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Gettin' together a POSSE

The primacy of predication in ASL possessives

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This article addresses the derivational relationship between attributive (nominal) and predicative (verbal) possessives marked by the POSS sign in American Sign Language. Though traditionally classified as a possessive pronoun, a collection of morphological, syntactic, and semantic patterns is presented here as evidence that POSS instead displays the distributional characteristics of a verbal predicate in the language. Classifying POSS as a verbal predicate of possession explains its presence in predicative possessives and allows its attributive use to be derived from this underlying verbal structure as an instance of a prenominal reduced relative clause modifier. These base structures and their interaction with other components of the predicative and attributive domains explain the documented properties of attributive and predicative POSS possessives, including, crucially, the sometimes divergent behaviors of these two possessive constructions.

Keywords: ASL, possessives, morpho-syntax, semantics, locatives, relative clauses

1. Introduction

Possessive constructions in human language encode a relation between the possessor and the possessee. When this relation is encoded within the nominal domain the resulting structure is referred to as an *attributive possessive*, while those possessives encoded outside of the nominal, as part of the sentential domain, are referred to as *predicative possessives*, on a par with the attributive (*blue book*) and predicative (*is blue*) distinction in adjectives. In American Sign Language (ASL), as in other languages, both signed and spoken, a variety of attributive and predicative possessive forms are grammatically available, a sampling of which is exemplified in (1)–(2).¹

1. Unless cited otherwise, data is from the author's fieldwork with native (deaf) signers. The English translations "an X of Y's" and "the X belongs to Y" have been adopted throughout to

- (1) Attributive possessives
 - a. Attributive POSS
i-BRUNO POSS_i BOOK
 - b. APOSTROPHE-S
BRUNO APOSTROPHE-S BOOK
 - c. Juxtaposition
BRUNO BOOK
'a book of Bruno's'
- (2) Predicative possessives
 - a. Verbs of possession
BRUNO HAVE BOOK
'Bruno has a/the book.'
 - b. Predicative POSS
BOOK_i POSS_i i-BRUNO
'The book belongs to Bruno.'

The present research focuses on the appearance of the possessive marker POSS, pictured in Figure 1, in attributive (1a) and predicative (2b) possessives and the derivational relationship underlying the overlap in form and meaning in these structures. Based on morphological, syntactic, and semantic patterns, I will argue that POSS is a verbal predicate of possession, an approach that straightforwardly captures the appearance of POSS in predicative possessives. The attributive use of POSS is derived from this verbal source via (reduced) relative clause modification of the possessee nominal, paralleling contemporary approaches to possession wherein attributive and predicative possessives are uniformly derived from underlying small clause predication structures (see, for example, den Dikken 2006).

I begin with a descriptive overview of POSS possessives and a discussion of how these structures have been traditionally accounted for: POSS has been classified as a pronoun- or determiner-like marker of attributive possession, with predicative possessives arising as predicate nominal structures. Empirical evidence from a variety of domains is presented against such an analysis in Section 3. Therein, I show that attributive uses of POSS fail to exhibit the quantificational properties expected if POSS is a possessive pronoun or determiner, while predicative uses of POSS fail to exhibit the structural or interpretive parallels to attributive POSS that would be expected under a predicate nominal analysis. In Sections 4 and 5, these

reflect quantificational and interpretive properties of the ASL structures. Discussion of these and other conventions can be found in Abner (2012), which also provides details of POSS structures that lie outside the scope of the present research and analyses of other attributive possessive structures in ASL. For a comprehensive typological discussion of possessive constructions in ASL, the reader is referred to Chen Pichler & Hochgesang (2008).



Figure 1. Production of POSS with first (left) and non-first (right) person possessors.

and other patterns are used to develop and defend the verbal predicate analysis of POSS. Section 4 focuses on distributional arguments for categorizing POSS as a verbal predicate in ASL and the morpho-syntactic evidence that it patterns with *belong*-type verbs of possession in terms of its argument structural properties. Constituent order, morphological patterns, and interpretive restrictions in predicative POSS (e.g. the ‘strict possession’ requirement) are the consequence of how this verbal structure interacts with the functional architecture of the predicative domain. The analysis of attributive POSS as a prenominal reduced relative clause modifier is developed in Section 5 and is shown to account for the documented empirical patterns, such as the quantificational variability of the attributive posses- sive. An overview of the arguments presented closes the paper.

2. POSSESSIVE STRUCTURES IN AMERICAN SIGN LANGUAGE

The presence of POSS in both attributive and predicative possessives in ASL suggests underlying structural similarity of these constructions. In Section 2.1, I provide a descriptive overview of the behavior of POSS in its attributive and predicative uses. These descriptive remarks will serve to illustrate the basic distributional behaviors of POSS, though additional properties of the constructions analyzed here will be introduced as they become relevant. Section 2.2 then identifies two derivational approaches that can account for the presence of POSS in both of these environments: either attributive possessive constructions are derived from their predicative counterpart or vice versa. As discussed therein, it is the latter of these approaches — the primacy of attributive POSS and the derivation of predicative POSS from it — that is assumed in the existing descriptive, typological, and formal literature on ASL. Section 3 explicates the empirical challenges facing such an

analysis and the remainder of the paper is devoted to developing and supporting the alternative approach, wherein predicative POSS serves as the basic possessive structure, from which attributive POSS can be derived.

2.1 Descriptive overview

As the data in (3) illustrates, the default surface position of POSS in both attributive and predicative possessives is medial to the possessor and the possessee, where ‘default’ here refers to a neutral word order not associated with any specific semantic restrictions. The order of the possessor (BRUNO) and possessee (BOOK) relative to each other, however, varies across these two structures. The neutral word order in attributive POSS possessives (3a) is possessor-initial, while in predicative POSS possessives (3b) it is possessee-initial, paralleling, in the latter case, the neutral subject-verb-object word order of the language.

- (3) a. [Attributive-POSS_i BRUNO POSS_i BOOK] ARRIVE
‘A book of Bruno’s arrived.’
- b. IX_i THINK [Predicative-POSS BOOK POSS_i i BRUNO]
‘I think the book belongs to Bruno.’

Alternative word orders are possible, giving rise to apparent flexibility in the order of POSS and the possessor in both the attributive and predicative construction. Here, too, the patterns are reminiscent of sentential constructions, namely the verb-object order flexibility that arises under object shift. The full paradigm of POSS possessives analyzed here is given below.²

- (4) Attributive possessives
 - a. i BRUNO POSS_i BOOK
 - b. POSS_i i BRUNO BOOK
‘a book of Bruno’s’
- (5) Predicative possessives
 - a. BOOK POSS_i i BRUNO
 - b. BOOK i BRUNO POSS_i
‘The book belongs to Bruno.’

Though non-manual properties play a significant role in the grammar of ASL and other sign languages, only the manual aspects of these possessive structures are

2. The patterns discussed here do not include post-nominal uses of attributive POSS nor the ‘POSS sandwich’ structures in which POSS is repeated in both pre- and post-nominal position. Abner (2012) extends the analysis to these word order variants as well as those word orders that are the consequence of topicalization and/or argument drop, as in (6) and (7).

explicitly addressed here. It should be noted, though, that no significant obligatory non-manual component seemed to be present in either the attributive or predicative POSS structure. Specifically, the structures above do not bear any non-manual characteristics that would suggest that their constituency is generated via topicalization to the sentence periphery. Finally, though they are not explicitly addressed here, additional surface variants arise when the possessor or possessee constituent is left unexpressed in the overt structure:³

(6) Attributive POSS

- a. POSS_i BOOK
'a book of his/hers'
- b. _iBRUNO POSS_i
'Bruno's' ('a [thing] of Bruno's')
- c. POSS_i
'his/hers' ('a [thing] of [his/hers]')

(7) Predicative POSS

- a. BOOK POSS_i
'The book belongs to [him/her].'
- b. POSS_i,BRUNO
'[It] belongs to Bruno.'
- c. POSS_i
'[It] belongs to [him/her].'

In the case of attributive POSS, the null possessor yields a structure in which POSS functions like a possessive pronoun, a pattern that presumably underlies its traditional classification as such, as discussed below.

2.2 Derivational possibilities

The observed alternation between attributive and predicative uses of POSS provides evidence of a derivational relationship between these structures, as has been proposed for comparable grammatical patterns in other languages by den Dikken (2006), Freeze (1992), and Kayne (1994), among others. Positing that a derivational relationship underlies this alternation would parsimoniously allow that POSS itself have a uniform structural origin as either an attributive or predicative possessive marker. Existing discussions of possessive structures in ASL assume, if not explicitly defend, a derivational analysis wherein the underlying function of POSS is that of a marker of attributive possession. As noted above, POSS is traditionally

3. Structurally ambiguous data such as (6c) and (7c) were distinguished by linguistic context during elicitation.

classified as a possessive pronoun. This classification is found in popular language learning materials (Lentz et al. 1988), grammatical descriptions of ASL (Baker-Shenk & Cokely 1981), contemporary typological discussions of possession (Chen Pichler & Hochgesang 2008), and is suggested by signers in their meta-linguistic discussion of possessive structures.⁴ The pronominal status of POSS has also been defended formally in the analysis of ASL DP structure presented by MacLaughlin (1997) and affiliated researchers (see Neidle et al. (2000) for a comprehensive discussion of their grammatical analysis of ASL), who argue that POSS functions as the [+definite] D head of the DP, gaining pronominal status when either the possessee, merged as the NP constituent of the DP, or the possessor, merged in the Spec-NP position and moved to Spec-DP, is left null in the overt structure.

Abstracting away from details of analysis, especially as such details are not in the purview of the descriptive or typological literature cited above, what each of the above approaches has in common is that POSS is underlyingly a marker of attributive possession and, moreover, that it categorically serves this function as a pronominal or determiner-like element. As laid out earlier, predicative POSS structures in such approaches would be derived from their attributive counterpart, presumably via predicate nominal formation on a par with predicative uses of possessive pronouns or genitive 's in English (8).

- (8) The book is his/Bruno's.

The predicate nominal analysis of predicative POSS constructions — the analysis of these constructions that is explicitly adopted by MacLaughlin —, schematized in (9), is compatible with the status of ASL as a null copula language.

- (9) POSSESSEE $\varepsilon_{\text{``is''}}$ [Attributive-POSS_i POSS_{i,1} POSSESSOR POSSESSEE]

Moreover, uncontroversial cases of predicate nominal structures with attributive POSS — assumed here to be indicated by the presence of an overt possessee —, are attested. This is illustrated in (10) with both possessor-POSS (10a) and POSS-possessor order (10b).

- (10) a. BOOK $\varepsilon_{\text{``is''}}$ [Attributive-POSS_i BRUNO POSS_i CHEMISTRY BOOK]
 b. BOOK $\varepsilon_{\text{``is''}}$ [Attributive-POSS_i POSS_{i,1} BRUNO CHEMISTRY BOOK]
 'The book is a chemistry book of Bruno's.'

4. The pronominal analysis could also seek support in the English pronouns that signers sometimes mouth concurrent with the manual production of POSS, a behavior that is, impressionistically, less common in the predicative structure. Given the array of empirical patterns presented here against such an analysis, such behavior should instead be taken as evidence that processes of co-sign mouthing are not necessarily indicative of either structural overlap with the ambient spoken language or dual access of the grammar of this language.

Thus, given the data in (6) illustrating the grammaticality of a null possessee in the attributive POSS structure, the surface patterns of predicative POSS could be generated by a predicate nominal analysis.

Structural analyses along these lines give rise to two clear predictions. First, if POSS has pronominal or determiner-like categorical status, then it should display the behavior of a pronominal or determiner-like element, within ASL and cross-linguistically. Second, if predicative POSS is derived as a predicate nominal structure, then it should display behaviors that match those of its attributive POSS source. Crucially, this latter prediction is made regardless of the specific categorical analysis of POSS adopted. As detailed in the section that follows, neither of these predictions is borne out.

3. Breaking from tradition: Challenges for DP-internal analyses

Morpho-syntactic and semantic properties of POSS constructions are presented below to establish the general infeasibility of analyzing POSS possessives as uniformly deriving from an attributive source. Attributive and predicative uses of POSS display distinct behavior with respect to morphological inflection for person and number, word order between POSS and the possessor, and the grammaticality of WH-possessors. Focusing on attributive possessives, the quantificational and relational interpretations of these POSS structures argue against a pronominal or determiner-like analysis of POSS. Therefore, the behavior of POSS across attributive and predicative possessive constructions is incompatible with a DP-internal analysis of POSS as a possessive pronoun or determiner, while the structural and interpretive distinctions between these constructions render untenable any approach analyzing predicative uses of POSS as predicate nominals formed from a more ‘basic’ attributive POSS construction.

3.1 Morphological challenges

3.1.1 *Agreement morphology*

As illustrated in Figure 1, though not yet discussed, the production of POSS exhibits spatial agreement with the possessor: first person possessors are produced with palm orientation toward, and potential contact with, the signer’s chest, while second and third person possessors are produced with movement and palm orientation toward the interlocutor or an established referential locus.⁵ This spatial

5. The role of space in signed languages is a topic of ongoing linguistic debate and the grammatical representation of space in the verbal domain of sign languages was discussed recently

agreement pattern is found in both attributive and predicative POSS constructions. When used predicatively, however, an additional spatial agreement pattern, noted in passing by MacLaughlin (1997:273–274, fn. 24) and Baker-Shenk & Cokely (1981:215), becomes available: POSS may move from the spatial locus associated with the possessee to that associated with the possessor. This pattern is referred to here as transitive spatial agreement and its similarity to the verbal agreement system is discussed further in Section 4.1.2. An example of POSS with transitive spatial agreement is provided in Figure 2.

The transitive spatial agreement pattern is signaled by the introduction of the initial subscript (*i*) on _(*i*)POSS_{*j*} in (11).

- (11) [Predicative-poss IX_{*i*} iBOOK CL:B_{*i*}, “stack of books” (*i*)POSS_{*j*} jBRUNO]
 ‘That stack of books belongs to Bruno.’

As the parentheses in the above transcription indicate, agreement with the possessee in the predicative POSS construction is optional, a pattern that is used below to align the agreement patterns of POSS with the subject-object agreement patterns of other verbal predicates in the language. In the attributive POSS construction, however, agreement with the possessee is impossible. This is shown in (12), with (12b) providing evidence that spatial agreement with the possessee is also ungrammatical when the attributive POSS structure is used as a predicate nominal.

- (12) a. [Attributive-poss jBRUNO (**i*)POSS_{*j*} iBOOK] ON TABLE
 ‘A book of Bruno’s is on the table.’
- b. IX_{*i*} iBOOK [Attributive-poss jBRUNO (**i*)POSS_{*j*} CHEMISTRY iBOOK]
 ‘That book is a chemistry book of Bruno’s.’

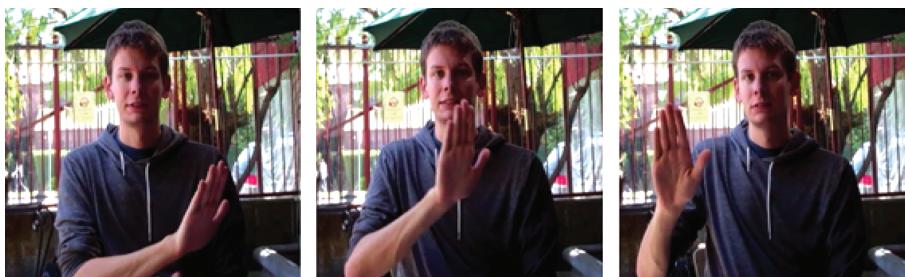


Figure 2. Movement of POSS between two discrete spatial loci to indicate transitive spatial agreement.

by Lillo-Martin and Meier (2011) and other contributors to the issue of *Theoretical Linguistics* covering this topic. The research presented here does not endeavor to address this debate as such and the term “agreement” is adopted throughout, with the crux of the argument being the observation that spatial properties of POSS parallel those found in the verbal system.

Thus, though both attributive and predicative uses of POSS encode the possessive relation that holds between the possessee and possessor, only predicative uses of POSS can indicate this relation spatially.

3.1.2 Number morphology

Transitive spatial agreement patterns provide a general argument against deriving predicative POSS constructions from the attributive POSS structure. Attributive POSS, because it is ungrammatical with transitive spatial agreement, does not provide a source from which the predicative POSS structures that exhibit this agreement pattern could be derived. Here, I present morphological patterns of POSS that counter-argue the specific attributive analysis proposed or assumed in the research literature, that POSS is a possessive pronoun. Were POSS to function as a possessive pronoun — independent of whether this function is the consequence of its underlying status as a determiner, as in MacLaughlin (1997) — then the morphological behavior of POSS, barring other explanations, should parallel that of other pronominal elements in the language. However, not only is the above transitive spatial agreement pattern unexpected for a pronominal element, the morphological paradigm triggered by plural possessors fails to parallel comparable plural morphology found with the indexical pronominal, glossed here as IX. As transcribed in (13), the indexical pronominal exhibits a four-way distinction in plural morphology: movement to two discrete loci in signing space to indicate dual plurality, seriated movement across signing space to indicate exhaustive plurality, and two distinct sweeping movements in signing space to indicate collective plurality, an arc-like movement and a rapid circular movement.

- (13) IX_{pl-dual} IX_{pl-dist} IX_{pl-arc} IX_{pl-cir}

Though POSS does exhibit a range of plural inflections, (14) shows that its inflectional possibilities are more limited than those of the indexical pronominal. Specifically, the circular movement allomorph of the collective plural marker is ungrammatical with POSS.

- (14) POSS_{pl-dual} POSS_{pl-dist} POSS_{pl-arc} *POSS_{pl-cir}

Two observations argue against a phonetic or phonological explanation of this distinction. One, comparable movement patterns are found with the lexical signs AREA and APPROXIMATELY, each of which is produced with a lax -handshape that is relatively phonetically similar to the -handshape of POSS. Two, none of the signers consulted offered any metalinguistic commentary that would suggest that the POSS_{pl-cir} form is motorically awkward. Thus, this distinction between POSS and the pronominal IX sign must be in the morphological system of the language, suggesting that POSS itself is not a pronoun. This suggestion will be confirmed in

Section 4.1.2, where it is shown that the inflectional restriction exhibited by POSS matches that found in the object agreement paradigm of verbal predicates.

3.2 Syntactic challenges

3.2.1 Word order

Attributive and predicative POSS structures exhibit comparable word order flexibility between POSS and the possessor. As shown for attributive POSS in (4) and predicative POSS in (5), POSS-possessor and possessor-POSS order are grammatical in each of these possessive constructions. Though these patterns are superficially amenable to an analysis of POSS as having attributive origins, the POSS-possessor order does present a challenge for the structure of attributive POSS proposed by MacLaughlin. Given that the possessor in her analysis moves to a left-peripheral Spec-DP position for case licensing, additional steps will need to be taken in order to generate the word order wherein the possessor surfaces following the POSS marker.⁶ Problematic for any attributive analysis of POSS, however, is the observation that word order variation behaves differently across attributive and predicative POSS structures. Specifically, indefinite possessors are grammatical only in the pre-POSS position of the attributive structure. This positional distinction is illustrated in (15). The indefiniteness of the possessor (TEACHER) here is established by context, as ASL does not obligatorily mark definiteness.

- (15) Context: A teacher's edition copy of a Wisconsin history textbook was left in the library.

- a. IX_i FIND [Attributive-POSS_j TEACHER POSS_j BOOK]
'She/he found some teacher's book.'
- b. *IX_i FIND [Attributive-POSS POSS_j TEACHER BOOK]
'She/he found some teacher's book'
- c. [Predicative-POSS BOOK POSS_j TEACHER] (BUT NOT-KNOW WHO)
'The book belongs to some teacher (but I don't know who/which one)'

As shown by the contrast between (15a) and (15b), the indefinite possessor is grammatical in the attributive POSS structure only if the structure uses the possessor-POSS order. The example in (15c) reveals that this restriction is not found in the predicative POSS structure, as here POSS-possessor order is grammatical with

6. Though MacLaughlin (1997:274–275, fn.25) acknowledges POSS-possessor orders in her data and notes that they are associated with a definiteness restriction on a par with that documented here, she leaves as a topic for future research how this word order variant should be analyzed. As discussed in Sections 4.3.2 and 5.2, word order variation in both attributive and predicative POSS is reduced here to object shift influenced by the (in)definiteness of the possessor (object) nominal.

the indefinite possessor. Again, behavioral distinctions such as these are problematic for the traditional assumption that predicative POSS is derived from attributive POSS, as there does not seem to be a grammatical attributive structure from which (15c) could be derived. Additional challenges along these lines are discussed below and the problem of word order variation in attributive and predicative POSS is addressed in Section 5.2.

3.2.2 WH-possessors

Attributive and predicative POSS structures also behave differently with respect to the grammaticality of WH-possessors. As illustrated in (16), WH-possessors are ungrammatical in attributive possessive constructions. This restriction cannot be attributed to the indefiniteness of the WH-possessor, as the ungrammaticality holds in both pre- and post-POSS position.⁷

- (16) a. *IX_i [Attributive-POSS_j WHO POSS_j i BOOK]
- b. *IX_i [Attributive-POSS_j POSS_j WHO_i BOOK]
 ‘Whose book is that?’

WH-possessors are, however, grammatical in predicative POSS constructions, though the position of the WH-possessors affects semantic interpretation in a manner parallel to the definiteness effects just discussed.

- (17) a. [Predicative-POSS IX_i i BOOK POSS_j j WHO]
 ‘Who (in general) does that book belong to?’
- b. [Predicative-POSS IX_i i BOOK_j WHO POSS_j]
 ‘Who (out of a specific group of people) does that book belong to?’

As was true for the pattern of transitive spatial agreement and the distribution of indefinite possessors, the differing behavior of WH-possessors across attributive and predicative possessive constructions provides crucial evidence against an underlying attributive structure for POSS possessives. The grammatical patterns exhibited by attributive POSS constructions are only a subset of those available with predicative uses of POSS. The predicative analysis of POSS will be tasked with explaining how these distinctions arise given a uniformly predicative origin of POSS; that is, how does the derivation of attributive POSS result in the documented grammatical restrictions on this structure? Before addressing these analytic

7. The grammaticality judgements reported here for attributive POSS with WH-possessors differ from those reported in Neidle et al. (2000) and other publications in support of the rightward movement analysis of WH-questions in ASL. The judgements given here were clear and uniform for four different consultants and were independently confirmed with a number of other signers.

issues, however, there is one further domain that needs to be discussed: semantic characteristics of the POSS structures.

3.3 Semantic challenges

3.3.1 Quantificational variability

Attributive POSS possessives are compatible with either definite or indefinite interpretations, as indicated by the two interpretations given in (18).

- (18) [Attributive-POSS_i BRUNO POSS_i COMPUTER] BREAK
 'A computer of Bruno's broke' or 'The computer of Bruno's broke'

The analysis of POSS as determiner-like marker of attributive possession is incompatible with the observed quantificational variability exhibited by attributive POSS structures, given the role of the determiner in establishing the definiteness of their associated nominal. Likewise, pronominals, cross-linguistically, are specified for a definiteness value (definite or indefinite). The interpretive patterns in (18), returned to in Section 5.1, therefore suggest that POSS is serving neither a determiner- or pronominal-like role in the structure.⁸

3.3.2 Interpretation of the possessive relation

The possessive relation encoded between a possessor and possessee is typically thought of as ownership. Other relational interpretations are nevertheless possible, such as part-whole interpretations or relational interpretations that are supplied contextually (see discussion in Barker 1995). Examples of such extended interpretations of the possessive relation in attributive POSS are given in (19), though in both (19a) and (19b) an ownership interpretation is also possible.

8. Interpretive variability in the definiteness and/or maximality/exhaustivity of possessive structures has also been documented for Mandarin Chinese by Yang (2005) and Partee (2006) and for Russian, Serbo-Croatian, Turkish, Japanese, and Korean by Bošković (2010). Bošković attributes this pattern to the lack of a DP layer in the nominal constituents of these languages and, for Serbo-Croatian, the adjectival nature of the possessive marker. This cannot be the explanation for the ASL patterns, given evidence presented by Bernath (2009) that ASL fails to pattern with no-DP languages according to Bošković's diagnostics (see also the discussion of the DP structure of ASL in Abner 2012). Moreover, an adjectival analysis of POSS, on a par with that proposed for the Serbo-Croatian possessive marker, is incompatible with POSS patterns documented here: adjectives in ASL do not exhibit transitive spatial agreement, nor are there any documented cases of argument-taking adjectives (MacLaughlin 1997). The analysis developed in Section 5 does, however, share the intersective semantics of Bošković's adjectival analysis, as it derives the interpretive flexibility of the attributive POSS possessive from its underlying relative clause structure.

(19) Attributive POSS

- a. [_{Attributive-poss} _iⁱ MONSTER POSS, #LEG] COLOR GREEN
‘A leg of the monster(s) (\checkmark alienable / \checkmark inalienable) is green,’
- b. [_{Attributive-poss} _iⁱ BRUNO POSS, BOOK] COLOR GREEN
‘A book of Bruno’s (\checkmark that he owns / \checkmark that he wrote) is green.’

The interpretation of the possessive relation in the predicative POSS structure, however, is more restricted. This is made apparent when one compares the licit interpretations of the attributive POSS structures above with the more restricted interpretation of the otherwise similar predicative POSS structures in (20).

(20) Predicative POSS

- a. [_{Predicative-poss} GREEN #LEG POSS, _iⁱ MONSTER]
‘The green leg belongs to (#alienable / \checkmark inalienable) the monster’
- b. [_{Predicative-poss} BOOK POSS, _iⁱ BRUNO]
‘The book belongs to Bruno (\checkmark he owns it / #he wrote it)?’

Only the more ‘canonical’ ownership interpretation of the POSS possessive relation is available in the predicative structures in (20), motivating the choice of *belong to* as the English translation of these possessive structures. This pattern, referred to here as the ‘strict possession’ requirement of predicative POSS, has been documented in other languages with morpho-syntactically similar attributive and predicative possessive structures (see Partee & Borschev 2001) and is returned to in Section 4.3.1.

3.4 Interim summary and the verbal hunch

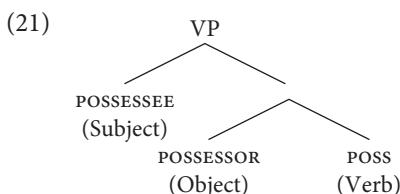
This section has documented empirical properties exhibited by attributive and predicative POSS structures, focusing on how these properties present challenges for analyses in which POSS serves fundamentally as a marker of attributive possession. The morphological, distributional, and interpretive patterns of POSS possessives were shown to argue against classification of POSS as a possessive pronoun or determiner, the classification that has thus far been assumed in the descriptive and research literature. These properties were also argued to provide evidence against any attributive analysis of POSS — that is, any analysis in which POSS is assumed to be underlyingly a marker of attributive possession, with predicative POSS structures derived as predicate nominals. Together, these challenges to existing analyses motivate the pursuit of an alternative approach to the structure of POSS possessives. Maintaining the desired derivational relationship between attributive and predicative POSS possessives, the proposal made here is that it is the predicative

POSS structure that is basic, with attributive POSS derived from this underlying predicative structure.

The question, then, becomes one of identifying the predicative category of the POSS possessive marker. Here, too, the morphological patterns discussed in Section 3.1.1 are informative. ASL, like many other mature sign languages, makes robust use of space for grammatical purposes. The relational use of space, however, is uniquely characteristic of verbal predicates in the language: only verbs move meaningfully between discrete spatial loci. The transitive spatial agreement pattern documented for predicative POSS is an example of this relational use of space. Thus, the way in which POSS makes grammatical use of space is parallel to that of verbal predicates in ASL. The remainder of the paper will be devoted to explicating the verbal analysis of POSS and detailing how its verbal origins give rise to the patterns documented in both predicative and attributive POSS structures.

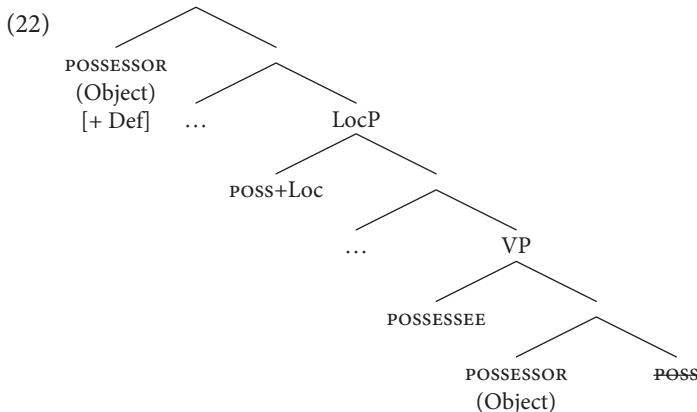
4. Predicative POSS structures

The present section is concerned with the development and defense of the verbal analysis of predicative POSS structures proposed here. In Section 4.1, distributional evidence from adverbs, modals, embedding predicates, and fragment answers is used in conjunction with morphological evidence from person and number agreement as well as aspectual inflectional and nominalization morphology to show that POSS exhibits the behavioral characteristics of verbs in ASL. Having supported the categorization of POSS as a verbal predicate, Section 4.2 appeals to specific patterns in word order and agreement morphology to show that the argument structural properties of POSS pattern with *belong*-type verbs of possession: the possessor functions as object and the possessee functions as subject. Thus, the basic verbal shell of the predicative POSS structure is as in (21).



Section 4.3 concludes the discussion of the predicative POSS structure by showing that word order variation and the ‘strict possession’ requirement can be derived from the interaction of the verbal POSS structure with other components of the predicative domain. Specifically, combination of the predicative POSS structure

with the functional architecture of locatives yields the semantics of ‘strict possession’ while object shift to structurally higher positions yields the observed word order patterns with definite possessors. These additional structural details are represented in (22).



4.1 POSS is a verb

4.1.1 *Distributional evidence*

Syntactic category assignment is determined by distributional properties. The distributional properties of POSS mirror those exhibited by canonical verbal predicates in ASL. When used predicatively, the default position of POSS is sentence-medial, as would be expected given the SVO status of ASL (Fischer 1975). Like verbs, predicative POSS constructions are compatible with an array of adverbial modifiers (23), including non-manual manner adverbials produced with the mouth (23b), as well as with expressions of modality and aspect (24).

- (23) a. DOG OFTEN-PALM/REAL POSS_{j,j} BRUNO
‘The dog often/really belongs to Bruno.’
adv-mm
 - b. DOG POSS_{j,j} BRUNO
‘The dog enjoys belonging to Bruno.’
- (24) a. BOOK WILL POSS_{j,j} BRUNO
‘The book will belong to Bruno.’
 - b. BOOK POSS_{j,j} BRUNO CAN
‘The book could belong to Bruno.’

Furthermore, as would be expected of sentential constituents headed by a verbal predicate, predicative POSS structures easily serve as embedded complements in both finite and non-finite environments.

- (25) a. DOG WANT POSS_{j,j} BRUNO
 ‘The dog wants to belong to Bruno.’
 b. IX_i THINK BOOK POSS_{j,j} BRUNO
 ‘She/he thinks the book belongs to Bruno.’

Finally, POSS alone can function as a fragment answer to a polar question (26a), a distributional pattern that was observed by Padden (1988) to be characteristic of verbs in ASL (26b) (‘q’ = yes/no question marker; ‘hn’ = head nod; ‘nodding’ = repeated head nods).

- (26) a. Question:

q
 IX_i BOOK CL:B_i, ‘stack of books’ POSS_{j,j} BRUNO
 ‘Do those books belong to Bruno?’

Answer:

nodding

YES, POSS_j
 ‘Yes, they do.’

- b. Question:

q
 2 INDEX KNOW 1 INDEX WOMAN
 ‘Do you know the woman?’

Answer:

hn

YES, KNOW
 ‘Yes, I do.’ (Padden 1988: 114–115)

4.1.2 Morphological evidence

As was noted earlier, the presence of spatial agreement with both the possessee and possessor (27a) parallels regular transitive spatial agreement found with verbal predicates in ASL (27b).

- (27) a. IX_i BOOK (i) POSS_{j,j} BRUNO
 ‘The book belongs to Bruno.’
 b. IX_i HELP₁ NOT-YET START
 ‘She/he has not started helping me yet.’

It is worthwhile to note at this juncture that the transitive spatial agreement pattern cannot be reduced to phonological assimilation between the production of

the possessee and the production of POSS. Transitive spatial agreement with predicative POSS is possible when POSS is separated from the possessee by a body-anchored adverbial (28) and when the possessee (or possessor) is left unexpressed in the overt structure (29). That is, transitive spatial agreement is available when the phonological environment that could trigger spatial assimilation is disrupted or is altogether absent, implying that the pattern itself is not the consequence of assimilation. Further evidence of the grammatical similarity between transitive spatial agreement on POSS and on other verbal predicates is discussed in Section 4.2.

- (28) $i_{\text{DOG}} \text{REAL} (i_{\text{POSS}}_j)_j_{\text{BRUNO}}$
 'The dog really belongs to Bruno.'
- (29) $(i_{\text{BOOK}}) (i_{\text{POSS}}_j)_j_{\text{BRUNO}}$
 '('The book) belongs to (Bruno).'

Turning next to the restricted patterns of plural inflection mentioned earlier, recall that POSS, unlike the indexical pronominal IX, is ungrammatical with the circular allomorph of the collective plural inflection. Here, too, we find evidence of similarity between POSS and verbal predicates in ASL. As shown in (30), verbal agreement with plural objects in ASL exhibits the same range of grammatical and ungrammatical inflectional patterns as are found when POSS inflects to agree with a plural possessor.

- (30) a. POSS_{pl-dual} POSS_{pl-dist} POSS_{pl-arc} *POSS_{pl-cir}
 b. GIFT-T_{O pl-dual} GIFT-T_{O pl-dist} GIFT-T_{O pl-arc} *GIFT-T_{O pl-cir}

As above, the manual characteristics of the verbal predicate GIFT-T_O used here for comparison suggest that this restriction cannot be attributed to the phonological system and is instead morphological in nature.

Morphological evidence in favor of the verbal analysis of POSS is also found outside the domain of spatial agreement paradigms. This evidence comes in the form of two processes of morphological reduplication that are used with verbal predicates in ASL and are also compatible with POSS. The first of these, glossed in the examples below as RED-HABITUAL, involves reduplication of the spatial path movement of the verbal predicate. As discussed by Fischer (1973) and Rathmann (2005), this path reduplication process yields a habitual interpretation (31a). This habitual reduplication is also possible with POSS, yielding a structure, first noted by Baker-Shenk & Cokely (1981), that is commonly used to describe personality traits or other individual characteristics (31b).

- (31) a. IX_i INFORM.RED-HABITUAL_j ABOUT PRESIDENT PLAN
 'He has a habit of informing [him/her] about the president's plans.'

- b. TEASE_{pl-dist} POSS.RED-HABITUAL_{j j} BRUNO
 ‘Teasing everyone is in Bruno’s nature.’

The second process of verbal reduplication compatible with POSS is the nominalizing reduplication process first discussed as ‘restrained reduplication’ by Supalla & Newport (1978) and glossed here as RED-NMZ. This morphological process reduplicates only a sub-part of the verbal form and is produced with rapid repetition and increased muscular tension of the articulators. Examined in detail by Abner (2012, Chapter 3), the output of nominalizing reduplication is potentially ambiguous. Depending on the verbal predicate chosen, the derived form may be a concrete object-denoting participant nominal (32a) or a result nominal (32b). In some cases, both interpretations are available (32c).

- (32) a. STAPLE.RED-NMZ → STAPLER participant
 b. INFORM.RED-NMZ → INFORMATION result
 c. VOTE-FOR.RED-NMZ → BALLOT / ELECTION participant / result

Not only is nominalizing reduplication morphologically compatible with POSS, but the output form exhibits the same range of potentially ambiguous meanings as those derived from combination with other verbal predicates. That is, as illustrated in (33), POSS.RED-NMZ is interpreted either as a concrete object-denoting participant nominal referring to the thing(s) possessed or as a result nominal referring to the abstract relational concept of possession (i.e. the subject of the present research).

- (33) POSS.RED-NMZ → POSSESSION participant (thing(s) owned)
 POSSESSION result (abstract concept)

4.2 Belong-alignment: Building the verbal shell

The distributional and morphological characteristics of POSS documented above provide robust evidence for analyzing POSS as a verbal predicate in ASL. The discussion can now shift to the more fine-grained details of the verbal structure of POSS and the empirical patterns that argue in favor of the proposed analysis of POSS as a *belong*-type verb of possession, taking the possessor as object argument and the possessee as subject argument. Here, too, distributional evidence in favor of this analysis has already been identified: the possessee in the predicative POSS construction appears in the canonical sentence-initial subject position in ASL. From this sentence-initial position, the possessee constituent precedes modals, tense markers, and pre-verbal adverbials, as expected of a subject nominal. The possessee can also be targeted for both subject raising (34a) and subject control (34b).

- (34) a. VEGETABLE TEND-TO POSS.RED-HABITUAL_{i i}BRUNO
 ‘Vegetables tend to belong to Bruno.’
- b. DOG WANT POSS_{i i}BRUNO
 ‘The dog wants to belong to Bruno.’

Morphological evidence from spatial agreement patterns also confirm the role of the possessee as subject argument. As first discussed by Padden (1988), spatial agreement with the subject in ASL is optional, while agreement with the object is obligatory:

- (35) a. WOMAN₀GIVE₁ NEWSPAPER
 ‘The woman gave me a newspaper.’
- b. *WOMAN_iGIVE₀₁INDEX BOOK
 ‘The woman gave me a book.’ (Padden 1988: 136–137)

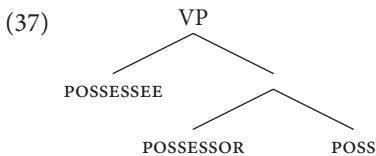
Comparing this with the observed properties of POSS, it becomes clear that spatial agreement with the possessee and possessor parallels the optionality and non-optionality, respectively, of verbal subject and object agreement markers. Spatial agreement with the possessee is optional, like spatial agreement with the subject, while spatial agreement with the possessor is obligatory, like spatial agreement with the object:

- (36) IX_{i i}BOOK_(i)POSS_{*(j)}_jBRUNO
 ‘The book belongs to Bruno.’

Spatial agreement with the possessee is, however, rendered unavailable when POSS combines with other verbal inflections, such as the habitual reduplication of (31b) and (34a). This pattern of markedness further aligns possessee agreement with agreement markers of verbal subjects, as Padden observes that subject marker omission is far more likely in the presence of other verbal inflections. The absence of the possessee subject agreement marker in these cases may also offer insight into why POSS with habitual reduplication is compatible with an inalienable-like possessee such as a personality trait. Though the interpretation of predicative POSS is returned to in Section 4.3 below, further research is needed before conclusions can be drawn on this matter.

Finally, the plural inflectional patterns used above as evidence for the categorical status of POSS as a verbal predicate also offer support for the *belong*-alignment argument structural properties proposed here. As discussed by Mathur (2000) and Benedicto & Brentari (2004), among others, subject agreement markers in ASL do not inflect to encode plurality of the subject argument. Object agreement markers, however, can do this. Thus, the very ability of POSS to inflectionally mark the plurality of the possessor provides evidence that the possessor is introduced as an

object argument. The proposed argument structural alignment of the verbal poss structure is given in (37).



As documented below, base merger of the possessor in a position preceding POSS captures the word order patterns evidenced in both attributive and predicative possessive constructions. The typical sentence-medial position of predicative POSS, for example, differs from this initial verb-final structure due to syntactic operations that occur later in the derivation and trigger movement of the POSS marker. Furthermore, the structure proposed in (37) is unproblematic given recent approaches to underlying phrase structure (Abels & Neeleman 2012) and the complex nature of verbs and other ‘lexical items’ (see Halle & Marantz 1993; Borer 2005; and Ramchand 2008, among others).

4.3 Object shift and the locative shell: Completing the predicative poss paradigm

Extensive language-internal support has been presented in defense of the verbal predicate analysis of POSS. The basic components of the POSS verbal structure, introduced in (37), broadly encode the relevant categorical (verb) and argument structural (*belong-alignment*) properties. Two patterns of predicative POSS possessives noted earlier, however, remain unresolved. One, the verbal structure of (37) does not yet explain the observed alternation between POSS-possessor and possessor-POSS order nor the sensitivity of this order to the (in)definiteness of the possessor object. Two, the structure thus far proposed does not yet offer a solution to the puzzle of the ‘strict possession’ requirement observed with predicative POSS. The solution to these outstanding issues is the topic of the present section. In Section 4.3.1, I will argue that the observed interpretive patterns are the consequence of the verbal POSS marker forming a complex predicate with a locative component of the predicative domain. Following this, Section 4.3.2 shows that the word order variation between POSS and the possessor can be reduced to object shift-like operations targeting structurally higher positions for definite possessors *qua* definite objects. Further evidence in favor of these structural components are discussed in Section 5.2, where it is shown that they straightforwardly capture the documented patterns of attributive POSS structures as well, even when these patterns, descriptively, diverge from those exhibited by predicative POSS.

4.3.1 The interpretive contribution of locative structure

The interpretation of the possessive relation in predicative POSS constructions is subject to a ‘strict possession’ requirement. Thus, the interpretations of predicative POSS can be thought of as forming a proper subset of the relational interpretations available in the attributive POSS structure, as illustrated in (38) and (39), repeated from above.

(38) Attributive POSS

- a. $i \text{MONSTER POSS}_i \# \text{LEG COLOR GREEN}$
‘A leg of the monster(s) (\checkmark alienable / \checkmark inalienable) is green,’
- b. $i \text{BRUNO POSS}_i \text{BOOK COLOR GREEN}$
‘A book of Bruno’s (\checkmark that he owns / \checkmark that he wrote) is green.’

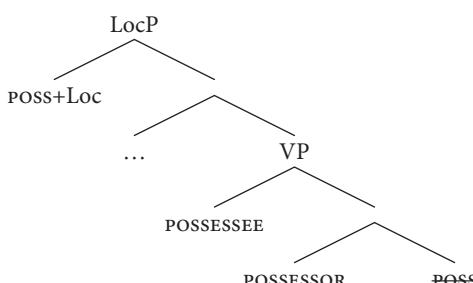
(39) Predicative POSS

- a. $\text{GREEN} \ # \text{LEG POSS}_{i_1} i_1 \text{MONSTER}$
‘The green leg belongs to (#alienable / \checkmark inalienable) the monster.’
- b. $\text{BOOK POSS}_{i_1} i_1 \text{BRUNO}$
‘The book belongs to Bruno (\checkmark he owns it / #he wrote it).’

Given that the ‘strict possession’ requirement emerges only in certain structural environments, namely predicative POSS, the source of this requirement must be structure-dependent.

The relevant structural dependency defended here is that the ‘strict possession’ requirement arises in predicative POSS because the verbal POSS structures embeds as the complement of a locative predicate, with which it undergoes complex predicate formation. As represented in (40), this complex predicate formation, assuming later movement of the possessee to the TP domain, has the additional effect of generating the observed sentence-medial position of POSS.⁹

(40)



9. Though presented here as an instance of head movement of POSS to LocP, nothing in the analysis hinges on this being the structural means by which the POSS+Loc complex predicate is created.

The semantic contribution of the locative predicate is the natural one, that the possessee be ‘located at’ the possessor. This semantic contribution has the effect of reining in, so to speak, the possessive relation contributed by POSS. It is thus the POSS+Loc complex predicate, not POSS itself, that requires the ‘strict possession’ interpretation of predicative POSS.

The presence of this locative structure in the predicative POSS construction unifies POSS possessives with the locative possessive structures common in other languages, as discussed, for example, by Benveniste (1966) and Freeze (1992). Moreover, this locative predicate structure is independently supported within the grammar of ASL. Though the possessor of a predicative POSS structure can be questioned using the argumental WH-word WHO, the predicative POSS structure itself can be questioned using a locative WHERE WH-word. The felicitous response patterns in (41) illustrate this (‘wh’ = WH-question marking).

- wh
- (41) a. AIRPLANE WHERE
 ‘Where is the airplane?’
 b. POSS_{i,j} BOY
 ‘It’s with/at the boy.’ (‘It belongs to the boy.’)

Therefore, in addition to providing an explanation for the observed ‘strict possession’ requirement, the locative predicate structure is an independently supported component of the predicative POSS possessive.

4.3.2 Word order variation as object shift

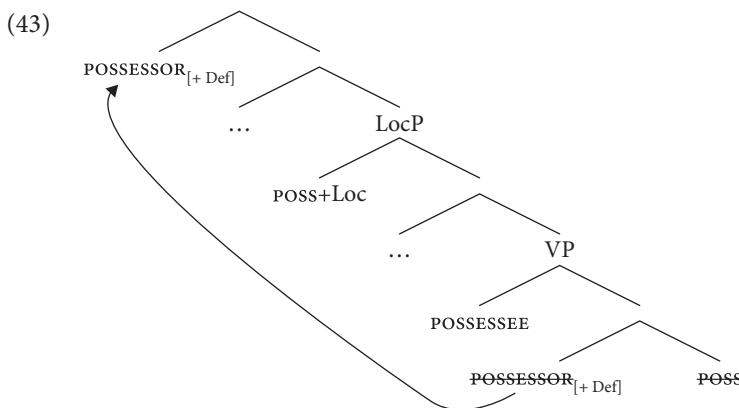
The word order patterns that emerge in predicative POSS structures can be generalized as follows: post-POSS possessors may be definite or indefinite, while the pre-POSS position appears to be restricted to definite possessors. This pattern is evidenced by the differing interpretations of WH-possessors in these two positions, noted in Section 3.2.2 and repeated below in (42).

- (42) a. IX_{i,j} BOOK POSS_{j,j} WHO
 ‘Who (in general) does that book belong to?’
 b. IX_{i,j} BOOK_j WHO POSS_j
 ‘Who (out of a specific group of people) does that book belong to?’

While the structure and distribution of (in)definite nominals in ASL warrants further investigation, these word order patterns, in light of Fischer’s (1990) analysis of word order variation in ASL as the consequence of low or ‘mini’ topicalization

operations, suggest that an object shift-like operation is at play.¹⁰ Such an operation, common cross-linguistically, would give rise to a surface pattern in which the position of definite nominals precedes that of indefinite nominals as a consequence of the former moving to structurally higher positions. Displacement of the WH-possessor in (42b) to the higher position occupied by definite nominals gives rise to the D-linked interpretation of the WH-phrase.

This object shift-like displacement of definite possessors *qua* definite objects is schematized structurally in (43).



As noted above, subsequent movement of the possessee subject to the TP domain will yield exactly the patterns observed: definite possessors *qua* definite objects appear in the pre-poss (pre-verbal) position, while indefinite possessors *qua* indefinite objects appear in the post-poss (post-verbal) position. Again, these patterns mirror word order alternations commonly found with (in)definite objects.

One observation that remains to be accounted for is that the post-poss (post-verbal) position is not, strictly speaking, restricted to indefinite possessors. However, this pattern is also true for post-verbal objects more generally in ASL, as illustrated by the flexibility of the interpretation of the post-verbal object in (44).

(44) BRUNO HAVE DOG

'Bruno has a/the dog.'

With respect to this observation, two structural analyses are possible. Either the post-poss (post-verbal) domain has a richer structure than that encoded here,

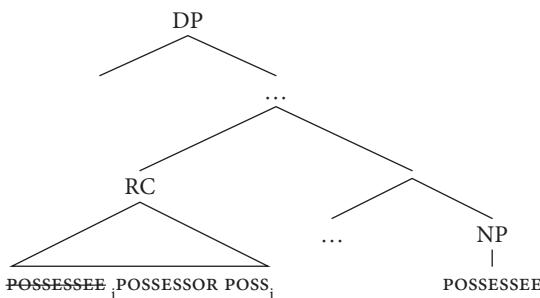
¹⁰. As the term ‘mini-topicalization’ suggests, Fischer observed that these displacement structures are associated with non-manual characteristics similar to those found with sentential topics. I leave as a matter of future research whether there are any non-manual correlates of the object shift movement operative in the present structures.

making available distinct positions for definite and indefinite possessors (objects), or there is a single post-POSS (post-verbal) position that is a licit host of both definite and indefinite possessors (objects). The former of these analytic approaches is suggested by distributional patterns evidenced in the attributive POSS structures addressed in the following section.

5. Attributive POSS structures

The verbal analysis of POSS is well-motivated given the morpho-syntactic properties of POSS structures documented here, not least of which is the appearance of POSS in predicative possessive structures. The present section addresses how attributive POSS structures can be derived from the underlying verbal predicate structure of POSS as prenominal reduced relative clause modifiers of the possessee nominal. Abstracting away from irrelevant structural details for reasons of space, the structure proposed here for attributive POSS is given in (45).¹¹

(45)



Evidence in favor of the above reduced relative clause analysis of attributive POSS is presented in Section 5.1. The subsequent, and final, section shows that variation in the size of the reduced relative clause — that is, variation in the predicative POSS constituent targeted for relativization — explains the observed patterns of attributive POSS structures. The discussion throughout these sections focuses on how this analytic approach captures the properties of POSS possessives that were used in Section 3 to challenge a uniformly attributive analysis of POSS structures.

¹¹ I adopt, without comment, an externally headed analysis of relative clauses and assume that they are connected to the modified noun via matching. This approach is taken so as to make maximally transparent the components of the attributive POSS structure, with the crucial observation being that the possessee follows any material internal to the attributive POSS relative. A change in the above analytic details (e.g., internal headedness, raising vs. matching) does not have any foreseeable effects on the observations made here.

5.1 Evidence for relativization analysis

Initial evidence for the (reduced) relative clause analysis of attributive POSS comes from the domain of theoretical and empirical parsimony. First, analyzing attributive POSS as a reduced relative clause, derived from an underlying verbal predicate structure, provides a uniform account of the distribution of POSS in both of these constructions. This was the goal outlined at the outset of the present research. Second, analyzing attributive POSS as a reduced relative clause appeals only to the linguistically natural and altogether common pattern of introducing verbal constituents into the nominal domain as relative clause modifiers. Patterns within the grammar of ASL, however, provide independent evidence for this analysis.

The first of these patterns concerns the distribution of participial-like modifiers in the nominal domain of ASL. Participial modifiers can also be derived via relativization of the verbal subject. Though largely unexplored, such participial modifiers in ASL can appear as pre-nominal modifiers on a par with attributive uses of POSS. The reduced relative clause analysis thus accounts for the pre-nominal position in which attributive POSS structures typically appear.

- (46) [[DANCE] BOY], GIRL PUNCH
 ‘The girl punched the dancing boy’

Moreover, if attributive POSS functions syntactically as a (reduced) relative clause modifier, then the restriction against WH-possessors (Section 3.2.2) found only in the attributive POSS structure is straightforwardly explained. The WH-constituent in the attributive POSS structure is contained within a relative clause. As such, it exhibits the expected ungrammaticality due to a relative clause island effect (see Abner (2011) and references therein for a discussion of WH-island effects in ASL):

- (47) *IX_i [RC_j WHO POSS_j] _iBOOK
 ‘Whose book is that?’

The quantificational variability that attributive POSS exhibits with respect to the definiteness of the possessive nominal, though problematic for the pronominal or determiner-like analysis of POSS, is also easily explained under the relativization analysis. As a relative clause, attributive POSS functions as an intersective modifier and, as such, fails to determine the definiteness of its associated nominal. The variable (in)definiteness of attributive POSS and its concomitant lack of obligatory maximality effects is confirmed by the felicity of the attributive POSS structure in (48) as a description of both of the contexts illustrated in Figure 3.



Figure 3. Definite (left) and indefinite (right) contexts compatible with attributive poss possessive in (48).

- (48) i ,_iBRUNO POSS,_i TWO BOOK COLOR GREEN
 ‘The two books of Bruno’s (definite) are green.’ or
 ‘Two books of Bruno’s (indefinite) are green.’

As is expected based on these patterns, attributive POSS structures fail to trigger definiteness effects in ASL. This is evidenced by the paradigm in (49), where (49a) illustrates the HAVE construction that parallels presentational-*there* sentences in English. The example in (49b) confirms that the HAVE construction exhibits definiteness effects with respect to the object nominal. These definiteness effects are not, however, triggered with attributive POSS structures (49c), even when a strong quantifier occupies the possessor position.

- (49) a. IX_i,_iGARDEN HAVE FLOWER
 ‘There are flowers in the garden.’
 b. *IX_i,_iGARDEN HAVE EACH GIRL
 ‘There is each girl in the garden.’
 c. IX_i,_iGARDEN HAVE EACH,_jGIRL POSS,_{j,dist} SHOE
 ‘There are shoes of each girl in the garden.’

Again, such patterns are unremarkable under a relative clause analysis, as demonstrated by the comparable structures using participial *belong* in English (50).

- (50) a. Two books belonging to Bruno are green.
 b. The two books belonging to Bruno are green.
 c. There are shoes belonging to each girl in the garden.

Finally, assuming that subject agreement in ASL is licensed high in the clause, the absence of transitive spatial agreement in the attributive construction can be accounted for as a consequence of the reduced nature of the relative clause. Unlike tensed or full relative clauses, the predicative structure relativized in the formation of attributive POSS never contains the structural components responsible for

introducing subject (possessee) agreement. Thus, the transitive spatial agreement pattern is unavailable in the attributive POSS structure.

5.2 Locus of relativization and attributive POSS variants

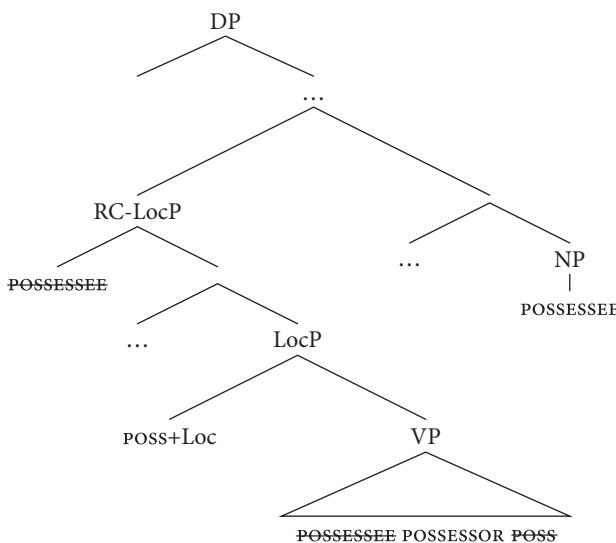
Given the underlying verbal structure assumed here, the default possessor-POSS order of attributive POSS possessives is derived if the structure targeted for reduced relativization is the VP headed by POSS. Because this low surface position of the possessor is compatible with both definite and indefinite interpretations, as discussed in Section 4.3.2, this structure explains the ambiguity in definiteness of pre-POSS possessors in the attributive POSS structure.

- (51) _iTEACHER POSS_i BOOK
 'a book of a/the teacher's'

Left unexplained, however, is the interpretation of the possessor when it follows POSS in the attributive structure. As discussed above, POSS-possessor order is grammatical in both attributive and predicative POSS possessives, albeit with different interpretive restrictions in each of these constructions. In predicative POSS structures, POSS-possessor order is neutral with respect to the definiteness of the possessor, while in attributive POSS structures this order is grammatical only with definite possessors. As the analysis has thus far anticipated, this pattern can be accounted for by appeal to the object shift operation discussed earlier and variability in the structure targeted to form the attributive POSS reduced relative, an approach that also offers insight into other interpretive patterns of attributive POSS structures.

If the relative clause structure underlying attributive POSS is formed not from the low verbal core of the predicative structure but instead from a constituent containing the locative predicate responsible for the 'strict possession' interpretation, then complex predicate formation between Loc and POSS can, as in the predicative structure, yield POSS-possessor order (52).

(52)



This derivation predicts that poss-possessor order in attributive possessives will be associated with the same ‘strict possession’ requirement exhibited by predicative POSS. As illustrated in (53), this prediction is borne out.

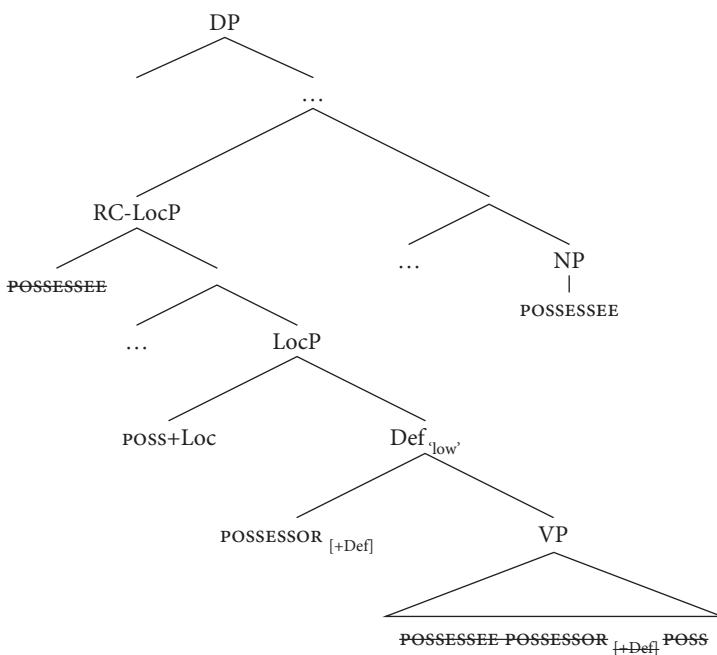
- (53) a. $i \text{MARK-TWAIN POSS}_i \text{ BOOK}$
 ‘a book of Mark Twain’s (\checkmark that he wrote / \checkmark that he owned)’
 b. $\text{POSS}_i i \text{MARK-TWAIN BOOK}$
 ‘a book of Mark Twain’s (#that he wrote / \checkmark that he owned)’

Patterns such as these illustrate how interpretive flexibility — for example, flexibility of the interpretation of the POSS relation in (38) or the (in)definiteness of the possessor in a given linear position — is not the consequence of semantic underspecification. Rather, it is the result of the same surface output (e.g., possessor-POSS order) corresponding to multiple distinct syntactic structures. Thus, interpretive variability of these string identical forms is reduced to a garden variety instance of syntactic ambiguity.

This, however, raises the issue of deriving the definiteness restriction on possessors in the post-POSS position of the attributive structure, as discussed in Section 3.2.1. While I shall not, at present, offer an explanation for this restriction, it should be observed that the analysis developed here provides the structural detail necessary to capture this pattern. Reflecting on the discussion at the end of Section 4.3.2, a more fine-grained analysis of the post-POSS domain would make available distinct structural positions for definite and indefinite possessors. In order to capture the definiteness restriction on post-POSS possessors in attributive

structures, then, one need only look for an explanation as to why relativization higher in the structure correlates with an obligatorily definite object. The structural pattern to be explained is illustrated (54).

(54)



Though this last matter is left open, it remains clear that the relative clause analysis of attributive POSS is well-supported by the attested grammatical patterns. This proposal provides a straightforward means of accounting for the documented properties of attributive POSS structures, including those properties that were identified as being problematic for an analysis in which POSS enters the structure as a marker of attributive possession. The relative clause structure underlying attributive POSS explains the observed restriction against wh-possessors and the quantificational variability of the attributive POSS nominal. As discussed in this final section, the structures proposed to account for word order variability and interpretation ('strict possession') of predicative POSS also provide an account of comparable patterns in the attributive structure, provided that the locus of relativization is allowed to vary.

6. Conclusion

Distribution of the POSS possessive marker across attributive and predicative possessives prefers a uniform analysis of the structural origins of POSS in these possessive environments. The analysis presented here proposes that POSS functions underlyingly as a predicative possessive marker, entering the structure as a verbal predicate of possession on a par with *belong*. Attributive POSS structures are argued to be derived from this predicative structure via (reduced) relative clause formation, an analysis that captures the surface patterns of these structures and receives independent empirical support. After a brief overview of the descriptive patterns of POSS possessives, the discussion focused on establishing the untenability of deriving these patterns from an underlying attributive POSS structure. Independent distributional evidence in favor of the verbal analysis of POSS was presented in Section 4. Therein, it was shown that word order variation and interpretative restrictions in predicative POSS are the result of two additional aspects of the predicative domain: distinct structural positions for licensing (in)definite objects and complex predicate formation involving POSS and a locative predicate constituent. These components are also active in attributive POSS structures, where variability in structure and interpretation is correlated with variation in the locus of relativization. This proposal provides a comprehensive and explanatory approach to POSS possessives, one in which complex structures are accounted for by detailed comparison with language-internal patterns.

Acknowledgements

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