The Object of My POSSession

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1. Introduction

In American Sign Language (ASL), as in other languages, signed and spoken, possessive relations may be expressed in both nominal (1) and clausal (2) environments.

(1)   Attributive Possession
      a.   Attributive POSS
                 $_i$BRUNO POSS$_i$ BOOK
                 POSS$_i$ $_i$BRUNO BOOK[1]
                 A book of Bruno's
      b.   APOSTROPHE-S Possessives
                 BRUNO APOSTROPHE-S BOOK
                 A book of Bruno's
      c.   Juxtaposition
                 BRUNO BOOK
                 A book of Bruno's

(2)   Predicative Possession
      a.   Verbs of Possession
                 BRUNO HAVE BOOK
                 Bruno has a/the book.
      b.   Predicative POSS
                 IX$_i$ $_i$BOOK POSS$_j$ $_j$BRUNO
                 This book belongs to Bruno.

Figure 1: POSS$_i$
(Image courtesy of www.lifeprint.com)

The puzzle addressed here is the appearance of the POSS sign, pictured at right above, in both attributive (1a) and predicative (2b) possessive constructions.[2] Patterns in the morphosyntax and semantics of POSS possessives reveal that the underlying function of POSS across these constructions is that of a verbal predicate. The analysis of POSS as a verbal predicate is transparently supported by its predicative use and is unproblematic for its appearance in attributive possessives, the latter of which receive a principled account as an instance of (reduced) relative clause modification of the possessee. While this approach contrasts with more traditional descriptions of POSS as a possessive pronoun, it parallels approaches that derive possessives from small clause predication structures (den Dikken, 2006) and sheds light on the origin and extent of symmetry in the encoding of possession in nominal and clausal domains.

[1] Glossing conventions are described in the appendix; data translations are always given with a preference for English naturalness. Unless cited otherwise, data comes from my own fieldwork with native (deaf) signers.
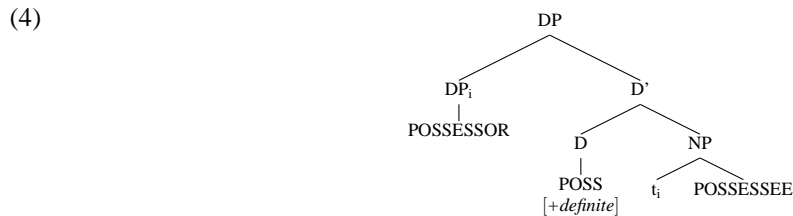
[2] For a detailed discussion of other possessive constructions, the properties of POSS that lie outside the scope of the present paper, and the theoretical implications of the analysis, see Abner (2012b).

1.1. Background on POSS Constructions

Produced with a flat handshape, POSS encodes agreement with the possessor in the orientation of the hand during the production of the sign and the final resting location of its movement trajectory: the upper chest of the signer for first person possessors and loci in signing space for second and third person.[3] As noted above, traditional descriptions of ASL categorize POSS as a possessive pronoun, an approach that receives a degree of intuitive support from the pronominal behavior that arises in the absence of an overt possessor or possessee (3) and would align 'full' POSS constructions (1a) with the possessor doubling constructions found in a number of languages and particularly common within Germanic.

(3)   a.   POSS$_i$ COMPUTER BREAK
                $\approx$ *His/her$_i$ computer broke*
        b.   COMPUTER, POSS$_i$ BREAK, POSS$_1$ FINE
                $\approx$ *As for computers, his/hers$_i$ is broken, but mine is fine.*

The possessive pronoun classification of POSS is found in contemporary typological discussions of ASL (Chen Pichler et al., 2008; Chen Pichler & Hochgesang, 2008) and is defended formally in the analysis of ASL DP structure presented in MacLaughlin (1997) and affiliated publications (cf. Neidle et al., 2000). In MacLaughlin's analysis, juxtaposed and attributive POSS possessives—all POSS constructions have an attributive origin in this approach—receive a uniform analysis as in (4), omitting details of the account not pertinent to the present discussion: the possessor is merged internal to the nominal projection of the possessee and undergoes raising to the Specifier position of the DP optionally headed by the [+*definite*] POSS, with the omission of POSS giving rise to the appearance of juxtaposed possessives.[4]

(4)

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                    DP
                   /  \
                  /    \
              DP_i      D'
               |       /  \
          POSSESSOR   /    \
                     D      NP
                     |     /  \
                   POSS  t_i  POSSESSEE
                [+definite]
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The pronominal function of POSS is thus a consequence of the status of POSS as a definite determiner.

However, the analysis of POSS as a definite determiner—in addition to proving insufficient to account for the properties of POSS constructions detailed below—is incompatible with the observation that POSS fails to determine the quantificational force of nominal phrases that contain it.

(5) $_i$CRAIG POSS$_i$ THREE COMPUTER BREAK
        ✓*The three computers of Craig's broke.*
        ✓*Three computers of Craig's broke.*

As suggested by the felicity of the two alternative translations given in (5), attributive possessives containing POSS are equally compatible with either an indefinite or definite interpretation, a pattern discussed further in §4.1. Crucially, such ambiguity is unexpected under a determiner analysis of POSS, independent of its specification for definiteness, given the role of the determiner in determining the definiteness of its associated nominal expression.[5] Furthermore, given that pronominals, too, are

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[3] As documented in other signed languages, reference in ASL is achieved through a complex system of spatial deixis wherein distinct loci in signing space can be associated with real or abstract discourse referents, in addition to the use of space to encode more complex notions such as semantic opposition and event chronology. Thus, the location(s) in which a sign or sequence of signs is produced can encode properties of verbal argument structure and pronominal reference. Though the grammatical representation of this use of space in signed languages is the topic of ongoing linguistic debate (cf. Lillo-Martin & Meier (2011) and other papers in that volume), the present discussion does not endeavor to address this debate as such and the term "agreement" is adopted throughout.

[4] See Abner (2012b) and §2.2 for specific arguments against a uniform analysis of juxtaposed and POSS possessives.

[5] This is not, however, an uncontroversial perspective on the role of the determiner. Two prominent alternatives propose either that [i] the responsibility of the determiner is, instead, to establish the argumental (vs. predicative) status of a nominal expression (Longobardi, 1994) or [ii] that the projection of a determiner is not an obligatory component of nominal syntax cross-linguistically (Chierchia, 1998), an alternative that has also been linked to

cross-linguistically associated with some specified value for definiteness, these patterns are equally problematic to any approach advancing a pronominal characterization of POSS, independent of the details of how the pronominal status of POSS is structurally achieved. Thus, existing descriptions and analyses of POSS are at odds with its failure to exhibit determiner- or pronominal-like properties.

1.2. Overview of the Proposal

The present approach shares in the spirit of parsimony evident in MacLaughlin's proposal, arguing that there does exist a derivational relationship between attributive and predicative POSS constructions, albeit a relationship that is, in a sense, the reversal of that assumed previously. Rather than taking as grammatical primitive the function of POSS as a DP-internal marker of attributive possession, the present analysis derives the class of POSS possessives from the predicative POSS construction. The discussion begins by documenting structural and interpretive differences between attributive and predicative POSS constructions that render the opposite approach, the derivation of predicative POSS from attributive POSS, untenable (§2). In light of these facts, it is proposed that predicative uses of POSS have genuinely predicative origins, a proposal clarified and defended in §3, where I present evidence that POSS exhibits the morphosyntactic and semantic characteristics of a verbal predicate in ASL. Therein (§3.2), evidence is presented to show that the argument structure of POSS predication parallels that of *belong*-type verbs of possession, with the possessor introduced in an internal (object) position prior to the introduction of the possessee. In §4, an account of attributive POSS constructions as (reduced) relative clause modifiers is presented and is shown to be well-suited to capturing the documented behavioral differences across attributive and predicative POSS constructions. A summary of the arguments presented is provided in §5.

2. Predicative and Attributive POSS: A Comparison

The above arguments against a determiner or pronominal analysis of POSS do not necessarily preclude its having a uniformly DP-internal source. The possibility of reducing predicative POSS structures (6a) to possessive predicate nominal constructions (6b) remains available, albeit with some as yet undetermined DP-internal structure, as schematized in (7).

(6)   a.   BOOK [$_{\text{Pred-POSS}}$ POSS$_i$ $_i$BRUNO]
       b.   BOOK [$_{\text{Pred-Nominal}}$ POSS$_i$ $_i$BRUNO BOOK]
(7)   BOOK $\varepsilon_{\text{"is"}}$ [$_{\text{Pred-Nominal}}$ POSS$_i$ $_i$BRUNO ~~BOOK~~]

An array of morphosyntactic and semantic differences between attributive and predicative POSS constructions, outlined in the present section, however, argues against any analysis of this type. As will be shown, predicative POSS constructions fail to parallel, structurally or interpretively, their attributive counterpart, thus rendering untenable any DP-internal characterization of POSS and opening the door to the alternative (verbal predicate) analysis pursued in the remainder of the paper.

2.1. Semantic Differences

Paralleling a pattern documented in other languages (cf. Partee & Borschev, 2001), the relation between the possessee and the possessor in the predicative POSS construction is more restricted than that in the attributive POSS construction. Thus, while attributive POSS exhibits a degree of flexibility in terms of the possessive relations it can express (8), only a strict subset of these relations can be expressed by

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argumental or predicative properties of nominals. However, neither of these alternatives provide a viable solution for ASL, given the licit appearance of bare nouns in argument position (contra-[i]) and the failure of ASL to exhibit patterns associated with languages that lack DP projections under any of the proposed DP/no-DP divisions (contra [ii]; for a discussion of ASL with reference to the proposal in Bošković (2008), see Bernath (2009).

the predicative POSS structure (9).[6]

(8) a. [ᵢMONSTER POSS_i $_{fs}$LEG/COLLAR] COLOR GREEN
         A leg/collar of the monster's (✓ inalienable / ✓ alienable) is green.
    b. [ᵢBRUNO POSS_i BOOK] COLOR GREEN
         A book of Bruno's (✓ that he owns / ✓ that he wrote) is green.

(9) GREEN $_{fs}$LEG [POSS_i ᵢMONSTER]
     A/the green leg belongs to the monster.
        #A leg of the monster is green
        ✓A leg in the monster's pile of legs is green

As expected, given contextual support—provided here through the use of the possessor MONSTER—, the fingerspelled noun $_{fs}$LEG in ASL may refer either to a part of one's body or to the (potentially detached) body part of another individual. When possessed, the former constitutes an instance of inalienable (or intrinsic) possession and the latter an instance of alienable (or extrinsic) possession, interpretations which are both allowed in the attributive POSS construction (8a). In the predicative POSS construction, however, only the alienable interpretation is allowed, forcing $_{fs}$LEG to refer to the body part of another individual that the monster has in its possession.

Restrictions on the possessive relation in the predicative POSS construction are also evident outside the domain of (in)alienability. In contrast to the attributive possessive with BOOK in (8b), for example, which allows both an author and owner interpretation of the possessor BRUNO, the predicative POSS possessive in (10) allows for only an owner interpretation of the possessor, a restriction which sometimes renders infelicitous the very use of the predicative POSS structure (11).

(10) POSS_1 BOOK FOR CLASS POSS_i ᵢBRUNO
      My book for class belongs to Bruno.
         ✓I borrowed it from him
         #He wrote it

(11) #POSS_1 BOOK FOR CLASS POSS_i ᵢMARK-TWAIN
      My book for class belongs to Mark Twain.

2.2. Morphosyntactic Differences

The semantic patterns above provide initial evidence of a structural distinction between attributive and predicative POSS, above and beyond that associated with predicate nominal formation. The morphosyntactic patterns discussed below not only confirm this distinction but also establish the untenability of a predicate nominal analysis of predicative POSS, as predicative POSS will be shown to display morphosyntactic behaviors unattested in its attributive counterpart.

2.2.1. Word Order

Variation in word order between POSS and the overt possessor is exhibited in both attributive and predicative POSS constructions (12).

(12) a. Attributive POSS
         (i)   ᵢBRUNO POSS_i BOOK
         (ii) POSS_i ᵢBRUNO BOOK
               A book of Bruno's
    b. Predicative POSS
         (i)   BOOK ᵢBRUNO POSS_i
         (ii) BOOK POSS_i ᵢBRUNO
               The book belongs to Bruno.

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[6] The relational flexibility of the attributive POSS construction is not, however, without restriction. As illustrated by (i), while attributive POSS in PICTURE-nominals allows both an ownership and authorship interpretation, it does not allow a depicted/theme interpretation of the possessor, as discussed in Abner (2012a,b).

   (i) [ᵢBRUNO POSS_i PICTURE]
        A picture of Bruno's (✓ that he owns / ✓ that he took / # that he is (just) in)

Though this pattern may seem at first blush supportive of the predicate nominal analysis counterargued here, word order variation in these two constructions is not subject to the same conditions. As illustrated in (13), though an indefinite possessor is licit in both attributive and predicative POSS constructions, its appearance in the attributive POSS construction is only licit in pre-POSS position.

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

     a.   Attributive POSS
         (i) IX_i FIND [$_j$TEACHER $POSS_j$ BOOK]
                He found some teacher's book.
         (ii)   *IX_i FIND [$POSS_j$ $_j$TEACHER BOOK]
                He found some teacher's book.
     b.   Predicative POSS
         BOOK [$POSS_j$ $_j$TEACHER] (BUT NOT-KNOW WHO)
         The book belongs to some teacher (but I don't know which one).

Thus, the definiteness of the overt possessor affects the word order possibilities of the two constructions differently. This difference provides crucial evidence that the predicative POSS construction in (13b) cannot be derived via predicate nominal formation from the attributive construction in (13aii), as the latter is simply not a grammatical output of the language.

2.2.2. WH-Possessors

The second morphosyntactic difference between attributive and predicative POSS possessives concerns the availability of WH-possessors. As illustrated by the contrast in (14), WH-possessors are ungrammatical in attributive POSS possessives.[7]

(14)   a. $_j$JOHN $POSS_i$ MOTHER VOLUNTEER ONE-WEEK-FUTURE
         John's mother will volunteer next week?
     b.   *$_i$WHO $POSS_i$ MOTHER VOLUNTEER ONE-WEEK-FUTURE
         Whose mother will volunteer next week?

This restriction cannot be an extension of the indefiniteness restriction discussed above, as WH-possessors are ungrammatical in both the pre- and post-POSS position of attributive POSS possessives (15), nor can it be aligned with some general restriction against WH-possessors in attributive constructions, as WH-possessors are grammatical in both JUXTAPOSITION and APOSTROPHE-S constructions (16).

(15)   a.   *IX_i [$_j$WHO $POSS_j$ $_i$BOOK]
         Whose book is that?
     b.   *IX_i [$POSS_j$ $_j$WHO $_i$BOOK]
         Whose book is that?

(16)   a.   ?[WHO MOTHER] VOLUNTEER ONE-WEEK-FUTURE[8]
         Whose mother will volunteer next week?
     b.   [WHO APOSTROPHE-S MOTHER] VOLUNTEER ONE-WEEK-FUTURE
         Whose mother will volunteer next week?

Furthermore, the observed restriction against WH-possessors cannot be a general restriction obtaining between POSS and the possessor, as WH-possessors are grammatical in predicative POSS constructions, in both pre- and post-POSS position, albeit with a slight difference in semantic interpretation (see Abner, 2012b).

(17)   a. IX_i $_i$BOOK [$POSS_j$ $_j$WHO]
         Who (in general) does that book belong to?
     b. IX_i $_i$BOOK [$_j$WHO $POSS_j$]
         Who (out of a specific group of people) does that book belong to?

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[7] The judgements given here, though different from those reported in the analysis of ASL WH-questions presented in Neidle et al. (2000), were uniform across four different consultants and independently confirmed with several other signers of ASL. I leave for future research the origin of this variation.

[8] The degraded grammaticality in this example seems best explained as prescriptive dispreference that sometimes emerges as a consequence of comparison with possessives overtly marked by POSS or APOSTROPHE-S

Again, such patterns illustrate not only the morphosyntactic differences that must be accounted for in any analysis of attributive and predicative POSS constructions, but also the inevitable complications facing any approach wherein predicative POSS constructions are derived from attributive POSS constructions.

2.2.3. Spatial Inflection

The third, and final, morphosyntactic difference discussed here concerns the spatial properties of the POSS sign itself. While both attributive and predicative possessives, by their very possessive nature, denote a relation between the possessee and possessor, only the predicative use of POSS can encode this relation spatially. As represented by the introduction of the initial subscript (i) in the transcription of $_i$POSS$_j$ in (18) and illustrated by the video stills in Figure 2, predicative POSS can move between two discrete spatial loci: that associated with the possessee (i) and that associated with the possessor (j).

(18)   IX$_i$ $_i$BOOK CL:B$_{i,\text{“stack-of-books”}}$ [$_i$POSS$_j$ $_j$BRUNO]
          That stack of books belongs to Bruno.

Figure 2: Movement of $_i$POSS$_j$ from contralateral locus of $_i$BOOK to ipsilateral locus of $_j$BRUNO.

Thus, though it need not obligatorily do so—indicated here by parentheses around the initial subscript—predicative POSS may identify spatially both of the arguments that stand in its possessive relation. This transitive spatial inflection is not available in attributive POSS constructions (19).

(19)   [$_j$BRUNO $_{(*i)}$POSS$_j$ $_i$BOOK] ON TABLE
          A book of Bruno's is on the table.

That this is truly a morphosyntactic effect and not the consequence of phonological assimilation between the spatial locus of the possessee and POSS is supported by the data below, where transitive spatial inflection of predicative POSS is shown to be possible not only when POSS is phonologically separated from the possessee (20a) but also when no overt possessee or possessor is present (20b).
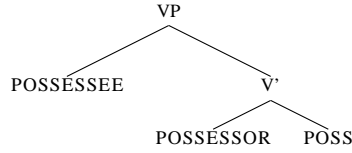
(20)   a. $_i$DOG REAL $_{(i)}$POSS$_j$ $_j$ BRUNO
               The dog really belongs to Bruno.
       b.   (i)   y/n
                       ‾‾
                       IX$_i$ $_i$BOOK CL:B$_{i,\text{“stack-of-books”}}$ [$_{(i)}$POSS$_j$ $_j$BRUNO]
                       Does that stack of books belong to Bruno?
            (ii)   nodding
                       ‾‾‾
                       YES, ($_i$BOOK) $_{(i)}$POSS$_j$ ($_j$BRUNO)
                       Yes, it does.

Moreover, it is this morphosyntactic property that allows the predicative POSS construction to wear its appropriate analysis on its proverbial sleeve, for while ASL, like other mature sign languages, makes robust use of space for grammatical purposes, this relational use of space—the meaningful movement between discrete spatial loci—is uniquely a characteristic of verbs in the language.

3. POSS as a Verbal Predicate

The verbal analysis of POSS, suggested first in the patterns of spatial inflection it exhibits, provides an immediate account of the appearance of POSS in the predicative construction: this is simply an instance of verbal predication. Abstracting away from structural details irrelevant to the present discussion, the verbal predication of POSS is as in (21).

(21)

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                          VP
                        /    \
              POSSESSEE        V'
                              /   \
                      POSSESSOR    POSS
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In addition to explaining the existence of the predicative POSS construction, as well as the support it receives from the spatial inflectional properties just observed, the verbal predicate analysis of POSS receives considerable independent support within the grammar of ASL, as inventoried below.

3.1. Morphosyntactic Support

Distributional properties of (predicative) POSS mirror those of canonical verbal predicates in the language. The default position of predicative POSS is the sentence-medial position expected in this typically SVO language (22) and the predicative POSS construction itself is compatible with an array of adverbial modifiers (23), including members of the class of manner adverbials that are expressed in ASL through mouth gestures concurrent with the manual production of the verb (23b).

(22) $_i$DOG KICK$_j$ / $_{(i)}$POSS$_j$ $_j$BRUNO
         The dog kicked / belongs to Bruno.

(23)   a. $_i$DOG OFTEN-PALM/REAL [$_{(i)}$POSS$_j$ $_j$BRUNO]
           The dog often/really belongs to Bruno.
       b. $\overline{\text{adv-mm}}$
            $_i$DOG [$_{(i)}$POSS$_j$ $_j$BRUNO]
            The dog enjoys belonging to Bruno.

Moreover, as is found with verbal predicates in the language, predicative POSS is compatible with expressions of modality, tense, and aspect (24)—albeit with the expected restrictions arising as a consequence of the stativity of POSS (cf. Rathmann, 2005), as in (24c)—and can serve as an embedded complement in both finite and non-finite environments (25).

(24)   a. $_i$BOOK WILL [$_{(i)}$POSS$_j$ $_j$BRUNO]
           The book will belong to Bruno.
       b. $_i$BOOK [$_{(i)}$POSS$_j$ $_j$BRUNO] CAN
           The book could belong to Bruno.
       c.   (i)   *$_i$DOG $_{(i)}$POSS$_j$ $_j$BRUNO FINISH
                   The dog belonged to Bruno.
           (ii)   BRUNO DANCE / *KNOW HISTORY FINISH
                   Bruno danced/knew history

(25)   a. $_i$DOG WANT [$_{(i)}$POSS$_j$ $_j$BRUNO]
           The dog wants to belong to Bruno.
       b.   IX$_i$ THINK $_j$BOOK [$_{(j)}$POSS$_k$ $_k$BRUNO]
           He thinks the book belongs to Bruno.

Finally, POSS can serve as a fragment answer to a polar question (26), which, as observed by Padden (1988), is a characteristic of the syntactic distribution of verbs in ASL (27).

(26)   a. $\overline{\text{y/n}}$
            IX$_i$ $_i$BOOK CL:B$_{i,\text{"stack-of-books"}}$ [$_{(i)}$POSS$_j$ $_j$CRAIG]
            Do those books belong to Craig?
       b. $\overline{\text{nodding}}$
            YES, [$_{(i)}$POSS$_j$]
            Yes, they do.

(27) a.

$$\overline{\qquad\qquad\qquad\qquad\qquad\qquad\text{q}}$$
$_2$INDEX KNOW $_i$INDEX WOMAN[9]
'Do you know the woman?'

b.

$$\overline{\qquad\quad\text{hn}}$$
YES, KNOW
'Yes, I do.'

                (Padden, 1988)

Conjointly with sharing their positional distribution, POSS also exhibits the morphological traits of verbs in ASL, beyond the spatial inflection properties discussed above. This is evident in the compatibility of the POSS sign with two forms of morphological reduplication, each of which are transcribed below using the .RED(UPLICANT) convention familiar from descriptions of reduplication in spoken languages. The first of these involves reduplication of the spatial path movement of the verb (28a), as discussed by Fischer (1973) and Rathmann (2005). This path reduplication process results in a habitual interpretation, yielding in the case of POSS a construction that is commonly used in descriptions of an individual's character (28b), as first noted by Baker-Shenk & Cokely (1981).

(28) a. IX$_i$ [INFORM.RED-HABITUAL$_j$] ABOUT PRESIDENT PLAN
He has a habit of informing [him] about the president's plans.[10]

b. TEASE$_{\text{pl-dist}}$ [POSS.RED-HABITUAL$_j$ $_j$CRAIG]
Teasing everyone is Craig's nature.

The second process of morphological reduplication compatible with POSS is the process of tense reduplication initially discussed in Supalla & Newport (1978). Tense reduplication reduplicates only a sub-part of the verbal form and its output displays rapid, reduced repetition with, as the name implies, increased muscular tension of the articulators. Used in the formation of derived nominals in ASL, the process of tense reduplication is not only compatible with POSS, but is compatible with POSS with exactly the same range of meanings—participant and result nominalizations (29)—that have been documented with verbs (Abner, 2012a,b).

(29) a. PUT-IN-JAIL.RED-TENSE $\longrightarrow$ JAIL   ✓participant
b. DEVELOP.RED-TENSE $\longrightarrow$ DEVELOPMENT   ✓result
c. VOTE-FOR.RED-TENSE $\longrightarrow$ VOTE / ELECTION   ✓participant, ✓result
d. POSS.RED-TENSE $\longrightarrow$ POSSESSION   ✓participant, ✓result

3.2. Arguments for Belong-Alignment

There are also morphosyntactic properties of POSS that support the particular verbal structure proposed above—specifically, the proposal that POSS aligns with *belong*-type verbs of possession, with the possessor introduced as an internal (object) argument and the possessee introduced externally (as a subject). First, beyond its ability to appear the sentence-initial canonical subject position of ASL, a position in which it precedes modals, tense markers, and pre-verbal adverbials, the possessee position can be targeted for both subject raising (30a) and subject control (30b).

(30) a. VEGETABLE TEND-TO [POSS.RED-HABITUAL$_i$ $_i$CRAIG]
Vegetables tend to belong to Craig.

b. $_i$DOG WANT [$_{(i)}$POSS$_j$ $_j$BRUNO]
The dog wants to belong to Bruno.

Second, paralleling the distinct morphological restrictions imposed on subject (31a) versus object (31b) agreement (Padden, 1988), spatial agreement with the possessee is optional, while spatial agreement with the possessor is obligatory (32).

(31) a. WOMAN $_0$GIVE$_1$ NEWSPAPER
'The woman gave me a newspaper.'

b. *WOMAN $_i$GIVE$_0$ $_1$INDEX BOOK
'The woman gave me a book.'   (Padden, 1988)

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[9] Cited data uses glosses and translations provided in the source.

[10] Bracketing of [*him*] is used here to represent the null object of the ASL sentence.

(32)   IX$_i$ $_i$BOOK CL:B$_{i,\text{"stack-of-books"}}$ [$_{(i)}$POSS$_{*(j)}$ $_j$BRUNO]
         The stack of books belongs to Bruno.

Third, comparable to what has been documented for object agreement, though not subject agreement, in ASL (Mathur, 2000; Benedicto & Brentari, 2004), the movement properties of spatial agreement with the possessor may inflect to encode dual, collective, and distributive plurality (33).

(33)   a.   BOOK POSS$_{j\text{-}k,\text{pl-dual}}$ $_j$JOHN AND $_k$CRAIG
            The book belongs to John and Craig.
       b.   TWO-OF-THEM$_{j\text{-}k}$, BOOK POSS$_{j\text{-}k,\text{pl-arc}}$
            The two of them, the book belongs to them.
       c.   EACH $_i$STUDENT POSS$_{i,\text{pl-dist}}$ $_j$BOOK CL:C$_{j,\text{"thin book"}}$
            Each student's book is a thin book.

Moreover, plural inflection of POSS exhibits morphophonological restrictions that parallel those of object inflection, in contradistinction to the morphophonology of plural inflection with pronominals. As transcribed in (34a), pronominals are also compatible with a range of plural inflections, including two allomorphs of the collective plural, an arc-like movement and a circular movement. This circular movement is not a licit allomorph of collective plural inflection with either POSS (34b) or object agreement on other verbal predicates (34c), a restriction that must be in the morphology, as it cannot be explained on phonological grounds alone.

(34)   a.   IX$_{\text{pl-dual}}$ IX$_{\text{pl-dist}}$ IX$_{\text{pl-arc}}$ IX$_{\text{pl-cir}}$
       b.   POSS$_{\text{pl-dual}}$ POSS$_{\text{pl-dist}}$ POSS$_{\text{pl-arc}}$ *POSS$_{\text{pl-cir}}$
       c.   GIFT-TO$_{\text{pl-dual}}$ GIFT-TO$_{\text{pl-dist}}$ GIFT-TO$_{\text{pl-arc}}$ *GIFT-TO$_{\text{pl-cir}}$

Thus, the verbal analysis of POSS schematized by the tree in (21) receives robust independent support from the morphosyntactic properties exhibited by POSS.

4. Deriving Attributive POSS

While having provided ample support for the verbal analysis of POSS, the case still remains to be made that this analysis can capture the appearance of POSS in its attributive use and the structural properties documented therein. This is the task of the present section, where, beyond making the general observation that relative clause formation is a natural means of deriving a nominal modifier from a verbal predicate, evidence is provided that attributive POSS can and should be analyzed as derived from the verbal analysis of predicative POSS through a process of (reduced) relative clause formation, as schematized in (35), again setting aside irrelevant structural details.

(35)

The section begins with arguments that attributive POSS displays properties of intersective modification expected under a relative clause analysis (§4.1) and then goes on to show that the relative clause proposal sketched here captures the structural properties of attributive POSS and, moreover, explains why these properties differ from those exhibited by predicative POSS (§4.2).

4.1. Modificational Nature of Attributive POSS

As noted in the discussion of the pronominal/determiner analyses of POSS provided in §1.1, attributive POSS fails to exhibit the quantificational properties one would expect of a pronominal- or determiner-like element. Rather, the semantic interpretations allowed by attributive POSS pattern with those found in nominal constructions containing intersective modifiers, such as adjectives or relative

clauses. For example, like both adjectival and relative clause modifiers (36b), attributive POSS allows non-maximal interpretations.

(36) a. [_iJOHN POSS_i TWO BOOK] COLOR GREEN
          ✓ *John's two books are green.*
          ✓ *Two of John's books are green.*
      b. (The) two (moldy) books (that are moldy) are green.

Furthermore, as is expected with intersective modifiers, and, specifically, with relative clauses (37), the presence of attributive POSS does not determine the definiteness of the possessed nominal. This is shown by the paradigm in (38): (38a) illustrates a basic presentational sentence in ASL; (38b) shows that these HAVE sentences exhibit definiteness effects comparable to presentational-*there* sentences in English; and (38c) confirms that attributive POSS—even with a strong quantifier in the possessor position—does not give rise to these definiteness effects.

(37) There are shoes that belong to each girl in the garden.
(38) a. IX_i $_i$GARDEN HAVE FLOWER
          There are flowers in the garden.
      b. *IX_i $_i$GARDEN HAVE EACH GIRL
          There is each girl in the garden.
      c. IX_i $_i$GARDEN HAVE EACH $_j$GIRL $POSS_{j,dist}$ SHOE
          There are shoes of each girl in the garden.

4.2. Attributive POSS *as (Reduced) Relativization*

Thus, in addition to providing a straightforward means of transitioning from verbal predicate to nominal modifier, a (reduced) relative clause analysis of attributive POSS is supported by the interpretive patterns of the construction. Such an analysis is also a structurally plausible and explanatory account. First, participial modifiers, which can also be derived via reduced relativization, can appear pre-nominally just as attributive POSS does:

(39) [[DANCE] BOY], GIRL PUNCH
      The girl punched the dancing boy/boy that's dancing.

Second, the pronominal-like use of attributive POSS—first illustrated in (3) above—can receive an unexceptional explanation as a case of *pro*-drop licensed by verbal agreement (Lillo-Martin, 1986).

(40) [[*pro*_i POSS_i] BOOK] ARRIVE
      A book of his_i arrived.

Third, the restriction against WH-possessors found only with the attributive POSS construction can be attributed to a Relative Clause Island Effect (41), as has been documented elsewhere in ASL (see Abner (2011) and references therein).

(41) *IX_i [$_{RC}$ $_j$WHO POSS$_j$] $_i$BOOK
      Whose book is that?

Finally, the word order patterns (§2.2.1), spatial inflection (§2.2.3), and interpretive restrictions on the possessive relation (§2.1) exhibited in the predicative POSS construction are easily encoded in the extended functional structure of the verbal domain. This functional structure, discussed in detail in Abner (2012b), is present in the predicative POSS construction but not, given the reduced nature of the relative clause, in the attributive POSS construction, thus accounting for the documented differences.

5. Conclusions

The preceding discussion has presented a novel analysis of POSS possessives in ASL, arguing against the traditional description of POSS as a possessive pronoun and in favor of a verbal predicate analysis of POSS. This analysis receives support from both the morphosyntactic distribution of POSS, in comparison with that documented for other verbal predicates in the language, as well as the ability of the verbal

predicate analysis to account for the properties of POSS when used in both attributive and predicative possessive constructions.

Appendix: Glossing Conventions

SIGN, SIGN-SIGN	Capitalized words provide English glosses for signs; hyphenated sequences used where multiple words are necessary to gloss the meaning of a given sign.
CL:H$_{\text{“doing-x”}}$	Broadly transcribed classifier constructions; H indicates the general handshape of the classifier used and the subscripts represent the meaning of the classifier predicate in context.
$\underline{\hspace{4cm}}$wh	Non-manual markings produced simultaneously with manual signs; scope of the line indicates spread of non-manual marking; letters at the end of the line indicate the type of non-manual marking used—here, WH-question marking.
$_i$SIGN$_2$	Spatial agreement markings; subscripted letters (*i,j,k*) indicate third person referents, while subscripted numbers (*1,2*) are used for first and second person. Initial subscripts on (pro)nominals represent co-reference.

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