possessor movement without thematic effects, but the empirical situation regarding affectedness judgments for Hebrew at least remains controversial.<sup>5</sup> For languages like Korean for which possessor movement analyses have been widely discussed (Ura 1996, Ko 2007), those analyses have come under fire for failing to account for affectedness constraints (e.g., Tomioka and Sim 2007); similar remarks apply to various instances of external possession explored as cases of Possessor Ascension in the framework of *Relational Grammar* (e.g., possessor dative constructions in French and Spanish; Blake 1990:82). If affectedness constraints on external possessors are indeed to be recognized in languages like Hebrew, French, Spanish, and Korean, these languages do not provide evidence for a true raising-style approach to external possession. The debate about possessor phrase movement in such languages should be recontextualized as a debate over the movement analysis of control.

The curious shortage of examples of raising-like external possession, compared with the wealth of control-like examples, has led some to doubt that Universal Grammar should permit possessor phrase movement in the way that it permits raising to subject.<sup>6</sup> This contention, if true,

<sup>4</sup> The case is of course different where possessor phrases occupy clausal  $\bar{A}$ -positions, as in the languages discussed by Szabolcsi (1984), Chung (1994), Gavrusseva (2000), and Haegeman (2004). Since this kind of external possession raises slightly different issues, I largely set it aside here.

<sup>5</sup> See Guéron 2006, Pylkkänen 2008. Notably, Lee-Schoenfeld (2006:123) reports that her Hebrew consultants do not share the crucial affectedness judgments Landau reports. I will not resolve this controversy here.

<sup>6</sup> See, for example, Guéron 2006 on Landau's (1999) raising analysis of Hebrew, and Blake 1990 on possessor ascension analyses in *Relational Grammar*.

comes with serious consequences. It entails that there is an end to the parallels between dependencies into nonfinite TP and those into possessive DP when it comes to movement to A-positions. This in turn suggests that analyses that posit possessor phrase movement into *thematic* A-positions for languages like German (e.g., Lee-Schoenfeld 2006, 2008), Russian (Grashchenkov and Markman 2008), Chinese (Kuo 2009), French (Nakamoto 2010), or Brazilian Portuguese (Rodrigues 2010) would have to be reconsidered. In the broadest terms, this conclusion deals a blow to the idea that referential dependency can in general be reduced to movement (Hornstein 2001).

What, then, are the prospects for the raising-style analysis? Do natural languages ever show true possessor raising in the way that they show raising to subject? This article is devoted to the contention that they do. I will make a new case for this conclusion on the basis of the Nez Perce construction in (2), which presents a particularly clear example of simple possessor raising. The possessor phrase moves from a position internal to the possessum DP to a position in the clausal spine. As in classic cases of raising to subject, the A-position targeted by movement is not a position in which a  $\theta$ -role is assigned. There is no affectedness condition on possessor movement in Nez Perce.

To make the case for the simple raising analysis of (2), I first provide some background on object case, object agreement, and the structure of the Nez Perce vP (section 2). In sections 3 and 4, I outline basic properties of the Nez Perce external possession construction and show how the movement analysis derives these and additional facts. In section 5, I address the semantics of possessor movement and make the case against an affectedness condition. This establishes that possessor movement in Nez Perce is not movement to a thematic position; it is pure possessor *raising*. In section 6, I then investigate the motivations for possessor raising, developing an account that treats possessor movement as case-driven, and exploring the consequences for the analysis of the Nez Perce genitive. The verbal morphology of possessor raising is investigated in relation to case assignment in section 7. In section 8, I relate the Nez Perce possessor-raising phenomenon to its more control-like European counterparts; this section concludes the article.

## 2 The Structure of the Nez Perce vP

Nez Perce is a morphologically rich language in which ordinary objects of monotransitive verbs show two distinctive behaviors relevant to possessor raising.<sup>7</sup> They mark a case traditionally called the *objective*, distinct from that of transitive subjects (ergative) and intransitive subjects (nominative); and they control dedicated object agreement for person and number.

<sup>7</sup> Nez Perce is a highly endangered language spoken by about 30 elderly individuals in Idaho, Washington, and Oregon. Unattributed examples are from fieldwork with a total of four speakers conducted in Lapwai, ID, from 2007 to 2012. Grammatical sketches can be found in Aoki 1970, Rude 1985, Crook 1999:chap. 2, and Deal 2010b:chap. 1. Prior work on external possession can be found in Rude 1985, 1986, 1999.

- (5) *Only objects mark objective case*
- a. Hi-pnim-se- $\emptyset$  picpic.  
3SUBJ-sleep-IMPERF-PRES cat.NOM  
'The cat is sleeping.'
- b. Ciq'aamqal-nim pee-tw'ehke'yk-se- $\emptyset$  **picpic-ne**.  
dog-ERG 3/3-chase-IMPERF-PRES cat-OBJ  
'The dog is chasing the cat.'
- (6) *Objects control dedicated object agreement*
- a. *pro* cewcew-tee'nix.  
*pro* call-HAB.PRES.PL  
'We call / make phone calls.'
- b. *pro* 'e-cewcew-tee'nix ('ip-ne).  
*pro* 3OBJ-call-HAB.PRES.PL 3SG-OBJ  
'We call him/her.'
- c. *pro* 'e-nees-cewcew-tee'nix ('imuu-ne).  
*pro* 3OBJ-O.PL-call-HAB.PRES.PL 3PL-OBJ  
'We call them.'

Objects are not distinguished by word order, however, and may appear in any linear order with respect to subject and verb (Rude 1992, Crook 1999:231–232, Deal 2010b:21–22).

Objective case and object agreement are extremely well-correlated (Deal 2010a). Ditransitive constructions reveal a common structural basis for the two. First, some basic facts: In a ditransitive, it is always the goal or source argument, never the theme, that controls object agreement and marks the objective case. The theme argument appears in the nominative, and does not agree. These facts hold regardless of the relative order of goal and theme. (Note that goal/source arguments are marked exactly as are objects of monotransitives; there is no distinct dative case.)

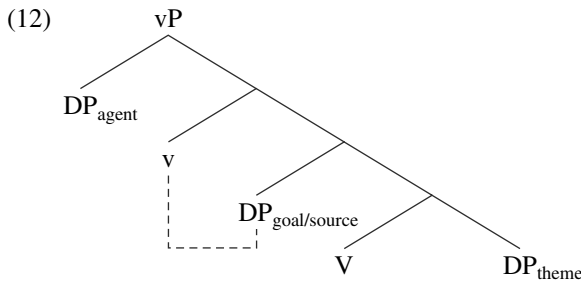
- (7) a. 'aayat-onm<sub>agent</sub> pe-'eny- $\emptyset$ -e tam'aamiin<sub>theme</sub> **haacwal-a**<sub>goal</sub>.  
woman-ERG 3/3-give-P-REM.PAST cake.NOM boy-OBJ  
'The lady gave the boy cake.'
- b. 'aayat-onm<sub>agent</sub> pe-'eny- $\emptyset$ -e **haacwal-a**<sub>goal</sub> tam'aamiin<sub>theme</sub>.  
woman-ERG 3/3-give-P-REM.PAST boy-OBJ cake.NOM  
'The lady gave the boy cake.'
- (8) *pro*<sub>agent</sub> 'e-nees-pe $\hat{x}$ wi- $\emptyset$ -ye nukt<sub>theme</sub> 'imuu-ne<sub>source</sub>.  
*pro* 3OBJ-O.PL-steal-P-REM.PAST meat.NOM 3PL-OBJ  
'I stole meat from them.'  
(Aoki 1994:530)
- (9) Weet *pro*<sub>agent</sub> 'e-tkuytuu'- $\emptyset$ -ye **Angel-ne**<sub>goal</sub> poxpok'ala<sub>theme</sub>?  
Y.N *pro* 3OBJ-throw-P-REM.PAST Angel-OBJ ball.NOM  
'Did you throw Angel the ball?'

Against this background, we can use Condition C effects to probe the relative structural relation between the goal/source DP and the theme DP. This test reveals that the argument that marks

objective case and controls object agreement in these structures—the goal or source—is the higher of the two objects.<sup>8</sup> The goal/source c-commands into the theme. This produces disjoint reference effects in (10b) and (11b).

- (10) a. *Pinooc-nim<sub>i</sub> pee-kiwyek-θ-e Elwit’et-ne<sub>j</sub> [’ip-nim<sub>i/j</sub> hipt].*  
 Pinooc-ERG 3/3-feed-P-REM.PAST Elwit’et-OBJ 3SG-GEN food.NOM  
 ‘Pinooc<sub>i</sub> fed Elwit’et<sub>j</sub> her<sub>i</sub>/his<sub>j</sub> food.’  
 b. *Pinooc-nim<sub>i</sub> pee-kiwyek-θ-e ’ip-ne<sub>\*i/\*j</sub> [Elwit’et-nim<sub>j</sub> hipt].*  
 Pinooc-ERG 3/3-feed-P-REM.PAST 3SG-OBJ Elwit’et-GEN food.NOM  
 ‘Pinooc<sub>i</sub> fed him/her/it<sub>\*i/\*j</sub> Elwit’et<sub>j</sub>’s food.’
- (11) a. *Weet pro ’e-tkuytuu’-θ-ye [’ip-nim-nix<sub>i</sub> poxpok’ala] Angel-ne<sub>i</sub>?*  
 Y.N *pro* 3OBJ-throw-P-REM.PAST 3OBJ-GEN-EMPH ball.NOM Angel-OBJ  
 ‘Did you throw Angel<sub>i</sub> her<sub>i</sub> ball?’  
 b. *Weet pro ’e-tkuytuu’-θ-ye [Angel-nim<sub>j</sub> poxpok’ala] pro<sub>i/\*j</sub>?*  
 Y.N *pro* 3OBJ-throw-P-REM.PAST Angel-GEN ball.NOM *pro*  
 ‘Did you throw him/her<sub>i/\*j</sub> Angel’s<sub>j</sub> ball?’

These facts point to a familiar asymmetric structure for double object constructions, shown in (12).<sup>9</sup>

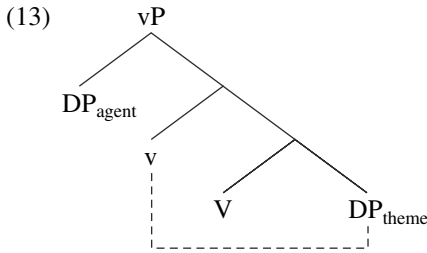


The higher object of the ditransitive participates in object agreement, indicated by a dashed line, and marks the objective case. These two morphological behaviors are the head- and dependent-marking realizations of an Agree relation between a DP and v. Locality constraints on Agree require that the DP that enters into this relation must be the closest to v in its c-command domain; and so the goal or source argument, and not the theme argument, will always be chosen.

In a monotransitive, the single object is the closest DP to v in its c-command domain, as shown in (13).

<sup>8</sup> This is one of several tests that reveal structural asymmetry in English ditransitives (Barss and Lasnik 1986). Other tests applicable in English (e.g., Condition A, superiority, negative polarity item licensing) are not straightforwardly applicable to Nez Perce.

<sup>9</sup> I provide here only a minimal structure for the ditransitive vP, representing structural asymmetry between objects but glossing over many other interesting questions; see Larson 1988 and Pyllkänen 2008, among other works.



We can generalize that object agreement and objective case are behaviors of the highest object, or the second-highest argument, in the Nez Perce vP.

### 3 The Object Possessor-Raising Construction: Basic Profile

We now turn to five crucial properties of the construction in (2), henceforth the *object possessor-raising construction*. Central to this sentence type is a DP that has the semantics of a possessor but the syntax of a clausal dependent. The English correlate of this possessor DP is italicized in all examples in this article.

The possessor DP in the object possessor-raising construction shows three properties typical of clausal dependents. First, it controls clausal object agreement.<sup>10</sup> The possessum DP does not agree. This agreement asymmetry is reflected in both person and number agreement. In sentence (14), the possessor DP is plural, and the possessum DP singular; object agreement must be plural.

- (14) *pro* hi-\*(**nees**)-hex-ne'ny- $\emptyset$ -e    **ma-may'as-na** pist.  
*pro* 3SUBJ-O.PL-see- $\mu$ -P-REM.PAST PL-child-OBJ    father.NOM  
 'He saw *the children's* father.'  
 (Rude 1986:119)

In sentence (15), the possessor DP is first person, and the possessum DP third person. Nez Perce verbs show overt person agreement only for third person.<sup>11</sup> Here, object agreement must take the form consistent with a first person object, (15a), rather than that encoding a third person object, (15b).

- (15) a. *pro* **hi**-tq'ilikeec-e'ny-u' **'iin-e** 'iniit.  
*pro* 3SUBJ-fall- $\mu$ -PROSP 1SG-OBJ house.NOM  
 'It will fall on *my* house.'  
 b. \**pro* **pee**-tq'ilikeec-e'ny-u' **'iin-e** 'iniit.  
*pro* 3/3-fall- $\mu$ -PROSP 1SG-OBJ house.NOM  
 Intended: 'It will fall on *my* house.'

<sup>10</sup> This property and the following one have been observed by Rude (1986).

<sup>11</sup> This holds for both subject and object agreement. On the morphosyntax of Nez Perce agreement, see Deal 2010b.



These facts are highly reminiscent of basic ditransitive constructions, in which the goal/source DP agrees, and the theme DP does not.

Second, in the object possessor-raising construction, the possessor DP can mark objective case. The possessum DP cannot.

- (16) Himiis-nim pee-p-e'ny- $\emptyset$ -e      **hoq'hoq'-na** siis      / \*siis-ne.  
 wolf-ERG 3/3-eat- $\mu$ -P-REM.PAST pig-OBJ      soup.NOM / \*soup-OBJ  
 'The wolf ate *the pig's* soup.'

These facts are again reminiscent of basic ditransitives: the goal/source DP marks the objective case, and the theme DP remains in the nominative.

Third, in the object possessor-raising construction, the possessor and possessum are freely separable from one another. Just as the relative order of verb, goal/source, and theme is flexible in an ordinary ditransitive, so the order of the possessor DP is flexible with respect to the verb and other verbal dependents, including the possessum DP, in a possessor-raising sentence.

- (17) a. Angel-nim paa-'ya $\hat{x}$ -na'ny- $\emptyset$ -a      Tatlo-na taaqmaa $\mathfrak{t}$ .  
 Angel-ERG 3/3-find- $\mu$ -P-REM.PAST Tatlo-OBJ hat.NOM  
 'Angel found *Tatlo's* hat.'  
 b. Angel-nim Tatlo-na paa-'ya $\hat{x}$ -na'ny- $\emptyset$ -a      taaqmaa $\mathfrak{t}$ .  
 Angel-ERG Tatlo-OBJ 3/3-find- $\mu$ -P-REM.PAST hat.NOM  
 c. Angel-nim taaqmaa $\mathfrak{t}$  paa-'ya $\hat{x}$ -na'ny- $\emptyset$ -a      Tatlo-na.  
 Angel-ERG hat.NOM 3/3-find- $\mu$ -P-REM.PAST Tatlo-OBJ

Nez Perce constituent questions involve *wh*-fronting (Deal 2010b). In interrogative possessor-raising sentences, the possessor may undergo *wh*-fronting without pied-piping the possessum.

- (18) 'isii-ne *pro* 'e-sewleke'yk-ey'-se- $\emptyset$       'aatoc?  
 who-OBJ *pro* 3OBJ-drive- $\mu$ -IMPERF-PRES car.NOM  
 'Whose car are you driving?'  
 (19) 'isii-ne *pro* 'aw-'ya $\hat{x}$ -na'ny- $\emptyset$ -a      'iniit?  
 who-OBJ *pro* 3OBJ-find- $\mu$ -P-REM.PAST house.NOM  
 'Whose house did you find?'

Importantly, this behavior is restricted to the object possessor-raising construction. In non-possessor-raising sentences, possessum and possessor do not behave as independent constituents. Linear contiguity is required. Examples (20a–c) show this constraint in declaratives: genitive-marked possessor phrase *Angelnim* 'Angel's' must be adjacent to possessum phrase *taa $\mathfrak{t}$  'hat'*.<sup>12</sup>

<sup>12</sup> These judgments contrast with two corpus examples reported in Deal 2010a:99, which seem to show possessors separated from possessa in non-possessor-raising environments. The pattern in question is exceedingly rare in corpora, and consultants' judgments on the examples here are quite sharp. I am not sure what status to accord to the discrepancy.

- (20) a. *pro* 'ew-'nii-se- $\emptyset$  Tatlo-na **Angel-nim** **taaqmaat**.  
*pro* 3OBJ-give-IMPERF-PRES Tatlo-OBJ Angel-GEN hat.NOM  
 'I'm giving Tatlo Angel's hat.'
- b. \**pro* **Angel-nim** 'ew-'nii-se- $\emptyset$  Tatlo-na **taaqmaat**.  
*pro* Angel-GEN 3OBJ-give-IMPERF-PRES Tatlo-OBJ hat.NOM
- c. \**pro* 'ew-'nii-se- $\emptyset$  **Angel-nim** Tatlo-na **taaqmaat**.  
*pro* 3OBJ-give-IMPERF-PRES Angel-GEN Tatlo-OBJ hat.NOM

In interrogative sentences, outside of the possessor-raising construction, *wh*-movement of a possessor phrase obligatorily pied-pipes the possessum phrase.

- (21) a. 'isii-nm 'iniit-pe 'ee wee-s- $\emptyset$ ?  
 who-GEN house-LOC you be-P-PRES  
 'Whose house are you at?'
- b. \*'isii-nm 'ee wee-s- $\emptyset$  'iniit-pe?  
 who-GEN you be-P-PRES house-LOC
- (22) a. 'isii-nm ciickan *pro* 'ew-'nii- $\emptyset$ -ye 'aayat-ona?  
 who-GEN blanket.NOM *pro* 3OBJ-give-P-REM.PAST woman-OBJ  
 'Whose blanket did you give to the lady?'
- b. \*'isii-nm *pro* 'ew-'nii- $\emptyset$ -ye ciickan 'aayat-ona?  
 who-GEN *pro* 3OBJ-give-P-REM.PAST blanket.NOM woman-OBJ

Only in the possessor-raising construction is it possible to disrupt the surface constituency of possessor and possessum.

A fourth property of the object possessor-raising construction concerns the verb. This is required to take a special suffix, *e'ni*, which (for reasons to become clear) I gloss as 'μ'.<sup>13</sup>

- (23) a. Weet *pro* 'a-capakayk- $\emptyset$ -a hipinwees-ne?  
 Y.N *pro* 3OBJ-clean-P-REM.PAST eating.table-OBJ  
 'Did you clean the table?'
- b. Weet *pro* 'a-capakayk-\*(a'ny)- $\emptyset$ -a Besi-ne hipinwees?  
 Y.N *pro* 3OBJ-clean-\*(μ)-P-REM.PAST Bessie-OBJ eating.table.NOM  
 'Did you clean *Bessie's* table?'

<sup>13</sup> This suffix is subject to allomorphy as well as to general phonological rules of vowel harmony, glide formation, and glottal stop metathesis. The morphological patterns are as follows: A short allomorph (*ey'lay'*) appears when the following suffix is CV or greater. (The vowel is lengthened when stressed.) A long allomorph (*e'nila'ni*) appears otherwise. (The final vowel is lengthened when word-final.) In addition, an *n* may appear suffix-initially depending on the morphological class of the constituent to the left, and a *y* may appear suffix-initially to resolve hiatus. These patterns are discussed at greater length by Deal and Wolf (in preparation).

- (24) a. *pro* 'ew-'nii-se- $\emptyset$                     pike-ne    miyapkaawit.  
           *pro* 3OBJ-give-IMPERF-PRES mother-OBJ baby.NOM  
           'I am giving the mother the baby.'
- b. *pro* 'ew-'nii-\*(**yey**)-se- $\emptyset$             Angel-ne pike            miyapkaawit.  
           *pro* 3OBJ-give-\*( $\mu$ )-IMPERF-PRES Angel-OBJ mother.NOM baby.NOM  
           'I am giving *Angel's* mother the baby.'

This suffix does not appear in ordinary ditransitive constructions; compare (23a) with (7)–(9), and (24a) with (24b).

A final central property of the object possessor-raising construction concerns its obligatoriness. External possession constructions in many languages productively alternate with structures where the possessor phrase is expressed only internal to the possessum DP (*internal possession*). This is the case in German, for instance, where internal and external possession differ semantically in terms of possessor affectedness. Both German sentences (25a) and (25b) are grammatical, but the external possession version (25b) can only be felicitous when Paul is alive. These examples come from Hole 2005.

- (25) Paul died first . . .
- a. Dann starb auch seine Mutter.  
     then died also his    mother  
     'Then his mother died, too.'
- b. #Dann starb **ihm**    auch seine Mutter.  
     then died him.DAT also his    mother  
     'Then his mother died *on him*, too.'

Nez Perce notably does not show a productive contrast of this type (Morvillo 1891, Rude 1986). Examples like (26b), the putative internal possession counterpart of (26a), are not grammatical.

- (26) a. Weet *pro* 'e-cukwe-ney'-se- $\emptyset$             Luk-ne    tiim'es?  
           Y.N    *pro* 3OBJ-know- $\mu$ -IMPERF-PRES Luke-OBJ book.NOM  
           'Do you know the book of *Luke*?' (i.e., the gospel)
- b. \*Weet *pro* 'e-cukwe-ce- $\emptyset$             Luk-nim    tiim'es-ne?  
           Y.N    *pro* 3OBJ-know-IMPERF-PRES Luke-GEN book-OBJ

*Pro*-drop of the possessor phrase is available in the possessor-raising construction, as in (27a). The possessor-raising construction requires the possessive parse of this example (indicated by *pro*<sub>possessor</sub>), and tellingly, the possessive parse is not possible without the possessor-raising construction, as in (27b).

- (27) a. *pro*<sub>subject</sub> 'a-ax-nay'-sa-qa                    \*(*pro*<sub>possessor</sub>) huukux    'istuuptu-peme.  
           *pro*    3OBJ-see- $\mu$ -IMPERF-REC.PAST    *pro*            hair.NOM cut-from  
           i. 'I saw *her* hair (on the ground) from being sheared.'  
           ii. \*'I saw the hair (on the ground) from being sheared.'

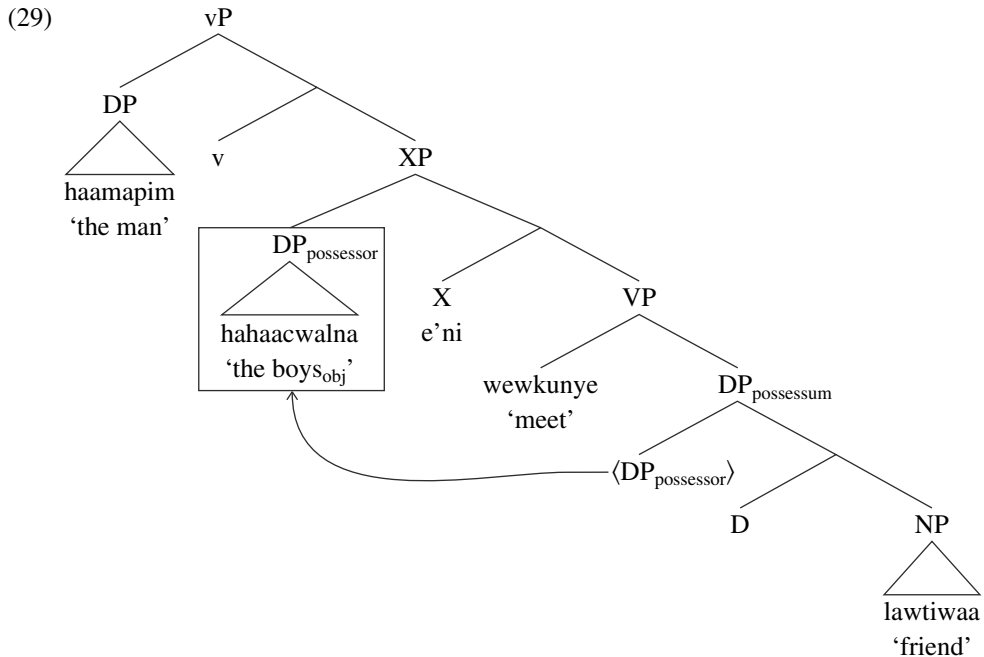
- b.  $pro_{\text{subject}}$  'a-ax-ca-qa                      ( $*pro_{\text{possessor}}$ ) hukuux-ne 'istuuptu-peme.  
*pro*      3OBJ-see-IMPERF-REC.PAST      *pro*      hair-OBJ      cut-from  
 i. \*'I saw *her* hair (on the ground) from being sheared.'  
 ii. 'I saw the hair (on the ground) from being sheared.'

The impossibility of a possessive parse for an example like (27b) is of a piece with the ungrammaticality of (26b): where the verbal morphology of possessor raising is absent, a possessor phrase within the highest object is ruled out.

#### 4 The Movement Analysis

The possessor movement analysis accounts straightforwardly for the properties listed above. Example (28) is parsed as (29).

- (28) Haama-pim hi-nees-wewkuny-e'e'ny- $\theta$ -e      **ha-haacwal-na** lawtiwaa.  
 man-ERG      3SUBJ-O.PL-meet- $\mu$ -P-REM.PAST      PL-boy-OBJ      friend.NOM  
 'The man met *the boys*' friend.'



The possessor DP originates internal to the possessum DP, where it receives the possessor  $\theta$ -role. Subsequently, it moves to the specifier of a vP-internal functional head, which for the time being we might call X. The head of this projection is realized as verbal suffix *e'ni* and allomorphs. (I return to the nature of X in sections 5–7.) In its derived position, the possessor DP is the second-highest argument in vP, and thus is correctly predicted to mark objective case and control verbal

agreement. For its part, the possessum DP is *not* second-highest in vP, and is correctly expected not to mark objective or to agree with v. Like the theme of a ditransitive, it appears in the nominative. The possessor DP and the possessum DP do not form a surface constituent; those processes responsible for word order freedom among verbal arguments in Nez Perce are expected to apply in this case. It remains only to account for movement's obligatoriness, a question to which we return in section 6.

Of course, the facts thus far are largely consistent with a binding-based alternative to the movement analysis. The major outstanding test for movement concerns its sensitivity to principles of locality, and indeed Nez Perce possessor raising shows evidence of locality effects of both the relative and absolute varieties.<sup>14</sup>

Relative locality constraints are those that constrain a probe to attract only the *closest* potential goal, where calculations of closeness are made in terms of c-command. This can be formalized in a standard way.

(30) *Relative Locality*

$DP_X$  can move to Spec, $\alpha$ P only if there is no  $DP_Y$  that  $\alpha$  asymmetrically c-commands and that asymmetrically c-commands  $DP_X$ .

A relative locality effect is seen in possessor raising in ditransitives. Here, the possessor of the higher object (goal/source) but not the lower one (theme) is subject to raising.<sup>15</sup> Consider sentences (31) and (32).

- (31) *pro* 'ew-'nii-yey'-se- $\emptyset$       Angel-ne pike      taaqmaat.  
*pro* 3OBJ-give- $\mu$ -IMPERF-PRES Angel-OBJ mother.NOM hat.NOM  
 a. 'I'm giving *Angel's* mother a hat.'  
 b. \*'I'm giving *a/the* mother *Angel's* hat.'

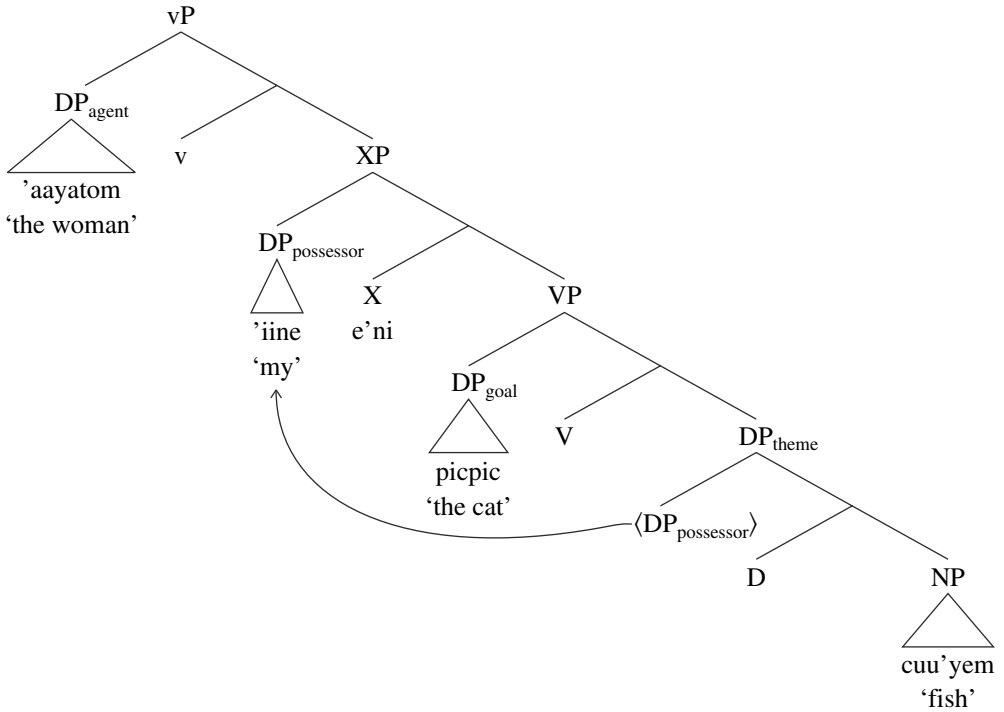
- (32) 'aayat-om hi-kiwyek-ey'-se- $\emptyset$       'iin-e picpic cuu'yem.  
 woman-ERG 3SUBJ-feed- $\mu$ -IMPERF-PRES 1SG-OBJ cat.NOM fish.NOM  
 a. 'The woman fed *my* cat the fish.'  
 b. \*'The woman fed *a/the* cat *my* fish.'

<sup>14</sup> Principles of relative locality go by several names: Relativized Minimality (Rizzi 1990), Minimal Link Condition (Chomsky 1995), Attract Closest (Chomsky 1995), Shortest Move (Chomsky 2000). Principles of absolute locality are discussed in terms of bounding nodes (Chomsky 1981), barriers (Chomsky 1986), and phases (Chomsky 2001).

<sup>15</sup> Suppose we dub whatever object marks objective case and controls agreement the *direct object* (Rude 1985). (This will mean, perhaps counterintuitively, that the goal or source argument is direct object in a ditransitive, rather than the theme.) Then we can state this finding in a way that very much recalls Relational Grammar's Law of Relational Succession (Perlmutter and Postal 1983): possessor raising to direct object is only possible from a possessum that would otherwise be direct object.

In order to derive the unacceptable (b) readings of these sentences, we would require a derivation wherein the possessor of the theme moves to Spec,XP across the goal DP, as in (33).

(33)

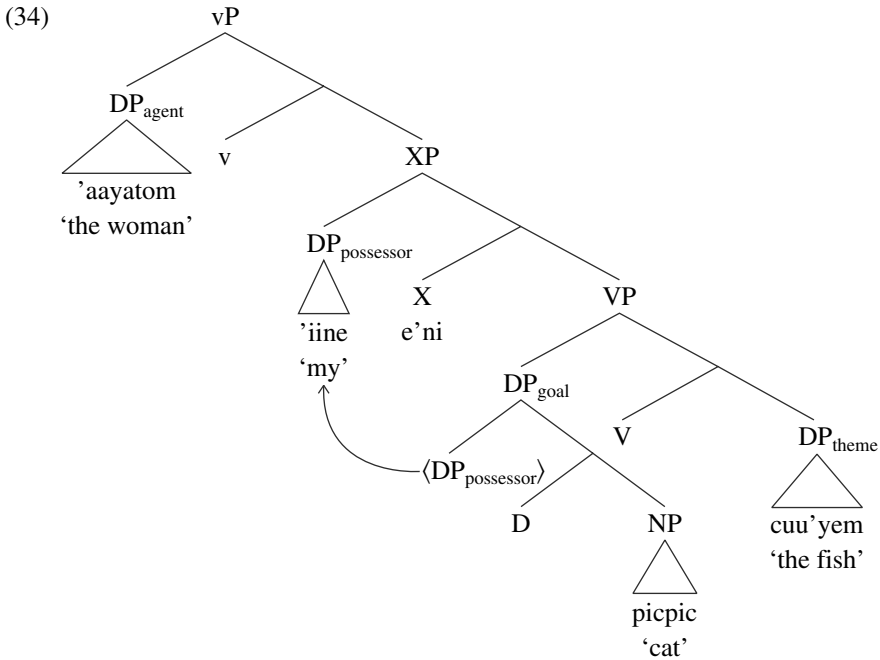


This derivation violates Relative Locality: the possessor DP that moves to Spec,XP is not the closest DP to X.  $DP_{goal}$  structurally intervenes between X and the base position of  $DP_{possessor}$ : X asymmetrically c-commands  $DP_{goal}$ , and  $DP_{goal}$  asymmetrically c-commands the base position of  $DP_{possessor}$ . Possessor movement is therefore barred.

By contrast, the acceptable (a) readings of (31) and (32) do *not* incur a Relative Locality violation, as (34) shows.

There is no DP that X asymmetrically c-commands and that asymmetrically c-commands the base position of  $DP_{possessor}$ .<sup>16</sup>

<sup>16</sup> Note that the  $DP_{goal}$  does not c-command the possessor DP it dominates, and so does not intervene.



The possessor-raising construction also shows locality effects of the absolute variety. Absolute locality concerns particular phrase types that limit extraction of their subconstituents. In Chomsky's (2001) theory, such phrases are *phasal*; only those elements that occupy the specifier position of a phasal constituent can be extracted from the phase. Chomsky (2001:45n29) suggests that DP is a phase. If this is so, we expect possessor raising only in those structures where the possessor phrase occupies Spec,DP.

This prediction is interesting in view of a special class of Nez Perce nouns that permit two distinct structures for the possessive. These nouns are all kinship terms. In addition to the productive analytic possessive structure (35), which all common nouns permit, these kinship terms show a synthetic possessive form. The synthetic form is possible only with first and second person singular possessors, and is made up of a special stem and a bound possessor prefix. Independent, genitive-marked possessor pronouns do not cooccur with the bound prefixes. There are, therefore, two entirely distinct ways to say 'my mother' or 'your father' in Nez Perce.

(35) *Productive possessive marking*

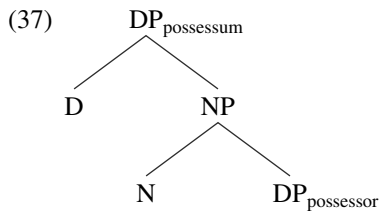
- a. 'iin-im pike  
1SG-GEN mother.NOM  
'my mother'
- b. 'im-im pist  
2SG-GEN father.NOM  
'your father'

(36) *Special synthetic possessive marking*

- a. ne-'iic  
1SG-mother.NOM  
'my mother'
- b. 'im-'toot  
2SG-father.NOM  
'your father'

This special possessive form appearing only with kinship terms—a major class of semantically relational nouns—is reminiscent of facts in English: all nouns permit the prenominal 's-genitive (*John's birthday* (relational), *John's day* (nonrelational)), but only relational nouns reliably permit the postnominal *of*-genitive (*the birthday of John* (relational), *??the day of John* (nonrelational)).<sup>17</sup>

Why should only relational nouns permit the synthetic possessive form in Nez Perce, or the *of*-genitive in English? Barker (1995) proposes that *of* is simply a marker for the direct arguments of N, projected within NP. Suppose the same holds for the special possessive structure in Nez Perce (36). With relational nouns, the structure in (37) is available.<sup>18</sup>



In Nez Perce, where there is no case marker parallel to English *of*, this structure surfaces as such only when the entire possessive NP may be realized with a synthetic possessive form.

Now we have a prediction for synthetic possessives. They should not support possessor raising. The possessor DP is buried too deeply inside the phase delineated by DP<sub>possessionum</sub> to move to Spec,XP. This prediction is correct. Rude (1986) provides the following minimal pair:

- (38) a. Kaa waaqo' ne-'iic-ep      pee-tqecimk-cix-∅      titooqan-m.  
and now    1SG-mother-OBJ 3/3-dislike-IMPERF.PL-PRES Indians-ERG  
'And now the Indians dislike my mother.'  
(Aoki 1979:17)
- b. Kaa waaqo' 'iin-e    pike      hi-tqecimk-ey'-six-∅      titooqan-m.  
and now    1SG-OBJ mother.NOM 3SUBJ-dislike-μ-IMPERF.PL-PRES Indians-ERG  
'And now the Indians dislike *my* mother.'  
(Rude 1986:122)

<sup>17</sup> These examples are from Barker 1995:chap. 2.

<sup>18</sup> Since the possessor here is a direct argument of N, only an 'inalienable' reading of the possessive should be possible. This prediction is somewhat difficult to test given speakers' strong preferences for inalienable readings of possessives with kinship terms regardless of their syntax—for example, (35) versus (36).



In sentence (38a), with synthetic possessive *ne'iiic* 'my mother', possessor raising has not taken place: there is no special verbal morphology, and object agreement shows the third person features of the possessum, rather than the first person features of the possessor. By contrast, in the possessor-raising example, (38b), the possessum head noun appears in the analytic form. Using the form of 'mother' seen in (38a) produces ungrammaticality.

- (39) \**iin-e 'iic hi-tqecimk-ey'-six-Ø titooqan-m.*  
 1SG-OBJ mother.NOM 3SUBJ-dislike- $\mu$ -IMPERF.PL-PRES Indians-ERG  
 Intended: 'The Indians dislike my mother.'

This is as predicted if the possessor-raising structure is derivable only from the analytic possessive. This constraint is enforced by the sensitivity of possessor raising to absolute locality.<sup>19</sup>

Overall, the sensitivity of possessor raising to constraints of absolute and relative locality argues strongly for a movement derivation of the possessor-raising structure.

### 5 The Case for Raising

Where is it that possessor phrases move to in the possessor-raising construction? What is the nature of the head X to whose specifier they go? The case for possessor *raising* in particular is the case that Spec,XP is not a thematic position. All available evidence points to this conclusion. Possessor raising in Nez Perce is not influenced by the semantics of the possessor phrase. It is not influenced by the alienability of the relation between possessor and possessum. It is not influenced by the ability of the possessor to be affected by the verbal action or the ability of the verbal action to have an effect on its participants.

The types of affectedness conditions that are familiar from external possession in other languages do not apply in Nez Perce. There is no entailment of the verbal action applying to the possessor as object (cf. English *She hit her on the arm* → *She hit her*).

- (40) *pro pee-c'ix'-ney'-se-Ø miyooxato-na c'iiqin.*  
*pro* 3/3-speak- $\mu$ -IMPERF-PRES chief-OBJ word.NOM  
 'He speaks *the chief's* words.' (↗ He speaks the chief.)

Relatedly, the relationship between the possessor and the possessum may be inherent/inalienable (e.g., (27a), (38b)) or accidental/alienable (e.g., (16), (23b)). Where the possessum is a body-

<sup>19</sup> Note that these facts contravene the generalization proposed by Tomioka and Sim (2007:3) in discussing external possession in Korean: "if a language has both options such as internal and external possession structures, the external possession structure is reserved for special possession relations, such as [inalienable possession] and kinship relations." In Nez Perce, in striking contrast to Korean, it is only kinship possessives that permit the internal possession structure, the structure *without* possessor raising, when occurring in object position.

part noun, possessor raising takes place regardless of whether the body part is physically attached to the possessor's body.<sup>20</sup>

- (41) *pro*<sub>subject</sub> 'a-ax-nay'-sa-qa                      *pro*<sub>possessor</sub> huukux.  
*pro*        3OBJ-see-μ-IMPERF-REC.PAST *pro*        hair.NOM  
 'I saw *her* hair.'

Context A: Her hair is attached to her head in the normal way.

Context B: She has just gotten a haircut. I go to the salon and see the hair on the ground.

There is no evidence of any affectedness constraint on the possessor in the style of what is found in German.<sup>21</sup> The possessor may be long dead.

- (42) Weet *pro* 'e-cukwe-ney'-se-∅                      Luk-ne    tiim'es?  
 Y.N    *pro* 3OBJ-know-μ-IMPERF-PRES Luke-OBJ book.NOM  
 'Do you know the book of *Luke*?'  
 (43) *pro* pee-x-te-ne'ny-u'                      Coosef-ne    temikees    naaqc    hiisemtuks-pe.  
*pro* 3/3-see-go-μ-PROSP Joseph-OBJ tomb.NOM one    moon-LOC  
 'They will go see *Joseph's* tomb next month.'

The possessor may be inanimate.

- (44) Weet *pro* 'e-hiteeme-ney'-tee'nix    Bible-ne    titwaatit?  
 Y.N    *pro* 3OBJ-read-μ-HAB.PRES.PL Bible-OBJ story.NOM  
 'Do you read *Bible* stories?'  
 (45) *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.'

The nature of the verb is unconstrained: it is not required to be eventive or telic ((42), (45)) or to carry entailments of patienthood for its object ((40), (45)).<sup>22</sup>

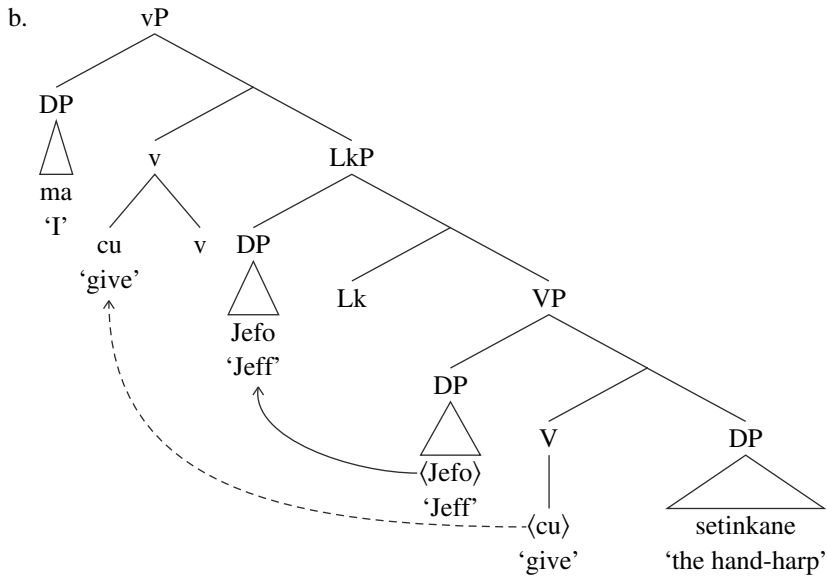
These facts speak against an analysis of X as a contentful applicative or a light verb head responsible for assigning a θ-role. They suggest instead an assimilation of X to a (low) object shift head—a head merged below *v* that forces A-movement of certain objects to its specifier. There have been many proposals for heads of this sort, based on data from various languages. Baker and Collins (2006), for instance, find evidence of such a head in Kinande, Jul'hoansi, and ꞤHoan 'linker' constructions like (46a), which they analyze roughly as in (46b).

<sup>20</sup> This is in contrast to Czech and Mohawk facts discussed by Baker (1999), Fried (1999), and O'Connor (2007).

<sup>21</sup> See Hole 2005, Lee-Schoenfeld 2006.

<sup>22</sup> See Keach and Rochemont 1994, Huang 1999, Payne and Barshi 1999b:sec. 3.3, Guéron 2006:sec. 3, Tomioka and Sim 2007 for discussion of this type of contrast.

- (46) a. Ma 'a cu Jefo ki setinkane. (≠Hoan)  
 1SG PROG give Jeff Lk hand-harp  
 'I am giving Jeff the hand-harp.'



Related proposals for low object shift are made by Johnson (1991) for English, Broekhuis (2008: chap. 2) for “all Germanic languages,” and Travis (2010) for Chinese, Swedish, and Kalangan. I will henceforth suppose that the head involved with possessor raising in Nez Perce belongs in the family of low object shifters—henceforth  $\mu$  heads—discussed by these authors. (I adopt this name from Johnson, perhaps the first to propose object shift to this location.) The Nez Perce  $\mu$  plays a role in the external possession construction that is similar to the role played by English finite T. Its merger makes an athematic specifier position available as a landing site for A-movement, and possessor raising ensues.

## 6 Obligatoriness and the Nature of Genitive

### 6.1 Syntactic Case and Last Resort

Let’s now return to the question of why possessor raising should be obligatory. Insofar as possessor raising is parallel to raising to subject—and indeed, it is exactly this parallel we have been working to establish—we expect the two processes to arise, other things being equal, from the same grammatical constraints. If it is case assignment that drives raising of subjects to T, we expect it to be case assignment that drives raising of possessors to  $\mu$ . This type of idea has been very prominent in possessor movement analyses for other languages (Keach and Rochemont 1994, Ura 1996, Landau 1999, Lee-Schoenfeld 2006). For Nez Perce, a case-theoretic motivation for possessor movement comes with some interesting consequences, in particular for the nature of genitive.

In example (47a), let us suppose movement to Spec, $\mu$ P is motivated by the case needs of the possessor phrase *Luk* ‘Luke’. Leaving this phrase in situ is not an option, as (47b) makes clear.

- (47) a. Weet *pro* 'e-cukwe-ney'-se- $\emptyset$  Luk-ne<sub>i</sub> [ $\langle$ DP<sub>possessor<sub>i</sub> $\rangle$  tiim'es]?  
 Y.N *pro* 3OBJ-know- $\mu$ -IMPERF-PRES Luke-OBJ [ book.NOM]  
 ‘Do you know the book of *Luke*?’  
 b. \*Weet *pro* 'e-cukwe-ce- $\emptyset$  [Luk-nim tiim'es-ne]?  
 Y.N *pro* 3OBJ-know-IMPERF-PRES [Luke-GEN book-OBJ]</sub>

Example (47b) shows that possessor raising is obligatory when the possessor phrase originates in the (highest) object. This situation contrasts with examples where the possessor phrase originates in an external argument. In this environment, possessor phrases surface internal to possessum phrases, where they mark the genitive case.<sup>23</sup>

- (48) [ 'ip-nim lawtiwaa-ma-pim] pe-'pt'e-six- $\emptyset$  haacwal-a.  
 [3SG-GEN friend-PL-ERG] 3/3-hit-IMPERF.PL-PRES boy-OBJ  
 ‘His friends are hitting the boy.’  
 (49) [ 'aayat-om ciq'aamqal] paa-wahnaatk-sa- $\emptyset$  picpic-ne.  
 [woman-GEN dog] 3/3-howl.at-IMPERF-PRES cat-OBJ  
 ‘The woman’s dog is howling at the cat.’

Ideally, this contrast between the behavior of possessor phrases in objects, as in (47), and their counterparts in subjects, as in (48)–(49), can be made to follow from general facts about Nez Perce clause and DP structure. We will not have to stipulate distinct internal syntax for possessives in subject and in object position.

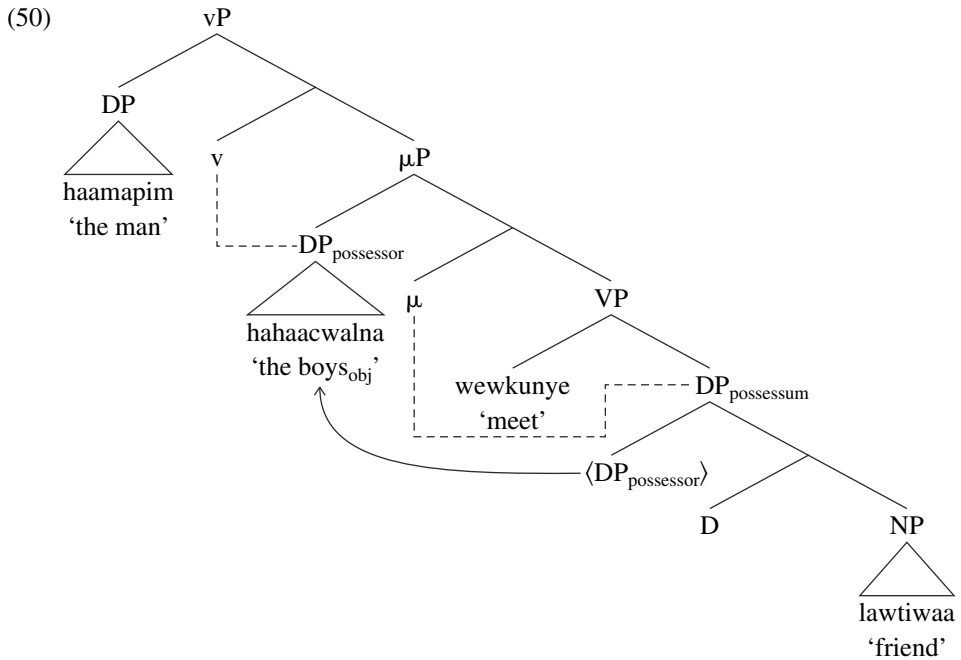
Let us then suppose that both the possibility and the necessity of case-driven possessor externalization in (47) can be taken as sources of general insight into the structure of the Nez Perce DP. We have already seen some reason to believe that the position of analytic possessors

<sup>23</sup> Note that there is variation, even for individual speakers, in the marking of ergative case on transitive subjects containing possessor phrases. (The possessor phrases themselves, however, are always marked genitive.) This variation seems to be limited to ergative case; note that cases such as locative and instrumental are not similarly omitted on the head noun when a possessor phrase is present.

- (i) Ciilyex 'iin-im 'aatim-pa hii-we-s- $\emptyset$ .  
 fly 1SG-GEN arm-LOC 3SUBJ-be-P-PRES  
 ‘There’s a fly on my arm.’  
 (ii) Waaqo' 'eetee-x koo-qaw-n- $\emptyset$  kin-ki 'iin-im 'ila'twiit-ki.  
 now INFER-1SG do-straight.through-P-PRES this-INST 1SG-GEN long.illness-INST  
 ‘Now surely I’ve been done in by this long illness of mine.’  
 (Aoki and Walker 1989:294)

in this language must be very high in DP—indeed, on the edge of that phase—in order for possessor raising to be a possibility. If the *necessity* of possessor phrase movement in (47) reflects a general fact, this fact is presumably that the syntactic ingredients of DP in Nez Perce do not include any case-assigning heads. Nez Perce syntax, that is, does not assign a genitive. Any genitive marking that appears in the language represents a kind of last resort PF repair. This approach potentially makes Nez Perce genitives similar to a range of nominal dependents in other languages, as this is essentially the analysis recommended by Borer (1984:chap. 2) for Hebrew *šel*, by Giorgi and Longobardi (1991:36–46) for Italian *di*, and by Stowell (1981:239–249) for English *of* and *'s*.

To this way of thinking, the presence of a possessor phrase inside any constituent creates a syntactic problem in Nez Perce: there is a shortage of heads available to assign case. In examples like (47a), the merger of  $\mu$  represents a syntactic solution to this problem. When the possessor phrase moves to Spec, $\mu$ P, it may locally receive objective case from *v*; case on the remnant possessum phrase is assigned by  $\mu$  itself. The tree in (50) updates (29) from this perspective. Case assignment relations are shown with dashed lines.



This structure makes sense of the fact that possessor DPs, rather than the possessum DPs that contain them, undergo raising. The latter must stay in situ to receive case from  $\mu$ . Ultimately, this proposal makes Nez Perce possessor-raising structures very similar to linker constructions like (46) on Baker and Collins’s (2006) analysis. These authors propose that the Lk head in (46b) provides a specifier position to which case can be assigned from *v*, and it assigns its own case under

c-command to material below it. This is precisely parallel to the mechanics of case assignment in (50).

We can now provide a rationale for why (47b) should be ungrammatical without possessor raising, in contrast to (48) and (49). The syntactic component must merge  $\mu$ , undertake possessor movement, and thus dispense with its case assignment problem syntactically whenever the results are syntactically well-formed. In the terms advocated by Preminger (2010, 2011), the grammar must attempt to solve its case problem in the syntax, but that attempt is allowed to fail. It fails in (48) and (49) because the possessive DPs are generated in vP, above the Merge position of  $\mu$ . Any attempt to lower the possessor into  $\mu$ P results in ill-formedness. The failure of syntactic case assignment to the possessor phrase results in the sending to PF of a caseless DP inside the projection of another DP. In this configuration, a morphological rule steps in to prevent ungrammaticality by assigning a case marker: genitive. Such a rule can be stated in a simple way reminiscent of Borer's (1984) proposal.

- (51) For any case value  $\alpha$  (including unspecified),  
 [Case: $\alpha$ ]  $\rightarrow$  [Case:Gen] / [<sub>DP</sub> DP:[      ] [<sub>DP</sub> . . . ]]

This rule replaces the case feature of any DP surfacing as specifier of another DP with the genitive.

This system now makes some predictions about the distribution of possessor externalization and genitive marking. A first prediction is that whenever a possessor phrase is for whatever reason ineligible to receive case via movement to  $\mu$ , it will not leave the possessive DP. It will surface in situ and be assigned the last resort genitive. A second prediction makes use of the precise way in which the genitive rule has been stated. Note that rule (51) is not sensitive to whether the case feature in its input is specified or unspecified. We therefore also predict that if the lower copy of a raised possessor could be pronounced, it too would be pronounced with genitive. Finally, if genitive can only be assigned to possessor phrases that are positioned in Spec,DP at the PF interface, we make a prediction about structures in which possessor phrases overtly leave the possessive DP under  $\bar{A}$ -movement. A possessor phrase that does not either receive case from v or remain in situ is left with no means of obtaining a case feature. We expect then that Nez Perce will enforce a version of the Left Branch Condition, forcing its possessors that do not receive case from v to surface internal to the possessive DP. The following three sections document that these predictions are correct.

## 6.2 Genitives Appearing When Possessor Raising Is Syntactically Excluded

First, from the theme position of a ditransitive, it is not possible to raise a possessor phrase without creating a violation of Relative Locality. The analytic possessive surfaces simply as a constituent with a genitive-marked possessor.

- (52) *pro*<sub>agent</sub> 'ew-'nii-se- $\emptyset$                       pike-ne<sub>goal</sub> [Angel-nim taaqmaat]<sub>theme</sub>.  
*pro*            3OBJ-give-IMPERF-PRES mother-OBJ [Angel-GEN hat.NOM]  
 'I'm giving the mother Angel's hat.' (cf. (31))

- (53) 'e-tquyeyuu-y Meli-ne<sub>goal</sub> ['im-im kapoo]<sub>theme</sub>!  
 3OBJ-throw-IMPER Mary-OBJ [2SG-GEN coat.NOM]  
 'Throw Mary your coat!'

Because the possessor cannot raise out of the theme possessum DP to Spec, $\mu$ P, it must surface in situ, contiguous with the possessum, and in this environment we see the emergence of case marking via genitive rule (51).

Second, certain possessor phrases are required to remain in situ because of an interaction between possessor raising and constraints on binding. Rude (1986) observes that it is not possible to raise the possessor phrase if it is bound by the subject. Rude's generalization can be seen in the facts in (54): when the subject binds a pronominal possessor, the analytic possessive object surfaces as a constituent and the verbal morphology of possessor raising does not appear.<sup>24</sup> Compare:

- (54) a. Pit'iin'-im<sub>i</sub> paa-'ya $\lambda$ -na'ny- $\emptyset$ -a 'ip-ne<sub>j</sub> [(DP<sub>possessor<sub>i</sub></sub>) picpic].  
 girl-ERG 3SUBJ-find- $\mu$ -P-REM.PAST 3SG-OBJ [ cat.NOM]  
 'The girl<sub>i</sub> found his<sub>j</sub>/her<sub>j</sub>/<sub>\*i</sub> cat.'  
 b. Pit'iin'<sub>i</sub> hi-'yaa $\lambda$ -n-a ['ip-nim<sub>i</sub> picpic].  
 girl.NOM 3SUBJ-find-P-REM.PAST [3SG-GEN cat.NOM]  
 'The girl<sub>i</sub> found her<sub>i</sub>/<sub>\*j</sub> cat.'

In short, possessor raising is forbidden when the possessor phrase is a bound pronoun, and required when it is a free one.

This contrast can be traced to Condition B. Let us suppose that all pronominal possessors in Nez Perce are subject to this condition: they must be free in their minimal binding domain, where binding domains include DP and CP. Let us further suppose that pronominal possessors that remain entirely free and those that will be bound (outside their minimal binding domain) are distinguished by some syntactic feature,<sup>25</sup> making it sensible to speak of "bound pronouns" and "free pronouns" as distinct lexical items. When a free pronoun originates in possessor position, raising of the pronoun creates no grammatical ill-formedness. The preferred, syntactic means of case assignment is therefore obligatory. This scenario corresponds to (54a). When a bound pronoun originates in possessor position, the situation is rather different. Raising a bound pronoun into the binding domain of the subject creates a violation of Condition B. Here, again, it becomes

<sup>24</sup> This binding configuration is also incompatible with ergative and objective case marking, and with object agreement; see Deal 2010a.

<sup>25</sup> This could be a bundle of  $\phi$ -features, as in Kratzer 2009. It is presumably not a [+anaphoric] or [+pronominal] feature in Chomsky's (1982) terms, though, as both free and bound pronouns are to be subject to Condition B. Therefore, in Chomsky's terms, both would need to be [+pronominal] and [-anaphoric].

possible to leave the possessor phrase in situ inside the possessive object, as in (54b), and to solve its case problem via the last resort strategy of genitive assignment, (51).

### 6.3 Genitives Appearing When Possessor Raising Is Covert

A final pattern of possessor phrases surfacing in the genitive case deserves special attention. For speakers of contemporary Nez Perce (but not, so far as descriptive and documentary materials reveal, for earlier generations of speakers), possessor-raising sentences come in two versions, which are distinguished most prominently by case morphology. In the version we have discussed thus far, the possessor phrase is marked objective; this pattern has been noted as far back as we have descriptions of Nez Perce (e.g., Morvillo 1891). In the alternative, innovative version, the possessor phrase is marked genitive. The following are minimal pairs:

- (55) a. *pro* 'a-ax-nay'-sa-qa                    **'ip-ne** huukux.  
           *pro* 3OBJ-see- $\mu$ -IMPERF-REC.PAST 3SG-OBJ hair.NOM  
           'I saw *her* hair.'
- b. *pro* 'a-ax-nay'-sa-qa                    **'ip-nim** huukux.  
           *pro* 3OBJ-see- $\mu$ -IMPERF-REC.PAST 3SG-GEN hair.NOM  
           'I saw *her* hair.'
- (56) a. Tewliki-nm pe-wiw-likeec-e'ny-u'                    **'aayat-ona** 'iniit.  
           tree-ERG    3/3-fall[of trees]-on.top- $\mu$ -PROSP woman-OBJ house.NOM  
           'The tree is going to fall on *the woman's* house.'
- b. Tewliki-nm pe-wiw-likeec-e'ny-u'                    **'aayat-onm** 'iniit.  
           tree-ERG    3/3-fall[of trees]-on.top- $\mu$ -PROSP woman-GEN house.NOM  
           'The tree is going to fall on *the woman's* house.'

What is the nature of this alternation?

The genitive versions of the possessor-raising sentences present a mix of properties we expect from an external possession structure and those we expect from its internal possession counterpart. Two crucial properties of the possessor-raising structure carry over to these examples. First, the distinctive verbal morphology of possessor raising remains obligatorily present; that distinguishes these examples from the ungrammatical (47b). This suggests that the grammar encounters a case problem, and that  $\mu$ P is projected to solve it, regardless of how these possessor phrases are ultimately realized morphologically. Second, genitive-marked possessors retain control of verbal agreement.

- (57) *pro* 'e-nees-cukwe-ney'-se- $\emptyset$                     **lepe'eeyu-nm** pike.  
           *pro* 3OBJ-O.PL-know- $\mu$ -IMPERF-PRES twins-GEN    mother.NOM  
           'She knows *the twins'* mother.'
- (58) Tewliki-nm hi-wiw-likeec-e'ny-u'                    **'iin-im** 'iniit.  
           tree-ERG    3SUBJ-fall[of trees]-on.top- $\mu$ -PROSP 1SG-GEN house.NOM  
           'The tree is going to fall on *my* house.'



In (57), the verb agrees with the plural possessor, not the singular possessum. In (58), verbal agreement takes a form consistent with a first person object, given the first person possessor, not the form indexing a third person object.

If genitive arises via rule (51), the genitive-marked phrases in (55)–(58) should be in situ in the possessum DP. Word order facts corroborate this hypothesis. Examples (59a–b) show that both genitive and objective possessors are grammatical when the possessor noun immediately linearly precedes the possessum noun. When the two are separated by another constituent, however, as in (59c–d), only the objective version remains licit.<sup>26</sup>

- (59) a. Angel-nim paa-'yaχ-na'ny-θ-a     **Tatlo-na/Tatlo-nm taaqmaat.**  
 Angel-ERG 3/3-find-μ-P-REM.PAST Tatlo-OBJ/Tatlo-GEN hat.NOM  
 'Angel found Tatlo's hat.'
- b. Angel-nim **Tatlo-na/Tatlo-nm taaqmaat** paa-'yaχ-na'ny-θ-a.  
 Angel-ERG Tatlo-OBJ/Tatlo-GEN hat.NOM 3/3-find-μ-P-REM.PAST
- c. Angel-nim **Tatlo-na/\*Tatlo-nm** paa-'yaχ-na'ny-θ-a     **taaqmaat.**  
 Angel-ERG Tatlo-OBJ/Tatlo-GEN 3/3-find-μ-P-REM.PAST hat.NOM
- d. Angel-nim **taaqmaat** paa-'yaχ-na'ny-θ-a     **Tatlo-na/\*Tatlo-nm.**  
 Angel-ERG hat.NOM 3/3-find-μ-P-REM.PAST Tatlo-OBJ/Tatlo-GEN

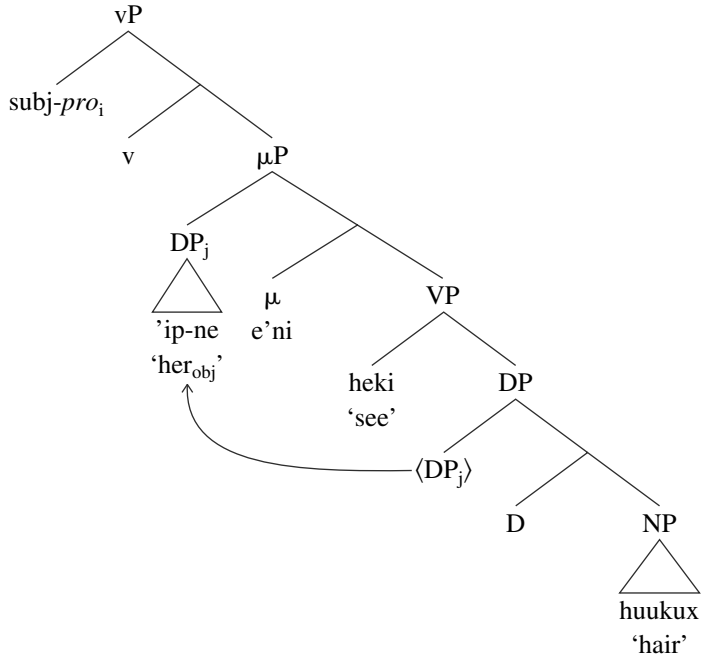
While the presence of  $\mu$  and control of agreement by the possessor phrase suggest that the possessor phrase occupies a position external to the possessum DP, these facts suggest that what is pronounced in the genitive version is something internal to that constituent.

Covert movement offers a way out of this conundrum. In both objective and genitive versions of the possessor-raising structure, the possessor phrase moves from a possessum-phrase-internal position to Spec, $\mu$ P. The resulting structure is one in which case is assigned both to the possessor and to the possessum, in the syntax. Movement produces two copies of the possessor phrase, and this presents the PF interface with a choice. Pronunciation of the higher copy results in overt movement, and pronunciation of the lower copy results in covert movement (Bobaljik 2002, Polinsky and Potsdam 2002).

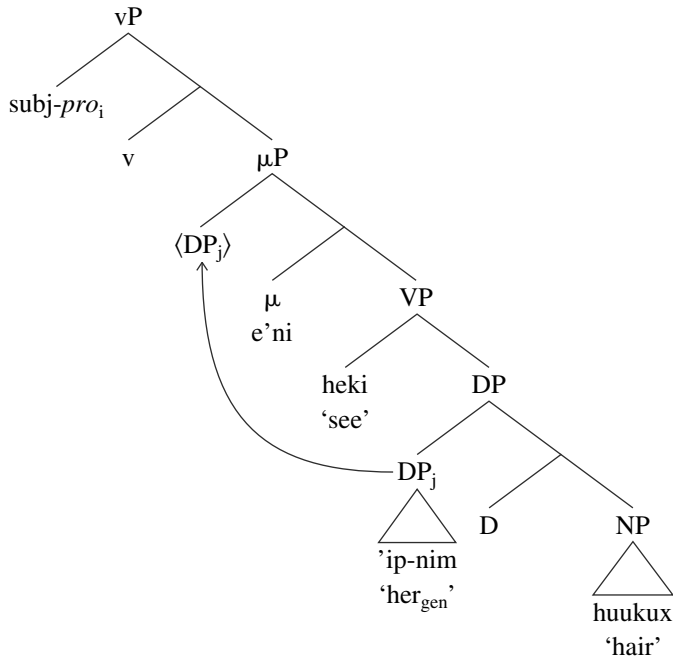
- (60) 'a-ax-nay'-sa-qa                    'ip-ne / 'ip-nim huukux.  
 3OBJ-see-μ-IMPERF-REC.PAST 3SG-OBJ / 3SG-GEN hair.NOM  
 'I saw *her* hair.'

<sup>26</sup> Owing to syncretism between ergative and genitive and the considerable flexibility of Nez Perce word order, the starred variant of example (59d) is grammatical on the parse 'Tatlo found Angel's hat' (i.e., with OVS order). Here, *Angelnim taaqmaat* 'Angel's hat' is a constituent with a genitive-marked possessor, and *Tatlonm* is the ergative-marked subject—a parse in conformity with the generalization above.

(61) a. *Higher copy surfaces*



b. *Lower copy surfaces*



Pronunciation of the lower copy means pronunciation of a possessor phrase in situ. This possessor phrase is part of an A-chain to which objective case is assigned; it has no grammatical need for a means of case marking. But note that the very simple version of the genitive assignment rule we have been considering is not sensitive to this fact. Rule (51) blindly applies to all DPs in Spec,DP, overwriting their case features with genitive. This genitive shows up in environments of possessor raising only when that raising is covert.

The case for covert movement—and therefore in favor of rule (51) in the analysis of genitive case—can in fact be strengthened on independent grounds. Regardless of the pronunciation of one or the other copy, movement effects a rearrangement of c-command relationships among the possessor phrase and any arguments lower than the possessum phrase from which it is extracted. The major means at our disposal for glimpsing this rearrangement in Nez Perce is Condition C.<sup>27</sup>

To see how covert movement might change the c-command domain of a possessor phrase, we must first establish the c-command behavior of a possessor that remains in situ. Consider a possessor phrase inside a transitive subject. In (62), the possessive DP *'ipnim mamay'ac* 'her children' is an external argument, generated in Spec,vP; this is above the position targeted by possessor raising, and so the possessor phrase must stay in place. Observe that there is no disjoint reference effect in (62).

- (62) *'ip-nim ma-may'ac paa-'yaχ-taa'nix Angel-ne kine.*  
 3SG-GEN PL-child.NOM 3/3-find-HAB.PRES.PL Angel-OBJ here  
 'Her<sub>i</sub> kids usually find Angel<sub>i</sub> here.'

This shows that in-situ possessors do not (or, more conservatively, do not have to) c-command out of the possessive DP that encloses them. The facts are different in environments of covert possessor raising. The following examples show possessor phrases covertly moving from goal arguments in ditransitives. Pronounced copies are boldfaced; unpronounced copies are in angled brackets. Crucially, the possessor phrases, surfacing in the genitive, may not be coreferential with R-expressions that are (in) lower arguments.<sup>28</sup>

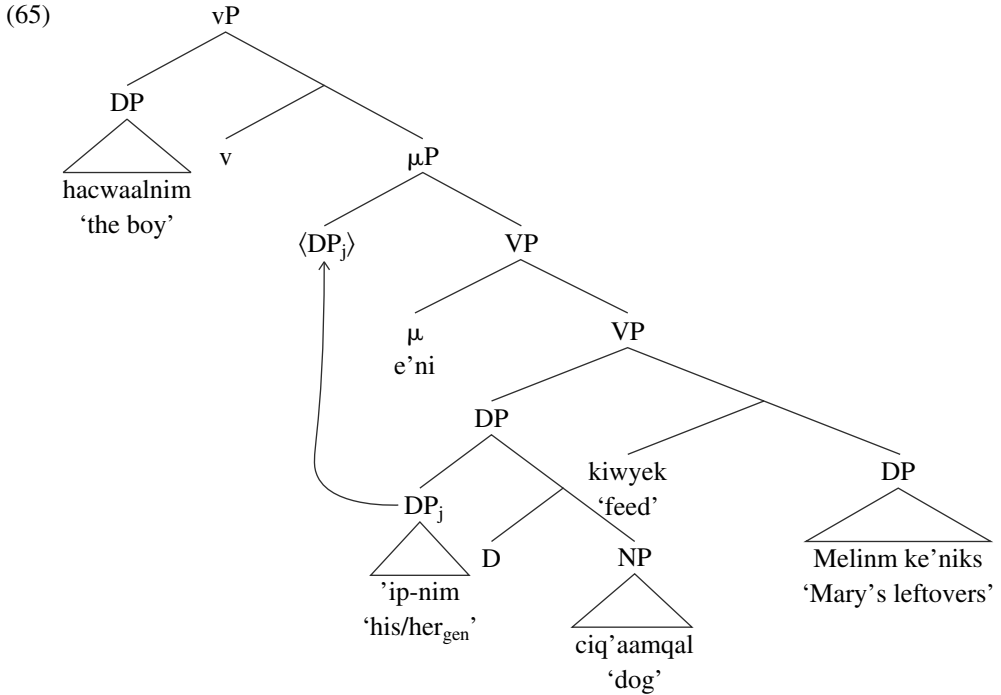
- (63) *Haacwal-nim<sub>agent</sub> pee-kiwyek-ey'-se-∅* <'ip-ne<sub>j</sub>> [**'ip-nim<sub>j</sub>** ciq'aamqal]<sub>goal</sub>  
 boy-ERG 3/3-feed-μ-IMPERF-PRES <3SG-OBJ> [3SG-GEN dog.NOM]  
 [Meli-nm ke'niks]<sub>theme</sub>.  
 [Mary-GEN leftovers.NOM]  
 'The boy is feeding *his/her<sub>j/\*i</sub>* dog Mary<sub>i</sub>'s leftovers.'

<sup>27</sup> See Polinsky and Potsdam, to appear, for discussion of other c-command-based tests that can be used to diagnose covert A-movement in other languages, particularly Adyghe.

<sup>28</sup> There is an interesting contrast in the status of the English translations of these examples. To my ear, the translation of (63) does not require disjoint reference, but the translation of (64) does. This could plausibly be explained in terms of the interaction of Larson (1988)–style dative shift and a Reinhart (1983)–style preference for binding over coreference. The DP PP version of this example, *I am giving the baby to its mother*, can be analyzed with semantic binding; plausibly, it is the desire to maintain this binding that renders the double object version of the sentence degraded. Note that similar considerations do not apply in Nez Perce, where there is no syntactic alternative to the double object frame.

- (64) *pro*<sub>agent</sub> 'ew-'nii-yey'-se- $\emptyset$  (<'ip-ne<sub>j</sub>>) [**'ip-nim<sub>j</sub>** pike]<sub>goal</sub> miyapkaawit<sub>theme</sub>.  
*pro* 3OBJ-give- $\mu$ -IMPERF-PRES <3SG-OBJ> [3SG-GEN mother.NOM] baby.NOM  
 'I am giving *his/her<sub>j/\*i</sub>* mother the baby<sub>i</sub>.'

This effect follows straightforwardly on the covert movement parse, shown in (65) for example (63).



Covert movement puts the possessor phrase in a position of c-command over *Meli* 'Mary', from which it is accordingly forced to be disjoint.

In addition to their bearing on covert movement, these facts provide an interesting window onto the grammatical status of Conditions B and C. Where raising of a possessor phrase would create a violation of Condition B, the grammar does not do raising. We see now that the potential for a Condition C violation is not handled in a parallel way. Compare (63) with (66), where raising is avoided in virtue of Condition B.

- (66) Haacwal<sub>agent</sub> hi-kiwyek-se- $\emptyset$  ['ip-nim ciq'aamqal]<sub>goal</sub> [Meli-nm hipt]<sub>theme</sub>.  
 boy.NOM 3SUBJ-feed-IMPERF-PRES [3SG-GEN dog.NOM] [Mary-GEN food.NOM]  
 'The boy<sub>j</sub> is feeding *his<sub>j/\*i</sub>* dog Mary's food.'

As before, a bound possessor pronoun may remain in situ, thanks to Condition B. Raising is obligatory when the possessor is a free pronoun, however; it does not matter whether that raising will create a violation of Condition C. This finding suggests that the mechanics behind Condition

B violations, but not those behind Condition C violations, are visible to the narrow syntax. Condition C effects are informed by *c*-command relations established in syntax, but the violations produced by Condition C cannot be taken into consideration in determining whether or not there should be possessor raising.

6.4 *Genitives and Left-Branch Extraction*

To capture the appearance of genitive under covert movement, it is crucial that genitive assignment rule (51) apply to *all* possessor phrases in Spec,DP. Let us now suppose that Nez Perce makes the genitive available *only* in this configuration. This leads to a straightforward explanation of an otherwise puzzling restriction: whereas A-movement may remove the possessor from a possessive DP,  $\bar{A}$ -movement may not do so. Nez Perce, in other words, obeys a version of Ross’s (1967) Left Branch Condition, but only for  $\bar{A}$ -movement.

Let us first consider  $\bar{A}$ -movement of possessors that have undergone possessor raising. These possessors move to Spec, $\mu$ P—an A-position—and may go on to scramble in the clause and to undergo  $\bar{A}$ -movement in interrogatives, as we saw in section 3.

(67) *Scrambling of raised possessors*

- a. Angel-nim paa-’ya $\hat{x}$ -na’ny- $\emptyset$ -a Tatlo-na taaqmaat.  
 Angel-ERG 3/3-find- $\mu$ -P-REM.PAST Tatlo-OBJ hat.NOM  
 ‘Angel found *Tatlo*’s hat.’
- b. Angel-nim Tatlo-na paa-’ya $\hat{x}$ -na’ny- $\emptyset$ -a taaqmaat.  
 Angel-ERG Tatlo-OBJ 3/3-find- $\mu$ -P-REM.PAST hat.NOM

(68)  *$\bar{A}$ -movement of raised possessors in interrogatives*

- a. ’isii-ne *pro* ’e-sewleke’yk-ey’-se- $\emptyset$  ’aatoc?  
 who-OBJ *pro* 3OBJ-drive- $\mu$ -IMPERF-PRES car.NOM  
 ‘Whose car are you driving?’
- b. ’isii-ne *pro* ’aw-’ya $\hat{x}$ -na’ny- $\emptyset$ -a ’iniit?  
 who-OBJ *pro* 3OBJ-find- $\mu$ -P-REM.PAST house.NOM  
 ‘Whose house did you find?’

These behaviors are expected of DPs receiving case syntactically from *v*. The surface position of the possessor phrase is not relevant for case assignment, and so  $\bar{A}$ -movement processes may freely apply.

Matters are different for possessors outside of the contexts in which possessor raising is possible. Recall that possessors of ditransitive themes, which cannot undergo possessor raising, cannot scramble away from possessa.

- (69) a. *pro* ’ew-’nii-se- $\emptyset$  Tatlo-na **Angel-nim taaqmaat.**  
*pro* 3OBJ-give-IMPERF-PRES Tatlo-OBJ Angel-GEN hat.NOM  
 ‘I’m giving *Tatlo* Angel’s hat.’
- b. \**pro* **Angel-nim** ’ew-’nii-se- $\emptyset$  Tatlo-na **taaqmaat.**  
*pro* Angel-GEN 3OBJ-give-IMPERF-PRES Tatlo-OBJ hat.NOM

- c. \**pro* 'ew-'nii-se- $\emptyset$                     **Angel-nim** Tatlo-na **taaqaat**.  
       *pro* 3OBJ-give-IMPERF-PRES Angel-GEN Tatlo-OBJ hat.NOM

Likewise, these possessors may not undergo *wh*-movement without the possessum phrase.

- (70) a. '**isii-nm ciickan**    *pro* 'ew-'nii- $\emptyset$ -ye                    'aayat-ona?  
       who-GEN blanket.NOM *pro* 3OBJ-give-P-REM.PAST woman-OBJ  
       'Whose blanket did you give to the lady?'  
       b. \*'**isii-nm**    *pro* 'ew-'nii- $\emptyset$ -ye                    **ciickan**                    'aayat-ona?  
       who-GEN *pro* 3OBJ-give-P-REM.PAST blanket.NOM woman-OBJ

The ill-formedness of (69b–c) and (70b) is expected given the PF rule for genitive. Genitive is assigned to possessors that are internal to possessive DPs at PF. The copy of the possessor phrase appearing overtly in (69b–c) and (70b) is outside of the possessive DP, and thus it is left with no source for genitive or any other case. Thus, the calculus of case for possessors enforces a version of the Left Branch Condition in a language otherwise happy to syntactically move possessors.

## 7 On the Verbal Morphology of Possessor Raising

We have now seen several pieces of the argument for raising-style external possession in Nez Perce:

- Possessor phrases in objects move outside of those objects.
- The position to which they move is not a  $\theta$ -position.
- This movement is driven by a case-marking problem.

Like the genitive rule in (51), the  $\mu$ -based solution that I have advocated for the case-marking problem is reasonably general; it is at any rate not expressly sensitive to whether or not there is possessor raising. The motivation for merging  $\mu$  is not the presence of a possessor phrase per se, but a shortage of assigners of case. This makes it natural to think of  $\mu$  as a general means for augmenting the syntactic valence of a verbal structure. Merging  $\mu$  enables one additional DP to receive a syntactic case. The consequences of this idea are the topic of this section.

Nez Perce morphology does not overtly realize the syntactic case that  $\mu$  assigns to the possessum, but it does overtly realize the  $\mu$  head itself. This head shows up in the morphology of the verb. In showing special verbal marking in contexts of external possession, Nez Perce is different from languages like German, but it is remarkably similar to a class of other languages from around the world. The list ranges from African languages like Kinyarwanda and Chichewa (Kimenyi 1980, Baker 1988) to Kalkatungu in Australia (Blake 1984), Georgian in the Caucasus (Harris 1981), and Creek, Ika, Mohawk, Oluta Popoluca, and Tzotzil in the Americas (Martin 1999, Frank 1990, Baker 1999, Zavala Maldonado 1999, Aissen 1979, 1987). This special verbal marking is boldfaced in (71) and (72), from Tzotzil (Mayan; Mexico) and Ika (Chibchan; Colombia). Note that in both examples, the verb agrees with the object possessor, rather than the object itself.

- (71) Ch-i-s-toyilan-**be**                    j-jol.  
 ASP-1ABS-3ERG-keep.lifting-IO 1GEN-head  
 ‘He kept lifting *my* head.’  
 (Aissen 1987:126)
- (72) Tigri peri mouga nΛ-kΛ-gga    au-?    no?  
 jaguar dog two    1OBJ-PERI-eat AUX-NEG Q  
 ‘The jaguar ate *my* two dogs, didn’t it?’  
 (Frank 1990:90)

The crosslinguistic proliferation of examples of this type makes it possible to ascertain a clear generalization about the pattern of verb marking in external possession. This marking is rarely, if ever, specific to the external possession construction itself. Languages showing a special verb form in this syntactic context reliably use a form they also employ in at least certain other cases of extended verbal valence.

This generalization is true of Nez Perce, Tzotzil, and Ika alike, and if an analysis like (50) can be maintained across these languages, we are handed a clear explanation for why. The only head that special possessor-raising morphology could be marking in structures like (50) is  $\mu$ , and the function of  $\mu$  involves considerations of case that are not specific to external possession. Whenever additional sources of case are needed within vP,  $\mu$  is expected to appear. Looking at things from the other direction, the presence of  $\mu$ —which is clearly marked in the verb in these languages—serves as an important clue for the language learner regarding a highly abstract process of case assignment. The presence and absence of the morphology of  $\mu$  indicates the structures that do and do not require additional case assigners.

From this perspective, the absence of  $\mu$  in ordinary Nez Perce ditransitives like (73) indicates to the learner that the ordinary components of ditransitives are sufficient to assign both object DPs a case. If, as I have been assuming, one object of a ditransitive is the specifier of VP and the other is V’s complement, the higher object (the goal/source) may receive its case from v, and the ditransitive verb will need to itself have the capacity to assign case to the theme.

- (73) ‘aayat-onm<sub>agent</sub> pe-’eny- $\emptyset$ -e                    **haacwal-a**<sub>goal</sub> tam’amiin<sub>theme</sub>.  
 woman-ERG    3/3-give-P-REM.PAST boy-OBJ                    cake.NOM  
 ‘The lady gave the boy cake.’

In assigning case in simple ditransitives in this way, Nez Perce differs from other languages making use of heads with the case assignment profile of  $\mu$ . In the African languages discussed by Baker and Collins (2006), ordinary ditransitives consistently appear with case-assigning ‘linker’/ $\mu$  morphology. The same is true of Tzotzil, as Aissen (1987:chap. 7) shows. All ditransitives in this language require the same verbal suffix *be* that we see in external possession examples like (71). Aissen glosses this suffix *IO* (indirect object).

- (74) a. 7a    li Xun-e, ba y-ak’                    chitom.  
 TOPIC the Xun-CL go 3ERG-give pig  
 ‘Xun went to give the pig.’  
 (Aissen 1987:104)

- b. 7a li Xun-e, ba y-ak'-(**be**) chitom li 7antz-e.  
 TOPIC the Xun-CL go 3ERG-give-IO pig the woman-CL  
 'Xun went to give the woman the pig.'  
 (Aissen 1987:105)
- (75) a. 7i-j-meltzan j-p'ej na.  
 ASP-1ERG-make one-NC house  
 'I made a house.'
- b. 7i-j-meltzan-\*(**be**) j-p'ej na li Xun-e.  
 ASP-1ERG-make-IO one-NC house the Xun-CL  
 'I made a house for Xun.'  
 (Aissen 1987:105)

Given Aissen's (1979, 1987) argument that external possession in Tzotzil makes no thematic demands of the possessor,<sup>29</sup> it seems highly plausible that the special verbal morphology of Tzotzil external possession (e.g., (71)) is morphology of  $\mu$ . The presence of the same morphology in ordinary ditransitives is expected, given that the primary function of  $\mu$  is assignment of case, rather than anything particular to external possession. *All* ditransitive structures in Tzotzil present a case problem that  $\mu$  must solve. Case is never assigned to the theme object by V in this language; in the (a) examples above, the theme object gets case from v, and in the (b) examples,  $\mu$  must be merged to provide for an additional case. The same can plausibly be said of Ika, where the same morphology seen in external possession (72) appears in thematic ditransitives with a second argument as recipient, goal, or addressee (Frank 1990). Frank glosses this suffix *PERI* (peripheral participant).

- (76) a. Kafé angei?-na-rua ni.  
 coffee sell-DIST-1S CERT  
 'I sold coffee.'
- b. Kafé Pablo-se? k-angei?-na-rua ni.  
 coffee Pablo-LOC PERI-sell-DIST-1S CERT  
 'I sold coffee to Pablo.'  
 (Frank 1990:69)

<sup>29</sup> Aissen (1979:99, 100) provides the following relevant examples, among others:

- (i) 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)'
- (ii) Ta j-nujan-be s-p'inal.  
 IMPERF 1ERG-turn.face.down-IO 3ERG-pot  
 'I'll turn *its* (the soup's) pot face down. (i.e., the pot that the soup was cooked in)'



- (77) a. Ža-na.  
 say-DISTAL  
 ‘He said.’  
 b. NΛ-kΛ-Ža-na.  
 1OBJ-PERI-say-DISTAL  
 ‘He said to me.’  
 (Frank 1990:68)

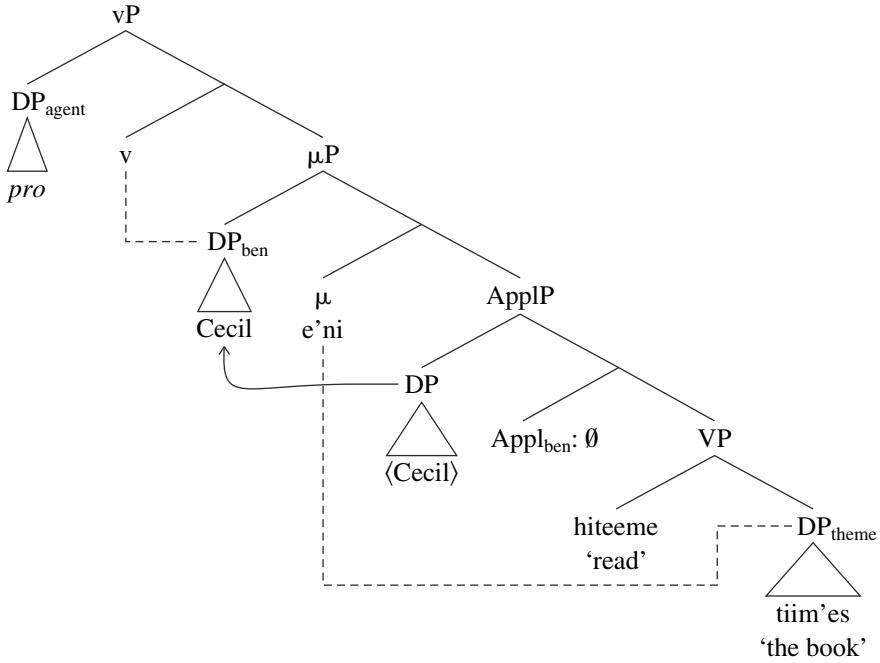
Nez Perce is different from Tzotzil and Ika not in possessing  $\mu$  or in marking it overtly, but in the ability of its ordinary ditransitive verb roots to assign their theme arguments case. This leads to a different inventory of environments in which the  $\mu$  head is needed.

Where, then, does the Nez Perce learner use  $\mu$  morphology to learn that additional case assigners are needed? Besides possessor-raising structures, the major instance of this need is seen in structures including nonsubcategorized benefactive or malefactive participants. These are exemplified in the following sentences from Crook 1999:178. The (a) examples show basic transitive clauses; the (b) examples show the addition of nonsubcategorized benefactives, and the presence of the familiar  $\mu$  morphology.

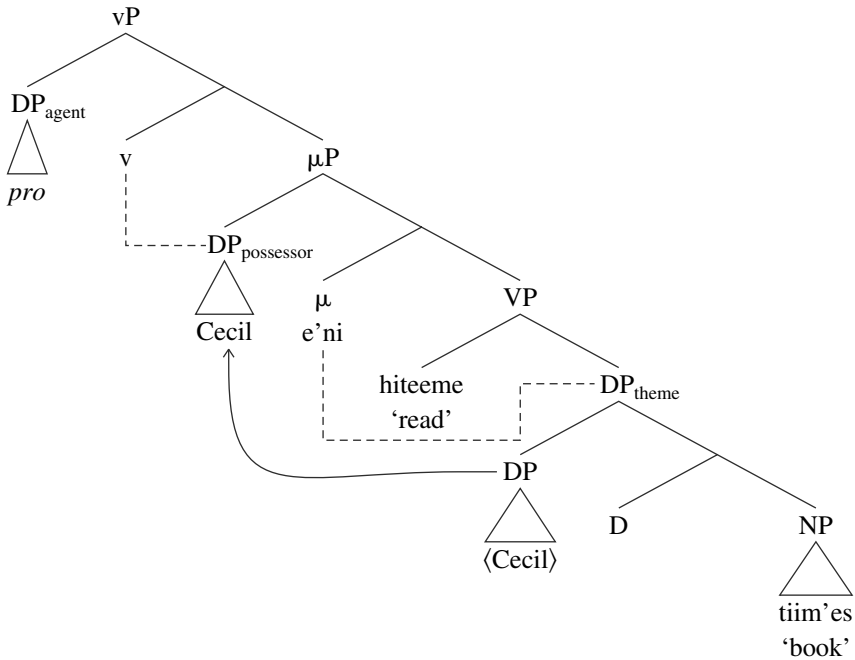
- (78) a. *pro* 'e-hiteeme-ce- $\emptyset$                       tiim'es-ne.  
*pro* 3OBJ-read-IMPERF-PRES book-OBJ  
 ‘I'm reading the book.’  
 b. *pro* 'e-hiteeme-ney'-se- $\emptyset$                       **Cecil-ne** tiim'es.  
*pro* 3OBJ-read- $\mu$ -IMPERF-PRES Cecil-OBJ book.NOM  
 ‘I'm reading Cecil the book.’
- (79) a. *pro* 'a-anii-sa- $\emptyset$                                       'iniit-ne.  
*pro* 3OBJ-make-IMPERF-PRES house-OBJ  
 ‘I'm making the house.’  
 b. *pro* 'a-ani-yaay'-sa- $\emptyset$                                       **Marsi-na** 'iniit.  
*pro* 3OBJ-make- $\mu$ -IMPERF-PRES Marcie-OBJ house.NOM  
 ‘I'm making Marcie the house.’

Discussion with consultants reveals that these (b) examples are in fact ambiguous between two readings. On one reading, highlighted by Crook's translations, the boldfaced phrases are interpreted as referring to beneficiaries. On the other reading, the phrases are interpreted as referring to possessors. As in the corresponding paradigms of Tzotzil and Ika, the two possibilities surface with the same morphology because their verbal marking—a realization of  $\mu$ —is an indicator of syntactic valence augmentation only. The structure of example (78b) on the benefactive parse is given in (80); compare the possessor-raising parse in (81). Case assignment relations are again shown with dashed lines.

(80) *Benefactive parse of (78b)* ( $\approx$  I am reading Cecil the book, I am reading the book for Cecil)



(81) *Possessor-raising parse of (78b)* ( $\approx$  I am reading Cecil's book)



Structure (80) contains an extra head in the clausal spine that (81) does not contain. This head, Appl<sub>ben</sub>, introduces a benefactive DP and assigns it a  $\theta$ -role, but it does not have the ability to assign a case. This means that the benefactive structure presents another version of the case-marking problem that characterizes sentences with possessor raising. The merger of  $\mu$  solves the problem in the same way in both environments. The higher DP is raised to Spec, $\mu$ , where it agrees with *v*, while  $\mu$  itself assigns case to a DP that is lower.

Thinking about examples like (78b) and (79b) in this way entails a departure from the traditional analysis, which treats the special suffix appearing here (*e'ni* and its allomorphs) as itself a marker of the benefactive (Aoki 1970, 1994, Rude 1985, Crook 1999). Following this analysis, I treated the suffix as a realization of an affectee Appl head in Deal 2010b. In the present perspective, this would amount to saying that *e'ni* and its allomorphs are homophonous markers of either  $\mu$  (in possessor raising) or Appl (in benefactives); and of course if this is so, the presence of the suffix in benefactive constructions provides no evidence for the general, non-possessor-raising-specific function of  $\mu$ .

This alternative view is perhaps a bit unwieldy, and it is in fact possible to marshal a Nez Perce–internal argument against it. If *e'ni* may independently realize both  $\mu$  and Appl, it should be able to realize both on the same verb. The double realization would arise when a possessor sits on the edge of the benefactive DP, as is shown in (82b). This produces ungrammaticality, however.

- (82) a. \**pro* 'e-hiteeme-ne'ny-ey'-se- $\emptyset$  Caan-ne lawtiwaa tiim'es.  
*pro* 3OBJ-read-APPL- $\mu$ -IMPERF-PRES John-OBJ friend.NOM book.NOM  
 Intended: 'I'm reading John's friend the book.'  
 b. [<sub>VP</sub> *pro* V [ <sub>$\mu$ P</sub> John  $\mu$  [<sub>ApplP</sub>[<sub>DP</sub> ~~John~~ friend] Appl<sub>ben</sub> [<sub>VP</sub> read book]]]]]

Consultants report that the verb form in (82a) is simply not well-formed. This is expected if *e'ni* and its allomorphs always realize  $\mu$ . There can be no more than one  $\mu$  head in a vP, just as there can be only one V; for this reason, there can be no more than one exponent of  $\mu$  on the verb in (82a).<sup>30</sup>

<sup>30</sup> It should also be noted that the major argument for the traditional view of *e'ni* as benefactive morphology turns out to be illusory. This concerns the presence of *e'ni* marking in putative monotransitives. Where there is only one object, there is no case-theoretic motivation for merger of  $\mu$ ; the single object will simply receive its case from *v*. Finding *e'ni* in a clearly monotransitive clause would therefore provide strong evidence that the suffix does not always realize  $\mu$ .

In Deal 2010b, I advanced (i) as an example of such a case, proposing that *e'ni* here is an applicative that transitivizes the intransitive verb *siisi* 'stew, make soup'.

- (i) 'e-nees-sisi-ye'nii- $\emptyset$  'istuk'ees-ne!  
 3OBJ-O.PL-make.soup- $\square$ -IMPER guest-OBJ  
 'Make soup for the guests!'  
 (Aoki and Walker 1989:519)

But there is reason to suspect that (i) may actually be a ditransitive with a null theme cognate object ('Stew the guests up some soup!'). Argument drop is rampant in Nez Perce, and the simplex form of this verb does indeed permit cognate objects.

The lesson of these examples in the broadest sense is that possessor raising does not come from *sui generis* tools. Ordinary syntactic machinery of case assignment drives possessors to raise, and it also is present to solve case assignment problems in other environments.

## 8 Conclusion: Possessor Raising in Perspective

Argument dependencies spanning the boundary of nonfinite TP can be divided into two groups according to whether the higher position is a thematic one, as in control, or not, as in raising. The overall conclusion from this work is that this same distinction is relevant to dependencies spanning the boundary of possessive DP—external possession. External possession in the style of control (however this is analyzed) is well-known. Here, I have provided new empirical evidence of external possession of the simple raising type. Object possessor raising in Nez Perce involves case-driven movement of possessor phrases into athematic A-positions external to the possessum DP. It is possessor raising in a way thematically parallel to raising to subject.

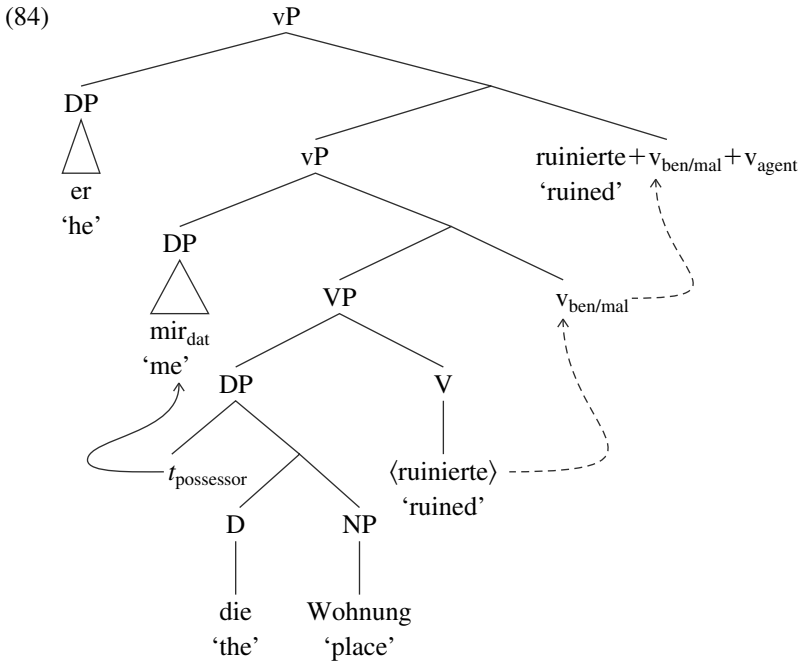
The distinction between control and raising at the DP level seems to me quite promising for ongoing debates over the analysis of control in particular. Universal Grammar does not prohibit A-movement from possessor position, and this makes it possible to entertain an analysis of affectedness-linked external possession that features movement to thematic positions. It makes it possible, in other words, to open up external possession as a new front in the debate over movement analyses of control.

Let me close with a look at some parameters of external possession that are brought into view by movement-based analyses on the control end of the spectrum. Two of these may be seen in comparing Nez Perce possessor raising with its control-like counterpart in German. Adopting a movement analysis, Lee-Schoenfeld (2006) proposes to parse German (83) as (84).

- (83) Er ruinierte **mir** die Wohnung.  
 he ruined me.DAT the place  
 ‘He ruined *my* place.’

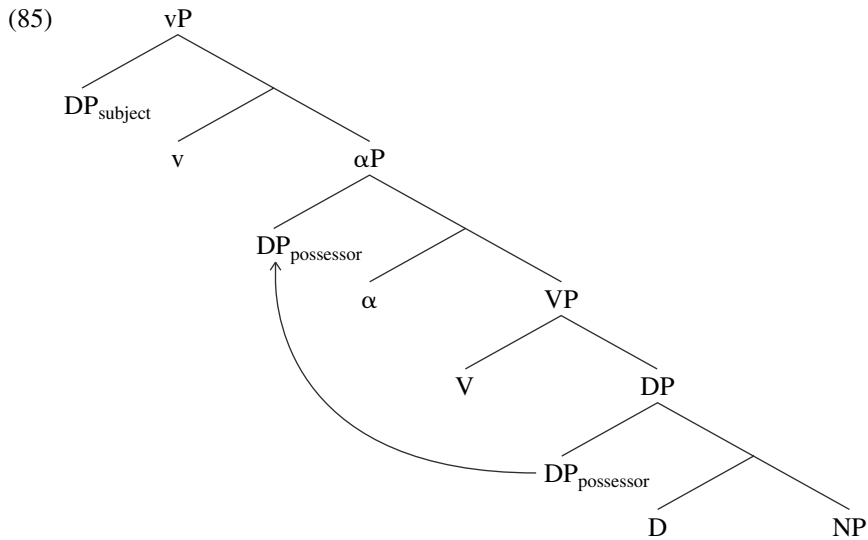
- 
- (ii) Teqe-siisii- $\emptyset$  siis!  
 quickly-make.soup-IMPER soup  
 ‘Quickly make soup!’  
 (Aoki and Walker 1989:519)

If (i) is indeed ditransitive, the appearance of  $\mu$  morphology is expected on case-theoretic grounds. Notably, intransitive verbs that entirely forbid objects—for example, *paay* ‘arrive’, *ciklii* ‘return’—cannot be made into monotransitives by adding *e’ni*. This is as predicted if *e’ni* always realizes  $\mu$ , present for reasons of case, and there is no distinct morphology for the affectee applicative.



On this parse, the projection hosting the moved possessor phrase is a light verb or applicative projection headed by  $v_{ben/mal}$ , responsible for assigning an affectee  $\theta$ -role to the phrase in its specifier position. Case for the possessor phrase is also handled by  $v_{ben/mal}$ , which grants all arguments in its specifier position—whether moved there or base-generated there—an inherent dative.

In the assignment of  $\theta$ -roles and case, this structure contrasts neatly with the Nez Perce structure for possessor raising. In both languages, possessor phrases undergo A-movement to a position just below the base position of the external argument, as shown in (85). In both languages, the head  $\alpha$  hosting possessor movement is a familiar one. The German-style possessor dative construction is built on a light verb/applicative head that obtains its argument via movement. Nez Perce-style possessor raising is built on  $\mu$ , a linker and a close cousin to the heads of object shift. The first task for the child acquiring an external possession construction is simply to choose whether to assign thematic content to  $\alpha$ . Where  $\alpha$  is an applicative or light verb head assigning an affectee  $\theta$ -role, external possession will impose a thematic condition. Where  $\alpha$  is a pure case head, assigning no new role, possessor movement is true possessor raising.



The second task for the child acquiring external possession is to ascertain how case is assigned in the external possession structure. German and Nez Perce again represent two possible choices. In a language like German where a thematic head is involved in possessor movement, a special case marker may appear as a morphological signal of the presence of that head. In this respect, there is a close connection between this parameter of external possession and the previous one. When the child learns that dative is an inherent case for affectees in German, she learns that possessor dative constructions in that language are instances of thematic external possession. In a language like Nez Perce where no new thematic position is involved in external possession, there is no possibility of an inherent case for the possessor. Perhaps the child acquiring this language is likewise informed or biased about the semantic content of the Nez Perce  $\alpha$  by patterns of case. Structural objective case for the possessor suggests that possessor movement is a simple raising operation driven by case assignment considerations alone.

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*Department of Linguistics*  
*University of California, Santa Cruz*  
*1156 High Street*  
*Santa Cruz, CA 95064-1077*  
*ardeal@ucsc.edu*