

# Distributive numerals in Basque\*

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## Abstract

This paper presents the first detailed study of distributive numerals in Basque. We show that Basque distributive numerals are subject to restrictions on the obligatory licensing plurality that are not attested for distributive numerals in other languages described in the literature. We analyse the Basque NPs headed by distributive numerals as syntactically deficient noun-phrases that are semantically incorporated with an added requirement that the event be an event plurality satisfying a particular cumulation condition. We analyse the non-rigidity condition on Basque distributive numerals as an ignorance/ indifference condition on the referent, not as a plurality condition on the referents of the distributive numeral.

## 1 Introduction

Distributive numerals are a subclass of dependent indefinites introduced by lexically marked numerals. Dependent indefinites are defined as indefinites that impose a condition that their reference be non-rigid [Farkas, 1997, sect.4]. Here we present the first detailed study of distributive numeral NPs in Basque, marked by the suffix *-na* on the numeral (*num-na NPs*).<sup>1</sup>

Distributive numerals from a range of typologically diverse languages have been the object of a number of studies in the recent literature (Georgian [Gil, 1988], Hungarian [Farkas, 1997, Farkas, 2015], Romanian [Farkas, 2002], Telugu [Balusu, 2006], Kaqchikel Maya [Henderson, 2014], Tlingit [Cable, 2014], Serbocroatian [Knežević, 2015], ASL [Kuhn, 2015]). We show that Basque *num-na* NPs differ from the distributive numerals described in the literature with respect to their licensing profile. We analyse Basque *num-na* NPs as syntactically deficient noun-phrases that are semantically incorporated. We further argue that the non-rigidity condition on Basque *num-na* NPs is an ignorance/ indifference condition on the referent, similar to the identity of the implicit agent in *The chair was lifted twice*, not a plurality condition on the distributed share, as in proposed in the analyses for other languages.

We will proceed as follows. Section 2 outlines the syntactic distribution of *num-na* NPs. Section 3 presents the licensing conditions for Basque *num-na* NPs contrasting them with other distributive numerals described in the literature. Section 4 develops the analysis.

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<sup>1</sup>See [Euskaltzaindia, 1993, Rijk, 2008, Etxeberria, 2012] for basic descriptions of the suffix *-na*.

## 2 The syntax of num-na NPs

The Basque distributive suffix *-na* combines with numerals<sup>2</sup> and the wh-word *zenbat* "how much" [Rijk, 2008, 850].<sup>3</sup> In what follows we focus on noun phrases containing numerals+na.

- (1) Ikasleek irakasleari **zazpi-na lan** aurkeztu zizkioten.  
 student-D.pl.erg teacher-D.sg.dat seven-na work.abs present aux.pl  
 The students presented seven works each to the teacher. [Etxeberria, 2012, 55: ex 203]
- (2) **Zenba-na** filma ikusi zituzten hiru umeek?  
 how.many-na film watch aux three child-D.pl.erg  
 How many films each did the three children watch?

### 2.1 The syntactic distribution of num-na NPs

Num-na NPs cannot be subjects (3) [Trask, 2003, 128]. [Rijk, 2008, 852] gives one attested example with the verb *help* and distribution over a 1pl dative experiencer (4). However, this example is not acceptable to our informants<sup>4</sup> and there are no examples of num-na NPs in subject position in the corpus **Mendeko Euskararen Corpus Estatistikoa**.<sup>5</sup>

- (3) \***Bi-na umek** hiru tarta jan zituzten.  
 two-na kid.erg three cake eat aux  
 Intended: The three cakes were eaten by two kids each.
- (4) % **Bos-na gizonek** lagundu digute. (G.B.2 89)  
 five-na man-D.pl.erg help aux  
 Each of us (dative) was helped by five men. [Rijk, 2008, 852]

Num-na NPs can be direct (1) and indirect objects (5-a), PP complements with case-markers *-etan/-ekin* "locative/with" (5-b)/(5-c), PP adjuncts (5-d) and noun complements (5-e)/(5-f).

- (5) a. Ikasleek **zazpina irakasleri lan** bat aurkeztu zieten.  
 student.D.pl.erg seven-na teacher.dat work one present aux (indirect obj.)  
 The students presented one work to seven teachers each. [Etxeberria, 2012, 55]
- b. Jonek neskei [**bi-na igandetan**] lan egin arazi zien.  
 Jon-erg girl-D.pl.dat **two-na Sunday-in** work do cause aux  
 John made each of the girls work on two Sundays. (locative case)  
 Lit. John made the girls work on two Sundays each.
- c. Mutilek **hiru-na enbaxadorekin** hitzegin zuten.  
 boy-Dpl.erg three-na ambassador-with talk aux  
 The boys spoke with three ambassadors each. (PP complement)
- d. Bi liburu oso garesti erosi zituen **bi-na lagunekin**.  
 two book very expensive buy aux two-na friend-D.pl-with  
 He bought two very expensive books with two friends each. (PP adjunct)

<sup>2</sup>The distributive numeral preserves the syntactic position of the simple numeral: *bat/ba-na* "one/one-na" is post-nominal while *bi/bi-na* "two/two-na" and other numerals are pre-nominal [Etxeberria, 2012].

<sup>3</sup>De Rijk also includes fractionals. However, as in fractionals *-na* combines with the numeral denominator: *erdi ba-na* "half one-na", and not with the fractional itself \**erdi-na* "half-na" we leave them aside here.

<sup>4</sup>% marks dialectal variation in acceptability. See [Knežević, 2015] who observes that in SerboCroatian only some speakers accept distributive numeral *po* phrases in subject position

<sup>5</sup>Corpus **Mendeko Euskararen Corpus Estatistikoa** <http://xxmendea.euskaltzaindia.eus/Corpus/>

- e. Mutilek **hiru-na herrialdetako** enbaxadoreekin hitzegin zuten.  
 boy-Dpl.erg three-na country-gen ambassador-with talk aux  
 The boys spoke with the ambassadors of three countries each. (complement of N)
- f. Umeek **bi-na musikariren inguruko** liburu bat irakurri zuten.  
 child-D.pl.erg two-na musician.gen about book one read aux  
 The children each read one book about two musicians. (PP complement of N)

Also note that the noun introduced by numeral+na can be modified (6).

- (6) Emakume-ak **bi-na** edari **hotz / limoiarekin** eman zizkien.  
 woman-D.erg two-NA drink cold / with-lemon give aux  
 The woman gave them two cold drinks/ two drinks with lemon each.

## 2.2 Distributive properties of num-na NPs

Following [Choe, 1987, 90] we distinguish the SORTAL KEY and the DISTRIBUTED SHARE. Choe analyses distribution as a quantificational relationship between the atoms of the key and the share. In Choe's terms distributive numerals mark the **distributive share** (share markers).

- (7) a. Distributive dependency is a relation between a **sortal key** A and **distributed share** DistShare B. [Choe, 1987, 90].  
 b.  $\forall a \in \mathbf{A} : \text{atom}(a) \exists \mathbf{B} : \mathbf{R}(a, \mathbf{B})$   
     Key                      DistrShare

Num-na NPs allow (6) but do not require temporal distributivity: they combine with stative predicates (8) and are acceptable in contexts without temporal distribution (9-a). Num-na NPs allow overlapping distributivity (9-b) (example adapted from [Knežević, 2015]) but exclude readings in which the sortal key provided by the licensing plurality is not exhausted (9-c).

- (8) Neskek **bi-na hizkuntza** dakizkite  
 girl-Dpl.erg two-na language know  
 The girls know two languages each.
- (9) Umeek **bina globo** eutsi zituzten.  
 child-D.pl two-na balloon hold aux.past  
 The children held 2 balloons each.
- a. ok: Context 1: children each holding 2 balloons (no temporal distribution)  
 b. ok: Context 2: children holding two balloons, with two children holding the same balloon (plus another balloon in the other hand).  
 c. excluded: Context 3: one of the children is not holding any balloons

## 2.3 Relative scope of distributive numerals

As dependent indefinites, distributive numerals depend on a plurality for their interpretation and take narrow scope with respect to their licensing plurality [Farkas, 2015]. Num-na NPs only take narrow scope with respect to modals (10-a), negation (11-a) and quantifiers (12-a).

- (10) a. Umeek **bina poema** irakurri **behar** dituzte.  
 child.pl.erg two-na poem read must aux  
 ok narrow scope: The children have to read two poems each.  
 \*intermediate scope: For each child there are two poems that the child must read.

- (11) b. Umeek **bi poema** irakurri **behar** dituzte.  
 child.pl.erg two poems read must aux  
 ok narrow scope / ok intermediate scope
- (11) a. Umeek **ez** zituzten **bina liburu** irakurri.  
 kid.D.pl.erg neg aux two-na book read.  
 The children did not read two books each.  
 Ok Narrowest scope: It is not true that the children read two books each.  
 \*Wide scope wrt neg + narrow scope wrt the children: There are two poems for each child that s/he did not read.
- b. Umeek **ez** zituzten **bi liburu** irakurri.  
 kid.D.pl.erg neg aux two book read  
 Ok Narrowest scope / Ok Wide scope wrt neg + narrow scope wrt the children
- (12) a. Jonek eta Mirenek **bi-na pasahitz** jartzen dituzte beraien email kontu  
 Jon.erg and Miren.erg two-na password put.prog aux their email account  
 bakoitzean.  
 every-D.sg-in  
 ok narrow scope: Jon and Miren put two passwords into every email account.  
 \* intermediate scope: Jon and Miren have two passwords each that they put into every email account.
- b. Jonek eta Mirenek **bi pasahitz** jartzen dituzte beraien email kontu  
 Jon.erg and Miren.erg two password put.prog aux their email account  
 bakoitzean.  
 each-D.sg-in  
 ok narrow scope / ok intermediate scope

Unlike num-na NPs, simple indefinites allow intermediate readings (10-b)/ (11-b)/ (12-b).

### 3 Licensing distributive numerals in Basque

Distributive numerals depend on a plurality for their interpretation. However, the types of plurality that can fulfill the licensing requirements for distributive numerals vary crosslinguistically ([Farkas, 1997, Balusu, 2006, Henderson, 2014, Cable, 2014, Knežević, 2015, Kuhn, 2015]).

Here we show that the licensing conditions for num-na NPs are different from the licensing profiles for other distributive numerals described in the literature.

Num-na NPs are ungrammatical without an overt licensor (13-a), like binominal *each* and Kaqchikel distr-num [Henderson, 2014], and contrasting with distributive numerals in Telugu (13-b), Tlingit and SerboCroatian [Balusu, 2006, Cable, 2014, Knežević, 2015], that can be licensed by implicit distribution over times/ locations.

- (13) a. \*Ne-re seme-ak **hiru-na** arrain harrapatu zituen. (Basque)  
 I-gen son-D.erg three-dist fish catch aux.past  
 Intended: My son caught three fishes (each time/ on each occasion).
- b. Raamu **renDu renDu** kootu-lu-ni cuus-ee-Du (Telugu)  
 Ram 2 2 monkey-Pl-Acc see-Past-3PSg  
 a. Ram saw 2 monkeys (in each time interval). Implicit temporal key  
 b. Ram saw 2 monkeys (in each location). Implicit spatial key [Balusu, 2006, ex9]

Num-na NPs are licensed by plural and quantified co-arguments (14-a). The complements have

to be clause-mates: licensing into an embedded predicate across a perception verb is impossible (14-b). Num-na NPs are also licensed by plural locative adjuncts (15).

- (14) a. Ume guztiek / Umeek **bina** liburu irakurri zituzten.  
 child all.D.pl.erg / children.erg two-na books read aux  
**All the children / The children** read two books each.  
 b. \***Mutil-ek** [Maria **bi-na** pizza erosten] ikusi zuten.  
 boy-erg.pl Maria two-na pizza buy.prog see aux  
 Intended: The boys each saw Maria buy 2 pizzas.
- (15) Jonak **bi-na** liburu erosi ditu liburutegia guztietan / horietan.  
 Jon.erg two-dist book buy aux bookstore **all-D.pl-loc / those.pl-loc**  
 Jon bought two books in each of **all the / those bookstores**. (apud [Rijk, 2008, 852])

In contrast with other languages that allow licensing by adverbial expressions, adverbs like *beti* "always" and when-clauses do not license num-na NPs (16)/(17) ( $\neq$  Kaqchikel dist-num allowing *always*). More precisely, **unbounded** temporal adjuncts do not license num-na NPs (18-a): the adjunct has to be bounded (18-b).

- (16) \*Manuelek **beti** bina pizza jaten ditu  
 Manuel-erg **always** two-na pizza eat-hab aux  
 Intended: Always/on each occasion M. eats 2 pizzas.
- (17) \*Ni ikustera etortzen denean Manuelek bina opari ekartzen dizkit  
 me-abs see-nmz-all come-hab is-rel-loc Manuel-erg two-na present bring-hab aux  
 Intended: **When he comes to see me**, Manuel brings me two presents.
- (18) a. \***Igandetan**, Manuelek bi-na opari ekartzen zizkidan.  
 Sunday-loc.pl Manuel.erg 2-na present bring aux (to me)  
 Intended: On Sundays M. brought/used to bring me two-na presents.  
 b. **Azken bi igandeetan** Manuelek bi-na opari ekarri dizkit.  
 last two Sunday-loc.pl Manuel.erg 2-na present bring aux (to me)  
**The last two Sundays** M. brought me 2 presents each time.

In the parallel examples with an **unmarked** indefinite, a dependent reading wrt to the unbounded temporal plurality is possible (19), showing that the num-na NPs in (16)/(17)/(18-a) are in the semantic scope of the unbounded temporal expressions.

- (19) a. Manuelek **beti bi** pizza jaten ditu  
 Manuel-erg **always two** pizza eat-hab aux  
 Manuel always eats two pizzas. i.e. on each relevant occasion M. eats 2 pizzas.  
 b. Ni ikustera etortzen denean Manuelek **bi** opari ekartzen dizkit  
 me-abs see-nmz-all come-hab is-rel-loc Manuel-erg two present bring-hab aux  
**When he comes to see me**, Manuel brings me two presents.  
 c. **Igandetan**, Manuelek **bi** opari ekarri dizkit.  
 Sunday-loc.pl Manuel.erg two present bring aux (to me)

The licensing plurality can be in an argumental PP (20-a) but not in an adjunct PP (20-b).

- (20) a. Jonak **espezialista hauekin** bi-na arazoz hitzegin zuen.  
 Jon.erg specialist these-with two-na problem-instr talk aux.  
 Jon spoke about two problems with each of these specialists. (argument PP)

- b. \*?Jonek bina liburu erosi zituen **umeekin**.  
 Jon.erg two-na book buy aux children-with (adjunct PP)  
 Intended: Jon bought two books with each of the children. (Lit. Jon bought two-na books with the children).

[Farkas, 2015] points out that pluralities of worlds do not license distributive numerals. This also holds for Basque: generics (21-a) and modals (21-b) do not license num-na NPs.

- (21) a. \***Txakurrek** lau-na hanka dituzte.  
 dog-D.pl four-na leg have  
 Not: Dogs have four legs. (generic subject), ok with anaphoric definite *the dogs*
- b. \*Mirenek bina liburu irakurri **behar** ditu.  
 Miren.erg two-na book read must aux  
 Not: Mari must read two books. (modals)

## 4 Analysis

Our analysis of num-na NPs involves three elements: (i) num-na NPs are semantically incorporated ([Chung & Ladusaw, 2004]), (ii) num-na NPs mark the event predicate they combine with as plural and (iii) the event plurality is subject to a restriction requiring it to be the cumulation of a bounded sum of the sub-events that are indexed by the plural licensor.

Following [Chung & Ladusaw, 2004] we assume that there are two modes of composition for a noun-phrase: Restrict and Saturate. We analyse num-na NPs as syntactically deficient noun-phrases that are semantically composed via Restrict [Chung & Ladusaw, 2004].<sup>6</sup> The semantically incorporated num-na NP is interpreted as a predicate modifier introducing a sortal restriction by the N and a cardinality restriction by the numeral bearing on the theta-role corresponding to the argument position occupied by the NP. The num-na NP does not introduce a discourse referent: the argument position is bound off by an existential closure operation EC ([Chung & Ladusaw, 2004]).

- (22) a. RESTRICT applied to a two place predicate [Chung & Ladusaw, 2004, 10]  
 Restrict  $((\lambda x \lambda y [\text{Verb}(x,y)], P(y)) = (\lambda x \lambda y [\text{Verb}(x,y) \ \& \ P(y)])$
- b. Existential Closure  $(\lambda x \lambda y [P(x,y)]) = \lambda x \exists y [P(x,y)]$

We further propose that num-na NPs function as event modifiers that contribute a dependency between the plural licensor and the event-description containing the num-na NPs, with an additional requirement that the event plurality be a bounded sum of events co-indexed with a plural licensor. The co-indexing plurality has to be an argument or a locative or temporal adjunct of the event description containing the num-na NP.

- (23) a. Umeek **bina** aulki altxatu dituzte.  
 child-D.pl two-na chair lift aux  
 The children lifted two chairs each.
- b.  $\exists E \in \text{lift}^*(e,x,y): E = \Sigma (e_i: x_i \in [[\text{children}]] \ \& \ \exists y P(e_i,x_i,y) \ \& \ \text{two-chairs}(y) )$
- c. There is a event-plurality E such that E is the sum of individual events with the num-na NP semantically incorporated into its argument position and existentially bound  
 and the event plurality can be indexed by the atoms of the plural licensor DP.

<sup>6</sup>The num-na NPs are clearly not morphologically incorporated as the noun can be modified cf. (6).

- (24) a. Jonek bi-na liburu erosi ditu liburudenda horietan.  
 Jon.erg two-dist book buy aux bookstore **those.pl-loc**  
 Jon bought two books each in those bookstores.  
 b.  $\exists E \in \text{buy}^*(e,j,y,l): E = \Sigma (e_i: l_i \in [[\text{those bookstores}]] \ \& \ \exists y \text{ buy}(e_i,j,y,l_i) \ \& \ \text{two-books}(y))$

The semantics proposed here is modification of the event description combined with an explicit cumulation condition on the event plurality indexed to the licenser. This is akin to a lexical expression of distributivity similar to that of a NP modified with the adverb *respectivamente* "respectively" in the following example from Spanish.

- (25) 9 han traducido dos obras cada uno y 3 traductores han traducido  
 9 translated two works each one and 3 translators have translated  
 otros tres libros respectivamente (Spanish)  
 another three books respectively <http://www.academia.edu/26224464/>
- (26) a. Los niños leyeron dos libros respectivamente.  
 The children read two books respectively.  
 b. Juan y Ana hablaron con los embajadores de tres países respectivamente.  
 John and Ana spoke with the ambassadors of three countries respectively.

Distributive configurations are pairings of the atoms of the sortal key with elements corresponding to the description of the share. Quantification by universal quantification over an existential quantification in the syntax is only one way of achieving such a pairing.<sup>7</sup> Other ways of imposing a paired structure between the sortal key and share are world knowledge (27-a) and lexical modification (27-b). Our analysis places the distribution contributed by num-na NPs on the side of lexical modification.

- (27) a. The children arrived on tandems.  $\rightarrow$  in groups of two. (World knowledge)  
 b. The children arrived in pairs.  $\rightarrow$  in groups of two. (Lexical modification)

Semantic incorporation accounts for the fact that num-na NPs have narrowest scope (section 2.3) and cannot be taken up in the following discourse (28).

- (28) Azken bi igandeetan Manuelek bina liburu ekarri dizkit.  
 last two sunday-loc.pl Manuel.erg 2-na present bring aux.  
 The last two Sundays M. brought me 2 books each time.  
 a. #Apal horretan gorde ditut.  
 shelf that.loc hide aux.3plA-1sE  
 # I put them on that shelf. (*them* = null argument + agreement on aux)  
 b. #Nere izena idatzi dut **beraien** barnean.  
 my name write aux they-loc inside-loc  
 # I wrote my name inside of them. (possessive pronoun)

The ban on num-na NPs in subject position (3) is also characteristic for many other instances of semantically incorporated arguments.

The fact that num-na NPs can appear in non-additive measure-phrases (29) further confirms that num-na NPs do not introduce a referent. However, based on [Laca, 1990] observing that psych-predicates only take individuals as arguments, we would expect that semantically incorporated noun phrases like num-na NPs are not possible with these psych-predicates. This

<sup>7</sup>We thank Hans Kamp for pointing this out to us.

is only partially borne out however as the examples in (30) are not completely ungrammatical. Speakers seem to have shifting grammaticality judgements with these sentences. Two speakers accepted num-na NPs in an anchored context, i.e. (30-b) said coming back with the children from the zoo, but found it degraded as a general preference statement with the imperfective verb form (30-c).<sup>8</sup> We have no explanation for this contrast.

- (29) Ontziak                    **36na gradutan** egon behar dute laborategi honetan  
 recipient-D.pl.erg 36-na degree.loc be must aux laboratory this.loc  
 The recipients have to be at 36 degrees each in this laboratory.
- (30) a. ?Neskek **bina barazki** gorroto dituzte.  
 girl-D.pl two-na vegetable hate aux  
 The girls dislike two vegetables each.
- b. Nere semeei                **bina animalia** gustatu zaizkie.  
 I-gen son-D.pl-dat animal like aux  
 My sons liked two animals each. (Said coming back from the zoo)
- c. ?Nere semeei                **bina animalia** gustatzen zaizkie.  
 I-gen son-D.pl-dat animal like-hab aux  
 My sons like two animals each.

A simple numeral and a num-na NP can be coordinated (31-a); this is not problematic for an incorporation account as a full DP and a semantically deficient NP can be coordinated (31-b).

- (31) a. Ikasleek patata tortila haundi bat eta sardeska **bana** eskatu zituzten.  
 student-erg potato omelette big one and fork one-na ask aux  
 The students asked for one big omelette (for everyone) and one fork each.
- b. Gaur goizean egunkaria eta zure gutuna irakurri ditut.  
 today morning-in newspaper and your letter read aux  
 This morning I read the newspaper and your letter.

The locality conditions on the dependency introduced by num-na NPs are partly similar to the locality of the antecedent for internal readings of *desberdin bat* "different.sg one", that also allows plural temporal and locative adjuncts (32)/ (33) but not licensing by coordinated verbs (34). However, the locality conditions on the licenser for num-na NPs and for internal readings of *desberdin bat* differs in examples with an embedding perception verb (35).

- (32) Jonek filma **desberdin bat** ikusi zuen astelehenean eta asteartean.  
 Jon.erg film different one see aux Monday.in and Tuesday.in  
 Jon saw a different film on Monday and on Tuesday. cf. (18-b)
- (33) Jonek liburu **desberdin bat** erosi ditu liburudenda guztietan.  
 Jon.erg book different one buy aux bookstore **all-D.pl-loc**  
 Jon bought a different book in each of **all the / those bookstores**. cf. (15)
- (34) a. \*Jonek filma **desberdin bat** ikusi eta kritikatu zuen.  
 Jon.erg film different one see and criticise aux
- b. \*Jonek **bi-na** filma ikusi eta kritikatu zituen.  
 Jon.erg two-na films see and criticise aux
- (35) a. Mutil guztiek Miren soineko **desberdin bat** erosten ikusi zuten.  
 boy all-D.pl.erg Miren dress **different one** buying see aux

<sup>8</sup>This may be related to the fact that the examples of num-na NPs with stative predicates are all with s-level statives *be at 36 degrees / hold two balloons*. The difference (30-b) vs. (30-c) is an s-level/i-level contrast.



- Each of the boys saw Mary buy a dress and the dresses were different.
- b. \*Mutil guztiek Miren **bina** soineko erosten ikusi zuten.  
 boy all-D-pl.erg Miren two-na dress buying see aux

Basque num-na NPs are possible with non-additive degree expressions (29), showing that there is no plurality requirement on referents corresponding to the num-na NPs. Also, in cases where the speaker is ignorant about the identity of the instantiations of the share, num-na NPs are felicitous, even if the referents corresponding to it in the scenario happen not to be different.

- (36) Umeek **bina** aulki altxatu dituzte.  
 child-D.pl two-na chair lift aux  
 The children two-na chairs.
- a. Context 1: Different photos, each depicting one child lifting two chairs.  
 →can use (36) even if the chairs happen to be the same two chairs for everyone.
- b. Context 2: One scene with the children taking turns lifting the same two chairs.  
 →cannot use (36)

The identity of the instantiations of the argument corresponding to num-na NP is **unspecified**, not **specified as varying**. This is comparable to the implicit agent in *The door was opened twice* or the implicit themes of *John read and Mary read* where it is left unspecified whether the agents/ books read are different or not. We therefore do not adopt a plurality presupposition/postsupposition on the num-na NP as proposed in Balusu's 2006, Henderson's 2014 or Farkas's 2015 analyses of distributive numerals. However, explicit knowledge of the identity of the referent of the share (e.g. by direct visual evidence of the scenario) seems degraded, so there seems to be an ignorance condition attached to the identity of the share.

The situation seems to be similar for English binominal *each*. In ex. (37), it is not *necessary* that there be more than two films watched, (37) asserts that there is an **event plurality** composed of subevents of *watching two films* for each child. The identity of the referents corresponding to *two films* can be blurred across the event-plurality as in event-related readings of examples like *4000 ships passed through the lock* [Krifka, 1990].

- (37) The children watched two films each.

## 5 Conclusion

According to the analysis proposed here num-na NPs are syntactically deficient noun-phrases that are interpreted by semantic incorporation. As such they contribute a predicate modification to the argument position they occupy without introducing a discourse referent corresponding to the num-na NP. Num-na NPs impose two further conditions: (i) a dependency condition between a plural licenser and the event-description that contains the num-na NP and (ii) an ignorance condition wrt to the identity of the indefinite. This analysis follows [Farkas & de Swart, 2004] and [Chung & Ladusaw, 2004] in distinguishing the lexical use of variables (as argument positions) and the discursive use of variables as discourse referents.

Analyses of distributive numerals in other languages treat them as introducing a discourse referent. The analyses proposed for Telugu [Balusu, 2006] and Tlingit [Cable, 2014] furthermore include a distributive component introduced by the distributives numerals themselves; this does not carry over to num-na NPs, auto-licensing by an implicit plurality is impossible (13-a).

The proposal in [Farkas, 2015] treats the variable introduced by the distributive numeral NP as dependent on a licensing variable. This account does not carry over to num-na NPs

since the dependent variable account derives narrow scope of the distributive numeral NP **wrt the licensor**, but not with respect to other scope taking elements and therefore, intermediate scope readings are expected, running counter the behaviour of num-na NPs (10)/(11)/(12).

The analysis in [Henderson, 2014] relies on a condition that imposes that the variable of the distributive numeral NP is marked for evaluation plurality: the variable is interpreted by a set of assignment functions such that the value assigned to the NP containing the distributive numeral is not constant across the set of assignment functions. As we have shown, the non-rigidity condition in Basque is not a plurality condition on the domain of the distributive share but rather a condition that identity of the distributive shares must not be part of the context. A plurality condition imposes a condition that requires the existence of at least two different instances; the condition imposed for Basque num-na NPs is weaker than presupposed plurality: identity of the instantiations of the share is not excluded as long as the identity is not part of the context. The analysis of ignorance/indifferent conditions is also central in the analysis of epistemic indefinites like Sp. *algún +N* "some N or other" [Alonso-Ovalle & Menéndez-Benito, 2013], and num-na NPs should be examined in comparison with these types of indefinites.

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