

# Possessive relatives and cooperating constructions

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Eastern and Western Armenian possess non-subject participial prenominal relative clause constructions which contrast with respect to the surface expression of the pronominal subject of the embedded verb. As can be seen in (1a), this argument is expressed as a person/number affix on the participle (and optional independent pronoun) in Eastern Armenian. In Western Armenian, however, it is expressed by a person/number marker on the relativized noun (Ackerman and Nikolaeva, 1997):

- (1) a. gn-ac'-əs      hovanoc-ə  
buy-PART-1SG umbrella-DEF  
'the umbrella I bought'      Eastern Armenian
- b. (im)      kr-adz      kirk-əs  
1SG.GEN write-PART book-1SG  
'the book I wrote'      Western Armenian

From a purely descriptive perspective, the distribution of the person/number markers reflects a striking property of these alternative encodings: whereas the participle in Eastern Armenian hosts a marker bearing a local relation to its subject argument, it is the relativized nominal that hosts the marker in Western Armenian, and thus this marker apparently bears a non-local relation with the subject of the participle. At first glance, it appears that the subject agreement suffix -əs in (1b) has attached itself to the wrong word!

The Western Armenian strategy belongs to the somewhat neglected subtype of prenominal gapping constructions analyzed under the label "possessive relatives" (Ackerman and Nikolaeva, to appear), so called because, as with all of the other languages of this subtype, the Western Armenian prenominal relative is formally identical to nominal possessive constructions:

- (2) (im)      hin kirk-əs  
1SG.GEN old book-1SG  
'my old book'

Ackerman and Nikolaeva, building upon Barker (1995), Partee and Borschev (2003), among others, argue that this formal similarity between distinct construction types is actually motivated by the interpretation of the relative as a subtype of the indeterminate two-place semantic relation ordinarily denoted by possessive constructions. In particular, the participial head of the relative

lexically specifies the semantic relation between its subject and the non-subject argument which is relativized. The nominal possessive construction in (2) simply conveys an unspecified association between the “possessor” and the “possessed” which is contextually determined: *kirkəs* ‘my book’ may be, for instance, the book I have, the book I own, the book I wrote, or the book I mentioned earlier. The relation between the subject and the object in (1b) on the other hand is lexically determined by the semantics of the participle, and in this example *kirkəs* can only refer to the book I wrote.

Ackerman and Nikolaeva observe that these formal and semantic relations to nominal possessive constructions are complemented by the contributions of two other construction types in all of the languages in which this subtype of relative occurs. In particular, beyond relating its relation the nominal possessive construction, the subject use of the person/number markers in relative clauses is characteristic of non-finite constructions in general:

- (3) a. *dunə hasadzi-s bes...*  
 home arrived-1SG as soon as  
 ‘as soon as I arrive home...’  
 b. *siradz panə-s*  
 liked thing-1SG  
 ‘the thing I liked’

In both of the examples in (3), first person singular suffix *-s* indicates the person and number of the subject of the participle. In (3a), the inflection appears on the participle heading an adverbial clause. However, in (3b), the participle is functioning as an adjectival modifier, and the suffix indicating the subject appears on the modified noun. Additionally, (4) illustrates another way in which these participles function like adjectives, namely, they can function as nominals, hosting person/number markers:

- (4) a. *hin-əs*  
 old-1SG  
 ‘my old thing’  
 b. *siradzə-s*  
 like-1SG  
 ‘the thing I liked’ (**not** ‘my liked thing’)

On the basis of facts like these, Ackerman and Nikolaeva identify the following descriptive generalizations which any adequate theoretical treatment of possessive relative constructions must address:

- (5) a. The person and number suffixes in both nominal possessive and possessive relative constructions show a reliable identity in form and pronominal function.  
 b. Possessive relatives also show a number of semantic and syntactic parallelisms with simple attributive adjectives in modificational constructions.  
 c. The meaning of the possessive relative construction is a special case of the underspecified meaning of nominal possessives.  
 d. There is a clear relationship between the pronominal subject use of person/number markers in possessive relatives and other non-finite clauses, though there are also important differences.

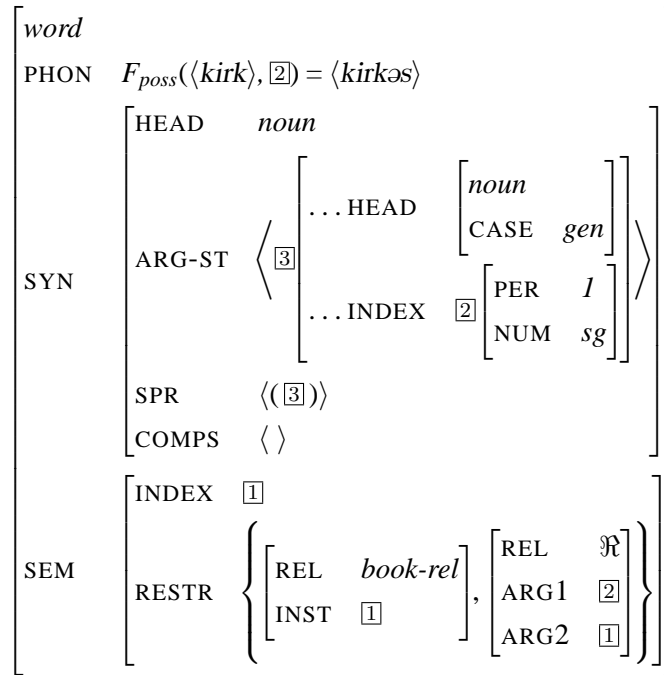


Figure 1: Lexical entry for a possessed noun

Ackerman et al. (2004) develop a constructional analysis that can account for these properties of possessive relatives in Tundra Nenets, a language unrelated to Western Armenian. While the two languages are typologically quite different, their possessive relative constructions nonetheless show remarkable similarity. In this paper we extend the analysis to Western Armenian possessive relative constructions and show that it satisfies the requirements in (5).

First, consider simple nominal possessive constructions like (2). Following Kathol’s (2002) analysis of Luiseño possessives, we propose that possessed nominals in Armenian are formed by a Possessive Lexical Rule which produces lexical representations like Figure 1. A possessed noun selects for an optional specifier, whose person and number features are indexed by the morphological form of the word, and which stands in a underspecified semantic relation  $\mathfrak{R}$  with the meaning of the unpossessed noun.

Next, we give the lexical entry for an Armenian attributive adjective in Figure 2. Like attributive adjectives in other languages, *hin* ‘old’ selects for a noun via its MOD feature, and the meaning of the modifier is a function of the meaning of the modified noun. In the case of an intersective modifier like this one, the adjective simply adds a relation to the RESTR of the noun, though more complex semantic relationships are possible. The modifier and the noun will combine by the Head/Modifier Construction in Figure 3, and the phrase produced by this combination of an adjective and a noun takes its syntactic properties from the head noun and its meaning from the modifier.

So far, the properties attributed to Western Armenian are completely standard, and would apply as well to Eastern Armenian or, for that matter, English. In order to account for the surprising non-local nature of subject agreement in Western Armenian possessive relatives, we offer the Participle Formation Lexical Rule in Figure 4. Taken with the lexical entries for possessed nouns and attributive adjectives, this lexical rule accounts for all of the properties of the Western Armenian possessive relatives. An example of a possessive relative participle combining with possessed noun by the Head/Modifier Construction is given in Figure 5.

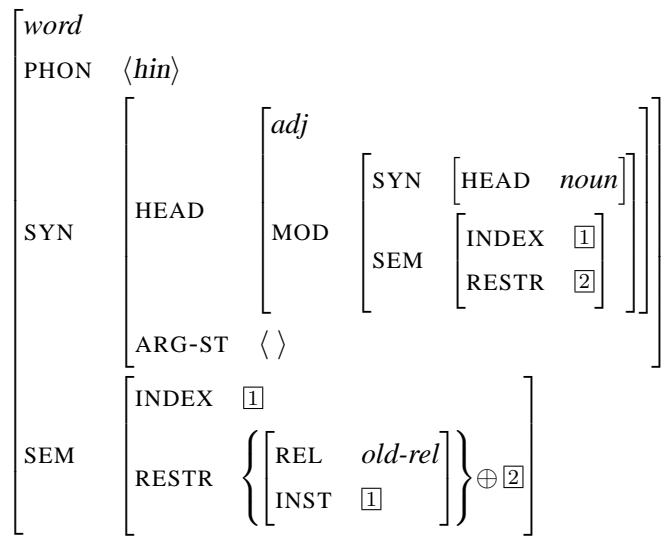


Figure 2: Lexical entry for an attributive adjective

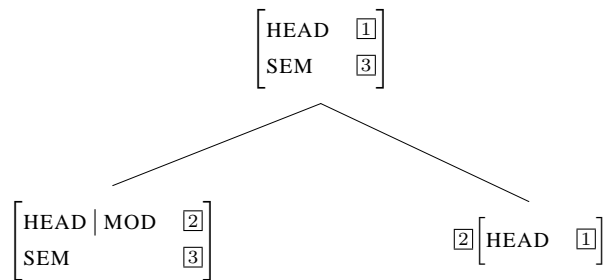


Figure 3: Head/Modifier construction

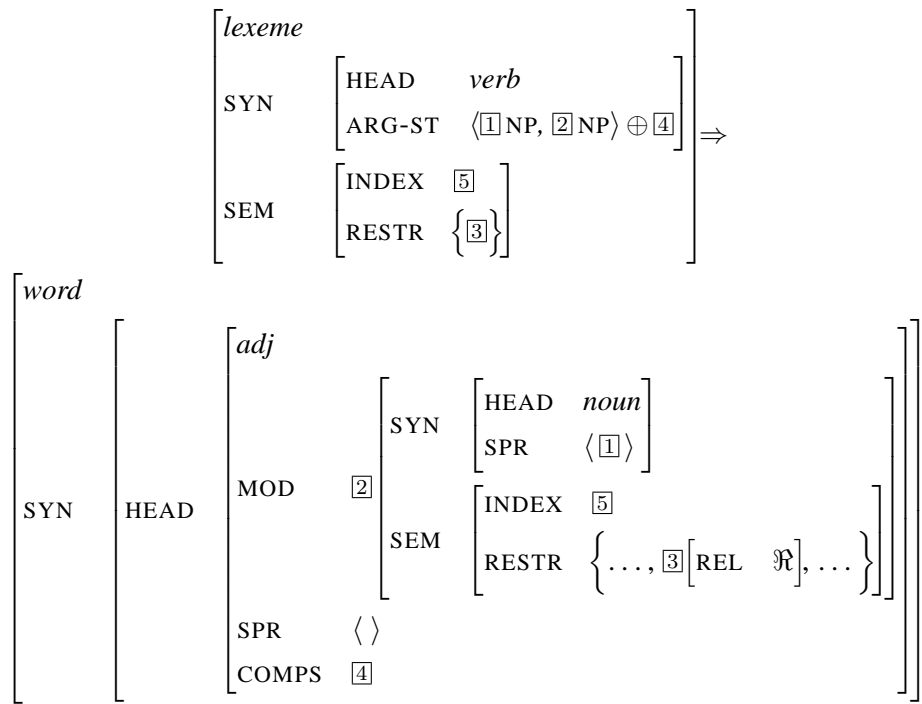


Figure 4: Possessive Relative Lexical Rule

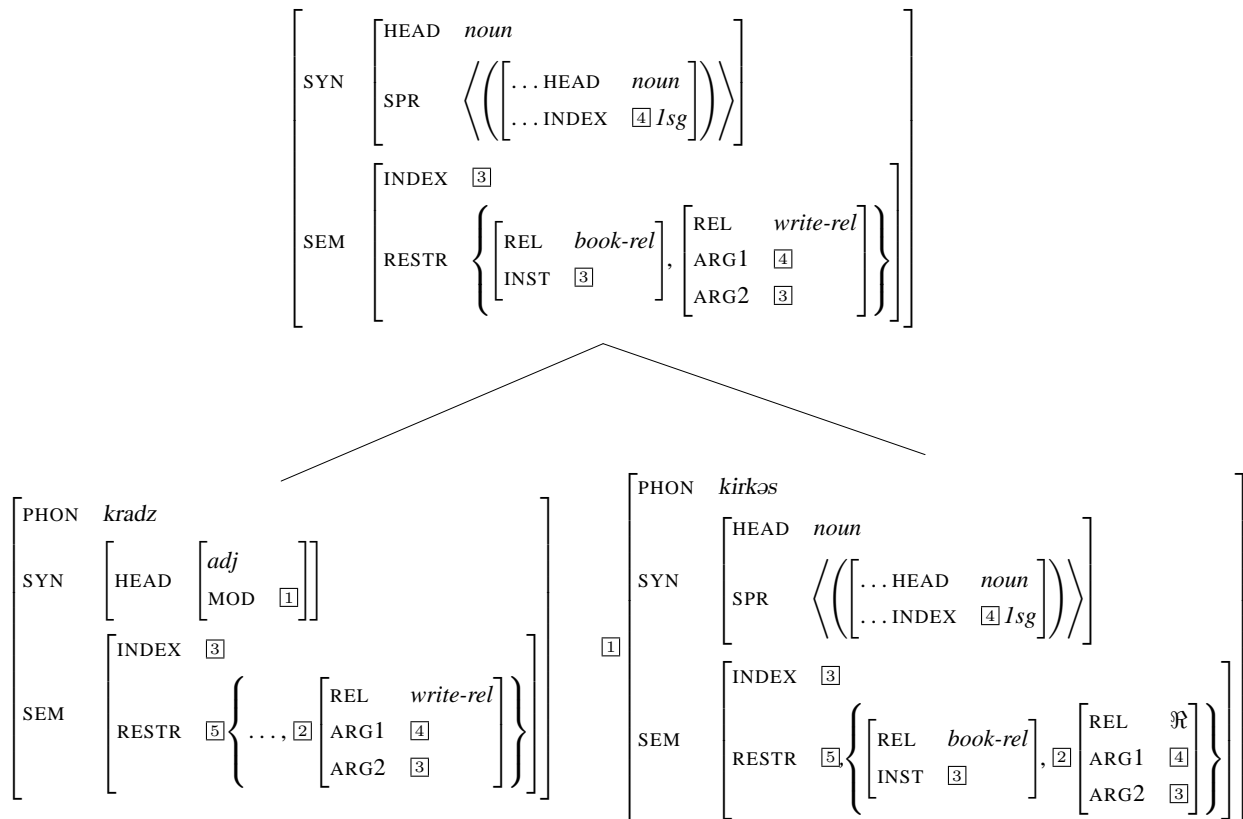


Figure 5: Structure of example (1b)

First, the MOD value of the participle produced by the rule in Figure 4 simply selects for a noun which itself selects for a nominal specifier. This means that the possessed noun form (Figure 1) will be used in both the nominal possessive construction (2) and the possessive relative construction (1b), and so they will necessarily show the same person and number markers. This provides an immediate account of property (5a).

Next, the participle produced by the rule in Figure 4 is an adjective, and as such will combine with a noun in the same way a normal attributive adjective does. In addition, it will also be able to participate in other constructions that adjectives appear in. For example, in (4) we see both attributive adjectives and possessive relative participles may be nominalized and occur with the possessive suffix which would have appeared on the head noun. Since, under this analysis, these participles *are* adjectives, property (5b) follows naturally.

Now, while possessive relatives inherit many properties of nominal possessives and attributive adjectives, their semantic content is more restricted than that either of either of those more general constructions. In the lexical rule in Figure 4, the MOD value of the participle lexically unifies a relation introduced by the verb with the underspecified relation  $\mathfrak{R}$  in the possessed noun. These two relations are clearly compatible; even in English, ‘my book’ could mean ‘the book I wrote’ under the right circumstances. Since the possessive relative participle lexically restricts  $\mathfrak{R}$ , it is not longer able to get a contextually determined possessive interpretation. Thus, examples like (1b) cannot be interpreted to mean ‘my book which someone wrote’. This semantic specification is what distinguishes possessive relatives from related constructions, and is what accounts for property (5c).

Finally, while the HEAD value of the output of Figure 4 is *adjective*, these participles will show many properties of the verbs which they are derived from. For instance, like verbs, these participles have argument structures. The modified noun is identified with the participle’s direct object, and the modified noun’s specifier is identified with the participle’s subject. Any additional arguments will be realized as syntactic dependents of the participle, just as they would be with an ordinary non-finite verb. The possessive relative participles are truly mixed categories, in the sense of Malouf (2000), and so are predicted to simultaneously show many of the properties of adjectives and non-finite verbs. This is what accounts for property (5d).

We conclude our analysis of Western Armenian possessive relatives as an amalgam of contributing constructions by showing how the proposal extends to treat those instances where both possessive and relative interpretation co-occur in the same phrase:

- (6) a. (im) patsadz turə-s  
 1SG.GEN open.PART door-1SG  
 ‘the door I opened
- b. (im) ( martun goyme ) patsvadz turə-s  
 1SG.GEN man-GEN through open.PASS.PART door-1SG  
 ‘my door which was opened (by the man)’

To conclude, in this paper we consider the possessive relative construction in Western Armenian, a construction which, at first glance, should not exist. In this construction, the subject agreement suffix associated with a participial modifier appears non-locally on the modified noun, outside the domain of the participle. Under the analysis presented here, however, there is nothing marked about this construction at all. On the contrary, its behavior follows naturally from the cooperation of other, well-motivated constructions. All of the syntactic and semantic properties of possessive relatives can also be found in very general nominal possessive, attributive modifier, and non-finite verb constructions. As Malouf (2003) and Kathol (2003), among others, have observed,

once we take the constructional aspects of language seriously, otherwise mysterious properties of a grammar can be seen to arise naturally within the context of a particular grammatical system through the cooperation of more general constraints.

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