

LINKERS IN AROMANIAN IN COMPARISON TO ALBANIAN AND ROMANIAN

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Abstract: *We present data from Aromanian varieties spoken in South Albania, including the towns of Divjakë and Fier. Unlike Romanian and like Albanian, Aromanian has preadjectival linkers. Furthermore, Aromanian has linkers in front of both datives and genitives and agreeing with the latter. These configurations are absent from Albanian and Romanian, which have linkers in front of genitives, but not of datives, and agreeing with the head noun. The fact that the same elements that appear as linkers also occur as demonstratives/articles leads us to categorize them as Ds. We propose that the pre-adjectival linker provides a (partial) saturation for the argument of adjectival predicates, to be ultimately satisfied by the head DP. We characterize oblique case as introducing an inclusion/ part-whole relation, which takes the oblique DP as one of its arguments (i.e. the whole, or possessor, etc.). The linker provides a (partial) lexicalization of the second argument (i.e. the part, or possessee etc.).*

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1. Introduction

In many languages a linker element is inserted between a noun and an adjective that modifies it or a (genitive) complement that the noun embeds or a relative clause (not considered here). Among Indo-European languages, the Iranian *ezafe* is generally taken to be such an element. According to traditional descriptions (Lazard 1992), the *ezafe* indicates nothing about the precise semantic or syntactic nature of the relation holding between the modifier/complement and the head-noun. While in Persian the *ezafe* is invariable (-e), in Kurdish varieties, the *ezafe* agrees with the head noun (Holmberg and Odden 2008; Haig 2011); thus, any account of linkers must encompass a certain amount of variation.

How much variation is admissible, and what kind, depends on the theory. For instance den Dikken and Singhapreecha (2004, fn. 31) explicitly exclude that Greek polydefiniteness counts as an instantiation of linker structure. On the other hand, Androutsopoulou and Espanol-Echevarria (2007) start from Greek in their survey of the phenomenon, and Larson and Yamakido (2008) also include Greek in theirs. Manzini et al. (2014), Franco et al. (2015) discuss the relation between another Balkan language, namely Albanian, and Kurmanji Kurdish. The Albanian article (as it is called in traditional grammars) has the same distribution observed for the *ezafe* (and the Greek article), namely before adjectives

and genitives¹. Albanian has a specialized series of nominal endings, inflected for definiteness as well as for phi-features and case²; the pre-adjectival/pre-genitival articles are related to the definite endings with which they often coincide. This is illustrated in (1) for pre-adjectival contexts and in (2) for pre-genitival contexts³.

- (1) a. εrði dial-**i** **i** mað
 came boy-nom.m.def Lkr.m big
 'The big boy came'
- b. εrði vaiz-**a** ε mað-ε
 came girl-nom.f.def Lkr.f big-f
 'The big girl came'
- c. εrðən diem-**t** **tə** məðjɲ-t
 came boy- pl.def Lkr.pl big-pl
 'The big boys came'
- (2) a. libr-**i** **i** vəða-it
 book-nom.m.def Lkr.m brother-m.obl.def
 'the book of the brother'
- b. putr-**a** ε cən-it
 leg-nom.f.def Lkr.f dog-m.obl.def
 'the leg of the dog'

In Romanian, no linker needs to appear between a noun and an adjective – though the so-called strong (i.e. non-clitic) form of the definite article (*cel* etc.) may appear in linker position, as in (3). Importantly, *cel* is mutually exclusive with demonstratives, pointing to an operator-like content for it, denoting familiarity (Cornilescu and Giurgea 2013), which seems to be missing from, say, the Albanian article. Only genitives, as in (4), are generally introduced by a linker agreeing with the head noun (*al* etc.) – which can be left out only under adjacency with a definite head noun. As in Albanian, *al* is a form of the definite article (Lat. *ille*) (Giurgea 2013).

- (3) maşin-a (cea) nouă
 car-the. f (the.f) new.f
 'the new car'

¹To be precise, it is a lexically defined subset of adjectives that takes the article (Camaj 1984; Solano 1972; Turano 2004; Campos 2008). We have nothing to say on those adjectives that do not take it. If uniformity of structures is desired, then we must conclude that apparently article-less (post-nominal) adjectives have an empty article.

²The formal literature treats these endings as post-nominal articles derived via movement of N to D (Dimitrova-Vulchanova and Giusti 1998; Turano 2002, 2003; cf. also Dobrovie-Sorin 1994 on Romanian). However, Albanian has a system of pronominal articles (e.g. with kinship terms) which can combine with definite inflections. This makes the implementation of a movement analysis difficult. Therefore we assume direct Merge in inflectional position.

³Data reflecting standard Albanian are taken from an informant of *Gjirokastër*, in South Albania and transcribed in a broad IPA to facilitate morphological parsing. The same broad IPA transcription will be used for the Aromanian data.

- (4) două kămăș-i ale băiat-ul-ui
two shirts-fpl the.fpl boy-the-obl
'two shirts of the boy'

Against this background, we focus on the discussion of linkers in Aromanian, explored *per se* and in comparison with the distribution of linkers in the cognate language Romanian and in the language in contact, Albanian; our data refer to Aromanian varieties spoken in South Albanian areas, including the towns of *Divjakë* and *Fier*.

2. The Aromanian of *Diviakë* and *Fier*

As a preliminary to the discussion to follow, we illustrate the system of nominal inflections in Aromanian. The direct vs. oblique Case distinction in Aromanian is not preserved in the masculine singular, except for the 3rd person pronoun; the definite inflection *-u* contrasts with the zero inflection for indefinites, as shown in (5). Note that the oblique covers both the dative (5b) and the genitive (5c).

- (5) a. ari vənītə/am vəzūtə fitfor-**u**/ un fitfor/atse-**u**
has come/I.have seen boy-msg/a boy/ that-msg
'The/a boy/he has come'/'I have seen the/a boy/him'
- b. i o am datə o fitfor-**u**/ o un fitfor/ ots-**ui**
him it I.have given Lkr boy-msg/ Lkr a boy /that-obl.msg
'I gave it to the/a boy/him'
- c. libr-a o fitfor-**u**/ ots-**ui**
the book Lkr boy-msg/ that-obl.msg
'the boy's/his book'

The feminine singular presents case distinctions (direct vs. oblique) and definiteness distinctions (at least in the direct case), as in (6).

- (6) a. ari vənītə/ am vəzūtə fet-**a**/ unə fetə/atse-**a**
has come/I.have seen girl-def.fsg/ a girl/ that-fsg
'The/a girl/she has come'/'I have seen the/a girl/her'
- b. i o am datə ali fet-**i**/ ali unə fet-**i**/ ots-**jei**
her it I.have given Lkr girl-obl.fsg/ Lkr a girl-obl.fsg/that-obl.fsg
'I gave it to the/a girl/ her'
- c. libr-a ali fet-**i**/ ots-**jei**
book-def.fsg Lkr girl-obl.fsg/ that-obl.fsg
'the girl's/ her book'

Case and definiteness distinctions are present in the plural both for the masculine (7) and for the feminine (8). Note that in the oblique plural there is a single form for the masculine and feminine pronoun. In order to process the data it is useful to keep in mind that *-ɣ-* is a phonological alternant of *-l-*.

- (7) a. ari vənītə/ am vəzūtə fitfor-**jə**/ ndoi fitfor/ atse-**i**
have come/I.have seen boy-mpl/ some boy/ that-mpl

- ‘the/some boys/they came’/‘I saw the/some boys/them’
- b. i o am datə o fitfor-ju / ots-u'yor
 him it I.have given Lkr boy-obl.mpl/ that-obl.pl
 ‘I have given it to the boys/ them’
- c. libr-a o fitfor-ju/ ots-u'yor
 book-def.fsg Lkr boy-obl.mpl/ that-obl.pl
 ‘the boys’/ their book’
- (8) a. ari vənità/ am vəzutə fetə-li / ndawə fet-i/ atse-li
 have come/I.have seen girl-def.fpl/ some girl-fpl/ that-def.fpl
 ‘The/some girls/ they came’/‘I saw the/some girls/them’
- b. i o am datə o fet-u'yu / ots-u'yor
 her it I.have given Lkr girls-obl.fpl/that-obl.pl
 ‘I have given it to the girls/them’
- c. libr-a o fet-u'yu/ ots-u'yor
 the book Lkr girls-obl.fpl/ that-obl.pl
 ‘the girls’/their book’

Preadjectival linkers, in the sense briefly defined in section 1, are generally present in Aromanian⁴, unlike in Romanian and mimicking closely Albanian. The demonstrative series, seen in (5)-(8) in its pronominal usage, is also deployed as a linker. The linker agrees with the head noun in gender, number, and case as shown in (9)-(10) for the masculine (singular and plural). It is generally excluded in contexts with an indefinite noun, cf. (9a’), recalling the ‘polydefiniteness’ distribution of Greek. It is also excluded in the presence of the comparative element *ka-ma* ‘lit: how-more’, as in (9a’), (10a’), though the linker may optionally combine with the simple form *ma* ‘more’, preceding it, as in (9a). Finally, the adjective agrees in gender and number – and to some extent in case, cf. the oblique plural in (10b’). It is also sensitive to the definite or indefinite nature of the head DP. Thus in definite direct contexts the adjective combines, say, with *-u* in the singular masculine in the definite (9a), but is inflectionless in the indefinite (9a’). This seems to indicate that it agrees with the head noun in definiteness as well.

- (9) a. fitfor-u (a)tse-u mar-u/ yung-u/ jkurt-u
 boy-msg Lkr-msg big-msg/ tall-msg / short-msg
 ‘the big/tall/short boy’
- a’. fitfor-u kama mari/ fitfor-u atse-u ma mar-u
 boy-msg more big/ boy-msg Lkr-msg more big-msg
 ‘the bigger boy’
- a’’. un fitfor mari
 a boy big
 ‘a big boy’
- b. o fitfor-u ats(-u'y)ui mar-u / yung-u / jkurt-u
 Lkr boy-msg Lkr-obl.msg big-msg/ tall-msg / short-msg

⁴ The variety of Aromanian we present is essentially what Campos (2005) calls Arvantovlaxika; our field data on pre-adjectival linkers are consistent with the data he gathers from written texts. Data on pre-oblique linkers, see the examples (c) in (5)-(8), are not discussed by Campos.

‘to the big/tall/short boy’

- (10) a. fitfor-**jə** (a)tse-**jə** mar-**jə**
 boys-mpl Lkr-mpl big-mpl
 ‘the big boys’
 a’. fitfor-jə kama mari
 boy-mpl more big
 ‘the bigger boys’
 b. o fitfor-**ju** ots-**uyor** mar-**jə**
 Lkr boy-obl.mpl Lkr-obl.pl big-mpl
 ‘to the big boys’
 b.’ o fitfor-**əyu** otsə-**yoru** mar-**uyu**
 Lkr boy-obl.mpl Lkr-obl.pl big-obl.mpl
 ‘to the big boys’

Similar conditions are found in the feminine, as illustrated in (11)-(12) for the singular and plural respectively. The example in (13) shows that the reduced declension (generally only phi-features) realized on adjectives does not correspond to a morphological limitation. Note the limited extent to which case is present on adjectives, namely optionally in (11b); by contrast, the nominalized adjective in (13) is obligatorily inflected for case ⁵.

- (11) a. fet-a ats-**ε** mar-**ε** yung-**a** /jkurt-**a**
 girl-fsg Lkr-fsg big-fsg / tall-fsg /short-fsg
 ‘the big/tall/short girl’
 a’. fet-a kama mari
 girl-fsg more big
 ‘the bigger girl’
 a’’. un fet-ə mari
 a girl-fsg big
 ‘a big girl’
 b. ali fet-i ats-**jei** mari / yung-**(-i)**
 Lkr girl-obl.fsg Lkr-obl.fsg big / tall-obl.fsg
 ‘to the big/tall girl’

- (12) a. fetə-li atse-**li** marə-**li**
 girl-fpl Lkr-fpl big-fpl
 ‘the big girls’
 b. o fet-uyu ots-**uyor** marə-**li**
 Lkr girl-obl.fpl Lkr-obl.pl big-fpl
 ‘to the big girls’

- (13) ali jkurt-**i**
 Lkr-fsg short-obl.fsg
 ‘to the short one’

⁵ In contexts demonstrative-noun the definite form of the noun is possible, though not necessary, as in Albanian. Thus, we can find *atse-li mǎ'jer* next to *atse-li mǎ'jer-li* ‘those women’. This may have some relevance in the present connection.

The schema in (14) shows a summary of phi-features, definiteness and case inflections in Aromanian, limited to the forms that we have chosen to illustrate here⁶.

(14)	a.	Aromanian Definite nominal inflection			
		<i>ms</i>	<i>fs</i>	<i>mp</i>	<i>fp</i>
	<i>Nom/Acc</i>	u	a	jə	li
	<i>Dat/Gen</i>	u	-i	ju/uɣu	uɣu
	b.	Aromanian Indefinite nominal inflection			
		<i>ms</i>	<i>fs</i>	<i>mp</i>	<i>fp</i>
	<i>Nom/Acc</i>	∅	ə	∅	i
	<i>Dat/Gen</i>	∅	i	∅	i

Now, from the discussion that precedes it emerges that there are in fact two candidates for linker status in Aromanian. In (15) we schematize oblique introducers, found in front of genitives and of datives. The *o* introducer of genitive/ dative coincides with the object clitic ‘him/her’; the element *-li* coincides not only with the plural inflection but also with the plural object clitic ‘them’. They appear to coincide with the Romanian morphological series – but differ from Romanian in two important respects. First in Romanian, as seen in (4) the pre-genitival linker agrees with the head noun; in Aromanian the linker agrees with the genitive, as seen in the (c) examples in (5)-(8). The other difference is that in Romanian the linker series related to (15) only appears in genitive contexts of the type in (5c), (6c) etc.; dative complements are externalized by the oblique DP without any preposed linker. In Aromanian, on the contrary, linkers are obligatory in front of datives, as illustrated in the (b) examples of (5)-(8) and of (9)-(12).

(15)	Aromanian pre-genitive/dative linkers			
	<i>ms</i>	<i>fs</i>	<i>mp</i>	<i>fp</i>
	o	ali	o	o

The second candidate for the role of linkers are pre-adjectival ones, lexicalized by the demonstrative, whose declension we summarize in (16). An interesting property of the demonstrative is that it seems to lexicalize dative contexts without need for an introducer of the series in (15). However we may consider that the change in colour of the vocalic initial from *a-* in the direct cases to *o-* in the oblique is due to the fact that the element *o-* is incorporated in the oblique.

(16)	Aromanian pre-adjective linkers				
	<i>ms</i>	<i>fs</i>	<i>mp</i>	<i>fp</i>	
	<i>Nom/Acc</i>	atse-u	atse(-a)	atse-jə	atse-li
	<i>Dat/Gen</i>	ots-(uɣ)ui	ots-jei		ots-uɣor

Morphologically, the declension of *ats-* seen in (16) is the same when it plays a referential role, for instance as the 3rd person pronoun in (5)-(8), and when it functions as a pre-adjectival linker, for instance in (b)-(c) examples in (5)-(8). It can also occur in a

⁶ For instance we have not illustrated the forms in *-i* such as *kəni* ‘dog’.

demonstrative function proper, as in (17) and combine with a pre-adjectival linker; of the two occurrences of *ats-* is the first one that determines the demonstrative reading of the DP; the linker does not.

- (17) u o m datə ats-əɣor doi fitʃor-jə tso/ats-əɣor marə
 to.them it I.have given those-obl.pl two boy-mpl Lkr-obl.pl big
 'I have given it to those two boys'

The data in (17) once again differentiate Aromanian from Romanian. As discussed by Cornilescu and Giurgea (2013, 408), the *cel* element that optionally appears in pre-adjectival position in Romanian is in complementary distribution with other demonstratives, as in (18), pointing to the fact that it maintains (part of) the D force of the demonstrative.

- (18) *acele case cele vechi
 those houses the old

Romanian, then, lacks pre-adjectival linkers, like other Romance languages. On the contrary, the Aromanian distribution parallels closely that of Albanian. In (1) we have already illustrated the distribution of the definite inflections of the noun and of the pre-adjectival linker in the nominative. In (19) we provide two examples in the accusative. The comparison between (1) and (19) shows that the form of the linker is sensitive to the case of the head noun, while comparison between (19a) and (19b) shows that it is sensitive to the definiteness of the head noun. In (20) we exemplify an oblique context.

- (19) a. patʃ dial-in / vaiz-ən ε mað/ mað-ε
 I.saw boy-acc.m.def / girl-acc.f.def Lkr big / big-f
 'I saw the big boy/girl'
 b. patʃ jə dial/ vaiz tə mað/ mað-ε
 I.saw a boy / girl Lkr big/big-f
 'I saw a big boy/girl'
- (20) j-a ðatʃ diaɫ-it / vaz-əs tə mað/mað-ε
 him/her-it I.gave boy-obl.m.def / girl-obl.f.def Lkr big/big-f
 'I gave it to the big boy/girl'

As seen in (1), the pre-adjectival linker takes the form *i* for the masculine singular, *ε* for the feminine singular and *tə* for the plural in the context of a nominative noun. An accusative definite noun is followed by *ε* in the singular; an indefinite selects *tə*, as in (19). If the noun is oblique the linker is *tə* for masculine singular, as in (20) and (21a). The form of the linker, *sə*, for feminine singular oblique is illustrated in (21b) with a pre-genitival context. The same linker paradigm characterizes pre-adjectival and pre-genitival contexts.

- (21) a. j-a ðatʃ diaɫ-it tə mətɾ-əs
 him-it I.gave boy-obl.m.def Lkr sister-obl.f.def
 'I gave it to the child of the sister'
 b. para putɾ-əs sə cən-it
 before leg-obl.f.def Lkr dog-obl.m.def

‘before the leg of the dog’

The linker of Albanian is schematized in (22) (Franco et al. 2015). The pronominal clitic forms, correspond to a subset of the linkers, namely ϵ for the accusative singular (‘him/her/it’) and I for the oblique singular and the accusative plural (‘them/to him/to her’).

(22) a. Albanian linkers with definite head nouns

	<i>ms</i>	<i>fs</i>	<i>pl</i>
<i>Nom</i>	i	ϵ	$t\partial$
<i>Acc</i>	ϵ	ϵ	$t\partial$
<i>Obl</i>	$t\partial$	$s\partial$	$t\partial$

b. Albanian linkers with indefinite head nouns

	<i>ms</i>	<i>fs</i>	<i>Pl</i>
<i>Nom</i>	i	ϵ	$t\partial$
<i>Acc</i>	$t\partial$	$t\partial$	$t\partial$
<i>Obl</i>	$t\partial$	$t\partial$	$t\partial$

In short, in both Aromanian and Albanian, pre-adjectival linkers agree with the head noun in phi-features and case. In both languages they are sensitive to the definiteness of the head noun, since in Romanian only definite head nouns admit of linkers and in Albanian the definite and indefinite linkers paradigms differ along the lines of (22). In both languages the adjective takes on nominal class (gender) and number inflection agreeing with the head noun, though in Aromanian it also marginally displays case.

On the basis of the morphological evidence seen so far, but also of syntactic and interpretive evidence to be analysed in later sections, linkers (at least in the languages considered) are close to what is usually called agreement. If linkers are agreement heads, the key theoretical question is why they would surface in the form of definiteness morphology, namely articles in Albanian and even demonstratives in Aromanian.

3. Previous analyses of linkers

The generative literature on linkers is deeply influenced by the model of nominal embedding provided by the *of* Insertion rule (Chomsky 1981). In English, given the lexical items *red* and *ball*, syntactic merger can take place without any extra material being inserted, yielding *red ball*. Yet merger of *the book* and *John* does require an extra element to be inserted, namely *of*, as in *the book *(of) John*. For Chomsky (1981) *of* is inserted in order to assign case on *John* when governed by an N head (cf. Vergnaud 2008 [1978]). In later literature, the occurrences of *of* in contexts such as *that idiot of a student* (roughly ‘that idiotic student’) are taken to parallel that of the copula in sentential domains (Hoekstra 1999; den Dikken 2006). Other scholars emphasize the role of *of* in identity avoidance (breaking an *N-N string, Richards 2010). The range of theoretical proposals on linkers closely reproduces the range of theories on *of* Insertion, as case assigners, as copulas, as means for identity avoidance.

There are good reasons for rejecting these various proposals. For example, the construal of linkers as copulas, proposed by den Dikken and Singhapreecha (2004) is undermined by the observation that in Albanian the pre-adjectival linker is not restricted to DP-internal

contexts, but appears in copular constructions, as in (23), where the copula is independently lexicalized. The same is true of the pre-genitival linker, as illustrated in (23') with an example from the Arbëresh (Italo-Albanian) variety of Vena (Manzini and Savoia 2007).

- (23) a. vft i kuc/ ϵ $\text{kuc-}\epsilon$
 s/he.is Lkr.m red/ Lkr.f red-f
 'S/he is big'
 b. jan $\text{t}\text{\textcircled{a}}$ kuc/ $\text{kuc-}\epsilon$
 they.are Lkr.pl red-mpl/ fpl
 'They are fat'
- (23') $\text{kj}\text{\textcircled{a}}$ vft $\text{t}\text{\textcircled{a}}$ $\text{p}\text{\textcircled{e}}\text{r}\text{\textcircled{e}}\text{-}\text{ut}\text{\textcircled{a}}$
 this is Lkr man-Obl.msg
 'This is of the man's'

The conclusions from Albanian are confirmed by Iranian languages, often taken as paradigmatic examples of linker languages. In the Bahdînî dialect of Kurmanji Kurdish in (24) a linker *je(t)/ja:* agreeing with the subject precedes the sequence adjective - enclitic copula.⁷ The fact that in predicative contexts the linkers are not in complementary distribution with the copula but combine with it, is again an argument in favour of separating linkers from copulas.

- (24) a. au je/ $\text{j}\text{\textcircled{a}}\text{:}$ $\text{m}\text{\textcircled{a}}\text{z}\text{\textcircled{a}}\text{n-}\epsilon$
 3sg Lkr.m / Lkr.f big-is
 '(s)he is big'
 b. au $\text{j}\text{\textcircled{e}}\text{t}$ $\text{s}\text{\textcircled{u}}\text{r-}\text{\textcircled{a}}\text{n}$
 3pl Lkr.pl red-are
 'they are red'
- (Kurmanji Kurdish, Bahdînî dialect)

Note that in Aromanian adjectives are not preceded by the demonstrative linker in copular context, though linkers precede post-copular genitives, as in (25).

- (25) atse esti o $\text{fit}\text{\textcircled{f}}\text{\textcircled{r-}}\text{u/}$ ali $\text{m}\text{\textcircled{a}}\text{j}\text{\textcircled{e}}\text{r-}\text{i}$
 this is Lkr.obl boy-def/ Lkr-obl.f woman-obl.f
 'This belongs to the boy/the woman'

In the context of the present discussion it is of particular relevance that Campos (2005), Campos and Stavrou (2005) propose a construal of linkers as copulas for Greek and Aromanian. For them, each modifier of N is introduced as part of a small clause PredP. The article in Greek is a lexicalization of the Pred head; according to Campos (2008) at least the pre-genitival linker of Albanian follows the same model, as schematized in (26a) for example (2a) above. Unfortunately this idea clashes with the fact that the linker co-occurs

⁷ Our informants give us the same forms as Haig's (2011) for feminine singular and for plural; in the case of the masculine singular we obtained the form *jet*, as reported in some examples, differently from the only form *(y)e* recorded by Haig.

As for Aromanian, in (29a-a') we reproduce examples from section 2 showing that the pre-adjectival demonstrative has the same inflectional properties as the head noun – which can further be duplicated on the adjective. In turn, the linker in dative and genitive contexts introduces a DP endowed with rich case inflections; a relevant example is reproduced in (29b).

- (29) a. o fitforə-yu otsə-**yoru** mar-**uyu**
 to the boys Lkr-obl big-obl.pl
 'to the big boys'
- a'. o fət-u \bar{y} u ots-**u \bar{y} or** marə-**li**
 to the girls Lkr-obl big-pl
 'to the big girls'
- b. i o ded o fitfor-ju/ o fət-u \bar{y} u
 him/her it I.gave Lkr boys-obl/Lkr-obl girls-obl
 'I gave it to the boys/to the girls'

A final family of accounts for linkers takes them to be means for identity avoidance. This approach has recently been revived by Richards (2010) as part of a more general account of identity avoidance/ syntactic haplology in morphosyntax (Yip 1998; Neeleman and van de Koot 2006; van Riemsdijk 2008; Manzini 2014). Empirical reasons lead us to doubt that linkers are part of this phenomenon. Linkers occur in copular context, cf. (23)-(25) above, where they do not avoid any type of N-N identity.

We believe that much of the theoretical literature about linkers provides important insights into the nature of the elementary components that enter into adjectival modification and predication and into possessor embedding. However we conclude that the linker is not a copula, nor a case assigner, nor does it introduce the possession predicate, nor is it an identity avoidance device.

4. Analysis of Albanian linkers

As we saw in section 3, the Albanian the linker-adjective sequence is not restricted to noun phrase internal contexts, but appears in predicative contexts with an overt copular 'be'. Importantly, copular sentences provide us with a straightforward argument for constituency. The linker that appears in front of the adjective, following the copula, is part of the structure of the AP, as in (30). Hence in complex nominals as well, it is not a functional projection of the head noun, but rather of the modifier AP (or of the genitive DP). Indeed the formal literature on Albanian concludes – much as we do here – that the article is part of the adjectival constituent (Dimitrova-Vulchanova and Giusti 1998; Turano 2002, 2003; Giusti and Savoia 2007). Following Manzini and Savoia (2011a, b), in (30) we further assign the linker head to the D category, based on the morpholexical identity of linker elements with clitic pronouns (ϵ , i – cf. the discussion surrounding table (22)) and with definite nominal inflections (often analysed as postposed definite articles, cf. fn.2). Following Manzini and Savoia, we categorize the adjectival inflection as an N exponent (for Nominal class/gender).

- (30) [_D ϵ [_A mað [_N - ϵ]]]

An analogous structure and categorization of linker material can be proposed for Iranian languages, as shown in (31) for Bahdîni Kurmanji, cf. example (24). This is consistent with occurrences of the so-called *ezafe* as a ‘stand-alone’ element (a demonstrative) and as a ‘tense’ element (Haig 2011), analysed by Franco et al. (2015) as a subject clitic.

(31) [_D A: [_A mazen]]

The case of Aromanian is also telling, since it recruits the demonstrative as an adjectival linker, i.e. an element standardly associated with definite denotation and with the D position of the DP. The analysis in (30)-(31) then extends to Aromanian, as in (32).

(32) [_D (a)tse [_N -u]] [_A yuNg [_N -u]]

Summarizing our conclusions so far, linkers most often vary according to the phi-features, case and definiteness properties of the head noun being modified (section 2). Second, the same elements that appear as linkers/agreement also occur with demonstrative/determiner interpretation, as we have just seen. The second fact has led us to categorize them as Ds; the first fact suggests that, whatever else they may be, they are agreement elements. The theoretical question we are faced with is what a referential category like D may have to do with agreement morphology, which is taken not to contribute to interpretation in traditional approaches, and in recent generative ones (Chomsky 1995) alike.

According to Dimitrova-Vulchanova and Giusti (1998), writing on Albanian, the pre-adjectival article is just a ‘redundant’ agreement⁹. One of the central tenets of current minimalist theory is that agreement results from an uninterpretable set of features (a probe) seeking a matching interpretable set of features (a goal) for checking (i.e. deletion or valuation of the uninterpretable set). According to Toosarvandani and van Urk (2012), writing on the Iranian language Zazaki, linkers are probes, i.e. they are associated with uninterpretable phi-features. This captures the connection between linkers and agreement morphology, in terms of the notion of probe. However, this may not be the right way to go if we want to explain why linkers overlap with Ds, i.e. definite determiners and pronouns¹⁰. It is true that clitic pronouns have been treated in the minimalist literature as pure bundles of phi-features (i.e. as ϕ Ps, cf. Roberts 2010), but apart from any other problem, demonstratives, as in Aromanian, seem unlikely candidates for such a status. The other logical option is to start from the D, hence presumably interpretable, status of linkers and see whether the continuity of linkers (determiners, demonstratives) with agreement can be captured this way.

Following Manzini and Savoia (2011a, 2011b), we take it that Albanian linkers have at least one important semantic property in common with D determiners, for instance in English. We apply the analysis, fairly standard in the literature (cf. Higginbotham 1985; Williams 1994), whereby Ns, even non-eventive ones, are predicates and have an argument slot (called the R-role). In English the determiner D saturates the argument of N according

⁹ Tomić (2006), quoted by Campos (2008, 1009), characterizes the Albanian pre-adjectival article as ‘agreement clitic’.

¹⁰ In Zazaki the *ezafe* is identical to the demonstrative and to the third person singular agreement marker, as in Kurmanji Kurdish.

to Higginbotham (1985)—and we can assume that the same role is played by definite nominal inflections in Albanian and Aromanian. In the same way, the adjectival predicate must be satisfied by an argument, which is provided by the D element in (30), i.e. the linker, in a language like Albanian. In other words, in (30) the linker/D element ε provides a (partial) lexicalization for the argument of the predicate *mað* ‘big’ to be further fixed by the subject of a copular sentence or by the head noun of the DP. This also lays the bases for the common lexicalization with pronominal clitics, i.e. D arguments saturating verbal predicates – eventually doubled by full DPs in so-called clitic doubling.

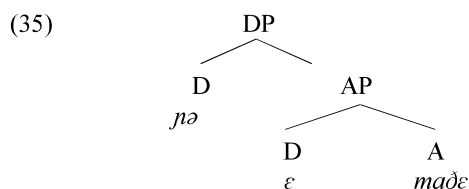
At the same time, there are also differences between determiner Ds and linker Ds. Distributional differences are particularly easy to detect. To take just English, the D determiner precedes all material with which it can co-occur, including quantifiers, as in *the three/many/few children*; alternatively it is in complementary distribution with other quantifiers, as in *the/every/no child*. On the contrary, in Albanian, elements quantifying over the adjective precede the D linker, as in (33). Therefore (33) suggests that the linker D is inserted within the AP in a position lower than the one the determiner D fills within DPs.

- (33) $m\varepsilon/fum$ ε $mað-\varepsilon$
 more/much Lkr big-f
 ‘bigger/very big’

More evidence on the low position of the linker D comes from instances where the same lexical bases that we have considered so far as adjectives are nominalized. As other nouns, they are inflected for case and definiteness, displaying the full system of nominal inflections. At the same time, they are also preceded by the determiner. The latter is embedded under quantifiers of the noun, including the indefinite article, as in (34). The structure of a DP like (34) can then be schematized as in (35), where the linker D and the determiner D co-occur – the linker in a lower position and the determiner in a higher position.

The question is how a structure where two Ds are present, as in (34)-(35), is to be interpreted. The higher D, i.e. the determiner, is interpreted in the standard way – namely as indicating that there is an individual (or a set of individuals, or a unique/familiar/etc. individual) on which the properties of the NP predicate and those of the sentential predicate overlap, i.e. as a quantifier. On the other hand, the lower D, i.e. the linker, simply values the argument slot of A, but does not provide a quantificational closure, nor lead to a referential interpretation – the latter is provided by the higher D.

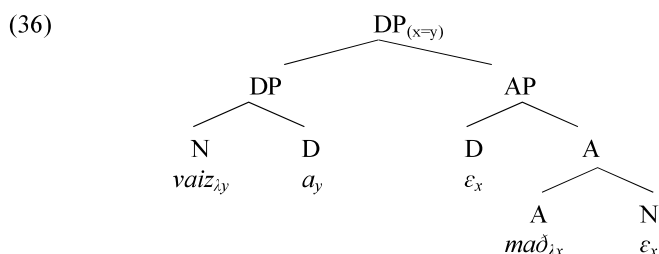
- (34) $\varepsilon r\delta$ $\eta\delta$ ε $mað\varepsilon$
 he.came a Lkr.f big.f
 ‘A big one came’



The relation of determiner and linker Ds is essentially the same as between pronominal clitics and doubling clitics within the sentential domain. Indeed we noticed that in Albanian not only articles are a subset of nominal inflections – but pronominal clitics are a subset (*i*, *ε*) of linkers. Two interpretations are available to pronominal clitics. In non-doubling contexts the clitic has referential import, and is capable of deictic or anaphoric pronominal reference. On the other hand when a doubling DP is present the clitic is interpreted as a bound variable of it.

At this point of the discussion we are ready to define a linker (or at least the Albanian linker). What a linker D and a determiner D have in common is that they are both able to satisfy argument slots. What they do not share depends on their different position of merger. A D closing off the DP is an operator, establishing a relation between a restrictor (the NP) and a domain of quantification (a VP). A linker D is a bound variable of the higher D – it provides a satisfaction for a theta-role ultimately bound by the higher D. In other words, it has the meaning of a bound pronominal that satisfies the adjectival role, prior to the introduction of higher operators.

For completeness, let us consider the embedding of an AP under a larger DP, for example in (1b), with the structure in (36)¹¹. According to the discussion that precedes, in (36) the adjective *mað*- ‘big’ is a property, i.e. has a single, obligatory argument position, suggested in (36) by the λx notation (cf. Adger and Ramchand 2005 on the Λ feature); the pre-adjectival linker ε provides a satisfaction of the argument slot of the predicate. A fortiori, the same is true of the *-a* definite inflection of the noun, satisfying the R-role of the noun (here λy). Following Higginbotham (1985), we assume that adjectival modification involves the identification of the theta-role of the adjective with the R-role of the noun. In other words, in (36) there is ultimately a single argument, satisfying both the predicate ‘girl’ and the predicate ‘big’; the referent denoted by the complex DP correspondingly lies at the intersection of the ‘big’ and ‘girl’ properties.



A formal possibility that we further suggest in the structure in (36), is that the N class inflection *-ε* on the adjective is like the linker in that it provides a (partial) saturation of the argument slot of the nominal predicate. In other words, the connection between linkers and agreement is not that linkers are uninterpretable heads i.e. the head counterpart to uninterpretable phi-features inflections in minimalist theory (see Philip 2012). On the contrary, phi-features inflections are endowed with elementary interpretive content, which

¹¹ As for DP-internal word order, Dimitrova-Vulchanova and Giusti (1998) generate the order Noun-Adjective by movement of the Noun to a Focus position. Turano (2002, 2003), following Cinque (1999), derives the Noun-Adjective order by movement of N to D. However following Abels and Neeleman (2012), generating the noun-adjective order does not require Cinque-type movement.

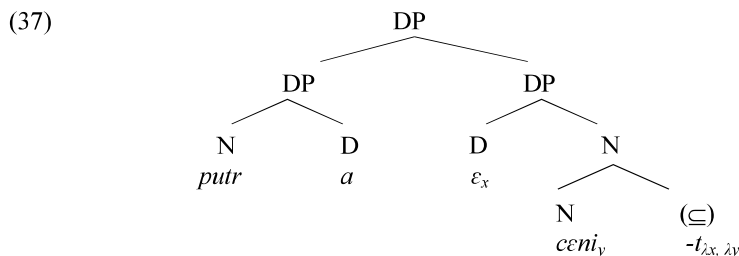
concur (together with D quantificational material) towards the satisfaction of argument slots.

This idea is developed in more detail in Manzini and Savoia (2011a, 2011b). It is worth remarking that it is compatible with the Minimal Search and Match conception of Agree in Chomsky (1995, 2001) – except that in the absence of uninterpretable inflections, Agree can no longer be triggered by the need to delete/value uninterpretable features before LF and the application of Full Interpretation. Rather, Manzini and Savoia suggest that the trigger is Full Interpretation, in so far as it forces inflections and free standing elements that concur to the satisfaction of the same argument slot to be identified as picking up a single referent.

4.1 Pre-genitival linkers

In order to understand the role of pre-genitival linkers, it is necessary to consider the nature of genitive case – or of oblique case, which in languages like Albanian subsumes both genitive and dative contexts. ‘Possessor’ is the traditional characterization of genitives. It is also natural to construe ditransitive verbs as events causing a possession to hold; in other words, ‘I give the book to John’ translates as ‘I cause the book to be in John’s possession’ (Kayne 1984). We take this to be the origin of the widespread syncretism between genitive and dative – holding in Albanian as well as in Romanian, Aromanian, and in those Iranian languages (e.g. Kurmanji Kurdish) which still have a case declension.

Following Belvin and den Dikken (1997), we take the relevant characterization of possession to be an ‘inclusion’ one, that we notate as (\subseteq) , as in Manzini and Savoia (2011a, 2011b). Under this proposal, and adopting for pre-genitival linkers the same position and structure as for pre-adjectival ones, the representation of an Albanian Noun-genitive DP structure, for instance (2b), is as in (37).



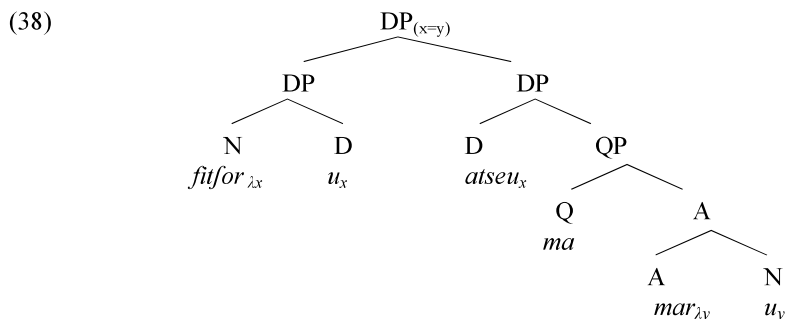
The genitive noun is formed by the N base *ceni-* (the predicate *cen-* ‘dog’ followed by the N class ending *-i*) merged with the (\subseteq) ending *-t*. The latter is an elementary two-place predicate $(\lambda x, \lambda y)$, establishing a possessor/inclusion relation between the noun to which it attaches and the head noun, so that ‘the dog’ possesses/zonally includes ‘the leg’.

As indicated in (37), the role of the pre-genitival linker is essentially the same as the pre-adjectival linker, namely to provide a partial saturation of an argument slot. In this instance, the predicate of which it satisfies an argument is ‘inclusion’ (\subseteq) . Though the external argument is ultimately supplied by the head noun *putra* ‘leg’, in Albanian it is necessary to provide a saturation of the external argument of (\subseteq) within the embedded complement DP, namely by the linker ϵ , which agrees with the head noun in the sense that they concur to the lexicalization of the same argument slot.

5. *Linkers in Aromanian*

The obligatory presence of pre-adjectival linkers in Aromanian definite DPs is a contact phenomenon with linker languages – and in particular with Albanian. As briefly indicated in section 1, standard Romanian may position what is traditionally called a strong article (*cel*) between a noun and a modifying adjective, cf. example (3). However this element is not obligatory and it is in complementary distribution with pronominal determiners, showing that it partakes of their nature – and is not a linker.

At the same time, Aromanian presents a differences with respect to Albanian. In Aromanian, pre-adjectival demonstratives either precede quantifiers like *ma* or they are in complementary distribution with them, as shown in (9a'). Therefore the demonstrative linker appears to lexicalize a higher D position in the AP than the Albanian article linker, as shown for Aromanian in (38).



As far as we can tell, the interpretation remains unchanged. In (28) two predicative bases are present, namely the adjective *mar*-‘big’ and the head noun *fitfor*- ‘boy’. They both have an argument slot and the linker is necessary to provide a satisfaction for the argument of the adjective prior to theta-unification with the argument of the noun. It is interesting to note that (38) converges with Campos (2005) in construing the Aromanian linker as the subject of a predication (cf. (26b) above). This point of contact serves to better highlight the differences. In the predicational structure adopted by Campos, encoding interpretation structurally, a head like the Albanian article can only play the role of copula (cf. (26a) above). In our approach, where structure is projected on the basis of morpho-lexical properties of the elements involved, the Aromanian and Albanian linker are seen to have parallel structures, and the predicative interpretation is not mediated by any abstract category¹².

In short, it appears that a higher position (lower in any event than that of the D determiner of the whole DP) is equally compatible with a linker reading. The difference between Albanian and Aromanian may be connected to the different lexical properties of the linker involved. In particular, we suggest that the clitic nature of the Albanian

¹² Campos (2008) uses the contrast between the position of quantifiers in Albanian, e.g. (34) and in Greek or Aromanian, as in (38) to argue that in Albanian the article is incorporated into the adjective. The discussion in the texts shows that this conclusion is not necessary. See also fn. 8 for an argument that the present theory is simpler overall.

determiner/pronoun/linker may allow for attachment in the inflectional domain or of the sentence (clitic string) which are not open to the Aromanian demonstrative/linker.

A second difference between the linker in Albanian and Aromanian is that in Aromanian the linker cooccurs only with definite head nouns, behaving in this respect like Greek polydefiniteness (cf. Lekakou and Szendroi 2012 for a recent analysis, based on somewhat similar assumptions to the present ones). Recall that in Albanian, as summarized in table (22), linkers cooccur both with definite and with indefinite head nouns. This means that the linker of Albanian does not contribute definiteness to the larger AP/DP that embeds it. At the same time, table (22) shows that a partially different series of linkers is instantiated depending on the definite or indefinite nature of the head noun. We may see the definiteness restriction holding of the linker construction in Aromanian as a consequence of the fact that the linker (the demonstrative) agrees in definiteness with the DP – and is therefore only compatible with definite inflections on the head noun. Recall that in (17) we have already shown how demonstrative linkers are not excluded from combining with prenominal demonstratives, while in Romanian (18), the preadjectival *cel* demonstrative is barred from co-occurring with a prenominal demonstrative. This contrast confirms that in Aromanian the linker does not determine reference.

Summing up so far, there is an alignment of Aromanian on Albanian (or Greek) in what concerns pre-adjectival linkers, which are not present in the cognate language Romanian, or in fact in other Romance languages. At the same time, this alignment of Aromanian on contact languages makes use of existing lexical resources, i.e. demonstrative, as well as existing structural possibilities, i.e. the alternation between the prenominal and preadjectival position of the demonstrative in Romanian¹³.

5.1 Pre-genitival linkers

Linkers introducing genitives and datives in Aromanian are different not only from the pre-genitival linkers of Romanian (despite their lexical relatedness) – but also from the pre-genitival linkers of Albanian. Cross-linguistically pre-genitival linkers normally agree with the head noun of the DP embedding the genitive; for instance, this generalization is central to Philip's (2012) understanding of linkers¹⁴. The generalization holds in Albanian; in the structure in (37), agreement between the linker and the head noun corresponds to the fact that the linker satisfies the external argument of the (\subseteq) elementary predicate introduced by genitive case, whose ultimate lexicalization is provided by the head noun.

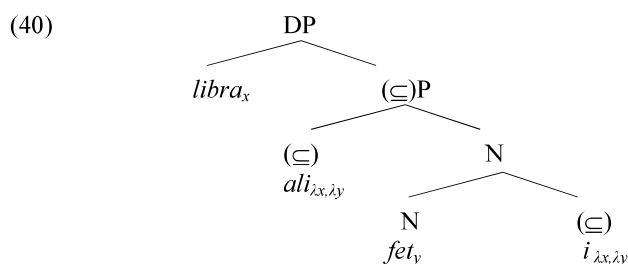
Essentially the same can be said of the pre-genitival linker in Romanian, as illustrated in (4), with the structure in (39). Oblique case introduces the (\subseteq) possession/inclusion predicate. The *ale* linker provides a lexicalization of the possessee (external) argument of (\subseteq) within the complement structure, acting essentially as a bound variable (a 'doubling clitic') of the head noun. The internal argument of (\subseteq) is the DP to which the oblique case attaches, i.e. the possessor.

¹³ On the position of the Romanian demonstrative, see Giusti (1995, 2002) who locates it in an AgrP position. Our analysis supports a different solution for Aromanian, based also on the comparison with Romanian.

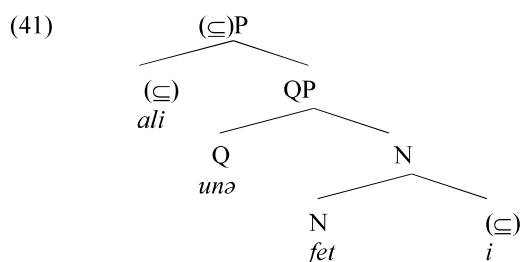
¹⁴ Split agreement also appears to be a possibility. For instance, for Zazaki, Toosarvandani and van Urk (2012) argue that the pregenitival linker agrees in case with the embedded N and in phi-features with the head N.

(39) [două kămăși]_x [ale_x [[băiatul]_y[-ui_{λx,λy}]]]

Aromanian differs from Romanian, but also Albanian, Kurdish, etc. in that pre-genitival linkers agree with the genitive DP. At least in the feminine singular it appears that the linker includes both a D constituent (*al-*) and an inflection (*-i*) exactly reproducing that of the genitive DP. In other words, the linker doubles the phi-features of the genitive DP and its case properties, as schematized in (40), cf. example (6c). In the masculine singular where the *-u* inflection only lexicalizes N class properties, it is the *o* linker that introduces the oblique relation.



The constituent structure assigned to the Aromanian linker in (40) is the same as in Romanian (39) or in Albanian (37) – or for that matter in Aromanian (38). Interpretively, on the other hand, the linkers seen so far provides a lower level satisfaction for the external argument slot of (⊆), ultimately bound by higher material (the head DP). The pre-oblique particle of Aromanian, by contrast, helps introducing the oblique case (⊆) itself. This also helps us understand why the same linker material introduces not just the genitive (i.e. the adnominal possessor), but also the dative (i.e. the possessor in a sentential context). Furthermore, in so far as it lexicalizes (⊆), the linker can be merged in a superordinate position to a determiner/quantifier head, as can most clearly be seen with indefinites, for instance (6b) – to which we assign the structure in (41).



By contrast, in Romanian, linkers agree with the head noun (the possessee) and depend on the absence of determiners preceding the genitive, as in (42a). (42b) shows that indefinite genitives are introduced by the preposition *a* (Giurgea 2012 and literature quoted there)¹⁵.

¹⁵ Giurgea argues in favour of the same constituent structure adopted here, where the linker is a projection of the genitive DP and not a functional category of the head DP. He entertains the two

- (42) a. haine ale avocat-ului
 clothes-f Lkr lawyer-obl.msg
 ‘the clothes of the lawyer’
- b. haine a mai multe persoane
 clothes-f to several people
 ‘the clothes of several people’

In Albanian and in Romanian, the part-whole relation (the oblique case on the embedded noun) and an inflectional level lexicalization of its external argument (the linker embedding the oblique) are separately merged in the syntactic tree. However in Aromanian only the first component appears to be lexicalized. Its similarity to linkers of the more canonical type consists in the fact that it is a clitic double of an element otherwise realized in the structure. Specifically the pre-oblique linker of Aromanian doubles the (\subseteq) elementary predicate in a position where it has in its local (Minimal Search) domain both of its arguments, namely the possessor (its complement) and the possessee (its Spec).

6. Conclusions

Aromanian displays alignment phenomena (Gumperz and Wilson 1971) with Albanian, with which it is in contact – specifically the use of the Romance-type demonstrative as a preadjectival linker. In theoretical terms, existing lexical resources (i.e. the demonstrative) find a new structural collocation in Aromanian (‘reanalysis’), in conditions of systematic bilingualism with Albanian (‘contact’).

For pre-genitival linkers, Romanian has a separate lexical series which Aromanian shares. At the same time, structures that are present neither in Romanian nor in the contact language Albanian also emerge – namely linkers in front of datives as well as of genitives, and agreeing with the genitive, rather than with the head noun. Thus the pressures of language contact (the potential tension between structural alignment and existing lexical resources in the language) brings about a result that is different from both Romanian and Albanian, even in respects in which the latter two coincide (agreement of the linker with the head noun). In theoretical terms, these outcomes are especially interesting, to the extent that they are attributable directly to UG.

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formal possibilities discussed here, namely that the linker is an agreement or a case marker. He concludes that it is a case marker in Romanian as well. We believe that the contrast between Aromanian and Romanian argues against such a conclusion.

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