Negative Concord in Two Dialects of Arabic

Fred Hoyt

May 22, 2005

1 Introduction

This paper is a comparison negative concord in the Palestinian and Moroccan dialects of Arabic. Both dialects have *negative concord* sentences, in which two or more expressions which could express negation by themselves in certain types of sentences (commonly referred to as *n-words*) are understood as expressing only one negation. Negative concord in the two dialects is similar in several respects, but differ in terms of the interpretations available for the n-words, and with the positions in the sentence in which these interpretations can be had. In particular, the Palestinian n-word **wɛla** "not even" expresses negation if it precedes the verb (1a), while it almost always is interpreted as a negative polarity item (1b) if it follows the verb. In contrast, the Moroccan n-word **ḥətta** "even" has only the NPI interpretation in either position (2):

(1) *Palestinian Arabic*:

a. **wɛla** **ḥada** fi-hʊm šæːf-ni.
not.even one.MS in-cl3MP see.perf.3MS-cl1S
"Not even ONE of them saw me!"

b. **ma**-šæːf-niː-š **wɛla** **ḥada** fi-hʊm.
not-see.perf.3MS-cl1S-neg not.even one.MS in-cl3MP
"Same."

(2) *Moroccan Arabic*:

a. **ma**-šaf-ni **ḥətta ḥadd**.
not-saw.3MS-cl1S even one
"Not even one person saw me."

b. **ḥətta ḥadd** **ma**-šaf-ni.
even one.MS not-saw.3MS-cl1S
"Same."

This contrast between the dialects raises two questions about their grammars:

(3) a. What properties of Palestinian **wɛla** allow it to have two interpretation while Moroccan **ḥətta** has only one?

b. What lexical or grammatical properties restrict the distributions of the different interpretations that Palestinian **wɛla** can have?

The answers to these questions which I argue for in this paper are the following:

(4) *Interpretation of n-words*:
   a. In Palestinian Arabic, n-words are ambiguous between a negative existential quantifier reading, and a "plain," polarity-sensitive existential quantifier reading (c.f. Herburger 2001);
   b. In Moroccan Arabic, n-words are uniformly interpreted as polarity-sensitive existentials

(5) *Morphosyntax of Negation*:
   a. In Palestinian Arabic, negation is expressed as a functional head which assigns a polarity feature with a negative value to its IP complement;
   b. In Moroccan Arabic, negation is expressed as an inflectional affix which can attach to either auxiliary or predicative stems.

The theoretical implications of these results are that the analysis of negative concord in natural language requires both an *ambiguity* analysis of n-words (such as argued for by Herburger 2001) as well as a *uniformity* analysis (c.f. Przepiórkowski 1999, Progovac 2000, Guerzoni & Alonso-Ovalle 2003).

The paper is organized as follows: In Section 2 (p.5) I present the similarities between negative concord in the two dialects. In Section 3 (p.8) I analyze negative concord in Palestinian Arabic. In Section 4 (p.15) I analyze negative concord in Moroccan. In Section 5 (p.18) I compare the two analyses and discuss their implications for theoretical approaches to negative concord, and discuss etymological considerations that bear on the ambiguity analysis.

1.1 A Note on Data

When I use the terms "Palestinian Arabic" and "Moroccan Arabic," I am not describing discrete dialects in a general sense. Palestinians in particular speak an intricate quiltwork of speech varieties which vary across communitites in terms of socio-economic status, religion, geographical region, and education. Nearly a hundred years ago Schmidt & Kahle (1918) characterized Palestinian Arabic as follows:

> The Arabic spoken in Palestine is not uniform. In general, two groups can be distinguished: the Arabic of the Bedouin, and of the *fellâḥîn* ("peasants"). The differences between the dialects are considerable... The Arabic spoken by the *fellâḥîn* is even more clearly distinct from the Arabic spoken in the larger cities, in particular the Arabic of Jerusalem... The dialect of Jerusalem is closer to that of Damascus — in which in many respects similar phenomena are to be noted — than it is to the that of the surrounding *fellâḥîn*. (Schmidt & Kahle 1918, p.*45)

The dialect situation among Palestinian speakers has become even more complicated as the result of the upheavals of the 20th century, from the increased level of literacy, and from the widespread

availability of modern communications media. At present, Palestinians are extremely sensitive to dialect distinctions, and in some cases can distinguish different extended families or even households on the basis of linguistic behavior. Likewise, individual speakers — especially educated speakers — switch between registers of speech as a matter of course, and in doing so change various aspects of their pronunciation and lexical usage.

As such, by Palestinian Arabic I mean the larger community of Palestinian speakers whose idiolects are consistent in terms of the phenomena under discussion. The idiolects in question may differ in other terms, especially with regards to pronunciation and lexis. Therefore, the reader should not be surprised to examples in this paper labelled as "Palestinian" but which differ in terms of certain sounds or lexical items[1].

Turning to Morocco, the data sources I have do not make it clear how much variation there is to be found within the greater Moroccan speach community. Marçais (1977, p.xi-xii) writes that "the Moroccan dialects, as a whole, present a rather uniform character. And one can say, roughly speaking, that to speak 'Moroccan' is to speak the Arabic of Rabat, and especially of Fes. . . ." One noteworthy point of variation has to do with the verb prefix which is used to indicate progressive aspect, which is pronounced as **ka-** in some parts of Morocco and as **ta-** in others. Also, different authors have used different transcription conventions, differing in particular with regard to how they represent vowels. I have retained the original transcriptions from the sources, so the reader should not be surprised to see examples of "Moroccan" Arabic which show different representations for vowels.

1.2 Theoretical Assumptions

Before proceedings with the discussion, I would like to briefly introduce the theoretical assumptions which I make that are crucial for the analysiss. In particular, the discussion relies on particular assumptions about structural relations between n-words and their licensors, and about the feature calculus involved in negative concord licensing.

First, I assume the *specifier-head* relation to be a structural primitive. This departs from recent work in the "Minimalist Program" according to which feature interaction is limited to the c-command relation (Chomsky 2000, Chomsky 2001). The analyses here makes use of both the c-command relation and the specifier-head relation as per the "classical" Government & Binding framework, as Benmamoun (1997) has shown both to be necessary for the analysis of negative concord in Moroccan Arabic. However, in place of the "Government" relation that Benmamoun (1997) assumes, I assume a c-command relation augmented by a variation on the AGREE relation proposed by Chomsky (2000). This is because the locality restrictions on AGREE under c-command

[1]Examples from published sources are given with the appropriate page numbers, except for the data from Schmidt & Kahle (1918) and Schmidt & Kahle (1930), which are collections of folktales in the rural dialect spoken in Bir Zeit. These are given according to the number and paragraphs of the story from which the data are taken.

are more easily formulated in Minimalist terms.

Turning to the feature calculus, I assume that morphosyntactic features are pairs of attributes and values. A *feature set* associated with a given expression is a function, meaning that each attribute in the set has a unique value. Features are also divided into two sorts: *interpretable* features and *uninterpretable* features. Interpretable features contribute to the semantic interpretation of the clause while uninterpretable features do not have semantic interpretation and instead act as morphosyntactic constraints.

The *uninterpretable* features are further divided into two more sorts: *unvalued* features and *unmatched* features (c.f. Pesetsky & Torrego 2004). Unvalued features consists of an attribute with an unspecified value (6). Unmatched features are attribute-value pair which must be *matched* by a feature on some other node in the structure (6):

(6) a. *Unvalued feature*: [ATTR _]
b. *Unmatched feature*: [↑ATTR VAL]

Uninterpretable features must be *resolved* by entering into an ACCORD relation with other features which *match* the first.

(7) An expression A is in an ACCORD relation with an expression B with respect to a feature F iff:
a. A and B match with respect to F;
b. A c-commands B, or A is the specifier of B;
c. There is no other expression C such that A c-commands C, C c-commands B, and C matches either A or B with respect to F.

Match is defined as follows:

(8) An object A matches another object B with respect to a feature F iff
a. A and B have the same ATTR with respect to F;
b. A's and B's feature sets unify with respect to the their values for F;

Unification of two feature sets consists of performing set union on them to the extent that the union is a function, or to put it differently, unification is union of two functions which yields a function. This means that two feature sets containing pairs with the same domain element can only unify if they have the same value.

ACCORD is a variation on the AGREE relation widely assumed in recent work in the Minimalist Program (Chomsky 2000, Chomsky 2001, Bhatt to appear), differing in that ACCORD is defined to allow either "top-down" or "bottom-up" matching, and to take place under either a c-command or a specifier-head relation[2].

I use the following notational conventions:

[2]See Frampton, Gutmann, Legate & Yang (2000) and Legate (n.d.) for discussion of using feature unification within the Minimalist Framework.

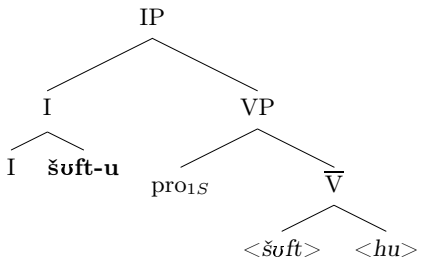
(9) a. Copies left by movement are indicated in angle-brackets with italics (<*copy*>);
b. Pronounced constituents are given in boldface (**constituent**);
c. Upwards-pointing arrows indicate syntactic movement;
d. Downwards-pointing arrows indicate an ACCORD relation;
e. *Matching* between two features is shown by numerical tags (e.g. 1).

Where Move or Accord have applied cyclically, earlier cycles are indicated with dashed arrows, while later cycles are indicated with solid arrows.

Also, a note on the representation of clitic pronouns is in order. There is an on-going debate in the literature as to whether Arabic enclitic pronouns should be represented as incorporated pronouns as or inflectional morphemes expressing agreement with a null pronoun. Since this issue has no bearing on my analysis, I will take the middle road and show clitics being pronounced as suffixed to verbs, but leaving independent copies[3]. For example, the simple sentence in (10a) would have the structure in (10b):

(10) a. šʊft-u.
see.perf.1S-cl3MS
"I saw him," "I have seen him."

b.



Because movement does not play a significant role in the analysis, I do not consider theoretical motivations for it.

2 Negative Concord

Both Palestinian and Moroccan Arabic have *n-words*, by which I mean words or expressions which can be used to express negation in some contexts. The Palestinian n-word is a determiner-like particle **wɛla** "not even," while the Moroccan n-word is the determiner **ḥətta** "even." These are identified as n-words by the fact that they express negation in fragment answers (11b, 12b):

(11) *Palestinian*:

[3]One way of thinking about this in more theoretically principled terms might be to assume that phonological merger coincides with syntactic merger, and that movement of a verb and its pronoun complement amounts to moving the node dominating the two

a. Q: ačam mɪn ɪl-ulæːd šʊft?
how-many from the-children see.perf.2MS
"How many of the children did you see?"

b. A: **wɛla ḥada** fi-hʊm.
not.even one in-cl3MP
"Not even ONE of them!"

(12) *Moroccan*:

a. Q: škun šəft?
who saw.2MS
"Who did you see?"

b. A: **ḥətta ḥadd**.
even one
"Not even one person."

When these particles occur in negative sentences, they do not — in the general case — express negation themselves but rather are interpreted as polarity sensitive indefinite noun phrases. This means that in negative sentences they do not express negation in addition to the sentential negation morpheme. Instead, they express that not even the minimal quantity of the nominal expression that they accompany participates in the eventuality being described[4]:

(13) *Palestinian*:

a. **ma**-šʊft-ɪš **wɛla ḥada** fi-hʊm.
not-see.perf.1S not.even one in-cl3MP
"I didn't see even ONE of them."

b. **maː**-ǧat-iš **wɛla waːḥdɛ** fi-hʊn.
not-come.perf.3FS-neg even one.FS in-cl3FP
"Not even ONE of them came."

(14) *Moroccan*:

a. **ma**-šəft **ḥətta ḥadd**.
not-saw.1S even one
"I didn't see even ONE person."

b. **ma**-ža **ḥətta waḥəd**.
not-came.3MS even one.MS
"Not even ONE person came."

This is *negative concord*: the co-occurance of two or more expressions which can express negation — in at least some contexts — being interpreted as expressing only one negation.

[4]Benmamoun (1997, 2000) glosses NPs with **ḥətta** with the English word "any": **ḥətta waḥəd** "anyone," **ḥətta ḥaža** "anything," etc. These glosses fail to distinguish the use of **ḥətta** from NPIs without it. However, Brustad (2000, p.308) provides glosses for **ḥətta**-NPs such as "even a single," "anything at all," "not even a piece." This suggests that the use of **ḥətta** does have a minimizing effect which is not present with "plain" NPIs such as **waḥəd** "anyone," **ḥaža** "anything," etc. In order to reflect this difference, I gloss **ḥətta**-NPs as expressing minimization.

When they appear in a full sentence (rather than a fragment answer), the n-words must appear along with a negation morpheme, or to put it differently, the n-words must be in a negative clause:

(15) *Palestinian*:

a. * šʊft **wɛla ḥada** fi-hʊm.
see.perf.1S not.even one in-cl3MP
"I didn't see even one of them."

b. * aǧa **wɛla ḥada** fi-hʊm.
come.perf.3MS not.even one.MS in-cl3MP
"No even ONE of them came."

(16) *Moroccan*:

a. * šəft **ḥətta ḥadd**.
saw.1S even one
"I didn't see ANYbody."

b. * ža **ḥətta waḥəd**.
came.3MS even one
"Not even one person came."

This indicates that n-words in both dialects have to be *licensed* by a negation morpheme, except in fragment answers.

The only exception to this generalization is that Palestinian **wɛla** expresses negation when it precedes the finite verb in the clause (17a). This is shown by the fact that addition of negation to a sentence in which a **wɛla**-phrase precedes the verb triggers a double-negation reading (17b):

(17) a. **wɛla ḥada** fi-hʊm šæːf-ni.
not.even one.MS in-cl3MP see.perf.3MS-cl1S
"Not even ONE of them saw me."

b. **wɛla ḥada** fi-hʊm **maː**-šæːf-niː.
not.even one.MS in-cl3MP not-see.perf.3MS-cl1S-neg
"Not even ONE of them didn't see me."

In Moroccan, by contrast, a pre-verbal n-word must co-occur with negation, and the sentence still has only the negative interpretation:

(18) a. ḥətta ḥadd **ma**-šaf-ni.
even one.MS not-saw.3MS-cl1S
"No even one person saw me."

b. * ḥətta ḥadd šaf-ni.
even one.MS saw.3MS-cl1S

This difference between Palestinian and Moroccan shows that the Palestinian n-word can be interpreted either as expressing negation, or as a negative polarity item, while the Moroccan n-word can only be interpreted as a negative polarity item. In other words, Palestinian **wɛla** is ambiguous between an NPI interpretation and an intepretation which expresses negation. I call this latter interpretation a *negative quantifier* interpretation (c.f. Herburger 2001).

2.1 Analysing Negative Concord

My proposal for analyzing negative concord in Palestinian and Moroccan is that the same licensing mechanisms are involved in the two dialects and that the differences between them have to do with the lexical properties of the n-words themselves and with differences in how negation is represented in the phrase structure.

The key assumption that I make for analysing negative concord is that both dialects include among their morphosyntactic features a POLARITY feature which can have either a positive or a negative value. This feature largely corresponds to semantic negation, but the correspondence is not exact. The intuition behind the POLARITY feature is that it represents a morphosyntactic grammaticization of the *antimorphism* property associated with the interpretation of negative concord licensors, just as agreement features such as person, number, and gender are grammatizations of semantic properties used to identify discourse referents:

(19) a. Negation morphemes contribute an interpretable [POL -] feature to the clause;
b. I^0-heads are as class specified with an unvalued [POL _] feature;
c. NPI n-words — the n-words which undergo negative concord — are specified with unmatched [↑POL -] features.

Next, I assume that I^0-heads in both dialects are specified with an unvalued polarity feature. This means that every clause will have some value for the POLARITY feature, but this value will be provided either by some other expression or by the following default principle for root clauses:

(20) *Root Clause Polarity Principle*: Root clause are [POL +].

Palestinian and Moroccan both have NPI interpretations for n-words, so I treat them as being morphosyntactically equivalent.

(21) a. (*Moroccan*) **ḥətta**: [↑POL -]
b. (*Palestinian*) **wɛla**: [↑POL -]

I follow Benmamoun (2000) in treating **ḥətta** as a determiner. Palestinian **wɛla** can seem to be able to combine with both NPs and PPs, so I treat it as an adjunct element which targets [VERB -] categories (i.e., nouns and preposition).

3 Negative Concord in Palestinian

Palestinian **wɛla** is also ambiguous between an NPI interpretation and a negative quantifier intepretation. Both versions of **wɛla** are specified with an unmatched POLARITY feature, but have different values:

(22) a. *NQ-**wɛla***: **wɛla** → N [↑POL +]

b. *NPI-**wɛla**:* ***wɛla*** → *N* [↑POL -]

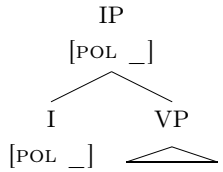
As I show below, the different values for NPI-**wɛla** and NQ-**wɛla** correctly predict their distributions.

I also assume that the negation morpheme **maː-** is a F^0-head which selects for IP-nodes[5]. Crucially, it itself is specified as [POL +] but assigns its complement a [POL -] value.

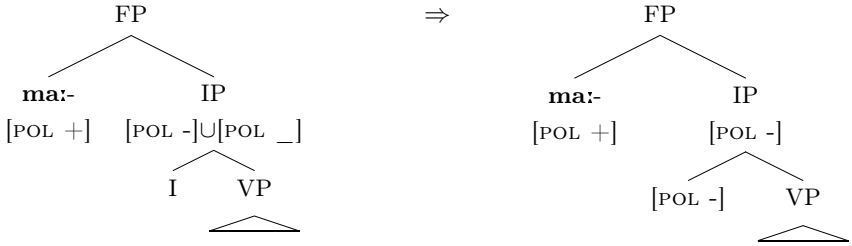
(23) **maː-** → F:[POL +], <IP:[POL -]>

When **maː-** (as shown in 23) combines with a complement IP (as in 24a), it assigns the [POL -] to the IP-node. The I^0-node is specified with an unvalued [POL _] feature which percolates to the IP-node by the usual feature percolation mechanisms. The interpretable [POL -] unifies with the unvalued [POL _] feature because the unvalued feature lacks a specific value and does not conflict with the value of the intepretable feature. This gives the IP-node a polarity feature with a negative value. This value percolates back down to the I^0-node (as shown in 24b):

(24) a.



b.

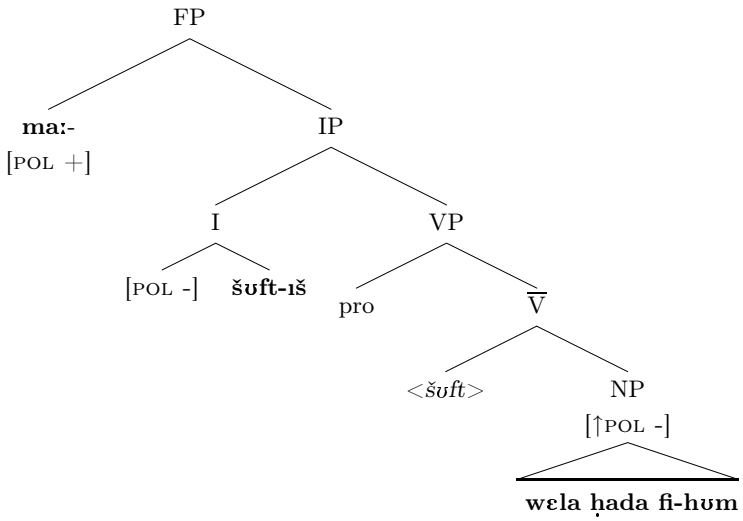


Any NPI-wɛla in the clause will have an unmatched [↑POL -] feature which needs to be resolved. For example, the **wɛla**-NP in example (25a) occurs in the object position of the verb and has an umatched [↑POL -] feature (25b):

(25) a. ma-šʊft-ɪš **wɛla** **ḥ**ada fi-hʊm.
not-see.perf.1S-neg not.even one in-cl3MP
"I didn't see even ONE of them."

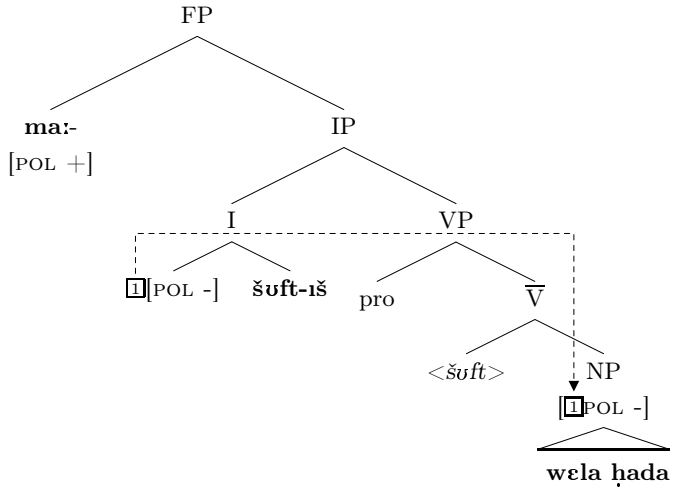
[5]See Hoyt (2005*a*, 2005*b*) for data and argumentation which support of this assumption.

b.



The **wɛla**-NP in (25b) is commanded by the [POL -] on the I^0-node and the values of the features are identical, so the two polarity features match and can enter an ACCORD relation:

(26)

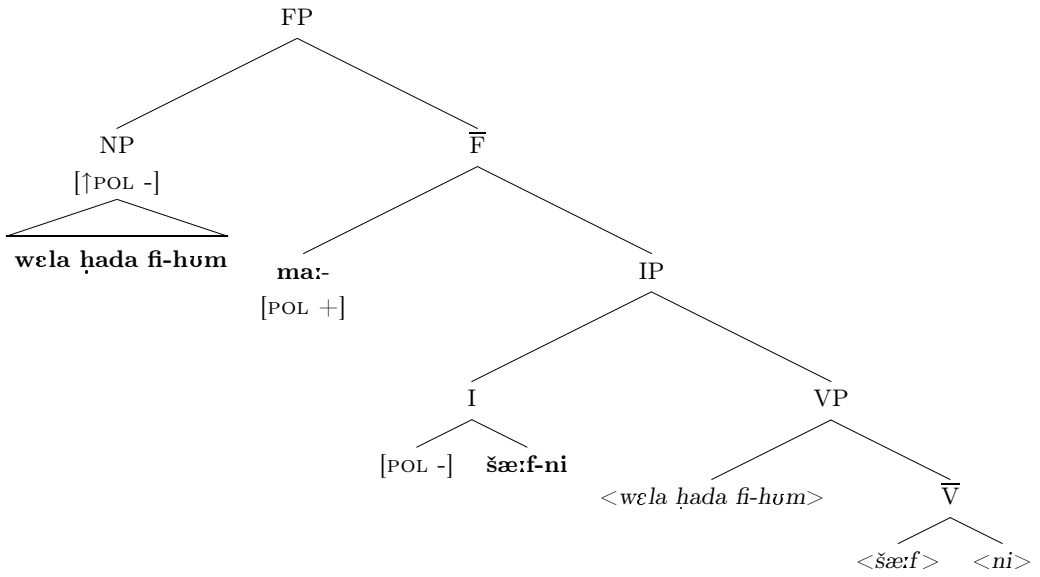


This resolves the unmatched polarity feature.

An NPI-**wɛla** NP cannot precede negation because it will find a match for its [↑POL -] polarity feature. This is because it is in a specifier head-relation with a [POL +] polarity feature with which it cannot match:

(27) a. **wɛla ḥada** fi-hʊm **ma**-šæːf-niː-š.
not.even one.MS in-cl3MP not-see.perf.3MS-cl1S-neg
*"Not even ONE of them saw me."

b.

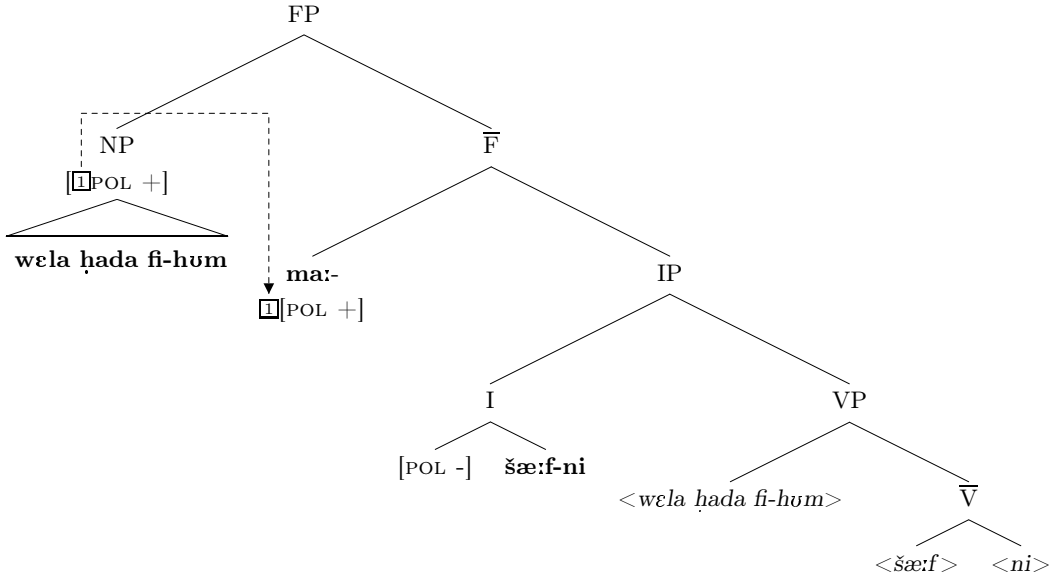


Accordingly the structure is ill-formed, correctly predicting the failure of NPI-**wɛla** phrases to appear in the pre-verbal position.

Of course, (27a) is perfectly acceptable when the **wɛla**-NP is interpreted as a negative quantifier. This is because NQ-**wɛla** has an unmatched polarity feature with a *positive* value ([↑POL +]). This feature enters into ACCORD under a specifier-head relation with the [POL +] feature on **maː-**:

(28) a. **wɛla ḥada** fi-hʊm **ma-**šæːf-niː-š.
not.even one.MS in-cl3MP not-see.perf.3MS-cl1S-neg
"Not even ONE of them DIDN'T see me."

b.



This gives rise to the double negation reading.

In certain kinds of sentences it is possible for a **wɛla**-phrase to appear in a post-verbal position in the absence of a negation morpheme. A **wɛla**-phrase which appears without negation is predicted to

be the negative quantifier **wɛla** because NQ-**wɛla** does not require a negation morpheme to license it. This prediction is correct, because in these sentences the **wɛla**-phrase contributes a negative meaning:

(29) a. tɪlʔɪt mɪn ɪl-ḥafli [$_{PP}$ kabl **wɛla ḥada**].
leave.perf.1S from the-party before not.even one.MS
"I leave the party before not even one [of them]."
"I didn't leave the party before anyone else."

b. ʔaliːsa mɪš mɪn ɪl-fɛnænæːt ɪlli b-ɪstaːhla yɪġanu b-ǧarɛš
Alisa not from the-artists rel indic-deserve.imperf.3MP sing.imperf.3MP in-Jaresh
liyɪnnu-hæ waḥdi maġruːra w-mɪtkabbari [$_{PP}$ ʕala **wɛla šiː**].
because-cl3FS one.FS vain.FS and-conceited.FS upon not.even thing
"Alisa is not one of the artists who deserve to sing at Jaresh because she is a vain, conceited person for absolutely no reason"[6].

c. kʊnt wɛla [$_{PP}$ **maʕ ḥada**].
be.perf.1S not.even with one
"I was with not even one person."

(30) a. w-mifɛkkɪr ḥæːl-u šiː mhɪmm bɛss hu **wɛla šiː**.
and-think.actpart.MS self-cl3MS thing important but he not.even thing
"...he thinks he's something important, but he's nothing at all."

b. ɪnt **wɛla šiː**, ʔɪnt imǧarrɪd šaχṣ.
you.2MS not.even thing you.2MS empty.MS person.MS
"You are nothing, you are a useless person."

Given that the sentences in question are interpreted as including negation and that there is no other negation morpheme in the clause, the **wɛla**-phrases must be negative quantifiers.

Herburger (2001) notes that Spanish n-words can only appear in the post-verbal position in the absence of negation in particular kinds of sentences. These are sentences in which the verb's meaning does not entail the existence of an object corresponding to the thematic role that the n-word fills. She explains this restriction by claiming that Spanish n-words (i) must be interpreted with surface scope, (ii) can follow the verb only when they do not contradict the verb's entailments.

For example, Herburger argues that verbs like **eat** or **arrive** assert the existence of an eating event or an arriving event, and that the existence of a such an event entails the existence of event participants which do the eating or get eaten, or which do the arriving. Having a negative quantifier filling one of these roles within the scope of the existential quantifier binding the event variable would express there was an eating or arriving event but that there was no participant in the event which did the eating or arriving. This is a clearly incoherent thing to assert. However, negative quantifiers can appear within the scope of the verb in case no such incoherency arises from conflicting entailments.

[6]Alisa is a popular Lebanese pop singer. Jaresh is a Roman-era ruin north-west of Amman, Jordan. This is the site of the Jaresh Festival of Culture and Arts, one of the most famous cultural festivals in the Arab world and at which many popular musicians perform. Alisa performed at the festival in 2004.

This is the case with verbs like **look** or **say** which do not entail the existence of something which is seen or which is spoken to.

The examples in (29-30) seem to agree with Herburger's generalization. In the cases in which a post-verbal **wɛla**-phrase is acceptable as expressing negation, it is either a predicate nominal or inside a predicate PP, or it is inside a PP-adjunct which can be interpreted relative to an event which is distinct from the event denoted by the verb. For example, in (29a) above (repeated here as 31a) a post-verbal **wɛla**-phrase takes narrow scope with respect to the event denoted by the verb as shown in the logical form in (31b)

(31) a. tɪlʕɪt mɪn ɪl-ḥafli [$_{PP}$ kabl **wɛla ḥada**].
leave.perf.1S from the-party before not.even one.MS
"I left the party before not even one [of them]."

b. $\exists e$[I left the party at e & $\neg\exists e'x$[x is a person & x left at e' & e' preceded e]]

Likewise, in (29b) the **wɛla**-phrase is the object of the preposition **ʕala** "upon," which is understood as expressing the basis for a belief or judgement. The examples assert the existence of a belief or judgement, indicating that the negation does not have matrix scope. What is negated is the existence of a (legitimate) basis for the belief or judgement. This reading corresponds to Herburger's narrow scope with respect to the event quantifier as shown by the logical form in (32b: the s variable is intended to range over "states"):

(32) a. liyɪnnu-hæ waḥdi maʒruːra w-mɪtkabbari ʕala **wɛla šɪ**.
because-cl3FS one.FS vain.FS and-conceited.FS upon not.even thing
"Alisa is not one of the artists who deserves to sing at Jaresh because she is a vain, conceited person for absolutely no reason."

b. $\exists s$[Alisa is conceited in s & $\neg\exists e$[e is a reasonable justification for s]]

Lastly, the unpleasantries in (30) do not literally mean that there is no property that the addressee instantiates. Rather, the speaker uttering a sentence like (33a) is saying that there is no degree of importance such that the person under discussion is worthy of respect to that degree (33b):

(33) a. bɛss hu **wɛla šɪ**.
but he not.even thing
"...but he's nothing at all"

b. $\neg\exists d$[I respect him to degree d]

Again, the negative quantifier in (33b) does not contradict an entailment of the predicate, so NQ-**wɛla** is allowed. Therefore the analysis that I am proposing correctly predicts that Herburger's generalization about post-verbal negative quantifiers extends to Palestinian Arabic.

Herburger's approach to ambiguity in Spanish also predicts that n-words within the scope of negation should be ambiguous between the negative quantifier reading and the NPI reading. The same seems *not* to be true in Palestinian Arabic: a **wɛla**-phrase within the scope of negation

only has the NPI reading. For example, if the **wɛla**-NP in (34a) were ambiguous between an NPI interpretation and an NQ interpretation, the sentence should have a double negation reading, which it does not (34b). It only has the NPI-interpretation (34c):

(34) a. ma-šʊft-ɪš wɛla ḥada fiː-hʊm.
not-see.perf.1S-neg not.even one in-cl3MP

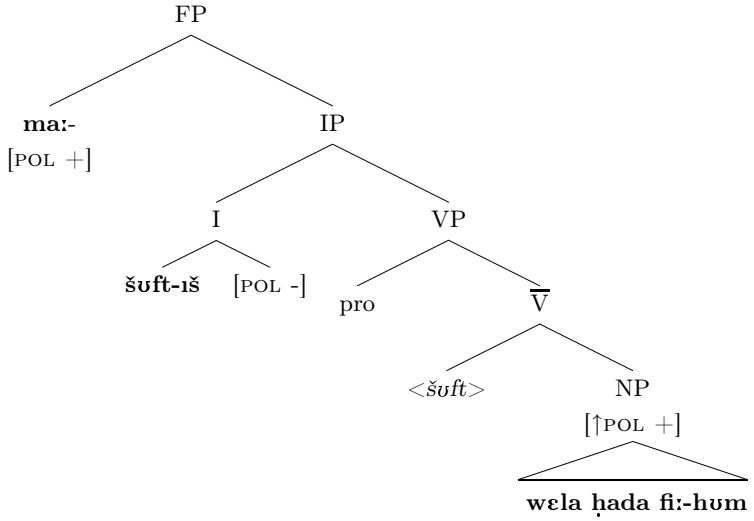
b. *"I didn't see NONE of them" (*implies I saw at least one*)

c. "I didn't see even ONE of them!"

The analysis I propose correctly predicts this because NQ-**wɛla** has an unmatched polarity feature with a positive value ([↑POL +]). Placing it within the scope of negation also places it within the local scope of a polarity feature with a negative value ([POL -]):

(35) a. ma-šʊft-ɪš wɛla ḥada fiː-hʊm.
not-see.perf.1S-neg not.even one.MS in-cl3MP
*"I didn't see not even ONE of them (I saw ALL of them)."
(*Perfectly acceptable on negative concord reading*)

b. *



According to clause (7c) of the definition of ACCORD given above (p.4), the [POL -] feature is closer to the [↑POL +] on the NQ-**wɛla** NP than the [POL +] feature under F^0. The unmatched [↑POL +] does not find a match, so no ACCORD relation can be established between them. This blocks resolution of the unmatched feature and makes the structure ungrammatical.

To summarize the analysis of Palestinian negative concord, the Palestinian n-word **wɛla** is ambiguous between a negative quantifier interpretation and an NPI interpretation. The NPI interpretation has an unmatched [↑POL -] feature, forcing it to appear within the scope of another expression specified with a [POL -] feature. The NQ interpretation has an unmatched [↑POL +] feature, blocking it from appearing within the scope of a [POL -] feature. Sentential negation in Palestinian Arabic is a functional head which assigns a [POL -] feature to its IP complement but

which itself is specified with a [POL +] feature. These factors conspire to produce the attested distributions of the NQ and NPI interpretations of **wɛla**.

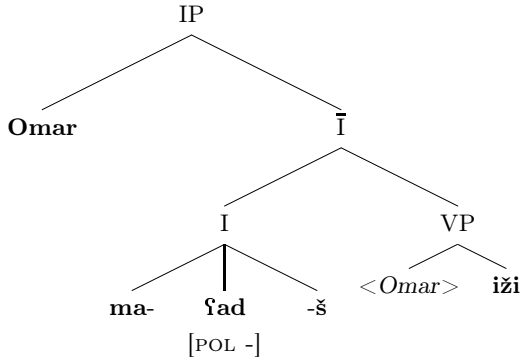
4 Moroccan Arabic

The analysis I propose for Moroccan Arabic negation is an adaptation of Benmamoun's (1997) of negative concord in Moroccan. According to this adaptation, Moroccan negative concord involves mechanisms which are comparable to those at work in Palestinian but operate over different structures.

The crucial difference between how negation is expressed in the two dialects is that the Moroccan negation morpheme **ma-** is an affix which can attach to any head-level constituent in the verbal spine of the clause[7]. It adds a [POL -] feature to the feature set of whichever head it combines with.

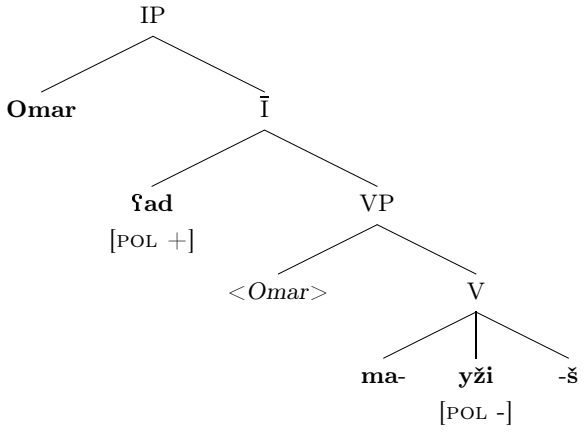
(36) a. Omar ma-ʕad-š iži.
Omar not-anymore-neg come
"Omar doesn't come anymore."

b.



(37) a. Omar ʕad ma-yži-š.
Omar anymore not-come.MS-neg
"Same."

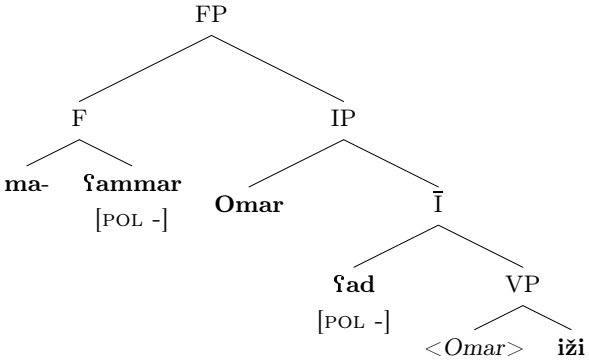
b.]



[7]See Hoyt (2005*b*) for data which support this.

(38) a. ma-ʕammar Omar ʕad iži.
not-ever Omar anymore come.3MS
"Omar never comes anymore."

b.

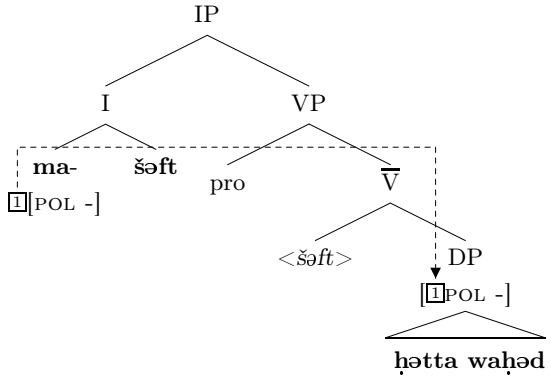


Note that in (37b) the I^0-node has its polarity feature specified as [POL +] by the default principle in (20) above. When the negation morphemes are attached to the I^0-head itself or to a higher head, the I^0-node is specified as [POL -].

In sentences in which the negation morpheme attaches to the I^0-head, an n-word is licensed either in the specifier of IP or in a post-auxiliary position. In the post-verbal position the n-word is c-commanded by the [POL -] feature on the I^0-node, and so enters into an accord relation with it and resolving the uninterpretable [↑POL -] feature:

(39) a. ma-šəft ḥətta waḥəd.
not-saw.1S even one
"I didn't see even one."

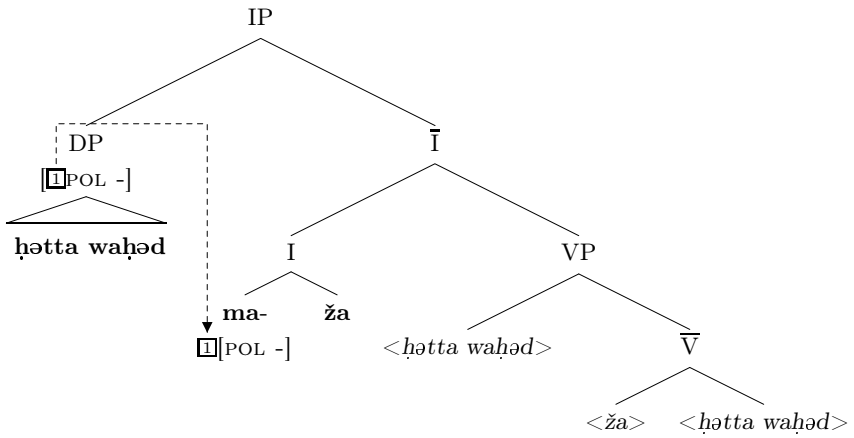
b.



If the n-word occurs in the specifier of a negation-marked IP, the n-word enters a specifier-head relation with the [POL -] feature making an ACCORD relation possible and resolving the [↑POL -] feature:

(40) a. **ḥətta waḥəd** ma-ža.
even one.MS not-came.3MS
"Not even one person came."

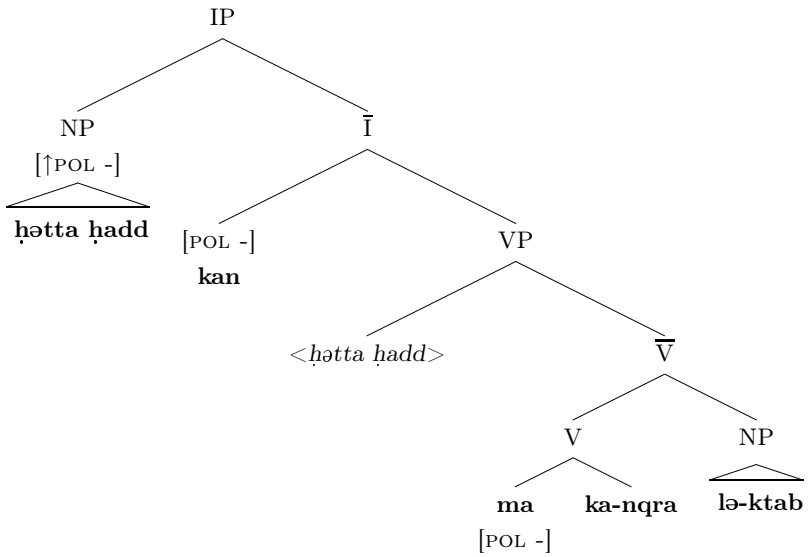
b.



The analysis correctly predicts that negative concord fails when negation is marked on the lexical predicate and a **ḥətta**-NP precedes the auxiliary (41a). This is because the **ḥətta**-NP is not a specifier-head relationship with the [POL -] feature. The **ḥətta-NP** *does* c-command the [POL -] feature, but the I^0 has its own specification for the feature according to the default principle in (20) above (p.8). This feature "intervenes" between the **ḥətta**-NP and the [POL -] feature, blocking matching:

(41) a. * ḥətta ḥadd kan ma-ka-nqra lə-ktab.
even one.MS was.1S not-asp-read.1S the-book
"No one was reading the book."

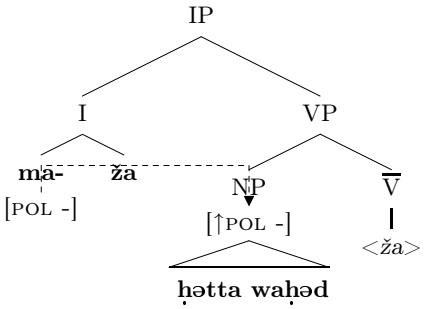
b.



When the **ḥətta**-NP follows the verb as in (42a-b), then it is c-commanded by I^0 regardless of whether it is embedded inside an other constituent:

(42) a. ma-ža ḥətta waḥəd.
not-came.3MS even one
"No one came."

b.



5 Comparison

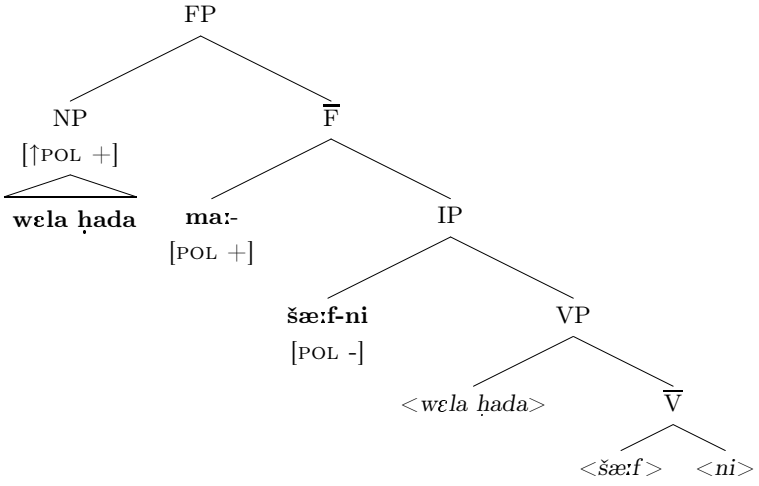
In this section I compare the two dialects in the light of the analyses developed in the preceding sections.

One important difference is that a pair of Palestinian and Moroccan sentences like the following have equivalent strings but different interpretations and structural descriptions:

(43) *Palestinian Arabic*

a. wɛla ḥada ma-šæːf-ni.
not.even one not-see.perf.3MS-cl1S
"Not even ONE [of them] didn't see me."

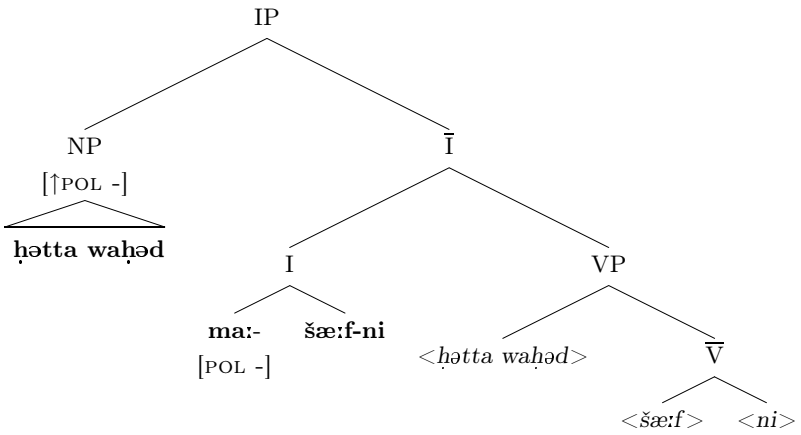
b.



(44) *Moroccan Arabic*

a. ḥətta waḥəd ma-šaf-ni.
even one.MS not-saw.3MS-cl1S
"Not even one person saw me."

b.



The Palestinian sentence (43a) only has the double-negation reading, indicating that the structure is only grammatical with NQ-**wɛla** in the pre-verbal position. The failure of an NPI reading for the **wɛla**-NP follows from the lexical category and feature specification of the negation morpheme **maː-** shown in (43b).

On the other hand, the failure of a double negation reading in Moroccan follows trivially from the fact that Moroccan lacks a negative quantifier interpretation for **ḥətta** "even." Furthermore, even if Moroccan did have a negative quantifier interpretation for **ḥətta** which paralleled the NQ-intepretation for Palestinian **wɛla**, (44a) would still be predicted to have only the NPI interpretation. This is because the structure in (44b) places a pre-verbal n-word in the specifier of a head specified with a [POL -] feature[8].

Therefore, the constrast in interpretation between (43a) and (44a) is ultimately a follows from the difference in how negation is expressed in the two dialects. In Palestinian, negation has been grammaticized as a functional element which is positioned relative to the left edge of the IP-constituent. In Moroccan, by contrast, negation as grammaticized as an inflectional affix.

5.1 N-words and ambiguity

The other difference between the dialects with respect to negative concord is that the Palestinian n-word is ambiguous while the Moroccan n-word is not. My argument has been that this is an argument that both Herburger-style ambiguity analyses *and* uniformity analyses are needed for analyzing negative concord in natural language.

This makes sense given the etymology of the words involved in Palestinian and Moroccan Arabic negative concord. Palestinian **wɛla** is derived from the morphological merger of the conjunction **wa-** "and" with the negation particle **la** "no, not." The conjunction **wa-** is a clitic in Pullum & Zwicky's (1988) sense — an affix which targets a phrasal constituent, so it cliticizes onto **la** to form **wala** "and not." **wala** in this sense is still fully productive in Palestinian Arabic:

[8]In fact, one might argue that Moroccan *does* have a negative quantifier interpretation for **ḥətta** in order to account for negative fragment answers like (12) above (p.6).

(45) kaːl ‘ʕa-l-yoːm lawin ḥada mæːt mɪn ʕeːlt-i **wala** sˤaːr ɪlli
say.perf.3MS to-the-day would-that one.MS die.perf.3MS from family-cl1S and-not become.perf.3MS rel
sˤaːr.
become.perf.3MS
“He said ‘until today, I would rather that one of my family died than have happen what happened’.”
(Schmidt & Kahle 1918, §58.2)

However, even in Classical Arabic, when **wala** followed another negation it started to be interpreted as a polarity-sensitive disjunction comparable to English **nor**. It is still used productively in Palestinian Arabic in this capacity:

(46) a. kaːl “ɪǧiːn-ak **la** rasmal **wala** faydɛ.”
say.perf.3MS come.imperf.3FP-cl2MS no capital nor profit
“He said ‘they would come to you without dowry or usefulness”’

b. **ma**-fiː hɪss **wala** nɪss.
not-expl sound nor movement
“There was neither sound or movement.”

The **la** morpheme within disjunction **wala** has clearly lost its negative intepretation, and instead marks the word as polarity-sensitive. This means that in Palestinian Arabic, the word **wala** is ambiguous between an interpretation which expresses negation and one which does not.

Disjunction **wala** is frequently used with elliptical conjuncts, and in particularly with PP and NP fragments:

(47) a. ma-lakat la-ǧoːz-hæ **wala** wlæːd-hæ.
not-find.perf.3FS not-spouse-cl3FS not children-cl3FS
“She didn’t find either her husband or her children.”

b. **ma**-χallaː-l-ɛ muːnɛ **wala** þæːþɛ.
not-leave.perf.3MS-to-cl3MS provisions not furniture
“He didn’t leave him either provision or furnishings.”

By an independent process, the conjunction **wa-** developed an “emphatic” use which is comparable to the use of English **even**. The emphatic use of **wa-** appears frequently with the counterfactual complementizer **law** “if it were the case” in the word **walaw** “even if it were the case”:

(48) a. maː hu ɪl-walad walad **walaw** ɪnn-ɛ kaːḍi balad.
not pro.3MS the-boy boy and-if.it.were that-cl3MS judge village
“Isn’t a boy [still] a boy even if he were the judge of a village.”
(Schmidt & Kahle 1918, §35.2)

b. taʕṭiː-ni **walaw** bɪnt, u-lawɪnn-hæ zay hal-kaʕbɛ.
give.2MS-cl1S even.if daughter and-if-cl3FS like this-top
“Give me [a child] even if is were to be a daughter, and even if she were like a kettle-top.”
(Schmidt & Kahle 1918, §32.1)

It also appears in the narrative formula **ɪlla wa-** “and all of a sudden there was. . . ” where it seems to express surprise or suddenness:

(49) a. lɛmmın ṣaːr ʕa-bæːb hal-ḥiftɛ sımıʕt ḥači fi-hæ ṭall **ılla**
when become.perf.3MS to-door this-hole hear.perf.3MS speaking in-cl3FS look.perf.3MS except
u-bınt-ɛ w-hal-badawi fi-waṣt ıl-ḥifte.
and-daughter-cl3MS and-this-bedouin in-middle the-hole
"When he got close to the opening of the hole he heard talking in it, he looked and there was his daughter and this bedouin in the middle of the hole."
(Schmidt & Kahle 1918, §38.6)

b. raːḥ ʕa-d-dıččæːn **ılla** w-hal-baġlɛ marbuːṭa bæːb ıd-dıččæːn.
go.perf.3MS to-the-store except and-this-mule.FS tied-up.FS door the-shop
"He went to the shop, and there was this mule tied up [at] the door of the shop."
(Schmidt & Kahle 1918, §50.5)

I suggest that the emphatic use of **wa-** may have spread to both version of **wala**, so that negative **wala** came to mean "not even" instead of or in addition to **and not**, and NPI-**wala** came to mean "nor even."

From here, NPI-**wala** preceding NP- or PP-fragments may have been reanalyzed as a determiner-like element expressing "emphasis" with respect to the interpretation of the NP or PP, and that this determiner-like use then spread by analogy to negative **wala** as well. Given the difference in vowel quality that I have noted between **wala** and **wɛla**, this process of change has been associated by a change in vowel.

To the extant that this little tale is plausible, it means NQ-**wɛla** and NPI-**wɛla** have developed from negative **wala** and NPI-**wala**, both of which are still productively used in Palestinian Arabic. NQ-**wɛla** expresses negation in a sense because it has never *stopped* expressing negation: the negation morpheme that it contains is still semantically active. NPI-**wɛla** by the same token does not express negation because NPI-**wala** does not express negation either. And the general distribution of NQ-**wɛla** and NPI-**wɛla** reflects the fact that negative **wala** occurs in sentence-initial position while NPI-**wala** occurs sentence internally. Accordingly, an ambiguity analysis for Palestinian **wɛla** makes perfect etymological sense in addition to correctly predicting the data.

By the same token, Moroccan **ḥətta** does not have a negative quantifier interpretation because **ḥətta** has never in its etymological history expressed negation. As an n-word, Moroccan **ḥətta** developed from the Classical Arabic particle **ḥatta**, which meant "as far as." In addition to this, it developed additional meanings including "in order to" and "even," both of which are attested in Classical Arabic as well as in both Palestinian and Moroccan:

(50) *Palestinian Arabic*:

a. **ḥıtta** s-sırka b-ıtbaiyın-hæ.
even the-theft.FS indic-clarify.imperf.3FS-cl3FS
"She would reveal even theft."
(Schmidt & Kahle 1918, §10.2)

b. w-ana ḥasseːt ḥarr-hæ **ḥatta** lɛmmın bakeːt fi-l-ğaw.
and-I.1S feel.perf.1S heat-cl3FS even when be.perf.1S in-the-air

"...and I felt its heat even when I was in the air."
(Schmidt & Kahle 1918, §64.3)

(51) *Moroccan Arabic*:

a. **ḥtta** f-l-məġrib mā məʕrūf-š.
even in-the-West not known.MS-neg
"Even in Morocco he is not known."
(Brustad 2000, p.292)

b. w-**ḥtta** ana mın hād l-kūtši mā nāzəl-š.
and-even I.1S from this.MS the-carriage.MS not descend.1S-neg
"Even I am not getting down from this carriage!"
(Brustad 2000, p.290)

The use of **ḥətta** as an n-word in Moroccan is clearly related to the use of **ḥətta** to mean "even." I suggest that frequent use of **ḥətta** with indefinite nouns in negative sentences led to it developing an association with negation. This is grammaticized as the unmatched polarity feature described above.

Again, to the extent that these speculations are correct, a uniformity analysis of **ḥətta** makes perfect etymological sense, just as an ambiguity analysis makes perfect sense for Palestinian **wɛla**.

6 Summary

The point of this paper has been that the Palestinian and Moroccan dialects of Arabic differ in (at least) the following two respects when it comes to expressing negation:

(52) a. Palestinian n-words are ambiguous between a negative quantifier and existential reading, as per Herburger (2001);
b. Palestinian negation morphemes are distributed in prosodic terms;
c. N-words are not licensed inside construct state nominals.

(53) a. Moroccan n-words are uniformly existential quantifiers;
b. Moroccan negation morphemes are distruted syntactically;
c. N-words are licensed inside construct state nominals;

References

Benmamoun, E. (1997), 'Licensing of negative polarity items in moroccan arabic', *Natural Language and Linguistic Theory* **15**, 263–287.

Benmamoun, E. (2000), *The Feature Structure of Functional Categories: A Comparative Study of Arabic Dialects*, Oxford University Press (Oxford).

Bhatt, R. (to appear), 'Long-distance agreement in hindi-urdu', *Natural Language and Linguistic Theory* .

Brustad, K. E. (2000), *The Syntax of Spoken Arabic*, Georgetown University Press (Washington).

Chomsky, N. (2000), Minimalist inquiries: The framework, *in* R. Martin, D. Michaels & J. Uriagereka, eds, 'Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik', MIT Press (Cambridge), pp. 89–155.

Chomsky, N. (2001), Derivation by phase, *in* M. Kenstowicz, ed., 'Ken Hale: A Life in Language', MIT Press (Cambridge), pp. 1–52.

Frampton, J., Gutmann, S., Legate, J. & Yang, C. (2000), Remarks on "derivation by phase": Feature valuation, agreement, and intervention. Ms, Northeastern University and MIT.

Guerzoni, E. & Alonso-Ovalle, L. (2003), Double negatives, negative concord and metalinguistic negation, *in* 'Proceedings of the Chicago Linguistic Society 38'.

Herburger, E. (2001), 'Negative concord revisited', *Natural Language Semantics* pp. 289–333.

Hoyt, F. (2005*a*), Negative concord and restructuring in palestinian arabic. University of Texas at Austin.

Hoyt, F. (2005*b*), Sentential negation marking in palestinian and moroccan arabic: A study in comparative morphosyntax. University of Texas at Austin.

Legate, J. A. (n.d.), Some interface properties of the phase. MIT.

Marçais, P. (1977), *Esquisse Grammatical de L'Arabe Maghrébin*, Librarie d'Amérique et d'Orient.

Pesetsky, D. & Torrego, E. (2004), The syntax of valuation and the interpretability of features. Ms, MIT and UMass-Boston.

Progovac, L. (2000), Coordination, c-command and 'logophoric' n-words, *in* L. Horn & Y. Kato, eds, 'Negation and Polarity: Syntactic and Semantic Perspectives', Oxford University Press (Oxford), pp. 88–114.

Przepiórkowski, A. (1999), On negative eventualities, negative concord, and negative *yes/no* questions, *in* T. Matthews & D. Strolovitch, eds, 'Proceeding of Semantics and Linguistic Theory 9', CLC Publications, Ithaca, NY, pp. 237–254.

Pullum, G. & Zwicky, A. (1988), The syntax-phonology interface, *in* F. Newmeyer, ed., 'Linguistics: The Cambridge Survey: Vol1, Linguistic Theory: Foundations', Cambridge University Press, pp. 255–280.

Schmidt, H. & Kahle, P. (1918), *Volkserzälungen aus Palästina, v.1*, Vandenhoek und Ruprecht (Göttingen).

Schmidt, H. & Kahle, P. (1930), *Volkserzälungen aus Palästina, v.2*, Vandenhoek und Ruprecht (Göttingen).