

# Eastern Armenian Pseudo-Incorporation

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## Contents

<b>1</b>	<b>Introduction &amp; Overview</b>	<b>2</b>
<b>2</b>	<b>An Introduction to Armenian Object Nouns</b>	<b>3</b>
2.1	Nominal Structure . . . . .	3
2.2	Two Object Positions . . . . .	5
2.3	Interim Summary . . . . .	7
<b>3</b>	<b>The Theory of Noun Incorporation</b>	<b>9</b>
3.1	Pseudo-Incorporation . . . . .	10
3.2	Interim Summary . . . . .	13
<b>4</b>	<b>Diagnosing Eastern Armenian PNI</b>	<b>13</b>
4.1	Obligatory Narrow Scope . . . . .	14
4.2	Number-Neutrality . . . . .	15
4.3	Anaphora . . . . .	16
4.4	Aktionsart . . . . .	16
4.5	Typicality . . . . .	17
<b>5</b>	<b>Eastern Armenian Pseudo-Incorporation</b>	<b>18</b>
5.1	Theoretical Assumptions . . . . .	18
5.2	Armenian Object Nouns Revisited . . . . .	22
<b>6</b>	<b>Conclusions</b>	<b>25</b>

# 1 Introduction & Overview

This paper primarily addresses two claims. The first claim is that Eastern Armenian is a Pseudo-Incorporating language, along the lines discussed by Dayal (2011, 2015). Noun Incorporation can be most generally defined as any case where a bare or morphologically reduced (relative to typical distribution) object noun occurs in a close linear position relative to its controlling verb. It is further identified by a set of fairly stable semantic characteristics of the Incorporated noun, chief among them the properties of number neutrality, obligatory narrow scope, and lack of discourse instantiation.

Although originally Incorporation was identified morphologically, wherein the object noun would form a lexical unit with its verb, the term Pseudo-Incorporation has been used to describe the broader set of phenomena (cf. Massam 2001). Pseudo-Incorporating languages generally show the semantic characteristics of Incorporation, but without the requirement that the object noun morphologically merge with the verbal head.

The second claim of this paper concerns the relationship to the putative case of Incorporation in Armenian and the syntax and semantics of non-Incorporating object nouns. Following López (2012), I claim that Scrambled/dative-DOM indefinite objects in Armenian are interpreted as choice functions, in the sense of Reinhart (1997). Their Incorporated counterparts, remaining in-situ, compose with the verbal predicate by means of the operation RESTRICT, developed by Chung & Ladusaw (2004).

This discussion is structured as follows. In the next section, I will provide an overview of the general characteristics of object nouns in Armenian. I will first examine their morphological structure, followed by an examination of their syntactic distribution. In Section 3, I will provide some background discussion of some of the recent approaches to (Pseudo-)Incorporation, which will preempt some of the later discussion concerning objects in Armenian. In Section 4, which constitutes the bulk of the empirical discussion, I will subject Armenian data to a battery of diagnostics that show that Armenian is, indeed, a Pseudo-Incorporating language. In Section 5, I conclude with a sketch of a formal analysis of the various issues reviewed.

## 2 An Introduction to Armenian Object Nouns

### 2.1 Nominal Structure

As is common for Indo-European languages, Eastern Armenian makes a sortal distinction in its noun lexicon between mass and count categories. This can be observed in the distribution of numeral modification; numerals can combine felicitously with nouns that pick out countable ‘things’, whereas numerals are at best aberrant, thus requiring some kind of contextualized coercion, with nouns that pick out uncountable ‘stuff’. This SIGNATURE PROPERTY, to use the terminology of Chierchia (2010), is demonstrated by examples like the following.

- (1) a. *mi yerexa*  
a child  
b. *(\*mi) jur*  
(a) water

A noun with an accompanying indefinite determiner denotes some singular countable individual, while a bare mass term is interpreted as a homogeneous, undivided whole. Count nouns may bear inflectional morphology related to number, while mass nouns generally may not.

- (2) a. *yerexa-ner*  
child-PL  
‘children’  
b. *\*jr-er*  
water-PL  
int: ‘waters’

On the face of it, there appears to be fairly straightforward mapping between form and meaning. This mapping, moreover, appears to behave as might be expected of a language that encodes a grammaticalized mass/count distinction and a singular/plural contrast in its number system. However, further examination reveals numerous difficulties with this simple view, inviting interesting questions.

When asked to provide a generalization for the meaning of a singular noun, a competent speaker of English might say that a singular noun picks out ‘one’ of whatever the noun stem names, while a noun marked with plural morphology picks out ‘more than one’. The actual state of affairs is a bit more complex.

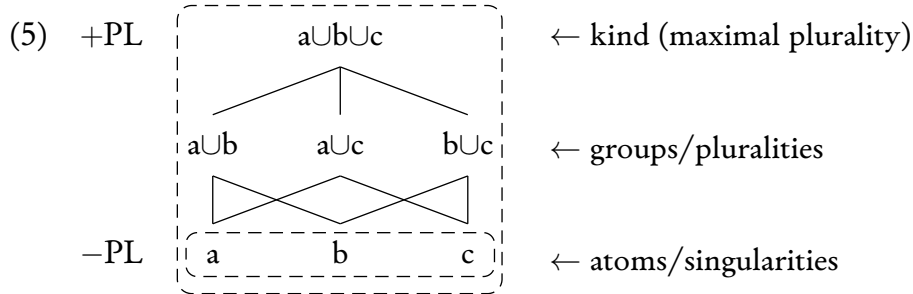
- (3) John saw dogs.  
a. True if John saw at least two dogs.  
b. False if John saw zero or one dogs.

In (3), a positive indicative statement, the bare plural object noun *dogs* permits an EXCLUSIVE or STRONGLY REFERENTIAL reading. This contrasts with the question environment of (4), wherein the object noun supports an INCLUSIVE or WEAKLY REFERENTIAL interpretation.

(4) Did John see dogs?

- a. Can be answered positively if John saw at least two dogs.
- b. Can be answered positively if John saw at least one dog.

One explanation for this difference has to do with the so-called DOWNWARD ENTAILINGNESS of the latter, but not the former, environment of the object noun. As a consequence of these facts, semantic theory must accept that languages like English map singular-marked nouns to singular individuals as possible referents, but plural-marked nouns map to both singular individuals alongside their sums. English count nouns are INCLUSIVE, in the sense above.<sup>1</sup> We can summarize the relationship between the semantics of singular and plural marked nouns in terms of a lattice-theoretic representation.



These facts differ sharply in the case of Armenian. In (6a), the bare object noun is INCLUSIVE in both positive and downward-entailing environments. In (6b), however, an overtly plural-marked object is strictly strongly referential.

<sup>1</sup>See Farkas & de Swart (2010) for an excellent review of this issue, along with an explanatory account of the perception that English plurals are Exclusive.

- (6) a. *Ara-n šun tesav(?)*  
 Ara-SP dog see.3SG.PAST.PFV  
 Statement: ‘Ara saw a dog/dogs.’ ( $\geq 1$ )  
 Question: ‘Did Ara see a dog/dogs?’ ( $\geq 1$ )
- b. *Ara-n šn-er tesav(?)*  
 Ara-SP dog-PL see.3SG.PAST.PFV  
 Statement: ‘Ara saw dogs.’ ( $> 1$ )  
 Question: ‘Did Ara see dogs?’ ( $> 1$ )

At an initial approximation, we can characterize the main differences between English and Armenian as follows. English object nouns have (at least) two possible forms, *singular* or *plural*, and when plural, denote both single individuals as well as their pluralities. Armenian object nouns, on the other hand, have (at least) three possible forms, *singular*, *plural*, or *bare*; when plural, they denote only pluralities of individuals in contrast to their English counterparts, and when bare, they denote both single individuals as well as their pluralities, more akin to English plural forms.

This distributional difference will become more apparent in the section to follow, where the existence of two object positions will be discussed.

## 2.2 Two Object Positions

In the data discussed in the previous section, the aspectual value of the verb was deliberately controlled for to avoid introducing what will ultimately become a valuable probative tool. Verbs that bear a perfective value are morphologically synthetic; imperfectives, however, are analytic and involve a separate verbal auxiliary that bears morphology encoding tense and agreement.

- (7) a. *Mariam-ě mi girk’ kardac’*  
 Mariam-SP one book read.3SG.PAST.PFV  
 ‘Mariam read a book.’
- b. *Mariam-ě mi girk’ kard-um e*  
 Mariam-SP one book read-PTCP.IPFV 3SG.PRES  
 ‘Mariam is reading a book.’

Kahnemuyipour & Megerdooian (2011, 2017), building on previous work by Megerdooian (1999), put forward the claim that this auxiliary is a second-position

clitic within the verbal predicate (for them delimited as *vP*). This auxiliary ends up at the left edge of the predicate by the point of spell-out to phonology, whereupon it encliticizes to whatever prosodic constituent sits to its immediate right (the constituent bearing sentential stress, in terms of Kahnemuyipour 2009).

- (8) a. *anuš-ě vstah e votanavor artasanel*  
 Anush-SP confident 3SG.PRES poem recite.PERF  
 ‘Anush recited a poem/poems with confidence.’
- b. *anuš-ě vstah votanavor e artasanel*  
 Anush-SP confident poem 3SG.PRES recite.PERF  
 ‘Anush has certainly recited a poem/poems.’ (K&M 2011)

In (8a), the auxiliary *e* follows the adverb *vstah* ‘confident(ly)’ and precedes the direct object *votanavor* ‘poem’, signalling that the adverb is within *vP* and is accordingly interpreted as contributing a manner description. Where the auxiliary follows the direct object, as in (8b), *vstah*, now predicate-external, is interpreted as a sentential adverb.

With these facts in place, we can now examine the actual distribution of direct objects. As preliminary background, these sorts of issues are staples of the analysis of indefinite noun phrases, and so we can begin with the typical diagnostics. Consider first the indefinite object nouns (9). Without context to fix the reference of the indefinite objects, the expressions are ambiguous.

- (9) a. Mary is looking for a manager that speaks German.  
 b. If Lud invites a philosopher, Bert will be offended.

It could be the case of (9a) that Mary is looking for any German-speaking manager, or she is specifically searching for Hans, the well-known associate manager of the branch. Similarly, the situation described of (9b) could suggest that Bert will be offended by the invitation of, say, Immanuel Kant, but it could be that Bert just generally has it out for philosophers. The take-away is that object indefinites in English appear to have a single positional distribution, which underlies multiple possible interpretations.

In the following data, adapted from Scala (2011), we can observe that Armenian objects may occupy two distinct positions. The first of these is predicate-internal (signalled by the auxiliary following the object), whereas the second is Scrambled to a predicate-external position (signalled by some other item or constituent intervening between the object and the auxiliary).

- (10) a. *amen arravot vostikan-in* [<sub>vP</sub> *tesnum em*  
 every morning policeman-DAT.DEF see.PTCP.PRES 1SG.PRES  
 ‘Every morning I see the policeman.’
- b. *amen arravot mi vostikan-i* [<sub>vP</sub> *tesnum em*  
 every morning one policeman-DAT see.PTCP.PRES 1SG.PRES  
 ‘Every morning I see a (particular) policeman.’
- c. *amen arravot* [<sub>vP</sub> *mi vostikan em tesnum*  
 every morning one policeman 1SG.PRES see.PTCP.PRES  
 ‘Every morning I see a (=some) policeman.’
- d. *amen arravot* [<sub>vP</sub> *vostikan em tesnum*  
 every morning policeman 1SG.PRES see.PTCP.PRES  
 ‘Every morning I see a policeman/policemen.’

In the two cases that the object is outside the predicate (10a,b), we can observe that the object noun displays Differential Object Marking (DOM), where dative case marks specific (and animate, in the case of Armenian) nouns.<sup>2</sup> If the object is within the predicate, however, no overt case marking is present, and two interpretational possibilities arise. In the case of (10c) where the object bears an overt indefinite determiner, it receives a singular count interpretation. The other possibility, shown in (10d), is that the object noun is totally bare, in which case it is ambiguous between singular and plural readings.

These facts suggest that the two object positions are associated with distinct interpretational characteristics (specific/referential vs. nonspecific/nonreferential), and that additionally the two positions are sensitive to the noun’s internal configuration (case-marked and overt indefinite vs. caseless overt indefinite/bare noun).

### 2.3 Interim Summary

Object nouns in English broadly show a singular/plural marking contrast, where the plural form maps to both single individuals and their pluralities. Armenian object nouns can be singular, plural, or bare. Bare nouns, and not plural-marked nouns,

<sup>2</sup>The theory of Differential Object Marking has its start in Bossong (1982), 1985, and 1991; for an updated perspective, see the minimalist proposal in Lima (2006), and the relation between DOM and Dative case marking in Bárány (2018).

pattern with English plural-marked nouns in terms of their semantics. Armenian plural nouns sharply differ in that they can only refer to pluralities.

	SINGULAR	PLURAL	
		INCLUSIVE	EXCLUSIVE
English	a book	books	
Armenian	( <i>mi</i> ) <i>girk'</i>	<i>girk'</i>	<i>grk'er</i>

Figure 1: English vs. Armenian Nominal Morpho-Semantics

In addition to the markedness and interpretational differences, English and Armenian differ in the syntactic distribution of their object nouns. Notably, Armenian objects display Differential Object Marking and Scrambling for definite or specific indefinite objects, while nonspecific indefinites and bare objects can remain in-situ. In the remainder of this discussion, I will be concerned with the positional and interpretational characteristics of overt indefinites and their bare counterparts.

	+SPEC		−SPEC
	+DEF	−DEF	
English	V Object		
Armenian	Object	$[_{vP}$ V	$[_{vP}$ Object V

Figure 2: English vs. Armenian Object Noun Distribution

In investigating what he terms the ‘polyvalent behavior of indefinites’, López (2012) connects DOM and object Scrambling as part of a single system of object interpretation. In piecing together a compositional account of this system, López argues Incorporated objects fall out naturally as a consequence of variation in the operations compose predicates and their arguments. This is an enticing direction, and it is one I will pursue in the proposal to come.

With the background details concerning Armenian DOM and object Scrambling out of the way, we can turn to the status of bare objects. I will first review the details of the theory of Noun Incorporation, covering both Canonical Noun Incorporation and Pseudo-Noun Incorporation. I will demonstrate that, based on currently available diagnostics, Armenian is likely a Pseudo-Incorporating language. I conclude with a sketch of a formal account of this characteristic.



### 3 The Theory of Noun Incorporation

Incorporation phenomena have had a rich history in linguistic investigations, particularly in the area of formal semantics. The first general explorations of Incorporation were those by Mithun (1984, 1986), who sought to provide a typology of Incorporation tendencies. Work by researchers such as van Geenhoven (1998) picked up on these initial studies and broadened the empirical foundation for the phenomena.

Incorporation would initially seem to be most clearly distinguished on the basis of morphosyntactic evidence. In cases of canonical Incorporation, a bare V head undergoes a merger with a sole theme noun, itself assumed to be a bare N head. Much like the case of compounding, the lexical elements that feature into the construction must also independently occur as full constituents elsewhere in the language. As demonstrated by the Inuit example shown in (11) below, the resultant structure behaves like a single morphological unit.

- (11) *arnajaraq eqalut-tur-p-u-q*  
Arnajaraq.ABS salmon-eat-IND-[-TR]-3SG  
'Arnajaraq ate salmon.'(van Geenhoven 1998)

Later work on the interpretation and morphosyntactic characteristics of predicates and the object nouns they embed reveal that the phenomenon is much farther reaching. Some languages were found to have the semantic characteristics of Incorporation but without the morphosyntactic ones. These sorts of languages were accordingly designated *Pseudo-Incorporating*.

As demonstrated by Massam (2001), the case of Niuean has many of the general hallmarks of canonical Incorporation, with the exception that its verb and theme do not undergo a morphological merger as they do in West Greenlandic. They do, however, have a distinctive morphosyntactic distribution within the language itself. In the remainder of this section, I will provide an overview of these characteristics which we can take to be dispositive of a language's status as being (Pseudo-)Incorporating or not.

### 3.1 Pseudo-Incorporation

#### 3.1.1 Massam (2001) — *Pseudo Noun Incorporation in Niuean*

Whereas clauses of Niuean are underlying SVO with obligatory verbal fronting, one may also find VOS patterns, where the verb and its theme form a constituent and front together. Along with this fronting, there is a distinct set of semantic properties that point towards a species of Incorporation process.

- (12) a. *Ko e fanogonogo a lautolu ke he tau lologo*  
PRES listen ABS they to PL songs  
'They were listening to songs.'
- b. *Ko e fanogonogo lologo a lautolu*  
PRES listen song ABS they  
'They were listening to songs.'
- (Massam 2001)

An important difference between Incorporation and pseudo-Incorporation concerns the size of the syntactic representation involved. Whereas canonical Incorporation is assumed to be a morphological merger between a lexical verb (a bare V terminal, in syntactic terms) and a lexical noun (a bare N), pseudo-Incorporation is taken to target phrasal categories.

#### 3.1.2 Dayal (2011) — *Hindi Pseudo-Incorporation*

Drawing from work like Massam's, Dayal (2011) argues that a pseudo-Incorporation analysis is appropriate for Hindi as well. In Hindi, transitive predicates may occur with fully quantified or determined nominals, but they may also occur with totally bare nouns. These nouns are interpreted ambiguously, either bearing a semantic value similar to that of an indefinite, or that of a bare plural. Because these bare arguments share a distribution with indefinites, an immediate concern is to isolate these similarities and demonstrate that bare arguments are not themselves a species of indefinite.

Having established that Hindi bare objects are not indefinites, Dayal's task is to demonstrate the positive claim—that they count as instances of (Pseudo-)Incorporation. This task itself has two components, beginning with establishing that these nouns pattern as expected of cases of Incorporation, followed

by separating out the characteristics that define Pseudo-Incorporation and showing that those, too, hold.

The initial evidence for Dayal’s Incorporation analysis comes from the semantic behavior of bare object nouns, crucially that they (a) obligatorily take narrow scope with respect to other operators, (b) are interpreted number-neutrally, and (c) cannot be referred to anaphorically.

- (13) a. *har aurat bacca sambhaal rahii thii*  
 every woman child look-after PROG be-PST  
 ‘Every woman was looking after a child/children.’
- b. *anu puure din cuuhaa pakaRtii rahii*  
 Anu whole day mouse catch-IMP PROG  
 ‘Anu kept catching mice (different ones) the whole day.’
- c. *anu-ne kitaab<sub>i</sub> paRhii #vo<sub>i</sub> bahut acchii thii*  
 Anu-ERG book read-PFV it very good be-PST  
 ‘Anu book-read (read a book). It was very good.’

A particular insight in Dayal’s account is the analysis of Pseudo-Incorporated nominals as not being bare lexical nouns, but instead full syntactic constituents of the category Num(ber)P, fully valued for singular (or atomic) reference. This takes care of the partial overlap with indefinites, but where Dayal’s work really comes together is in accounting for the plural (or number-neutral) side of the available interpretations. Ultimately, she claims that the atomic/number-neutral ambiguity resolves in terms of quantization/homogeneity, driven by aspectual characteristics of the predicate (cf. Krifka 1989, 1998; Krifka et al. 1995).

### 3.1.3 Schwarz (2014) — *How weak are weak indefinites?*

Building on the work of Dayal (2011), Schwarz (2014) analyzes the phenomenon of so-called “weak definites” (cf. Carlson 2006). Although definite noun phrases are typically taken to pick out distinct, maximally salient referents, there are instances where they appear to name generalized, well-established properties without singling out a specific instance of it. Despite the definiteness of *the hospital* in (14), two non-conflicting interpretations are available.

- (14) Bill is in the hospital, and John is too.
- a. Bill is at Mercy and John is at Piedmont
  - b. Both Bill and John are at Piedmont

This contrasts with a sentence like (15) which also has two readings, but only so far as one permits either that John and Mary cooperated in consuming one large sandwich together, or that the sandwiches they individually ate were of the same constitution.<sup>3</sup>

- (15) John ate the sandwich, and Mary did too.
- a. John ate the sandwich, and Mary ate the same sandwich.
  - b. John ate the sandwich, and Mary ate the same kind of sandwich.

The way that Schwarz handles these facts appeals to the internal make-up of the event descriptions supported by transitive versus Incorporating verb types. Contrary to theories of weak definites that suppose the question resolves to some property of the definite object noun, he instead claims that the object is just as definite as any other; instead, where the definite argument is able to pick out an established KIND of thing (e.g. *the hospital* is metonymic for advanced medical care, not a specific location), it is able to semantically Incorporate into the verb. In so doing, the entire predicate is detransitivized.

- (16) a.  $\llbracket \text{read}_{\text{TV}} \rrbracket = \lambda x \lambda e [\text{read}(e) \wedge \text{Th}(e) = x]$
- b.  $\llbracket \text{read}_{\text{INC-V}} \rrbracket = \lambda P_{e, st} \lambda st^* \{e | \text{read}(e) \wedge \exists x [P(x)(e) \wedge \text{Th}(e) = x] \wedge e \leq s\}$

A lexically transitive verb, as in (16a), binds a Davidsonian event variable and (assuming a severed external argument, cf. Kratzer 1996) a single variable for its object. If the verb is Incorporating (16b), however, it denotes a plural eventuality realizing an event kind (the ‘maximal, unique entity’ picked out by  $\iota$  in a plural domain of events, as constructed by the join operator  $*$ ).<sup>4</sup>

<sup>3</sup>There is, of course, a third interpretation that arises with some creative manipulation of the context. We won’t ruminate on it here.

<sup>4</sup>Note that the verb as described takes in a property, which is not the correct type to compose with the definite object; I will not get into the specifics of Schwarz’s proposal, which involves further type-shifting. What suffices here is the connection to event-kinds he elaborates on from Dayal.

This will ultimately prove to be a crucial insight for the analysis of Armenian object nouns, as I will ultimately follow Schwarz, herself in step with Dayal, in claiming that it is the internal characteristics of the event being described that are responsible for the broader properties of the bare object as being a Pseudo-Incorporation construction.

### 3.2 Interim Summary

Incorporation (broadly construed) is a fairly wide-reaching phenomenon that appears to have a distinctive semantic signature that separates it from the distribution of indefinites. Obligatory narrow scope, number-neutrality, lack of anaphoric instantiation, the contribution of *Aktionsart*, and typicality of the predicate's reference all stand as useful (though not universal) diagnostics.

An additional theme that has come out of more recent research is the usefulness of kind-level reference in explaining lexicon-interfacing syntactic and semantic phenomena. Taking Incorporation to hold at the level that lexical objects first enter grammatical operations, we might suppose that syntactic dependencies, as well as their concomitant semantic relations, start out very broadly and become increasingly specified as the expression is structured.

Incorporation, on such a view, would fit rather naturally into a theory of object interpretation which holds that, in a manner of speaking, the 'initial meeting' of two lexical objects sets their subsequent possibilities. Those possibilities are, in turn, actualized by grammatical operations, and finally encoded as a distinct proposition by rules of semantic composition.

In the next section, I will continue with this line of thinking and provide a sketch of such a proposal. My goal in doing this will be to deploy the diagnostics discussed above, as well as demonstrate that Armenian fits into an expected typological niche that we should naturally expect on this view of syntax-semantics.

## 4 Diagnosing Eastern Armenian PNI

Having considered what constitutes Incorporation, we can now in turn apply similar reasoning to the case of Eastern Armenian. There are several stable semantic properties that indicate the presence of Incorporation. In this section, I examine a few of these properties that have been shown to be dispositive of Incorporation phenomena: (a) the presence of obligatory narrow scope for bare objects, (b) the

requirement of number-neutral interpretations, and (c) the inability to link objects to discourse operators.

#### 4.1 Obligatory Narrow Scope

A well-known property of object indefinites is their ability to take wide scope with respect to other clausal operators. For example, in (17a), the indefinite object takes wide scope over the quantificational subject; this contrasts with (17b), where the indefinite takes narrow scope.

(17) Everyone received a gift.

- a.  $\exists y[\text{gift}(y) \wedge \forall x[\text{person}(x) \rightarrow \text{receive}(x, y)]]$
- b.  $\forall x[\text{person}(x) \rightarrow \exists y[\text{gift}(y) \wedge \text{receive}(x, y)]]$

An important initial test for Incorporation is to determine whether possibly Incorporated nouns behave as expected of indefinites. If the expression is able to support a wide-scope reading with respect to other operators, then this is good evidence that they are indeed merely indefinites, and thus not Incorporated in the canonical sense.

- (18) a. *amen mek-ě nver stac'-av*  
 every one-SP gift receive-PAST.PFV  
 'Everyone received a gift.'
- b. *amen mek-ě mi nver stac'-av*  
 every one-SP one gift receive-PAST.PFV  
 'Everyone received a (particular) gift'

The expression in (18) supports a reading where for every person, there is some gift or other that they received, comporting with a narrow-scope interpretation of the object. The wide-scope reading, wherein there is some specific gift that everyone got, requires an overt indefinite. From this, we can conclude that bare object nouns in Armenian are more likely to be *bona fide* Incorporating, rather than merely indefinite.

## 4.2 Number-Neutrality

Another important semantic diagnostic concerns the quantificational properties of the noun's denotation. In the conventional understanding of number, a morphologically singular noun takes its denotation from a domain of atomic entities; that is, what is marked as singular is interpreted as singular. In the case of Incorporation, we often find that the numeral interpretation is ambiguous—that is, number-neutral.

Eastern Armenian comports with what is expected of typical cases of Incorporation. The morphologically singular object is indeed interpreted as either singular or plural depending on surrounding context. The expression in (19) can be taken to assert that Armen has one child, or that Armen has children (rather generally). To put it differently, it asserts the truth of Armen as being a “child-haver” in some context.

- (19) *Armen-ě yerexa un-i*  
Armen-SP child have-3SG.PRES  
‘Armen has a child / children’

This is a sufficient initial test, but to really get give Incorporation its due consideration, we can take this further. One clear test for neutrality concerns the interpretation of the object in a temporally iterated event. In (20), the event of *catching* has, of course, a clear termination: when the mouse is caught, the temporal trace of *catching* comes to an end. There are two logical interpretations that can be assigned to the expression, either (a) there was a singular mouse which Hasmik caught repeatedly over the course of the day, or (b) Hasmik went around mouse-catching, with each subsequent catching event involving a unique mouse-participant.

- (20) *ambołj or-ě Hasmik-ě muk ē bŕn-um*  
entire day-SP Hasmik-SP mouse 3SG.PRES catch-PTCP.IPFV  
‘Hasmik was catching mice all day.’

As expected of the case of Incorporation, the favored interpretation is one in which Hasmik catches multiple distinct mice, indicating that the singular-marked object is interpreted neutrally.

### 4.3 Anaphora

Another tendency we can observe is for Incorporated nouns to be possible antecedents in an anaphoric relationship. In (21a), where the object noun is fully argumental, we can get full anaphoric reference. Whatever particular book Mariam happens to be reading is established in the discourse context, and it can be picked out by anaphoric elements like *ir* ‘its’ across expressions. In (21b), on the other hand, the favored interpretation does not easily support anaphora.

- (21) a. *Mariam-ě mi girk' kard-um ē*  
Mariam-SP one book read-PTCP.IPFV 3SG.PRES  
‘Mariam is reading a book.’ (its title is ...)
- b. *Mariam-ě girk' ē kard-um*  
Mariam-SP book 3SG.PRES read-PTCP.PRES  
‘Mariam is reading a book.’ (# its title is ...)

### 4.4 Aktionsart

While Armenian does not offer all of the same aspectual values that Hindi does, many of the telicity effects should be straightforwardly observable. The Armenian predicate may be valued for perfective aspect, in which case the verb takes on an analytic morphology, or it may appear as an imperfective participle along with a tense-bearing auxiliary, therefore having a synthetic morphology. If Armenian does in fact pattern as a language whose bare object nouns are Incorporated, and if they are indeed valued as singulars, then we should expect to see similar patterns of acceptability when varying the aspect and telicity of the predicate. By hypothesis, we may expect that perfective aspect will pattern with quantized interpretations when we can force the predicate to be telic, and cumulative interpretations where we can force it to be atelic.

In (22), the verb *gnec'i* ‘bought’ bears perfective morphology. With a bare object noun, we can see that the entire predicate is wholly ambiguous between singular and plural readings.

- (22) *aysor girk' kard-a-c'i*  
today book read-1SG.PAST.PFV  
‘Today I read a book.’ / ‘Today I read books.’



By adding the adverbial expression *mi žamum* ‘in an hour’ which forces a telic reading as in (23), we indeed see the expected change; the overall interpretation of the predicate is one in which the object noun is quantized.

- (23) *Sirun-ě mi žam-um xndzor ker-av*  
 Sirun-SP one hour-LOC apple eat-3SG.PAST.PFV  
 ‘Sirun ate an apple in an hour. / \*‘Sirun ate apples in an hour.’

The expression *mi žam* ‘(for) an hour’, on the other hand, returns a reading that is preferentially atelic. This is demonstrated by (24). Again, as we may expect, the interpretation of the predicate is cumulative, and the object noun is accordingly plural.

- (24) *Sirun-ě mi žam xndzor ker-av*  
 Sirun-SP one hour apple eat-3SG.PAST.PFV  
 # ‘Sirun ate an apple for an hour.’ / ‘Sirun ate apples for an hour.’

#### 4.5 Typicality

A final major diagnostic that has been gaining traction in more recent investigations is the criterion of ‘typicality’ (cf. Carlson 2006) of the named activity. There is some evidence of this in Armenian. Consider the following representative example.

- (25) *yes hayr em kotrel*  
 I father 3SG.PRES lose.PERF  
 ‘I have lost (my) father.’

This could just as well be said with overt possessives (*im hayr-ě* ‘my father-SP’; *hayr-s* ‘father-2SG.POSS’). It is not uncommon, however, to use the bare noun, relying instead on the (admittedly normative) inference that people tend to have one father.

## 5 Eastern Armenian Pseudo-Incorporation

The characteristics of the data presented in the previous section, I argue, make a clear case that Eastern Armenian is a language that shows the hallmarks of Pseudo-Noun Incorporation. Furthermore, given López’s claim that DOM, Scrambling, and Incorporation hang together as part of a single system of object reference, I additionally suggest that Armenian fulfills an expected typological niche. Armenian shows overtly what many languages keep covert. All that remains, then, is to provide an accounting of these facts, which I now turn to.

I now turn to the situation left off in 2.3. In this section, I begin by laying out the theoretical assumptions that background the formal proposal. Next, I will provide an account for the case of bare objects as being Pseudo-Incorporated. Finally, I will tie up the remaining threads of the discussion by accounting for the characteristics of DOM/Scrambled indefinites.

### 5.1 Theoretical Assumptions

#### 5.1.1 *The Basic Framework*

I follow the proposal of Chierchia (2010) in taking the basic meaning of a lexical noun stem to be a number-neutral property.

- (26) The core meaning of a noun stem  $W$  in language  $L$  is a number neutral,  $\cup$ -closed property  $P$ , unless  $\langle W, P \rangle$  is listed in the lexicon of  $L$ .

We can accordingly represent the semantics of a basic lexical noun stem in Armenian as follows.<sup>5</sup>

- (27)  $\llbracket girk \rrbracket = \lambda x[\text{BOOK}(x)]$

In (27), the property  $\text{BOOK}$  is number neutral and closed under sum formation; this immediately derives the property of bare object nouns to have Inclusive reference to atoms and sums.

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<sup>5</sup>In Chierchia’s original formulation, such basic stems also bind an intensional variable  $w \in D_s$ . I do not adopt this convention here, largely for the sake of brevity; no major consequences hang on this decision.

On this model, we can define a domain of events  $U_E$  consisting of atomic events and pluralities of events consisting of them. A basic transitive predicate can be represented as follows, where  $E$  is a variable ranging over the entire domain  $U_E$ .

Note that I follow the now standard Kratzerian assumption that external arguments compose by means of a separate Voice projection, and so a transitive predicate is essentially monovalent, so far as its variable over individuals is concerned.

### 5.1.2 DOM, Scrambling, and Incorporation

(29) a. *María busca a/Ø un traductor de alemán*  
 María seeks a translator of German  
 ‘María is looking for a German translator.’ (López 2012: 10)

b. *Juan envió el paquete \*(a) un niño*  
 Juan sent the package to a boy

19

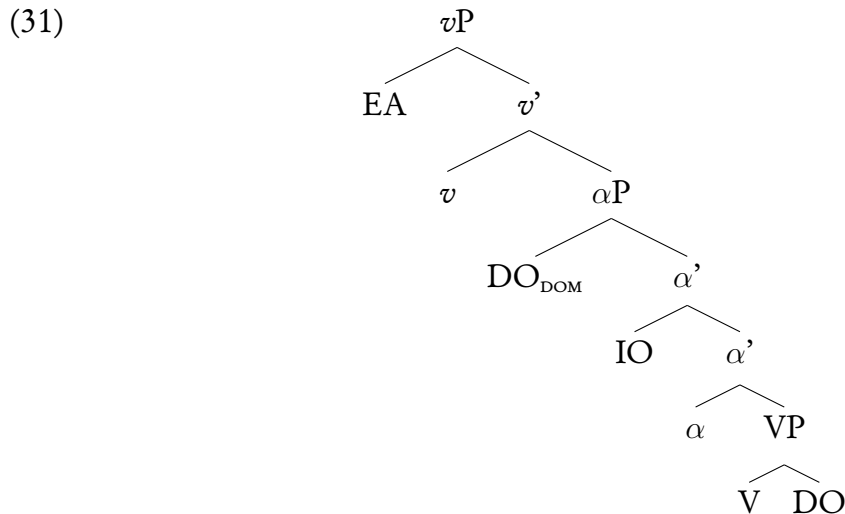
The broad characterization of (29a) is that the particle *a* (so-called ACCUSATIVE A) is a marker of indefinites interpreted as (wide scope) indefinites. López in turn asks if this particle, given its distribution and familiar characteristics connected to specificity, can be unified with the case of Scrambling.

For this, he turns to data like in (30) which show an interesting covariation with the presence or absence of the Accusative A particle.

- (30) [Context: What did the enemies do? The enemies delivered X to Y and Z to W, but ...]

*Los enemigos no entregaron a su<sub>i</sub> hijo a/Ø ningún<sub>i</sub> prisionero*  
 the enemies NEG deliver.PL DAT his son no prisoner  
 ‘The enemies did not delivery any prisoner to his son.’ (López 2012: 41)

López remarks that the reading available in the presence of Accusative A is a quantifier-variable interpretation, in which each prisoner is paired with a son. This reading is absent in the case that the Accusative A marker is also absent. To account for this, López suggests that the expression in (30) is structurally ambiguous, modulo the presence of the particle. He proposes that the Accusative A marked structure results from short Scrambling of the marked object to a position that is structurally above the bound variable *su*. This is represented below.



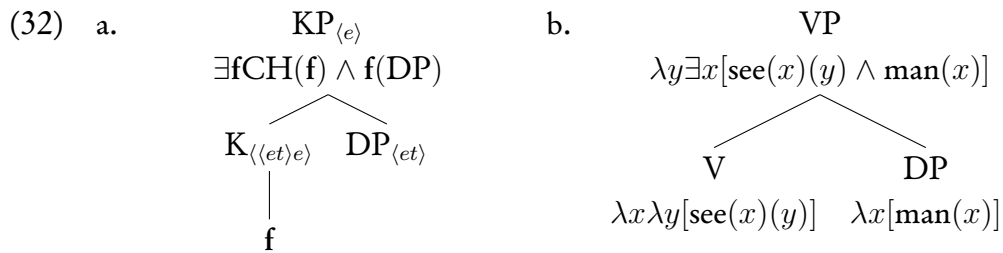
An unmarked direct object (represented as DO) remains in-situ. The indirect object is the argument of an applicative projection ( $\alpha$ P), and if the direct object is marked by Accusative A, it Scrambles to spec, $\alpha$ P. In this position, it C-commands the indirect

object. In the case that the indirect object bears an anaphoric element that can be bound under C-command, this Scrambled direct object is in the correct position to do this.<sup>7</sup>

To briefly sum up, López's proposal draws a direct link between the variability of direct object interpretation, its marking possibilities, and its syntactic position. An Accusative A marked object in Spanish may be interpreted for a wide scope indefinite, but an unmarked object must not be.

The difference, he argues, is that the mobility of the marked object and its interpretational characteristics can be derived from the same source. Marked objects are syntactically larger objects than unmarked ones, respectively K(ase)P versus DP for the case of Spanish. The K head of the KP realizes as Accusative A, potentially getting its form as a realization of the dative marking available in the applicative  $\alpha$ P. DPs are, in turn, unmarked.

Furthermore, he proposes that KPs and DPs map to different semantic representations. In the former case, he adopts the choice functional view of Reinhart (1997), which accounts for the scope-taking and specificity possibilities observed. For the latter case, he adopts the view of Chung & Ladusaw (2004), interpreting them by means of the semantic operation RESTRICT. Rather than saturating the property that the verbal predicate denotes, arguments composed by Restrict eponymously restrict the domain of verbal reference. These options are schematized as follows.



The restriction of the verb and subsequent existential closure of the variable bound by the object noun results in an obligatory narrow scope reading. In the remainder of this section, I will apply this analysis to the case of Armenian to show that the facts come out as expected.

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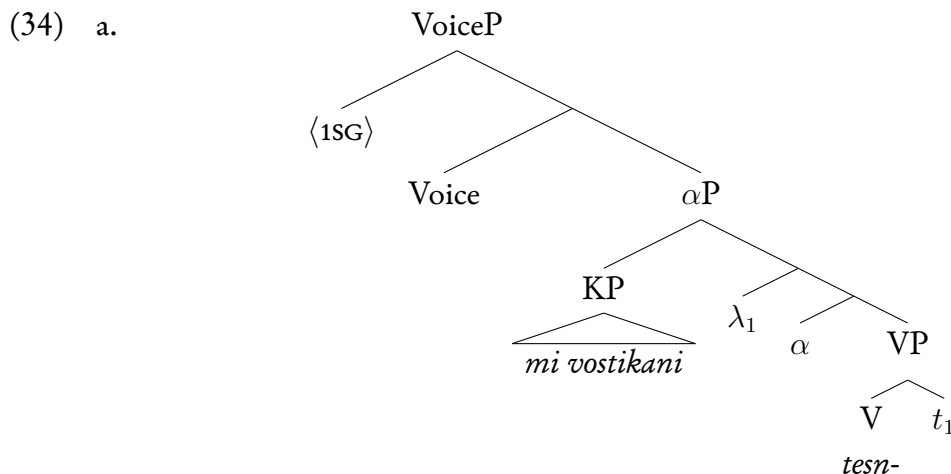
<sup>7</sup>Note that the linear order is not in question here; rightward adjunction of the marked DO would derive the correct linear facts.

## 5.2 Armenian Object Nouns Revisited

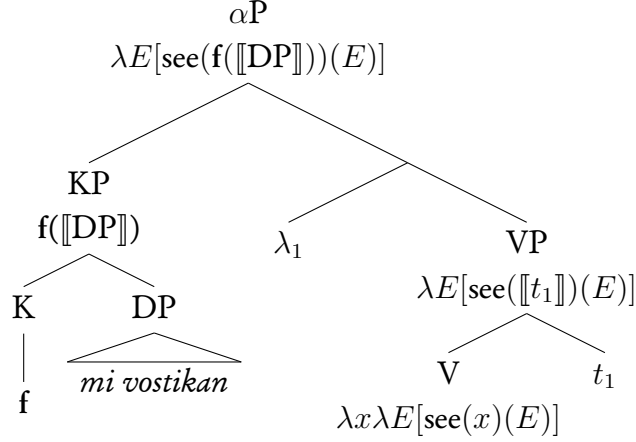
To demonstrate the application of the proposal, consider the data in (33a-c), repeated from (10b-d). Just like the Spanish facts surveyed by López, we can observe that the distribution of object nouns follows a marking strategy that is best explained in terms of Scrambling and realization of case morphology, as in (33a). The object is not required to vacate the predicate (33b), but in that case it cannot be interpreted specifically. Finally, if the object is totally bare, as in (33c), it must remain in situ and is obligatorily interpreted as a number-neutral, narrow scope expression.

- (33) a. *amen arravot mi vostikan-i* [<sub>vP</sub> *tesnum em*  
 every morning one policeman-DAT see.PTCP.PRES 1SG.PRES  
 ‘Every morning I see a (particular) policeman.’
- b. *amen arravot* [<sub>vP</sub> *mi vostikan em tesnum*  
 every morning one policeman 1SG.PRES see.PTCP.PRES  
 ‘Every morning I see a (=some) policeman.’
- c. *amen arravot* [<sub>vP</sub> *vostikan em tesnum*  
 every morning policeman 1SG.PRES see.PTCP.PRES  
 ‘Every morning I see a policeman/policemen.’

Taking the case of (33a,b) to be a KP that can optionally Scramble, we can expect a configuration like in (34). I have represented the intermediate step which shows the shorter movement to spec, $\alpha$ P, but note that subsequent movement to a position outside of VoiceP must occur. The full semantic composition for  $\alpha$ P is represented in (34b).



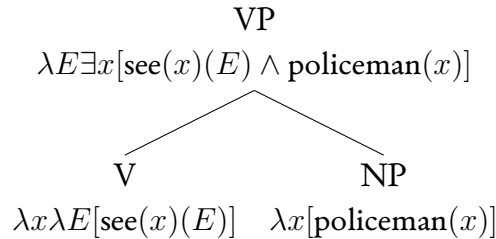
b.



In (34b), the KP object noun raises to spec, $\alpha P$ , leaving a trace  $t_1$  behind. Coreference with the trace is mediated by the adjunction of a lambda operator below the landing site of the moved KP. The KP itself is interpreted for a choice function and returns an individual of type  $\langle e \rangle$  from the domain of the indefinite expressed by its DP complement. It is then able to compose with the lambda-abstracted VP.

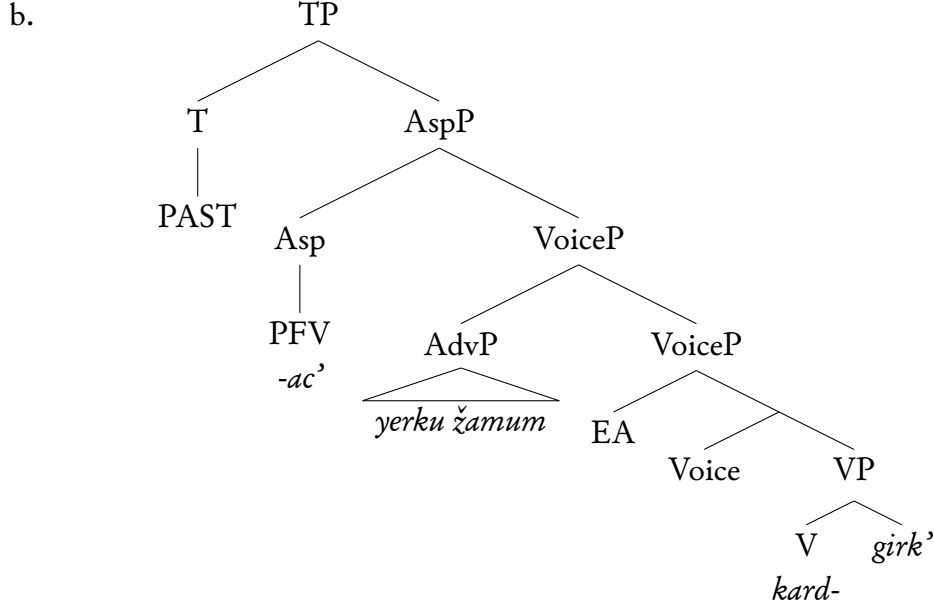
Finally, in the case that the noun remains in situ, as in (33c), the object noun composes via Restrict. One key difference I take from López in this regard is that I treat bare objects as NPs, rather than DPs.

(35)



One upshot of this analysis of Incorporation is that it permits a satisfying explanation for the effect of time-span and time-frame adverbials on the interpretation of the object noun. Because the lexical verb is taken to range over plural events, we can compose a temporally bound expression, modified by an adverbial, as follows.

- (36) a. ... *yerku žamum girk' kardac'*  
           two hour.LOC book read.3SG.PAST.PFV  
           '... read a book in two hours' / \*'... read book in two hours'



Taking the VoiceP up to the point of the addition of the external argument (EA) to be represented by the formula in (37a), the composition of the predicate with the time-span adverbial *yerku žamum* ‘in two hours’ narrows the possible set of events that the predicate can represent, shown in (37b). The perfective morphology reinforces a quantized reading of the object noun, given that the run-time of the book-reading event must now occur within the scope of the two-hour time frame, as in (37c). The natural interpretation of these facts is that a single book was read, even though the object noun and the plural event do not preclude plural objects.

- (37) a.  $\llbracket [\text{VoiceP EA Voice } [\text{VP} \textit{kard- girk'}]] \rrbracket$   
 $= \lambda E \exists x [\text{read}(E)(x) \wedge \text{book}(x) \wedge \text{Init}(E)(\llbracket \text{EA} \rrbracket)]$
- b.  $\llbracket \textit{yerku žamum} \rrbracket(\llbracket (37a) \rrbracket)$   
 $= \lambda e \exists E [2\text{-hours}(e) \wedge \tau(E) \subseteq e \wedge \text{read}(E)(x) \wedge \text{book}(x) \wedge \text{Init}(E)(\llbracket \text{EA} \rrbracket)]$
- c.  $\llbracket \text{PAST PFV} \rrbracket(\llbracket (37b) \rrbracket)$   
 $= \lambda s' \exists s \exists e \exists E [t_s \prec t_{s'} \wedge \tau(e) \subseteq t_s \wedge 2\text{-hours}(e) \wedge \tau(E) \subseteq e \wedge \text{read}(E)(x) \wedge \text{book}(x) \wedge \text{Init}(E)(\llbracket \text{EA} \rrbracket)]$

The representation in (37a) asserts a set of plural events  $E$  for which there is some  $x$ , where those plural events are reading of  $x$ ,  $x$  a book, and EA initiates  $E$ . When the time-span adverbial composes in (37b), it returns a set of atomic events that occur in a span of two hours and which have the content of the expression in (37a).



Finally, the contribution of PAST and PERFECTIVE in (37c) establishes a minimal situation  $s$  whose temporal variable  $t_s$  is a superset of the runtime of  $e$ , and which strictly precedes the temporal variable of the derived situation  $s'$ . The situation  $s'$  may then go on to compose with further temporal information, to ultimately find evaluation relative to some utterance context.

## 6 Conclusions

In this paper, I have argued that Eastern Armenian is a Pseudo-Incorporating language. Its (non-plural, non-definite) object nouns come in two forms, bare and overtly marked indefinite. Bare nouns are able to pick out singular and plural referents, while overtly marked indefinites behave as choice functions, able to take wide scope over other operators.

Having established that Armenian is Pseudo-Incorporating, I further expanded on some of the recent research directions in the relevant literature. Namely, I adopt the theoretical framework of López (2012), himself following similar analysis by Chung & Ladusaw (2004), in taking Incorporated nouns to be interpreted via *sc Restrict*. Non-Incorporated nouns are able to *Scramble*, and if they are animate, display Differential Object Marking. When Scrambled, they appear outside of the verbal predicate and are interpreted as specific indefinites.

Central to the formal component of this proposal was the claim that Incorporated object nouns are inherently number neutral, and further that they get their more restricted interpretations (as being singular or plural) through processes that quantize the cumulative verbal predicate. This is a significant departure from theoretical antecedents, namely Dayal (2011) who analyzes Hindi Pseudo-Incorporation as involving singular-valued NumPs. Future work would flesh out the model sketched in this paper, followed by testing against some of the data used to support arguments like Dayal's.

Another component of this analysis was the identification of a Scrambling position that passes through an applicative projection, as argued for in López (2012). This served two functions, first permitting coreference between the Scrambled object and the indirect object it derivationally C-commands, and second providing some motivation for the homophony between DOM and dative case in both Spanish and Armenian.

Several questions remain. In terms of the morphosyntax of such Incorporating constructions, there is the question of argument licensing. In his 2015 dissertation, Levin suggests that there is a strict linear adjacency requirement for arguments that are not merged into the verbal predicate as KP-categorized objects. While

preliminary results not discussed in this paper show that this has some import for the case of Armenian, it would be an interesting further confirmation to show that such a licensing strategy is present, as predicted, in Eastern Armenian.

## Appendix: Abbreviations

1	<i>first person</i>
2	<i>second person</i>
3	<i>third person</i>
ABS	<i>absolutive case</i>
DAT	<i>dative case</i>
DEF	<i>definite</i>
IND	<i>indicative</i>
IPFV, IMP	<i>imperfective aspect</i>
LOC	<i>locative case</i>
NEG	<i>negative; negation</i>
PERF	<i>perfect aspect</i>
PFV	<i>perfective aspect</i>
PL	<i>plural</i>
PRES	<i>present tense</i>
PROG	<i>progressive aspect</i>
PST, PAST	<i>past tense</i>
PTCP	<i>participle</i>
SG	<i>singular</i>
SP	<i>specific</i>
TR	<i>transitive</i>

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