Negative Coordination in (Turaif) Arabic

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Abstract

We discuss the combination of negation and coordination in an Arabic construction which is somewhat akin to the *neither...nor* construction in English and many other languages. In Arabic however, the form marking the non-initial conjunct is transparently related to the *and* coordinator rather than the *or* form. We provide an analysis of bisyndetic negative coordination expressing both sentential and constituent negation, and also as negative concord in certain contexts. We draw exclusively on data from the Turaif variety of Arabic in our discussion. The central facts concerning the use and distribution of the bisyndetic negative coordination construction are broadly similar across the Arabic vernaculars.

1 Introduction

We discuss the combination of negation and coordination in an Arabic construction somewhat akin to the *neither...nor* construction in English illustrated in (1) and (2) (for the coordination of predicates and arguments respectively), corresponding in logical meaning to the monosyndetic examples with a single *and/or* in (3).

(1) John neither washed nor dried the dishes.

(2) Leo ate neither the rice nor the carrots.

(3) John did not wash the clothes and did not hang them out to dry (either).
John did not wash or dress.
Leo did not eat rice or carrots.

Haspelmath (2004, 2007) describes coordinated structures of the bisynthetic (and polysynthetic) types such as (1) and (2) as instances of 'emphatic coordination' (or focusing coordination), arguing that where every term has a negative coordinator, the terms are indicated as being in some sort of contrast. On the other hand, the examples in (3) have a less 'emphatic' flavour.

Our discussion draws on data from the Turaif dialect (of Saudi Arabia), but the facts are broadly similar in other contemporary varieties of Arabic. The bisynthetic construction, also referred to as emphatic bisynthetic coordination (Haspelmath, 2004, 2007) is illustrated in (4) and (5). We focus in particular on the use of *wala* and *lā*.

(4) a. mansōr **mā** akal l-ruz **wala** šarab
Mansour.M NEG eat.PFV.3SGM DEF-rice NEG.CONJ drink.PFV.3SGM
l-gahwa
DEF-coffee
Mansour neither ate the rice nor drank the coffee.

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b. mansōr **lā** akal l-ruz **wala** šarab
Mansour.M NEG eat.PFV.3SGM DEF-rice NEG.CONJ drink.PFV.3SGM
l-gahwa
DEF-coffee

Mansour neither ate the rice nor drank the coffee.

(5) **lā** ʔaħmad **wala** mhammad ǧ-aw
NEG Ahmad.M NEG.CONJ Mohammad come.PFV-3PLM

Neither Ahmad nor Mohammad came.

The element *wala* is polysemous - we will gloss the *wala* which appears in this construction as NEG.CONJ and refer to it as 'coordination *wala*'. We will gloss *lā* as NEG (reflecting its etymological source). Coordination *wala* is transparently related to a combination of the conjunction and a negative particle. The main questions which we address here are: (i) does coordination *wala* contribute negation or is it simply restricted to a negative environment?; (ii) what are the constraints on the constructions illustrated above and how can they be captured in LFG?

2 Agreement, Coordination, Disjunction

In Turaif Arabic we find full agreement in both SVO and VSO word orders (SVO is the common or default word order). Both 3SG and 3PL show gender agreement (i.e. there is a 3PLF form in this variety of Arabic). When the agreement controller is coordinate we find fully resolved agreement in SVO order and both fully resolved and closest conjunct agreement (CCA) in VSO word order. With disjunctive agreement controllers, we find a closest conjunct agreement pattern in both word orders. As we will see in section 4.3, the *lā...wala* negative coordination structure exhibits its coordinative (rather than disjunctive) nature by following the agreement pattern of *w* 'and' (6) rather than *yā* 'or' (7).

(6) a. huda w mansōr ǧ-aw
Huda.F CONJ Mansour.M come.PFV-PLM

Huda and Mansour came.

b. huda w nora ǧ-an
Huda.F CONJ Noura.F come.PFV-3PLF

Huda and Noura came.

(7) yā abō-i yā ʔumm-i raħ ti-ǧ-i
either father.M-1SG.GEN or mother.F-1SG.GEN FUT 3SGF-come.IMPV
bokra
tomorrow

Either my father or my mother will come tomorrow.

3 Negation

3.1 Sentential Negation

Like many other vernacular Arabics, sentential negation in verbal sentences in Turaif Arabic uses the particle *mā* immediately before the verbal element, as in (8). This verbal strategy with *mā* also extends to use with pseudo-verbs as in (9).[1]

(8) a. ʕali mā kitab l-waǧib
Ali.M NEG write.PFV.3SGM DEF-homework
Ali didn't do the homework.

b. ʕali mā ya-ktib l-waǧib
Ali.M NEG 3SGM-write.IMPV DEF-homework
Ali doesn't do the homework.

(9) huda mā ʕinda-ha/maʕa-ha sayyārah
Huda.F NEG with-3SGF.GEN/with-3SGF.GEN car
Huda doesn't have a car.

Sentential negation with non-verbal predicates (other than the set of pseudo-verbs which exhibit the verbal strategy with *mā*) uses the particle *mū*, and its inflectional counterparts which show agreement with the subject, in (10).[2]

(10) a. ʕali imdars
Ali.M teacher.SGM
Ali is a teacher.

b. ʕali mū/mahu imdars
Ali.M NEG/NEG.3SGM teacher.SGM
Ali is not a teacher.

The distribution of *lā* is much more constrained in vernacular Arabic than it is in Modern Standard Arabic. In connection with Palestinian Arabic, Hoyt observes: "In Classical Arabic and early forms of the dialects (c.f. Blau, 1967), the *la*-particle was itself ambiguous between three uses: (i) expressing present tense verbal negation; (ii) expressing existential or categorial negation (Arabic *nafi lǧins* "negation of the kind") ...; and (iii) negative imperatives. Of these, (i) and (ii) have

[1] The term pseudo-verb is used for forms diachronically related to prepositions and nouns which do not inflect as regular verbs (but by means of a GEN affix coding the SUBJ) but exhibit verbal functions, including that of occurring as the main sentential predicate. The use of the verbal strategy for negation distinguishes the pseudo-verb from its prepositional counterpart (such as the locative prepositions *ʕind* 'at' and *maʕ* 'with').

[2] As shown by (10) there is no copula in the affirmative predicational clause with present tense interpretation. It is sometimes claimed that *mū* (and inflectional variants) is a form of copula verb. Whether or not this is the case, the main point here is that (10b) is an instance of sentential negation.

largely been reduced to formulaic borrowings from Standard Arabic, leaving negative imperatives...as the primary productive use of *lɛʔ*". (Hoyt, 2010, 108). (11) illustrates existential or categorial negation in MSA.

(11) lā šakka-a fī ḏālika
NEG doubt-ACC.INDEF on that.FSG
There's no doubt about that. (Ryding, 2005, 179)

Beyond the coordinative constructions we discuss here, the particle *lā* occurs only in the prohibitive (negative imperative), shown in (12), in Turaif Arabic.[3]

(12) a. ʔktib l-waǧib!
write.IMPV DEF-homework
Do the homework!

b. lā ta-ktib l-waǧib!
NEG 2SGM-write.IMPV DEF-homework
Don't do the homework!

3.2 Other Strong Negative Elements

Alongside sentential negative particles, there are certain other expressions in Turaif Arabic which have inherently negative meaning, as shown by the fact that they may occur as fragment negative answers to questions. Of these, relevant to the current topic, we find (i) the negative (pronominal) quantifier *māħad* 'no one' and (ii) the negative quantifier *wala* 'not even one' in its scalar focus particle (SFP) use, which combines with an indefinite NP. Note that, as observed in section 1, *wala* is polysemous, and indeed there are other languages where the same word form occurs both in SFP and negative coordinator uses, such as *ani* in Polish (cf. also Russian, Hungarian, Modern Greek and Romanian (Haspelmath, 2004)).

The examples in (13) show that *māħad* 'no one' is an inherently negative word appearing in preverbal position, and as a consequence combining it with the sentential negation marker leads to a 'double negative' interpretation, as in (13b). It does not occur in postverbal position where instead we find the corresponding item *ʔaħad* anyone, which does not itself express any negative meaning. As shown in (13c) to convey 'no one' it will occur in the context of a preceding sentence negative *mā, mū*, etc. SFP *wala*, illustrated in (14), also has an inherently negative meaning preverbally, which is negated if the sentential negative occurs in the same sentence. However, it also occurs in postverbal position, as in (15) where it behaves like *ʔaħad* in that it requires a preceding sentence negator to convey its usual negative meaning. Thus strong preverbal SFP *wala* contributes negation while weak

[3]The (positive) imperative is formed of the imperfective stem (without the agreement prefix), and an epenthetic augment. We gloss it simply as an imperfective stem. The prohibitive is formed of the imperfective stem with second person inflection, preceded by *lā*.

postverbal SFP *wala* occurs in a "negative context", and arguably exhibits negative concord (NC). However as Lucas (2009, 187) claims, "the Arabic varieties that exhibit true negative concord are fewer than what is claimed in the literature".

(13) a. māħad ǧ-a l-yōm
no.one come.PFV-3SGM DEF-day
No one came today.

b. māħad mā ǧ-a l-yōm
no.one NEG come.PFV-3SGM DEF-day
No one didn't come today. (= Everyone came today.)

c. mā ǧ-a ʔaħad l-yōm
NEG come.PFV-3SGM one DEF-day
No one came today.

(14) a. wala ṭālib ǧ-a l-yōm
NEG.SFP student.SGM come.PFV-3SGM DEF-day
Not even a (single) student came today.

b. wala ṭālib mā ǧ-a l-yōm
NEG.SFP student.SGM NEG come.PFV-3SGM DEF-day
Not even a single student didn't come today.
(= Every student came today.)

(15) a. mā ǧ-a wala ṭālib l-yōm
NEG come.PFV-3SGM not.even student.SGM DEF-day
Not even a (single) student came today.

b. *ǧ-a wala ṭālib l-yōm
come.PFV-3SGM not.even student.SGM DEF-day
Intended: Not even a (single) student came today.

Following Przepiórkowski and Patejuk (2015) (see also Sells (2000), Laczkó (2014) and Laczkó (2015)) on the syntactic aspects of such negative items, we will represent the distinction between constituent negation and eventuality negation at f-structure, using two features ENEG and CNEG (standing for eventuality negation and constituent negation).[4] Thus an example such as (14b) with NQ SFP *wala* and a realisation of sentential negation will be represented as in (16).[5]

[4]For the data which we discuss here, it would in principle be possible to replace the features ENEG and CNEG by a more general feature NEG, available in the f-structures corresponding to sentences and their dependents alike. Discussion of the further aspects of negation in Arabic which do in fact motivate the maintenance of the ENEG/CNEG distinction we make use of here would take us too far afield.

[5]The feature SFOC simply provides a syntactic indication of the scalar focussing property of negative quantifier *wala*. It is not important in the present context.

(16)
$$\begin{bmatrix} \text{PRED} & \text{`COME}< \text{SUBJ} > \text{'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`STUDENT'} \\ \text{CNEG} & + \\ \text{NUM} & \text{SG} \\ \text{SFOC} & + \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`TODAY'} \end{bmatrix} \right\} \end{bmatrix}$$

4 Negative Coordination

There are several strategies for expressing the coordination of negated predications in Turaif Arabic. In particular, although neither *lā* nor *wala* are used as markers of sentential negation they occur in widespread strategies for negative coordination.

4.1 With Verbal Predicates

The examples in (17) involve coordination at the lexical level where we see three variants are possible: *mā ... w mā* in (17a) involves the standard marker of verbal negation on the first conjunct and the coordinating particle *w* followed by the standard marker of verbal negation on the second conjunct (and any subsequent conjuncts); *mā ... wala* combining the standard marker of verbal negation on the first conjunct with negative conjunction *wala* (17b); and finally *lā ... wala* which marks negation on the first conjunct using the negative element *lā* combined with the negative conjunction *wala* before the second conjunct (and any subsequent conjuncts), in (17c).

(17) a. huda mā naẓẓaff-at w mā rattib-at l-bēt
Huda.F NEG clean.PFV-3SGF CONJ NEG tidy.PFV-3SGF DEF-house.SGM
Huda did not clean and did not tidy the house.

b. huda mā/lā naẓẓaff-at wala rattib-at
Huda.F NEG/NEG clean.PFV-3SGF NEG.CONJ tidy.PFV-3SGF
l-bēt
DEF-house.SGM
Huda neither cleaned nor tidied the house.

c. huda lā naẓẓaff-at wala rattib-at
Huda.F NEG clean.PFV-3SGF NEG.CONJ tidy.PFV-3SGF
l-bēt
DEF-house.SGM
Huda neither cleaned nor tidied the house.

These three strategies are all equally available to cases of coordination with a shared subject, at the VP and I′ levels, as shown in (18) and (19).

(18) a. mansōr mā akal l-ruz w mā šarab
Mansour.M NEG eat.PFV.3SGM DEF-rice CONJ NEG drink.PFV.3SGM
l-gahwa
DEF-coffee

Mansour did not eat the rice and did not drink the coffee.

b. mansōr mā/lā akal l-ruz wala
Mansour.M NEG/NEG eat.PFV.3SGM DEF-rice NEG.CONJ
šarab l-gahwa
drink.PFV.3SGM DEF-coffee

Mansour neither ate the rice nor drank the coffee.

(19) a. huda mā kān-at ta-lʕab riyāẓa w mā
Huda.F NEG be.PFV-3SGF 3SGF-play.IMPV sport.3SGF CONJ NEG
kān-at t-rūḥ n-nādi
be.PFV-3SGM 3SGF-go.IMPV DEF-gym

Huda didn't either play any sport or go to the gym.

b. huda mā/lā kān-at ta-lʕab riyāẓa wala
Huda.F NEG be.PFV-3SGF 3SGF-play.IMPV sport.SGF NEG.CONJ
(kān-at) t-rūḥ n-nādi
be.PFV-3SGF 3SGF-go.IMPV DEF-gym

Huda didn't either play any sport or go to the gym.

Things are different with coordination at the sentential level. In this case, the pattern seen in (17a), (18a) and (19a) in which *mā* occurs immediately adjacent to the verb in each conjunct, is grammatical, as in (20a). However, the patterns which combine sentence-internal *mā* or *lā* on the first conjunct with *wala* on the second conjunct are ungrammatical, and we find instead that *lā* occurs before the first conjunct. We will return briefly to discussion of IP coordination in section 5.3.

(20) a. mansōr mā gaʕad min n-nōm, w ʕali mā
Mansour.M NEG wake.PFV.3SGM from DEF-sleep, CONJ Ali.M NEG
ǧ-a min d-dawām
come.PFV-3SGM from DEF-work

Mansour did not wake up and nor did Ali come from work.

b. *mansōr mā/lā gaʕad min n-nōm, wala
Mansour.M NEG/NEG wake.PFV.3SGM from DEF-sleep, NEG.CONJ
ʕali ǧ-a min d-dawām
Ali.M come.PFV-3SGM from DEF-work

Mansour did not wake up and nor did Ali come from work.

c. lā mansōr gaʕad min n-nōm, wala ʕali
NEG Mansour.M wake.PFV.3SGM from DEF-sleep, NEG.CONJ Ali.M
ǧ-a min d-dawām
come.PFV-3SGM from DEF-work
Mansour did not wake up and nor did Ali come from work.

4.2 With Non-Verbal Predicates

Negative coordination of non-verbal predicates is grammatical with all three strategies, as shown below. Where *mā* occurred in corresponding verbal sentences in (17) - (19) we find *mū* or its inflected forms.

(21) a. huda mi fī l-bēt wa mi fī d-dawām
Huda.F NEG.3SGF in DEF-house CONJ NEG.3SGF in DEF-work
Huda is not at work and not at home.

b. huda mi/lā fī l-bēt wala fī d-dawām
Huda.F NEG.3SGF/NEG in DEF-house NEG.CONJ in DEF-work
Huda is neither at home nor at work.

(22) a. huda mi ṭuīl-a wa mi giṣīr-a
Huda.F NEG.3SGF tall-SGF CONJ NEG short-SGF
Huda is neither tall nor short.

b. huda mi/lā ṭuīl-a wala giṣīr-a
Huda.F NEG.3SGF/NEG tall-SGF NEG.CONJ short-SGF
Huda is not tall and not short.

4.3 With Nominal Dependents

In sections (4.1) and (4.2) we have seen a number of patterns for expressing sentential or eventuality negation. The possibilities are much more restricted when it comes to the constituent negation of coordinate nominal arguments such as subject and object. Since these are nominal **arguments**, rather than main sentential predicates, neither *mā* nor *mū* are possible marking the coordinate argument; hence the only pattern which arises is that combining *lā* on the first conjunct with *wala* on the second (and any subsequent) conjunct. Parallel to what we saw above in section 3.2 for certain negative words such as SFP *wala*, the negative coordination of arguments with *lā...wala* preverbally is inherently negative (see (23a)) and can combine with sentential negation to give a double negative meaning, as in (23b). Again like SFP *wala*, postverbal negative coordination with *lā...wala* exhibits negative concord (NC) and requires the presence of sentential *mā* (see (24)). The agreement behaviour that we see is the coordination-appropriate pattern for this variety of Arabic — full (resolved) agreement in SVO and both fully resolved

and CCA agreement in VSO (examples (23) and (24) show resolved agreement and (25) illustrates CCA). When we have the CCA agreement pattern with a (negative) coordinate subject it is possible to drop the *lā* marking the first conjunct, as in (25).

(23) a. lā ʔaħmad wala mhammad ǧ-aw
NEG Ahmad.M NEG.CONJ Mohammad.M come.PFV-3PLM
Neither Ahmad nor Mohammad came.

b. lā ʔaħmad wala mhammad mā ǧ-aw
NEG Ahmad.M NEG.CONJ Mohammad.M NEG come.PFV-3PLM
Neither Ahmad nor Mohammad didn't come.
(= Both Ahmad and Mohammad came.)

(24) *(mā) ǧ-aw lā ʔaħmad wala ʕali
NEG come.PFV-3PLM NEG Ahmad.M NEG.CONJ Ali.M
Neither Ahmad nor Ali came.

(25) mā ǧ-at (lā) huda wala ʕali
NEG come.PFV-3SGF NEG Huda.F NEG.CONJ Ali.M
Neither Huda nor Ali came.

The same positional dependent alternation between NEG in (26b) and NC (in 26a) readings arises with non-subject arguments to verbs, as illustrated in (26). Negative coordination of arguments to non-verbal predicates such as the pseudo-verb *ʕind* 'have' is parallel in all respects, as in (27a) and (27b).

(26) a. ʕali mā šarab lā gahwa wala šāy l-yōm
Ali.M NEG drink.PFV.3SGM NEG coffee NEG.CONJ tea DEF-day
Ali has drunk neither coffee nor tea today.

b. lā gahwa wala šāy šarab ʕali l-yōm
NEG coffee-SGF NEG.CONJ tea.SGM drink.PFV.3SGM Ali.M DEF-day
Ali has drunk neither coffee nor tea today.

(27) a. mā ʕind-i (lā) raχṣ-a wala sayyār-ah
NEG have-1SG.GEN NEG license-SGF NEG.CONJ car-SGF
I have neither a license nor a car.

b. lā raχṣ-a wala sayyār-ah ʕind-i
NEG license-SGF NEG.CONJ car-SGF have-1SG.GEN
I have neither a license nor a car.

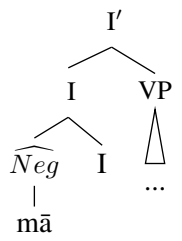
5 Sentential Negation and Negative Coordination: Analysis

We start by considering the *mā* .. *w mā* .. pattern illustrated in (17a), (18a) and similar examples. In these examples the SUBJ is outside the coordinate structure (in terms of c-structure) and distributed in (in terms of f-structure). Sentential negation is independently marked in each conjunct by the negative particle *mā*, and the conjunction *w* defines CONJTYPE as AND and CONJFORM as W for the coordinate structure as a whole.

(28)
$$\begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \text{CONJFORM} & \text{W} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`EAT}< \text{SUBJ, OBJ} > \text{'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`MANSOUR'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`SWEETS'} \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`DRINK}< \text{SUBJ, OBJ} > \text{'} \\ \text{ENEG} & + \\ \text{SUBJ} & \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`COFFEE'} \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

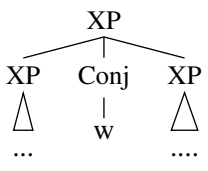
The negative particle *mā* is obligatorily adjacent to the verb (and is a morphologically bound form in some vernaculars). We treat it as a non-projecting word adjoined to I and defining ENEG = +. For the conjunction *w*, two possible analyses are plausible. We adopt the flat structure in (31a) as the more standard assumption. The alternative would be the structure shown in (31b) in which the conjunction forms a constituent with the following conjunct.

(29)

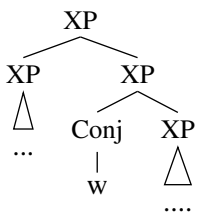


(30) *mā* $\widehat{\text{Neg}}$ (↑ ENEG) = +

(31) a.



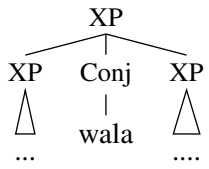
b.



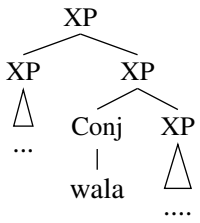
5.1 The wala conjunct

Consider now coordination *wala* as in (18b) and other similar examples above. Coordination *wala* (distinct from SFP *wala*) occurs only before non-initial conjuncts, expresses coordination and contributes negation to the following conjunct. Again there are two possible structures, differing in whether *wala* forms a constituent with the second conjunct or occurs at the level of the coordinate structure as a whole.

(32) a.

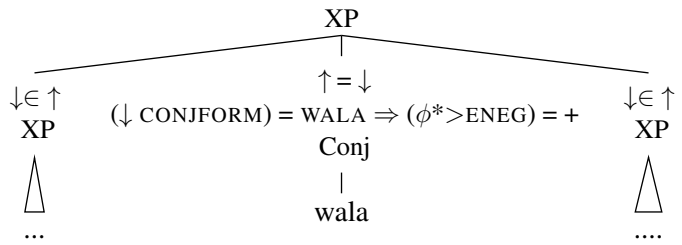


b.



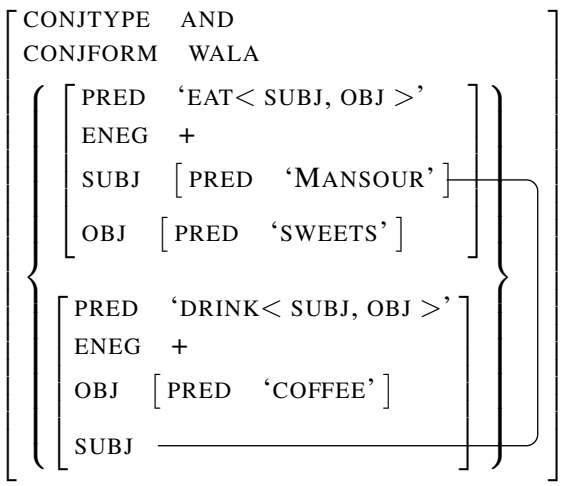
In a flat structure we would require annotations along the lines shown in (33), where the conditional A $\Rightarrow$ B $\equiv_{df}$ $\neg$ A $\vee$ (A$_c$ $\wedge$ B) (Bresnan et al. (2015, 64) originally proposed in Andrews and Manning (1999)), and where *> denotes the right sister of a node and ϕ* > the f-structure of that node (Dalrymple, 2001, 120). The f-description ($\downarrow$ CONJFORM) = WALA $\rightarrow$ (ϕ*> ENEG) = + assigns ENEG = + to the right sister (the following conjunct) provided that the CONJFORM of the coordinate structure as a whole is CONJFORM =$_c$ WALA. This in turn is provided by the lexical description of conjunction *wala*, in (34). The conjuncts themselves have the standard $\downarrow \in \uparrow$ annotation. The features CONJFORM and CONJTYPE are non-distributive; when a non-distributive feature is definied on a set the attribute and its value is a property of the set as whole: for example, the f-description ($\uparrow$ CONJFORM) = WALA in (34) defines the CONJFORM value of the coordinate structure as a whole, as shown in (35). See Dalrymple (2001, 156-158) for the distinction between distributive and non-distributive features.

(33)



(34) *wala* Conj (↑ CONJFORM) = WALA
(↑ CONJTYPE) = AND

(35)



In the case of non-binary negative coordination, as stated in (36) this requires all conjunctions to be *wala* (which corresponds to the facts).

(36) *Iterating Coordination Schema*

$$\begin{array}{lccc} \text{XP} \longrightarrow & \text{XP} & (\ \text{Conj} & \text{XP}\ )^{+} \\ & \downarrow \in \uparrow & \uparrow = \downarrow & \downarrow \in \uparrow \end{array}$$

$$(\downarrow \text{CONJFORM}) = \text{WALA} \rightarrow \phi^{*} > (\text{ENEG}) = +$$

The approach outlined above does seem to permit an analysis of the appropriate facts, though perhaps at a cost of a certain amount of technical machinery.[6] Among the drawbacks of this approach (with a flat c-structure) however, are that *wala* cannot lexically define its conjunct's ENEG feature using the notation $\phi\ *\ >$ because it has no sister. While the intuition is that *wala* directly contributes ENEG information, this information is introduced constructionally.[7]

We now consider an alternative analysis using (32b). On this approach, other coordinate structures involve the flat coordination structure (so *wala* must be excluded from this), but *wala* coordination (alone) involves the special coordination schema in (37), which must be limited to this type of coordination.The c-structure rule for the conjunct XP is shown in (38): the inside-out f-description ($\in \uparrow$) ensures that the f-structure of the XP is a member of a set. Treating ENEG as an instantiated (and non-distributive) feature will ensure that (38) applies only once in each conjunct. The element which we have called coordination *wala* (to distinguish it from SFP *wala*) specifies both negative and coordinative information in f-structure,

[6] As given above, this approach actually permits the first conjunct to be either affirmative or negative, but in the general case, both (all) conjuncts are negative if *wala* is used. To rule out coordination of this type with mixed polarity across the conjuncts, a further condition could be added to the f-description of the Conj node.

[7] An alternative possibility, still maintaining the flat c-structure, is that this is an instance of lexical sharing, involving a Conj node and a Neg node initial within the following conjunct, however this also requires us to make provision for a special negative *lā* which is not found outside of negative coordination.

and so the question arises as to whether it is categorially a Conj or a Neg. In (38) we have treated it categorially as a Neg element, as (38) is potentially also appropriate for negative incidental adjuncts, which we cannot discuss here. For the coordination data, it would also be possible to treat *wala* NEG.CONJ categorially as a conjunction.

(37) *Negative Coordination Schema*

XP ⟶	XP	XP^{+}
	$\downarrow \in \uparrow$	$\downarrow \in \uparrow$
	$(\downarrow \text{ENEG}) =_c +_{\_}$	$(\downarrow \text{CONJFORM}) =_c \text{WALA}$
	$(\downarrow \text{CONJFORM}) \neq \text{WALA}$	

(38) XP ⟶ Neg ($\uparrow = \downarrow$, $(\in \uparrow)$) XP ($\uparrow = \downarrow$)

(39) *wala* Neg
$(\uparrow \text{CONJFORM}) = \text{WALA}$
$(\uparrow \text{ENEG}) = +_{\_}$
$((\in \uparrow) \text{CONJTYPE}) = \text{AND}$

The analysis of (18b) (the variant with *mā*) in this approach is as follows. In the first conjunct ENEG = +_ is contributed by *mā*, a non-projecting word introduced as sister to the verbal element (see (29)): the CONJFORM annotation on the first daughter of (37) prevents *wala* occurring in this conjunct. The lexical entry for *mā*, revised to treat ENEG as an instantiated feature, is shown in (40). (37) requires the second conjunct to have the feature CONJFORM = WALA which is satisfied by adjunction of *wala* using (38). The f-structure is shown in (41).

(40) *mā* $\widehat{\text{Neg}}$ $(\uparrow \text{ENEG}) = +_{\_}$

(41)
$$\left[\begin{array}{ll}
\text{CONJTYPE} & \text{AND} \\
\left\{\left[\begin{array}{ll}
\text{PRED} & \text{`EAT}\!<\text{SUBJ, OBJ}\!>\text{'} \\
\text{ENEG} & +_{_} \\
\text{SUBJ} & \left[\text{PRED} \quad \text{`MANSOUR'}\right] \\
\text{OBJ} & \left[\text{PRED} \quad \text{`RICE'}\right]
\end{array}\right]\right. & \\
\left.\left[\begin{array}{ll}
\text{PRED} & \text{`DRINK}\!<\text{SUBJ, OBJ}\!>\text{'} \\
\text{ENEG} & +_{_} \\
\text{CONJFORM} & \text{WALA} \\
\text{OBJ} & \left[\text{PRED} \quad \text{`COFFEE'}\right] \\
\text{SUBJ} & \text{(reentrant)}
\end{array}\right]\right\} &
\end{array}\right]$$

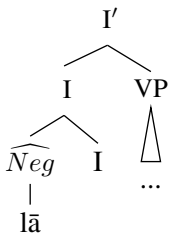
5.2 Status of *lā*

We can now turn to the status of *lā*, the special marker of negation which occurs only on the initial conjunct of a coordinate phrase in examples such as (42).

(42) mansōr lā akal l-ruz wala šarab
Mansour.M NEG eat.PFV.3SGM DEF-rice NEG.CONJ drink.PFV.3SGM
l-gahwa
DEF-coffee
Mansour neither ate the rice nor drank the coffee.

In Turaif Arabic (and other vernaculars), *lā* marks negation in the initial conjunct of negative coordination and provides some additional emphatic, focussing, or related information as compared to the counterpart sentences with *mā* or *mū* on the first conjunct (this is not dissimilar to the choice between *not A or B* and *neither A nor B* in English). Beyond this use in coordination, *lā* only occurs (vestigially) in fixed collocations, and as part of the negative imperative (prohibitive). In Classical Arabic and MSA, on the other hand, *lā* appears as a marker of sentential negation in a position immediately adjacent to the imperfective form of the verb, hence in a structure similar to (29), (see (43)).

(43)



While *lā* in Turaif Arabic may appear immediately adjacent to the verb (as it does in (42)) it is **not** restricted to this position and so does not share the positional restrictions of its CA/MSA cognate. It may occur initially (before the subject) in the negative coordination of sentences, as shown in (44). While *mā* is a non-projecting $\widehat{\text{Neg}}$ word immediately adjoined to the verb in I, the syntax of *lā* is like that of coordination *wala*: it combines with a following phrase (including an IP) in accordance with (38). The proposed lexical description for *lā* is shown in (45).

(44) lā mansōr gaʕad min n-nōm, wala ʕali
NEG Mansour.M wake.PFV.3SGM from DEF-sleep, NEG.CONJ Ali.M
ǧ-a min d-dawām
come.PFV-3SGM from DEF-work
Neither did Mansour wake up nor Ali come (home) from work.

(45) *lā* Neg (↑ CONJFORM) = LĀ
(↑ ENEG) = +_
((∈ ↑) CONJTYPE) = AND

(46) *Negative Coordination Schema* where XP $\equiv$ { IP | I′ | VP | AP | PP}

XP $\longrightarrow$	XP	XP^{+}
	$\downarrow \in \uparrow$	$\downarrow \in \uparrow$
	$(\downarrow$ ENEG$) =_c +_-$	$(\downarrow$ CONJFORM$) =_c$ WALA
	$(\downarrow$ CONJFORM $) \neq$ WALA	

5.3 Further Issues

The analysis of cases in which the main sentential predicate in each conjunct is non-verbal will follow straightforwardly from the above, given an appropriate sentential analysis for cases of non-verbal predication in Arabic. In these sentence types, ENEG can be marked by *mū* and its variants or *lā* on the initial conjunct and by *mū* and its inflectional variants or *wala* on the non-initial conjuncts. If *lā* is used, then *wala* is required on subsequent conjuncts. However there is a remaining issue concerning negative coordination of full IPs (see the data in (20). If (46) applies to IP (as stated above), then it will additionally (and incorrectly) permit *lā* and *mā* in clause internal position in the first conjunct (the ungrammatical pattern in (20b). One possibility (which we do not explore further here) is that there are *additional* linearisation constraints which require the NEG element to be initial in each conjunct. Another possibility is that negative coordination of IPs is excluded from (46) and falls instead under the rule for saturated arguments discussed in section 6 below.

6 Negative Coordination of Dependents

We can now turn to the negative coordination of dependents, illustrated by an example such as (47). There are considerable reasons for concluding that the syntactic f-structure analysis of such examples should reflect rather directly the external syntactic manifestation which involves the coordination within the dependent, with each conjunct showing constituent negation.[8] These are that the pattern of agreement between the subject and the predicate is consistent with the pattern we find with conjunction rather than disjunction in Turaif Arabic, and the combination of (preverbal) negative coordination of dependents with the expression of predicate negation gives rise to a double negative reading, shown in (48). Accordingly we take the f-structure for (47) to be as in (49), with (50) for the 'double negative' reading in (48).

(47) lā ʔaħmad wala mhammad ǧ-aw
NEG Ahmad.M NEG.CONJ Mohammad come.PFV-3PLM
Neither Ahmad nor Mohammad came.

[8]That is, in contrast to closely mirroring the interpretation. We leave matters of interpretation to one side here, but note that the interpretation (at least the most salient) is $\neg$ came(Ahmad) $\wedge$ $\neg$ came(Mohammad) or equivalently, $\neg$ (P $\vee$ Q).

(48) lā ʔaħmad wala mhammad mā ǧ-aw
NEG Ahmad.M NEG.CONJ Mohammad NEG come.PFV-3PLM
Neither Ahmad nor Mohammad didn't come.
(= Both Ahmad and Mohammad came.)

(49)
$$\begin{bmatrix} \text{PRED} & \text{`COME}\langle\ \text{SUBJ}\ \rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{CNEG} & +_{\_} \\ \text{CONJFORM} & \text{LĀ} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`MOHAMMAD'} \\ \text{CNEG} & +_{\_} \\ \text{CONJFORM} & \text{WALA} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

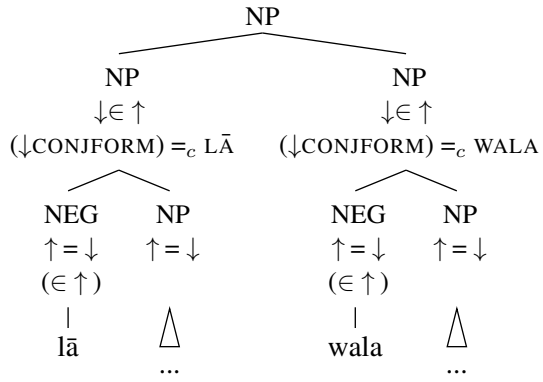
(50)
$$\begin{bmatrix} \text{PRED} & \text{`COME}\langle\ \text{SUBJ}\ \rangle\text{'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{CNEG} & +_{\_} \\ \text{CONJFORM} & \text{LĀ} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`MOHAMMAD'} \\ \text{CNEG} & +_{\_} \\ \text{CONJFORM} & \text{WALA} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

If we are right about this, then we need lexical descriptions for *lā* and *wala* in their CNEG incarnation, alongside the lexical descriptions which are motivated by the use of these conjunctions in sentential negation (adjoined to verbs and pseudo-verbs and their projections), if we maintain the assumption that ENEG and CNEG are distinct attributes (rather than instances of the same attribute in different f-structures). So in addition to (45) (for *lā*) and (39) (for *wala*) we postulate (51) and (52), alongside a version of the *Negative Coordination Schema* for dependents, in (53). Note that there are real distributional differences between *wala* and *lā* in their (clausal) predicate negating and argument negating functions: in the latter function we require *lā* on the first conjunct, whereas in the former negation can be realised in a variety of different ways, as we have seen.

(51) *lā* Neg (↑ CONJFORM) = LĀ
(↑ CNEG) = $+_{\_}$
((∈ ↑) CONJTYPE) = AND

(52) *wala* Neg (↑ CONJFORM) = WALA
(↑ CNEG) = +_
((∈ ↑) CONJTYPE) = AND

(53)



(54) *Negative Coordination Schema: Dependents*
where ZP ≡ { NP |DP | PP}
ZP ⟶ ZP ZP
↓ ∈ ↑ ↓ ∈ ↑
(↓ CONJFORM) =c LĀ (↓ CONJFORM) =c WALA

6.1 Negative Coordination of Dependents: Negative Concord

We now turn briefly to the question of *lā...wala* nominal (and prepositional) dependents as negative concord elements. While *lā...wala* marking of dependents in preverbal position marks negation (as we have seen above), in the postverbal position *lā...wala* constitutes an instance of (non-strict) negative concord. Because position is a crucial factor, there is an apparently irreducible syntactic component to the phenomenon of negative concord (which arises postverbally).

(55) mā ǧ-aw lā ʔaħmad wala ʕali
NEG come.PFV-3PLM NEG Ahmad.M NEG.CONJ Ali.M
Neither Ahmad nor Ali came.

In (55), *mā* contributes ENEG = +_, and *lā* and *wala* are NC items, so they do not contribute CNEG = +_ to their respective f-structures:

(56)
$$\begin{bmatrix} \text{PRED} & \text{`COME}< \text{SUBJ} > \text{'} \\ \text{ENEG} & +\_ \\ \text{SUBJ} & \begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{CONJFORM} & \text{LĀ} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`ALI'} \\ \text{CONJFORM} & \text{WALA} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

Przepiórkowski and Patejuk (2015) briefly outlines an approach to the (strict) negative concord items in Polish *nikt* 'nobody.NOM' and its inflectional counterparts, which occur in the context of the marker of sentential negation *nie*, in (57) (NW stands for n-word). They associate an inside-out constraint with these NC items which requires ENEG to be defined as + in the appropriate containing f-structure, as shown for *nikt* 'nobody.NOM' in (58).

(57) Nikt nie lubi nikogo.
nobody.NW.NOM NEG likes nobody.NW.GEN
Nobody likes anybody. Polish: Przepiórkowski and Patejuk (2015, 330)

(58) *nikt (nobody)* N $(\uparrow \text{CASE}) = \text{NOM}$
$((\text{XCOMP}^* \ \text{GF}^+ \in \uparrow) \ \text{ENEG}) =_c +$

For the non-strict NC element *lā ... wala*, we need to treat the negative coordination of an argument as introducing CNEG or as a case of NC depending on its position with respect to the verb and the expression of sentential negation (non-strict NC language). The NC interpretation arises if there is ENEG in the clause **and** the marker of ENEG precedes the conjunctive negative markers (*lā* and *wala*). The interpretation as a marker of constituent negation (CNEG) arises if there is no marker of ENEG **and** no marker of TNS which f-precede the conjunctive negative markers. To capture the precedence relations we need **both** the values of the ENEG and the TNS feature to take a position in the f-precedence relation *independent* of the larger (sentential) f-structure. The lexical description for the dependent-marking *wala*, taking account of the fact that it occurs as a marker of CNEG in some circumstances and as an NC marker in other circumstances, would then be along the lines shown in (59) replacing (52). In both negative and NC uses, *wala* defines CONJFORM and CONJTYPE features (first two equations in (59)). Alongside this, either it defines the CNEG feature to be positive (under certain f-precedence conditions, namely when the f-structure it which it appears as an attribute is not f-preceded by either the marker of ENEG or that of TENSE) or the NC feature to be positive (under distinct conditions, namely when it f-precedes these same elements).[9] We use a feature NC here essentially for expository convenience (it would be possible to introduce the appropriate conditions without this feature), but in any case such a feature might eventually turn out to play a role in guiding the mapping to the semantics.

(59) wala *Neg* $(\uparrow \text{CONJFORM}) = \text{WALA} \qquad ((\in \uparrow) \ \text{CONJTYPE}) = \text{AND}$
$\{(\uparrow \text{CNEG}) = +_- \wedge ((\text{GF}^+ \in \uparrow) \text{ENEG}) \ {}_f\not\prec \uparrow \wedge ((\text{GF}^+ \in \uparrow) \ \text{TNS}) \ {}_f\not\prec \uparrow \ |$
$(\uparrow \text{NC}) = + \wedge ((\text{GF}^+ \in \uparrow) \text{ENEG}) =_c +_- \wedge ((\text{GF}^+ \in \uparrow) \text{ENEG}) \ {}_f\prec \uparrow \}$

[9] Note that we assume here that both the values of ENEG and that of the TENSE feature to take a position in the f-precedence relation *independent* of the larger, sentential f-structure.

A Further Option: Note that the meaning of a sentence such as (60) is not equivalent to that of an *and* coordination in the dependent under the scope of sentential negation. That is, it does not correspond to ¬ (P ∧ Q), where P is *drank(ali, coffee)* and Q is *drank(ali, tea)*, but rather it corresponds to meaning ¬ (P ∨ Q). In the light of this we might consider an alternative approach to the dependent data, separating the conjunctive CNEG reading from a disjunctive NC reading in the entries for *wala* and *lā*, leading to entries such as (61) and (62).

(60) ʕali mā šarab lā gahwa wala šāy l-yōm
Ali.M NEG drink.PFV.3SGM NEG coffee NEG.CONJ tea DEF-day
Ali has drunk neither coffee nor tea today.

(61) *wala* Neg
$(\uparrow \text{CONJFORM}) = \text{WALA}$
$((\in \uparrow) \text{CONJTYPE}) = \text{AND}$
$(\uparrow \text{CNEG}) = +_{-}$
$((\text{GF}^{+} \in \uparrow) \text{ENEG})_{f} \not\prec \uparrow$
$((\text{GF}^{+} \in \uparrow) \text{TENSE})_{f} \not\prec \uparrow$

(62) *wala* Neg
$(\uparrow \text{CONJFORM}) = \text{WALA}$
$((\in \uparrow) \text{CONJTYPE}) = \text{OR}$
$(\uparrow \text{NC}) = +$
$((\text{GF}^{+} \in \uparrow) \text{ENEG}) =_{c} +_{-} \wedge ((\text{GF}^{+} \in \uparrow) \text{ENEG})_{f} \prec \uparrow$

However, we note that it is possible to have full (resolved) agreement in VSO order with a NC-marked *lā...wala* SUBJ. This is consistent with conjunction, but disjunctive agreement controllers give rise to a single conjunct pattern. Although this is not conclusive evidence, we do not propose to follow this alternative.

7 Conclusion

We have considered the analysis of the bisyndetic negative coordination strategies in vernacular Arabic, on the basis of data from Turaif Arabic and in particular the combination of *lā* (which does not otherwise occur as a marker of sentential negation) with *wala*, which also has a SFP use. We have argued that *wala* and *lā* in these negative coordinate constructions both negate individual conjuncts and also contribute CONJTYPE information to the coordinate structure as a whole.

We have shown that when *lā... wala* is used in the coordination of dependents (rather than predicates), it gives rise to either a negative reading or a negative concord reading. The conditions under which these interpretations arise are parallel to those for other items in Arabic which show an alternation between a negative and a NC reading, including the element *wala* used as a SFP. The diachronic development of a SFP by compounding a conjunction with a negative marker is attested in a number of languages, and the Arabic facts appear similar in some respects to these cases (see e.g. Gajić (2016) (Serbian), Herburger (2003) (Spanish), Gianollo

(2017) (Latin), Haspelmath (1997) and especially Hoyt (2010) for a discussion of Palestinian Arabic, in which he proposes that the SFP weak-*wala* may have developed out of constructions in which a final disjunct closes off a set of alternatives).

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