A Morpho-syntactic Analysis of Negation in Moroccan Arabic[*]

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ملخص

تهدف هذه الورقة إلى تقديم دراسة تركيبية نحوية لأسلوب النفي في اللغة العربية المغربية، والتي تطرقت إلى هدفين أساسيين. الهدف الأول هو شرح و تحديد طبيعة الزائدة المحيطية التي يتميز بها التكوين التركيبي للغة. في هذا الصدد، سنقوم بدعم نظرية الصرف الموزع التي تقترح أن تكوين و تركيب الكلمات تحكمه بالأساس المبادئ والقيود النحوية. أما بخصوص الهدف الثاني فهو عبارة عن شرح لسبب حذف المورفيم {ʃ-} عند التقائه بعنصر الاستقطاب السلبي. (NPI) ومنه فالفرضية المطروحة هنا هي أن هذا الحذف سببه هو ما يمكن تسميته بالتنافر النحوي (Syntactic Haplology).

Abstract

This paper has a two-fold goal. First, it attempts to argue that the circumfixal nature of the negative morpheme in Moroccan Arabic supports the existence of impenetrable (cyclic) domains, as in Chomsky's (2001) Derivation by Phase. The second goal is to propose a principled account of the long-standing puzzle of the co-occurrence restriction holding between the post-verbal negative marker {-ʃ} and negative polarity items in an adjacent domain. Applying the precepts of Distributed Morphology, my proposal consists of formalizing this restriction in the form of a general constraint banning the realization of multiple negative morphemes in the same spell-out domain, with the effects being the deletion of the post-verbal negative marker. This is achieved via postulating post-syntactic morphological operations. I show that this prediction is not only borne out in MA but also cross-linguistically.

Keywords: Negation, Moroccan Arabic, Distributed Morphology, Negative Polarity Items, Syntactic Haplology, Phases.

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1. Introduction

In many Arabic dialects, negation is expressed by a two-pattern negation system using two negative particles. In Moroccan Arabic (MA), for example, sentential negation is morpho-syntactically realized as either a discontinuous morpheme {ma-…-ʃ} or the non-discontinuous {maʃi}. Of interest to the present paper is the way the negative morpheme is realized with respect to the category it attaches to. In particular, the internal structure of the word to which the negative morpheme is attached seems to be impenetrable. Consider the following examples that express the same truth-condition[1]:

(1)

    a. d-drari ma-Dərb-u-ʃ   Sħab xalid
        the-boys NEG-hit-3ms-NEG friends Khalid
        'The boys didn't hit Khalid's friends

    b. ma-Dərb-u-hum-ʃ
        NEG-hit-they-them-NEG
        'They didn't hit them'

    c. *ma-Dərb-ʃ-u-hum
        NEG-hit-NEG-they-them

    d. *ma-Dərb-u-ʃ-hum
        NEG-hit-they-NEG-them

While (1-a) is an instance where all the arguments of the verb are overtly expressed as full DPs, in (1-b) the arguments are expressed as incorporated clitics on the verb. Interestingly, the way the negation morpheme is attached to the verb suggests that this complex verb [Drb-u-hum] seems to function as a single morphological unit whose internal structure is not visible or is impenetrable to further affixal processes, hence the ungrammaticality of (1-c-d). Another interesting characteristic of sentential negation in MA is the co-occurrence restriction holding between a Negative Polarity Item (NPI) and the {-ʃ} morpheme. The so-called discontinuous morpheme realizing negation in MA exhibits a puzzling behavior when it co-occurs with an NPI.

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[1] Transcription and abbreviations: The IPA transcription is used. Emphatic consonants are represented using a corresponding capital letter. Gemination is transcribed by doubling the consonant. The following abbreviations are used: 1/2/3= First/Second/Third Person; ACC=accusative case; f=feminine; GEN=Genitive Case; m=masculine; MA= Moroccan Arabic; NEG=negation; NOM=nominative case; PF=Phonetic Form.

As the set of the data in (2) display, the NPI and the discontinuous morpheme are mutually exclusive, with the result being that the particle {-ʃ} deletes.

(2)

    a. **ħətta** waħd **ma**-ʒa (*-ʃ)
       even one   NEG-came-3ms(NEG)
       'No one came'

    b. **ma**-bɣa   **walu**
       NEG-wanted-3ms nothing
       'He didn't want anything'

    c. **ma**-klit **ħətta ħaʒa**
       NEG-ate-3ms even thing
       'I ate nothing'

As far as the first issue is concerned, it will be shown that the examples in (1) above observe Chomsky's (2001) locality condition on syntactic relations, i.e. *The Phase Impenetrability Condition* (PIC). This presents a sustained argument for the view that syntactic structures are spelled-out syntactically and processed morphologically (Embick, 2010). This also agrees with Marantz (2007), and Embick and Marantz (2008) in that category-defining heads such as *v*, *n*, and *a* define phases. When they are merged to a structure, they trigger the Spell-Out of their complements. Construing the process as an instance of *Syntactic Haplology* (Neeleman and Van De koot, 2006; Richards, 2010), empirical evidence will be provided, both diachronic and synchronic, to show that the post-verbal negation particle {–ʃ} is an NPI, with the surface result being that {–ʃ} is haplologized when another NPI is introduced. There are two issues that will be explored here, the first of which is determining the conditions under which syntactic haplology is triggered. The second issue is identifying the rule/rules that govern its application in a given context, and whether or not locality plays a role.

2. The Status of {-ʃ}

Before we proceed to our proposed analysis, it is vital to provide reasons that show that the postverbal negative morpheme {-ʃ} is an NPI, on a par with the NPIs attested in the language. The pieces of evidence in support of this claim come from both diachronic and synchronic data. In this section, we will also investigate the appropriate syntactic projection under which {-ʃ} is merged. To begin with, {–ʃ} is said to be historically derived from the noun '*ʃayʔ*' which is

nonnegative in origin (Lucas and Lash, 2010). In Classical Arabic, the noun *ʃayʔ* appears in two contexts, first as a nominal as in (3-a) and second as an adverbial NPI (3-b) (data from Lucas, 2009).

(3)

    a. Ɂinna-hu la ʃayɁ-un   ʒamiil-un   Ɂan ya-zuura-naa xaalid-un
       COMP-him   thing-NOM beautiful-NOM that 3ms-visit-us Khalid-NOM
       l-yawm-a
       the-day-ACC
       'That's a good thing that xalid is visiting us today'

    a. laa ya-Durru-kum   kaydu-hum   ʃayɁ-an
       NEG 3ms-harm-you-3mp cunning-their thing-ACC
       'Their cunning will not harm you at all'

As it stands, the noun *ʃayʔ* can be used as either a noun denoting a non-referential or quantificational property, as is the case with its counterpart in English 'thing', or as an NPI. The second interpretation seems to be restricted to its co-occurrence with a pure negative marker, hence its status as NPI. In the same vein, Lucas and Lash (2010) show that of the 77 times of the occurrences of the noun *ʃayʔ*, 63 (81.8%) of *ʃayʔ* always appears in the scope of negation. It should come out as no surprise then that '*ʃayʔ*' gradually lost its semantic meaning and developed a purely grammatical function by combining with {ma-}, a process of grammaticalization (Lucas, 2009).

Seen as an undetermined quantifier, the development of '*ʃayʔ*' as a negative marker seems to resemble the negative system attested in French. Standard French expresses negation by a bipartite negative system *ne...pas*. As Chatar-Mounni (2012) points out, one striking commonality between Arabic and French is that they both develop a unit denoting quantification to encode negation, in conformity with the Jespersen's Cycle (Jespersen, 1917; Dahl, 1979). In old French, *ne* combined with a variety of nouns, each of which seems to denote a semantically restricted field of experience. The noun *pas* "step", for instance, always combined with verbs denoting motion. Another reason for treating {-ʃ} as a derivative form of the noun '*ʃayʔ*' is that some varieties of MA[2], especially in rural areas, a portion of the noun is still used, as is evident from the examples below:

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[2] In MA, there are three variants of the post-verbal negation particle whose distribution is geographically and sociolinguistically motivated. These variants are: {-ʃ}, {-ʃi} and {ʃay}. This is a case of free variation; nothing hinges on this, however.

(4)

    a.   ma-qətl-u-ʃay
        NEG-killed-him-NEG
        'He didn't kill him'

    b.   ma-klit-u-ʃay
        NEG-ate-it-NEG
        'I didn't eat it'

    c.   ma- ʃəft-u-ʃay
        NEG-saw-him-NEG
        'I didn't see him'

This piece of evidence may support the claim that {-ʃ} is derived from the Classical Arabic '*ʃayʔ*'. For example, the deletion of the glottal stop can be explained on phonological grounds. More precisely, the glottal stop is not contrastive in the sound inventory of the language; rather, its presence is primarily to satisfy the Onset Principle active in the language (see Boudlal, 2001 for a detailed discussion).

As for the syntactic position of {–ʃ}, there are two major approaches that attempt to account for the status of {–ʃ} in the clausal structure: The *Spec-Neg Analysis* (Pollock, 1989; Ouhalla, 1990, 2002) and the *Discontinuous Neg Analysis* (Benmamoun, 2000; Aoun *et al.* 2010). The former approach treats {–ʃ} as generated in the specifier of Neg on a par with French, where the preverbal is the head of Neg, as shown in (5):

(5)
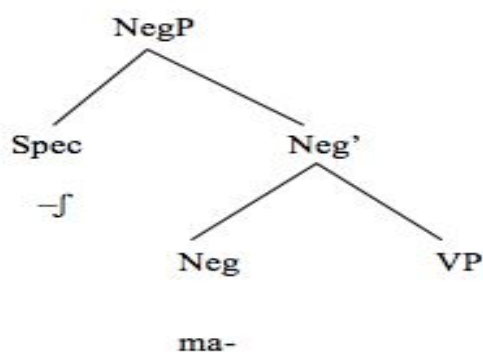
The major strength of the syntactic configuration in (5) lies in the treatment of the co-occurrence restriction that holds between {–ʃ} and NPIs. That is, if we assume that NPIs and {–ʃ}

compete for the same syntactic position, their complementarity distribution follows quite naturally. However, this analysis is challenged by data from Egyptian Arabic, where there are instances where NPIs co-occur in the same sentence:

(6)

    a. maa-saafir-t*(-ʃ)   MaSr ʕumr-ii
       NEG-travelled-3ms-NEG Egypt ever-my
       'I have never travelled to Egypt'

    b. Mona lissah ma-saafir-it-*(-ʃ)
       Mona yet NEG-travelled-3fs-NEG
       'Mona hasn't travelled yet'   (Soltan, 2011: 265)

These sentences can be taken as evidence against the *Spec-Neg Analysis*. The *Spec-Neg Analysis* is further complicated by the Multiple Specifier analysis in the MP (Chomsky, 1995), in which more than one specifier can be merged. Thus, there is no reason to believe that elements may compete for the same specifier (Soltan, 2011). An alternative proposal has been suggested in Benmamoun (2000) and further developed in Aoun *et al.* (2010), according to which both {ma-} and {–ʃ} are generated under NEG.

(7)
    NegP
        / \
  Spec   Neg'
           / \
       Neg   VP
       ma-…-ʃ
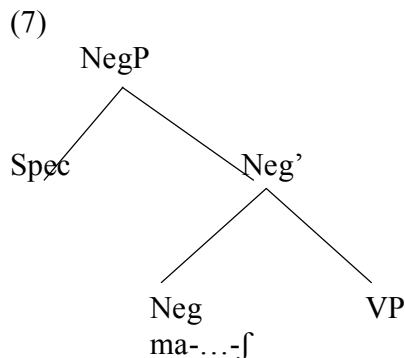
This approach is problematic, as it predicts that {ma-} and {–ʃ} function as one morphological head, contrary to fact. This is evident in the deletion of {-ʃ} in the context of NPIs and the existence of dialects that mark negation with {ma-} only, as it is the case in Kuwaiti Arabic and Sudanese, as illustrated in (8):

(8)   ***Kuwaiti Arabic***

    a. l-bint muu ħəlwa
       the-girl NEG beautiful-3fs
       'The girl isn't beautiful'   (AlSalem, 2012: 3-4)

Sudanese

b. maa-fihim
    NEG understood-3ms
    'He didn't understand'   (Benmamoun, 1997: 265)

Furthermore, as discussed in Benmamoun (2000: 70), Lebanese dialect of Baskinta and Jordanian dialect allow the enclitic {–ʃ} to surface on its own:

(9) ***Lebanese***

a. bi-t-ħib-ʃ   siɣl il-bayt
    Asp-3f-likes-NEG work the-house
    'She does not like housework'

Jordanian

b. bədd-i-ʃ
    want-my-NEG
    'I don't want'

In addition, Aoun *et al.* (2010) associate the distribution of sensational negation in Arabic with the presence (or lack thereof) of verb movement. In the presence of verb movement of the verb in the past tense, the discontinuous pattern follows, as the verb moves in a successive cyclic fashion through Neg to T in compliance with the Head Movement Constraint. In non-verbal constructions, on the other hand, the negative morpheme is spelled-out as the continuous form, as in (10):

(10)

a. ʒamal maʃi mriD
    Jamal NEG sick-3ms
    'Jamal isn't sick'

b. FaTima maʃi zwin-a
    Fatima NEG beautiful-3fs
    'Fatima isn't beautiful'

One major implication of the *Discontinuous Neg Analysis* is that the distribution of sensational negation is governed by syntactic operations, namely head movement. This assumption is not borne out, however, as there is empirical evidence that the choice of one negation form over the other is not tied to verb movement. For example, it is possible to negate these sentences using the discontinuous morpheme, as maintained by data in (11):

(11)

    a. ʒamal ma-mriD-ʃ
        Jamal NEG-sick-3ms-ʃ
        'Jamal isn't sick'

    b. FaTima ma-zwin-a-ʃ
        Fatima NEG-beautiful-3fs-NEG
   'Fatima isn't beautiful'

Another implication of the aforementioned approach is that the two negative morphemes are in complementary distribution, in that the two are said to be triggered by different operations. The main challenge to this approach are constructions where the two negative morphemes seem to co-occur. Consider the following examples:

(12)

    a. Karim maʃi ma-ʒa-ʃ
        Karim NEG NEG-came-3ms-NEG
        'Not that Karim didn't come'

    b. ʒamal maʃi ma-mriD-ʃ
        Jamal NEG NEG-sick-3ms-NEG
        'Not that Jamal isn't sick'

As shown in these examples, both the discontinuous and dependent morphemes seem to co-occur in both verbal and non-verbal sentences. On the basis of these assumptions, we adopt the *Split-Neg Analysis* suggested in Zeijlstra (2008) and adopted in Soltan (2011). This analysis assumes that {ma-} and {–ʃ} occupy separate heads in the syntax, with the assumption being that only the preverbal {ma-} is specified for semantic negation. The syntactic structure we adopt is as follows:

(13)
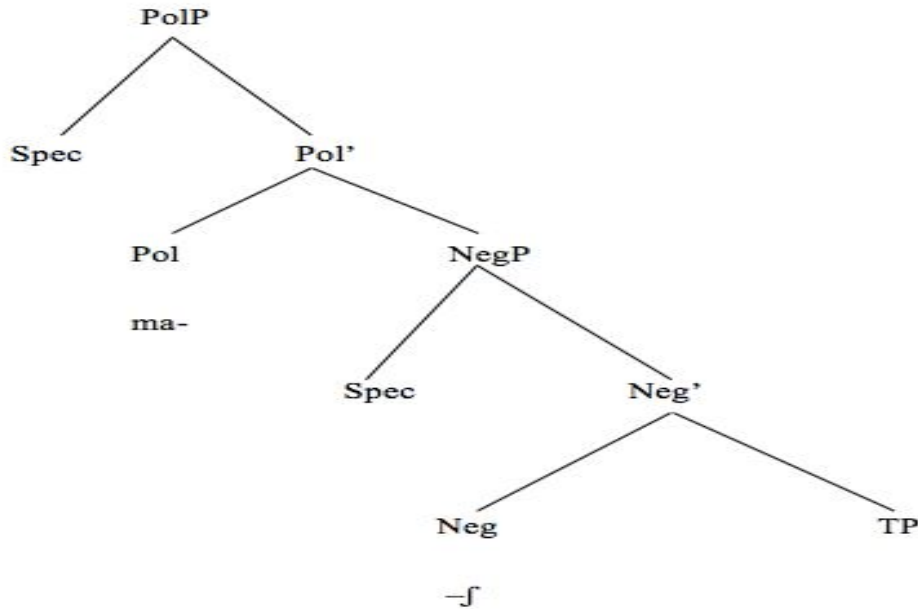
The advantages of this structure are manifold, chiefly among which is the prediction that {ma-} and {–ʃ} do not always form a morphological unit. Thus, it predicts that Arabic varieties where either {ma-} or {–ʃ} are absent are possible. Of interest to the present study is the possibility of formulating a spell-out rule that would delete one element and not the other.

To sum up, we have presented both diachronic and synchronic evidence to argue for the treatment of the postverbal negative morpheme {–ʃ} as a NPI. Adopting a *Split-Neg Analysis*, we have argued that this syntactic configuration circumvents the problems associated the previous approaches in a systematic way. The remainder of this paper is divided into two major sections. The section that follows attempts to show that the distribution of the discontinuous morpheme observes Chomsky's (2000, 2001, 2004) Phase theory, thus accounting for the data in (2) above.

3. The Distribution of Negation

Negation in MA supports the existence of syntactic phenomenon at the word level, specifically the existence of phase-by-phase Spell-Out, as in Chomsky's (2001) Derivation by Phase. We shall see that syntactic structure in word formation, specifically the existence of

impenetrable (cyclic) domains, is necessary to make generalizations about the distribution of negation in MA. The existence of phases at the word level gives support to a theory of syntactic approach to word formation, following the same rules for syntactic phrase formation.

The analysis proposed herein crucially relies on the assumption that the derivation of linguistic objects proceeds by phase[3], where each phase is determined by a subset of the Numeration placed in the active memory. Linguistic objects are not spelled out as a whole but cyclically, in chunks determined by the syntactic structure. This amounts to saying that sentences are built in stages, where stages are defined cyclically. We also adopt the assumption that words, the internal structure of words, observe syntactic phases (Marantz, 2001). For example, Marantz (2001) argues that once category-defining functional heads are merged, they determine the edge of a cyclic domain, a phase. Incorporating this assumption with Chomsky's (2001, 2004) theory of Phase, we take the following domains as constituting a spell-out domain.

(14)
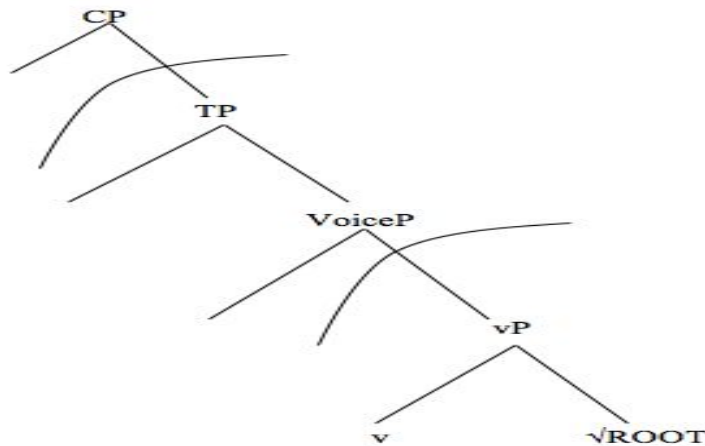
Two phase heads have been suggested, namely C and little v[4] (Chomsky 2000, 2001, 2004). Thus, a typical simple sentence will have three spell-out domains. These domains are the complement of Voice, the complement of C, and the rest of the clause, as depicted in (14). Phases lighten the burden on the memory load of C_{HL}, for the evident reason that once a phase is shipped

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[3] As one anonymous reviewer rightly points out, several versions of the phase theory are entertained in the literature. As stated at the very outset, the phase theory we adopt here is the one advanced in Chomsky (2000, 2001, 2004), and presented above. For a survey and an assessment of the state of the art in phase theory, the interested reader is referred to Citko (2014) and Gallego (2012).
[4] For the phase status of VoiceP, the reader is referred to Marantz (2007). For arguments that the traditional VP structure should be split into VoiceP and vP, see Loutfi (2017) and the references cited therein.

off to the interface levels, C_{HL} forgets about the internal structure of the spelled-out phase; hence, it is not accessible to further operations. The only elements that remain visible to the computational system are the phase head and its edge. This follows from the *Phase Impenetrability Condition* (PIC):

(15)   ***The Phase Impenetrability Condition (PIC):***

In phase a with head H, the domain of H is not accessible to operations outside a, only H and its edge are accessible to such operations.

(Chomsky 2000: 108)

In fact, the distribution of the discontinuous negative morpheme provides supporting evidence to the Phase theory just presented. As has been pointed out, the negative morpheme cannot see through the complex verb. Thus, it can only be affixed as {ma-} being a prefix while {–ʃ} as a suffix, accounting for the ungrammaticality of the sentences in (2) above, repeated here for convenience:

(16)

    a. ma-Dərb-u-hum-ʃ
        NEG-hit-they-them-NEG
        'They didn't hit them'

    b. *ma- Dərb-ʃ-u-hum
        NEG-hit-NEG-they-them

    c. *ma- Dərb-u-ʃ-hum
        NEG-hit-they-NEG-them

We argue that this fact is motivated by the assumption that once the first phase is formed, its elements are sent to the PF component. Once the derivation of the √ROOT and its arguments are merged, these pieces are sent to the PF component, the place where we also argue the linearization process takes place (see Loutfi, 2016a). This is shown in the following tree diagram:

(17)
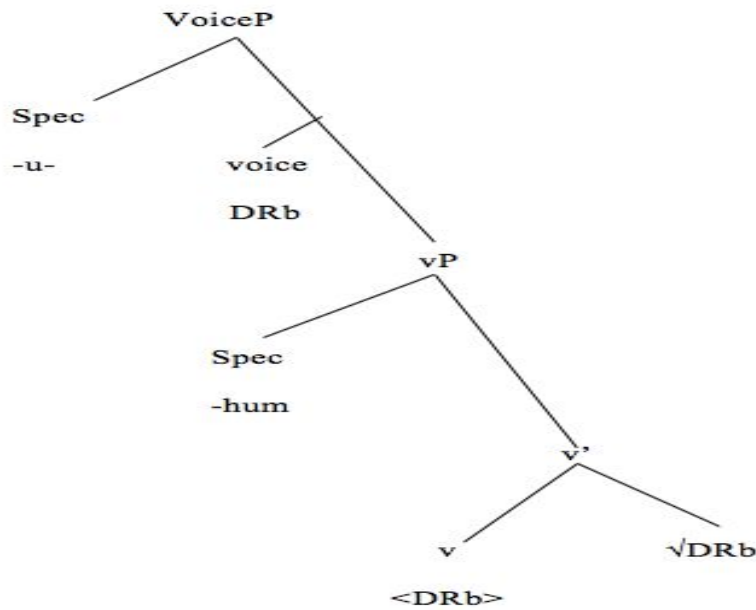
Successive cyclic head movement and PF linearization[5] ensure that the form [Dərb-u-hum] is generated. Given the assumption that only the phase head and its edge are visible to further operation, it follows that the complex verb [Dərb-u-hum] is visible to the computational system as a single morphological unit. On this analysis, the PIC makes the internal structure of the complex verb opaque to the discontinuous negative morpheme. Ignoring irrelevant details, this is made clearer in the syntactic tree below:

(18)

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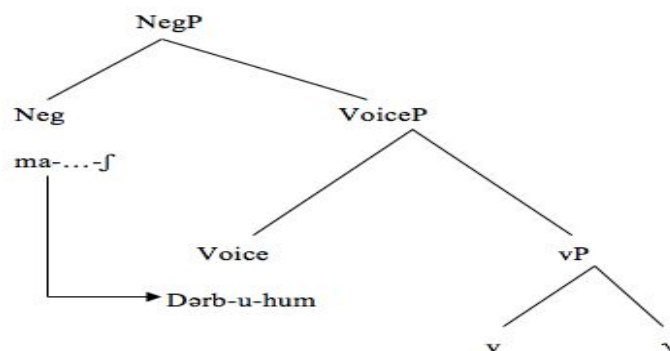
[5] For more on PF linearization in MA, see Loutfi (2016a).

4. Syntactic Haplology[6]

The fact that languages ban the repetition of elements of the same type is not uncommon (Perlmutter, 1971; Leben 1973, Goldsmith 1976, McCarthy 1986; Yip, 1998, and the references cited therein). This ban on the repetition of identical elements occur at different levels, i.e. the phonemic, morphemic and phrasal. In this paper, we will be primarily concerned with co-occurrence restrictions that occur at the phrasal level, a phenomenon referred to as Syntactic Haplology (SH). SH can be broadly defined as an instance where two nodes of the same type are not allowed in the same spell-out domain, a phrasal dissimilation effect. In fact, patterns where such a process is attested are argued to mimic the Obligatory Contour Principle (OCP) effects in phonology (Leben 1973, Goldsmith 1976, McCarthy 1986). For example, McCarthy (1986) defines the OCP as follows:

(19) ***The Obligatory Contour Principle***
      At the melodic level, adjacent identical elements are prohibited.
                                              (McCarthy, 1986: 208)

The OCP demands that identical elements, feature-wise, are not tolerated. This intolerance is often resolved through the deletion of one of the identical elements. This deletion is more often than not seen as an instance of identity avoidance. Moreover, the OCP has been used in the literature to explain the process of dissimilation, a process whereby sounds in a circumscribed domain become less alike or different (Crystal, 2008).

OCP effects, or more precisely SH has also been observed at the phrasal level (Yip 1998, Richards, 2010; see also Neeleman and van de Koot 2006 for a survey research on SH). In DM, we will show that SH results from the operation of Vocabulary Insertion, which can be sensitive to items that are in the local environment of the morpheme being spelled out. In this paper, we will be concerned with OCP effects as they apply in a syntactically-defined domain, hence the term SH. The process places co-occurrence restrictions on purely syntactic configurations. To meet this end, there are basically two issues that can be explored, first of which is determining the conditions under which SH is triggered. The second issue is identifying the rule/rules that govern its application in a given context, and whether or not locality plays a role.

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[6] To the best of my knowledge, SH, especially as it applies to Arabic/Moroccan data, is a relatively new field. Thus, it is my belief that looking for examples to illustrate SH from Arabic, as one anonymous reviewer recommends, would take us too far afield.

In the literature of (morpho)-syntactic haplology, four strategies to avoid haplology have been investigated. These strategies are summarized as follows:

(20)

    a. Tolerate the violation
    b. Delete one of the offending morphemes.
    c. Spell out the offending morphemes by using an unexpected morpheme as in Italian.
    d. Do not spell-out morpho-syntactic structure in question altogether.

As far as the first strategy is concerned, the repetition of identical morphemes does not trigger haplology. Thus, the language in question tolerates the sequence of identical morphemes. The comparative form '*cleverer*' of the adjective 'clever' contains the sequence of *er-er*, but the form is not ruled out. Likewise, in Dutch the sequence of two prepositional phrases in the same clause is tolerated, as shown in the following examples:

(21)

    a. De meeste journalisten hopen da nook [$_{pp}$ **op** [$_{pp}$ **op** z'n kop]].
       the most journalists hope then also   on   on its head
       'Indeed most journalists are hoping for upside down.'

    b. Dit is een geode wijn [$_{pp}$ **voor** [$_{pp}$ **voor** de televisie]].
       this is a   good wine   for   dor the television
       'This a good wine for in front of the television.'
                             (Neeleman and Van de Koot, 2006: 688)

The second strategy can be illustrated by the English genitive of plural nouns. As shown in (23) below, both the plural morpheme and the genitive morpheme are marked by {-s}. Interestingly, when the forms are adjacent with each other, only one {-s} surfaces.

(22)

    a. The woman's coat.
    b. The kids' toys.
    c. *The kids's toys.

The third strategy is attested in certain variants of Italian, where the impersonal clitic *si* and the reflexive *se/si* co-occur, another clitic surfaces replacing the reflexive clitic.

(23)

    a. Lo   si   sveglia   **Impersonal** *si*
       3.ACC IMPERS wakes.up
       'One wakes him up'

b. Se lo compra   **Reflexive** *se/si*
    REFL 3-ACC buys
    'S/he buys it for himself/herself'

c. Ci/*Se si lava   **Impersonal plus reflexive**
    IMPERS REFL washes
    'one washes oneself'

                              (Ackema and Neeleman, 2005: 291)

Finally, the last strategy concerns cases where the two forms in question are deleted. As discussed in Ackema and Neeleman (2005), a form like **uglily* is a case where such a strategy applies. The existence of different strategies suggests that the choice of one strategy over the other is not systematic, but instead it is idiosyncratic to the language in question. There are also languages that choose more than different strategies to avoid haplology, as is the case with English. This suggests that SH cannot be said to apply in the narrow syntax. Rather, it should be regarded as a language-particular condition applying at the PF interface level. As a working definition, SH can be defined as follows:

(24) *Syntactic Haplology*
       Multiple nodes with an identical specification are disallowed in the same Spell-Out domain at PF.

This is a general definition of SH applying at the PF interface. Since languages deploy different strategies to satisfy SH, we take this constraint as a syntax-phonology interface condition triggered by language-particular requirements. Crucial to our definition is the issue of locality. In fact, locality seems to play a key factor in the application of haplology. All other things being equal, all dissimilatory processes seem to be locally defined. Their domain of application is as varied as the syllable, the PrW, the morpheme, the word, or the phrase (syntactic phase). We further discuss this point in the section that follows.

5. Locality and Syntactic Haplology

It is worthwhile to explore the issue of how locality plays a role in the application of SH in natural languages. The basic idea that we will be defending is that elements participating in this process should in principle be adjacent. To formalize this adjacency requirement, we adopt the notion of phase to delimit the application domain. As per the MP, the Spell-Out is the process whereby a Syntactic Object (SO) is sent to the PF and LF components. As has been discussed,

two phase heads have been suggested, namely C and little *v* (Chomsky 2000, 2001, 2004). Thus, a typical simple sentence will have three spell-out domains. For example, Japanese seems to pose a morpho-phonological restriction on the realization of the two accusative case particles. SH emerges in Object Possessor Raising construction. Interestingly, this restriction occurs only when the particles occur within the same Spell-Out domain. This explains the grammaticality of (25-d) where the DPs bearing accusative case are not close to each other. When they are, however, ungrammaticality ensues, as in (25-b-c). Consider the following examples:

(25)

    a. Ken-ga [Naomi-**no** atama]-**o** tatai-ta.
       Ken-NOM Naomi-GEN head-ACC hit-PST
       'Ken hit Naomi's head.'

    b. ??Ken-ga Naomi-**o**$_i$ [*e$_i$* atama]-**o** tatai-ta.
       Ken-NOM Naomi-ACC head-ACC hit-PST
       'Ken hit Naomi on the head.'

    c. ??Ken-ga omoikkir Naomi-**o** atama-**o** tatai-ta.
       Ken-NOM hard Naomi-ACC head-ACC hit-PST
       'Ken hit Naomi hard on the head.'

    d. Naomi-**o**$_i$ Ken-ga omoikkiri *t$_i$* atama-**o** tatai-ta.
       Naomi-ACC Ken-NOM hard head-ACC hit-PST
       'Ken hit Naomi hard on the head.'

                    (Hiraiwa, 2010: 4)

As we have argued previously, the distribution of the discontinuous morpheme in MA supports the existence of cyclic Spell-Out. Since the application of SH crucially hinges on the idea of locality, we argue that its domain of application is the phase. To account for the ban on the repetition of NPIs in MA, we formulate this generalization in the form of a Spell-Out constraint banning the co-occurrence of two NPIs within the domain of the Phase[7]:

(26) **NPI²$_{Phase}$**
    Multiple identical occurrences of NPIs cannot be realized within a single Spell-Out domain at Transfer.

To capture this generalization, we propose the context-sensitive Spell-Out rule in (29). This rule clearly shows that one of the offending morphemes is deleted, hence its status as a

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[7] Interestingly, the condition in (26) can be regarded as a markedness constraint, since multiple occurrences implicate additional structures (see Noyer, 1992). I will not investigate this issue any further here.

repair strategy. As a matter of fact, this rule suggests that multiple NPIs be disallowed. Moreover, the sequence *NPI NPI is not ruled out altogether, but it can be solved by haplological reduction, as in (27) below:

(27)   **OUTPUT:** NPI$_1$ NPI$_2$ —————➤   NPI$_1$

To ensure that the condition in (28) targets{-ʃ}[8], we argue that at the point of Vocabulary Insertion, this rule of deletion applies:

(28)   {–ʃ} —————➤   ∅/ [NPI]_____

Thus, when the relevant phase domain is sent to the PF, the phase is scanned for the occurrences of multiple NPIs. By way of illustration, sentence (29) below, where two NPIs are realized, triggers the condition in (28). This rule applies along with the directionality rule that ensures the deletion of {–ʃ}.

(29)

    a. *ħətta waħd ma-ʒa-ʃ
       even one NEG-came-3ms-NEG
       'No one came'

    b. *ma-bɣa-ʃ walu
       NEG-wanted-3ms nothing
       'He wanted nothing'

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[8] In Benmamoun *et al.* (2013) and Loutfi (2017), it is suggested that the post-verbal negative marker in MA is undergoing a change in progress. The negative marker used as a renewal is the quantifier *gaʕ*. In Loutfi (in preparation), I argue that the change is not total, but it is taking place in a cyclical fashion. In an attempt to explain why the renewal is taking place, I entertain the hypothesis that this change might be motivated by the influence of the neighboring language, Amazigh, which is an instance of a contact-induced change. Interestingly, such an assumption, if correct, directly challenges the so-called Jespersen's Cycle. See Loutfi (2017) for a list of examples that support this change in progress and Loutfi (in preparation) for an analysis.

(30)
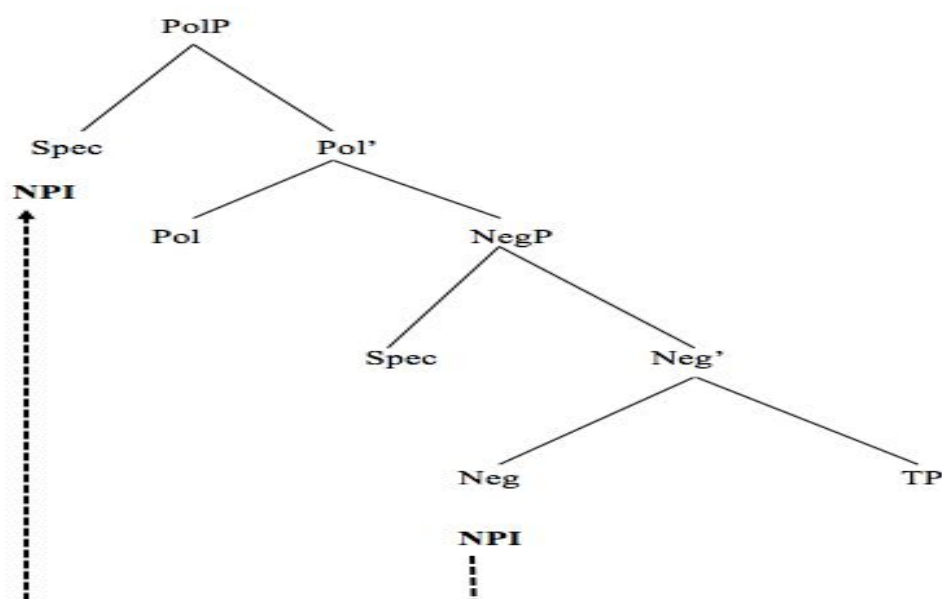
6. Conclusion

This paper has been concerned with providing a morpho-syntactic analysis of the realization and distribution of negation in MA. As far as the realization is concerned, we have argued that the negative affixal process is governed by the PIC. This explains why the preverbal negative {ma-} is always a prefix and {-ʃ} is always a suffix. Moreover, the disappearance of the {-ʃ} in the context of NPIs has been treated as a case of Syntactic Haplology, motivated primarily by the notion of identity avoidance. In this regard, we have treated SH as a post-syntactic rule triggered when two occurrences of NPIs are detected in a phase domain.

There are several implications that cannot go unnoticed, chiefly among which is that this study provides further supporting evidence to the assumption that a generative lexicon, where morphological rules, among other things, are listed, is not conceptually necessary[9]. It has been shown here that syntactic rules and principles can adequately account for word formation. If correct, such an approach is line with the minimalist assumptions, in that no machinery is beyond what is needed has been posited (Chomsky, 2000). Under this approach, we predict that word structure and phrasal structure are derived using the same formal mechanisms. Empirically, we

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[9] See Loutfi (2017) for empirical arguments from data from Arabic that further question the validity of the Lexicalist approach, as far as Arabic is concerned.

have attempted to explain the mysterious disappearance of the post-verbal negative marker in a principled way.

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