On Plurals, Noun Phrase and Num(ber) in Moroccan Arabic and Djibouti Somali

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This paper revisits some aspects of plural formation in Moroccan Arabic (henceforth MA) and Djibouti Somali (henceforth DJ). It takes as its starting point one noticeable property of certain nouns in MA, which display two plural forms: for instance, singular *kasˤetˤ* 'tape' leads to plurals *kwasˤtˤ* and *kasˤetˤatˤ*. Morphologically speaking, both are genuine plurals referring to what Semitists commonly call broken and sound or internal and external plurals. From a semantic perspective, however, there is a crucial difference: *kasˤetˤatˤ* indicates a definite number, usually occurring with numerals, whereas the corresponding internal plural has a collective reading. The examples in (1) illustrate the situation.

(1) a. *mmul l-kwasˤtˤ*

owner det-tape.F-PL

'tape seller, record store'

b. *ʒuʒ kasˤetˤ-at*

two tape.F-PL

'two tapes'

In DJ, as in Standard Somali[1] in general, pluralization involves one of three strategies, suffixation, prosodic shift and reduplication of the last consonant of the root. In addition, the gender of the plural may not correspond to the gender of the singular. The examples in (2) illustrate gender change in suffixed plurals.[2]

(2)   a.   *naág*   *naag-ó*

            woman.F.SG.ABS   woman.M.ABS-PL

            'woman'   'women'

       b.   *baré*   *bara-yáal*[3]

            teacher.M.SG.ABS   teacher-F.PL.ABS

            'teacher'   'teachers'

No attempt will be made here to do justice to the vast literature on the plural formation in Arabic (cf. Hammond 1988, Idrissi 1997, Kihm 2003, 2006, McCarthy and Prince 1990, Ratcliffe 1997, Wright 2004, among others) or in Somali (cf. Andrzejewski 1964, 1979, Banti 1988, Godon 1998, Lampitelli To appear, Lecarme 2002, Orwin 1995, Puglielli and Siyaad 1984, Saeed 1993). Instead, an interface approach to number will be presented. We will designate the structural location of number in MA and capture the empirical contrast between internal and external plurals by positing that the first are derived from an *n* head and the second from a *Num* head. In the same vein, we will argue that DJ plurals occupy two distinct syntactic positions: the suffix *-ó* is an instantiation of a *Num* head, whereas the suffix *-yáal* is a root, in the sense of Lowenstamm (To appear). The reader is also referred to

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[1] Somali is a Lowland East-Cushitic language spoken by roughly 13 million people in Somalia, Somaliland, Puntland, Djibouti, Ethiopia (Ogaden) and Kenya (Northeastern Province). Northern Somali dialects, spoken north of the Wadi Shabeel, represent the standard variety of the language (cf. Banti 2011). Djibouti Somali is the variety of Standard Somali spoken in the Republic of Djibouti. The data have been collected by one of the authors in Djibouti in June 2012. Fifteen informants have been interviewed. Many thanks to all of them.

[2] Somali examples are written according to the official spelling.

[3] The suffix *-e* becomes *-a-* when it appears in an intervocalic position. The same holds for the suffix *-ó*, cf. *naagó* 'women' vs. *naagáyáal* 'groups of women'.

Faust (2011) on Hebrew plurals.

1. Number in Moroccan Arabic nouns

MA has two numbers: singular and plural. It lacks the dual of Classical Arabic. Singular forms are generally unmarked compared to plurals which are formed by means of infixation (e.g. *dˤaarˤ* / *dˤjoorˤ* 'houses'), vowel alternation (e.g. *ħmaar* / *ħmiir* 'donkeys') or suffixation (e.g. *muʔəllim* / *muʔəllim-in* 'teachers'). The reader is referred to Heath (1987) for further details and analysis. In the remainder of this section, we focus on the analysis of nouns that have two plural forms.

That a single noun may display more than one plural form is not specific to Arabic. Many other languages in the Afroasiatic family such as Somali, Hausa and Amharic show similar cases, to the extent that they involve distinct morphological strategies: in Hausa, for instance, singular *màatáa* 'woman' alternates with plurals *màcé* and *máatàayée*. Likewise, Somali *díbi* 'bull' has plurals *dibí* and *dibi-yó*, and Amharic *mämhɨr* 'teacher' has *mämhɨran* and *mämhɨranotʃtʃ*. In most cases, they involve so-called double pluralization whereby a plural form derives from another plural (see Newman 2000: 463 on Hausa, Puglielli and Siyaad 1984 and Lecarme 2002 on Somali, and Kramer 2012: 227 on Amharic).[4] In Arabic, however, very few such double plurals are found, including MA *mwas-at* 'knives' and *qwas-at* 'arches', and Classical Arabic *riʒaal-aat* 'men' and *ahraam-aat* 'pyramids'. The examples in (3) illustrate common coexisting internal and external plurals in MA:

(3)	*singular*	*internal plural*	*external plural*
qamiʒa	qwamʒ	qamiʒat	'shirts'

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[4] It should be mentioned that such double formatives occur in the plural and not in the singular. As far as we know, none of the languages discussed above has double singular forms. This may relate to the standard issue of the input to derivation, well-known in morphological theory: is the plural form derived from the singular or from an abstract root? Due to space limitations, we leave the issue aside. The reader is referred to Prunet (2006) for a detailed review of the literature.

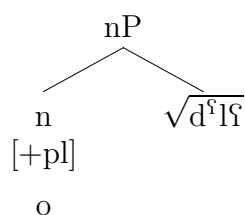|			
muʒa	mmʷaʒ	muʒat	'waves'
tˤasˤwera	tˤsˤawˤir	tˤasˤwˤerˤat	'pictures'
bɨrraka	brarɨk	bɨrrakat	'huts'
blasˤa	blayɨsˤ	blasˤat	'places'
dˤilʕa	dˤloʕ	dˤilʕat	'muscles'
ʕdˤɨm	ʕdˤɑːm	ʕɨdˤmat	'bones'

Four observations are in order. First, the examples involve native words and loans alike. Second, the internal plurals behave irregularly in that they undergo a variety of morphophonological changes such as -wa- infixation in *qwamʒ* and gemination in *mmʷaʒ*, whereas the external plurals invariably use the suffix –at.[5] Third, as mentioned previously, very few internal plurals in MA co-occur with the suffix –at (see *mwasat* and *qwasat* above), unlike in Amharic where internal and external plurals commonly combine into double plurals. Lastly and most importantly, internal plurals are often semantically associated with collective readings.

Since Ritter (1991), plural inflection is commonly derived by means of a syntactic projection, viz. Number Phrase, located between DP and NP. The facts discussed above lead us to consider that not all MA plurals are located in the same syntactic position, and that the internal and external plurals of the type in (3) are generated in independent terminal nodes. In line with recent work on number and plurality, including Lowenstamm (2008), Acquaviva (2008) and Kramer (2012), we assume that the external plurals in MA are associated with the standard *Num* projection, whereas the internal plurals are associated lower in the structure with the *n* projection. The structures in (4) illustrate the derivations.
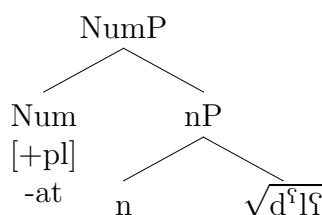
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[5] The suffix –at happens to be the feminine plural marker, mainly in adjectives and participials: for example, *zwin* 'beautiful (M sg)' / *zwinin* (M pl) / *zwinat* (F pl). However, this does not hold for nouns since –at does not necessarily change the gender of the noun it combines with.

(4)

a.   b.

```
          nP                              NumP
        /    \                          /      \
       n      √dˤlˤ                    Num       nP
     [+pl]                            [+pl]     /   \
        o                             -at      n     √dˤlˤ
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Under the assumption that roots combine with category-defining heads (see Marantz 2001 and Embick and Marantz 2008, among other references), *dˤloʕ* (4a) is formed within the nP projection, the head of which has a plural feature, whereas *dˤilʕat* (4b) inherits its plural feature higher in the structure from the NumP. The distinct syntactic locations of these plurals allow one to capture their morphological and semantic differences. Furthermore, the lower location of the internal plurals, close to the root, accounts for their morphological irregularity, compared to the external plurals which invariably resort to –at suffixation. It should be noted, however, that the external plural formation is highly productive and predominant in most noun classes. Thus, for instance, mass nouns all resort to –at suffixation, especially when used with numerals: e.g. *ħut* 'fish' / *ʒuʒ ħutat* 'two fishes', *xubz* 'bread' / *ʒuʒ xubzat* 'two loaves of bread'. Likewise, a large majority of loans naturally form their plural by means of external suffixation rather than internal changes: e.g. *tˤobis* 'bus' / *tˤobisat* 'buses', *taksi* 'cab' / *taksiyat* 'cabs', *tˤomobila* 'car' / *tˤomobilat* 'cars'.

Before turning to plural formation in Somali (§3), we provide in the following section a brief overview of so-called emphasis-spread, a well-known process supporting the analysis advocated here.

2. Emphasis spread

Emphasis is traditionally described as a secondary pharyngeal articulation associated with a subset of consonantal segments, mainly the coronals *t, d, s, z* and *r* (see Benhallam 1980, Ghazali 181, Younes 1993, Davis 1995, Kenstowicz and Louriz 2009). In MA, like in many other Arabic languages, these coronals spread their emphatic (pharyngeal) feature to the neighbouring segments over domains larger than the syllable. However, the nature of these domains remains unclear, ranging from the stem to the phonological word or utterance. According to Kenstowicz and Louriz (2009:45): "in MA the process is restricted to the stem and does not affect inflectional suffixes except that a CV sequence must be realized uniformly as plain."

From our perspective, the projections of category-forming heads, including the nP, are the maximal domain of emphasis spread in MA. According to this view, the internal plurals containing an emphatic consonant will be entirely pharyngealized, while the external plurals will be affected only partially. For instance, *ʕdˤaam* 'bones' will be entirely emphatic, while in *ʕidˤmat*, the suffix *–at* along with the onset consonant *m* will remain unaffected. In terms of phase theory (Chomsky 2001), we would say that nP demarcates a phase, wherein the internal plural is spelled out and is hence sensitive to emphasis spread (see Marantz 2001, 2007 on nP, vP and aP as phases).

3. Number in Somali

As mentioned in the introduction, DJ – as Standard Somali in general – displays various ways to pluralize a noun. These include suffixation (three possible items: *-ó, -yáal* or *-oyín*), prosodic shift (the accentual pitch moves one vowel rightwards) and reduplication of the last consonant of the root (Andrzejewski 1964, 1979, Banti 1988, Puglielli and Siyaad 1984). Moreover, the gender of the singular can change in the

plural. This is known as gender polarity (Lecarme 2002). The main patterns of pluralization in Somali are shown below in (5):

(5) Pluralization patterns in Somali[6]

      a. *naág*   =>   *naag-ó*   (suffixation & gender change)

         woman.F.SG.ABS   woman.M.ABS-PL

         'woman'   'women'

      b. *albaáb*   =>   *albaabb-ó*   (suffixation & gender change)

         door.M.SG.ABS   door.F.ABS-PL

         'door'   'doors'

      c. *baré*   =>   *bara-yáal*   (suffixation & gender change)

         teacher.M.SG.ABS   teacher-F.PL.ABS

         'teacher'   'teachers'

      d. *sheekó*   =>   *sheeko-oyín*   (suffixation & gender change)

         tale.F.SG.ABS   tale-M.PL.ABS

         'tale'   'tales'

      e. *mádax*   =>   *madáx*   (prosodic shift & gender change)

         head.M.SG.ABS   head.F.PL.ABS

         'head'   'heads'

     f. *ílik*   =>   *ilk-ó*   (suffixation; NO gender change)

        tooth.M.SG.ABS   tooth.M.ABS-PL

        'tooth'   'teeth'

     g. *míis*   =>   *miis<á>s*   (reduplication; NO gender change)

        table.M.SG.ABS   table<PL>~C

        'table'   'tables'

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[6] The diacritics " ´ " indicates the accent pitch. Cf. Hyman (1981) for further details. Somali has four syntactic cases: ABS(solutive), nominative, genitive and vocative. The nouns given in (5) display the default case, i.e. ABS (cf. Saeed 1993).

Gender polarity occurs in the examples (5a) to (5e). In (5a), the singular is feminine and the plural is masculine, whereas in (5b) the singular is masculine and the plural is feminine. Interestingly, the same suffix, -ó, is used to pluralize these nouns.[7] The groups (5c) and (5d) include nouns ending in -é (masculine) and -ó (feminine), respectively.[8] A specific plural suffix applies to each class: -yáal and -oyín. Both suffixes trigger the change of gender in the plural. The example in (5e) shows those nouns that pluralize only by moving the accentual pitch one vowel rightwards. Finally, the groups (5f) and (5g) show nouns whose gender remains unchanged in the plural. In (5f), the plural is formed by suffixing -ó (as in 5a and 5b), whereas in (5g) the plural involves the reduplication of the last consonant of the root and the insertion of -a-.

Despite the complexity of the data, some general trends can be pointed out. We observe that the suffixes -yáal and -óyin are always associated with particular genders: the former with F and the latter with M. In contrast, the suffix -ó does not entail a given gender. It can be associated either with M or with F. On the one hand, in groups (5a) and (5g), -ó is associated with M. The latter group includes only masculine nouns and there is no gender polarity. On the other hand, in group (5b), the suffix -ó is associated with F and there is gender polarity.
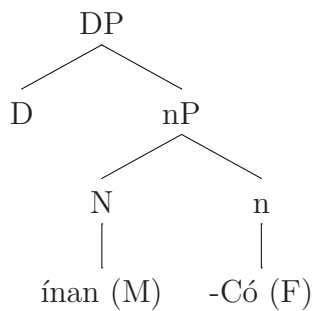
Lecarme (2002: 129) argues that "-Có (cf. 5b) and -ó (cf. 5a, 5g) are functional stems, like syntactic light v's *do*, *have*, *be*, etc., whose insertion is completely determined by features." Although this view describes the lexical status of gender polarity, we do not agree with the fact that such plurals are low in the structure, viz. directly merged with N (which, in our terms, is the root):

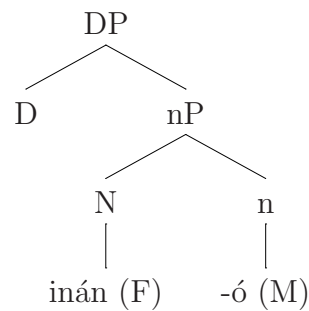[7] The plural of nouns in (5b) is characterized by the gemination of the last consonant of the stem.
[8] The endings -é and -ó are suffixes, as noted by Puglielli and Siyaad (1984: 59-63) and later by Lecarme (2002). Cf. *bár* 'to teach' => *baré* 'teacher'.

(6)   Lecarme's (2002: 129) representation of plurals ending in *-ó*

a.   b.

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        DP                                      DP
       /  \                                    /  \
      D    nP                                 D    nP
          /  \                                    /  \
         N    n                                  N    n
         |    |                                  |    |
      ínan (M)  -Có (F)                       inán (F)  -ó (M)
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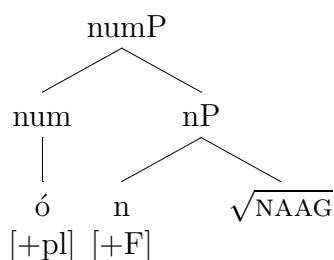
The crucial argument put forth by Lecarme is that the suffix *-ó* imposes its own gender, thus changing the original gender of the base (in Lecarme's terms, the base corresponds to the singular form).

We argue that this configuration does not account straightforwardly for the behavior of the plural suffix *-ó*. More particularly, it does not explain why this suffix is not associated with a specific gender, since it can be either M or F. In addition, in one case (cf. group 5f) the suffix *-ó* does not even change the gender of the singular. Therefore, we argue that the suffix *-ó* is not involved in gender specification, but only in pluralization.[9]

We propose that the suffix *-ó* is introduced by the projection numP (it is configurationally higher in the structure), whereas the suffixes *-yáal* and *-óyin* are specific types of roots, in the sense of Lowenstamm (2008, To appear), as illustrated below in (7).
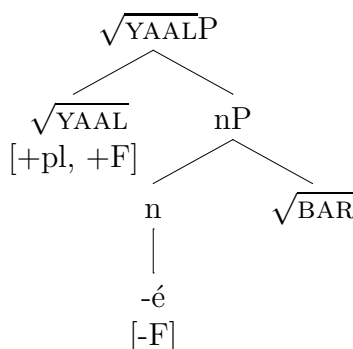
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[9] Lampitelli (To appear), building on Godon (1998), proposes that the unique plural suffix of Somali nouns is *-o*. This suffix has three allomorphs: *-o* (*naagó*, *albaabbó*, *ilkó*), *-a-* (*miisás*) and zero (*madáx*). The accentual pitch is the marker of the syntactic case.

(7) a.   b.

$\sqrt{\text{YAAL}}$P

numP

$\sqrt{\text{YAAL}}$ nP
[+pl, +F]

num   nP

n $\sqrt{\text{BAR}}$

ó   n $\sqrt{\text{NAAG}}$
[+pl] [+F]

-é
[-F]

[naagó] M, pl   [barayáal] F, pl

In (7a), the head *n* selects for the root and introduces [+F] gender. In turn, the plural suffix -*ó* is introduced by the head *num*, which merges with the nP. In addition, gender polarity occurs, resulting in a masculine plural noun. Note that this gender change does not follow from the syntactic structure, since the suffix -*ó* bears no gender information. Rather, it depends on specific lexical and phonological factors, which will not be discussed here due to space limitations. The reader is referred to Lampitelli (To appear) and Godon (1998). Under this view, the suffix -*ó* is the regular plural marker in Somali nouns.

In contrast, the plural suffix -*yáal* in (7b) behaves as a root in its own right. As such, it imposes its own gender (as roots do if they are heads) and selects only for nouns, that is, nPs. The nP must be [-F] when merged with –*yáal,* and [+M] when merged with -*óyin* (cf. the example 5d).
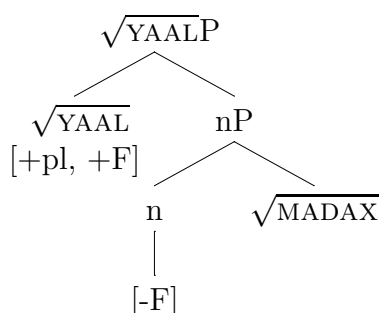
The following section focuses on the behavior of -*yáal* in DJ.
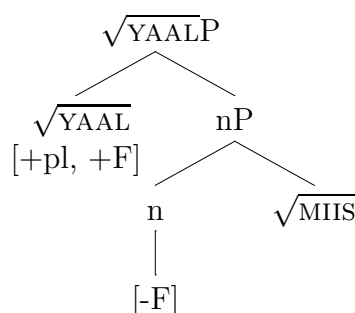

4. -*yáal* plurals in DJ

According to the syntactic configuration in (7b), we expect the other groups of nouns to be pluralized by means of the suffix -*yáal*. This is possible for one reason, at least:

affix roots select for a particular lexical property in the items they attach to. In the case at hand, this property is gender and more specifically the masculine (gender is a typically nominal property).

In Somali, five inflectional groups out of seven are masculine in the singular. Accordingly, we expect that each masculine singular noun be pluralized by means of the suffix -*yáal*. This is actually the case in DJ where, according to informants, *yáal*-plurals are always possible. Two plural forms, *madax-yáal* 'heads' and *miis-yáal* 'tables', are shown below in (8).

(8)   a.   b.

          [madaxyáal] F, pl   [miisyáal] F, pl

It should be noticed that in Standard Somali, *mádax* (M, sg) undergoes prosodic shift in the plural, leading to *madáx*, whereas *míis* (M, sg) resorts to reduplication and vowel insertion, leading to *miisás*. The gender polarity occurs only in *madáx*, while *miisás* remains masculine. In contrast, the DJ examples represented in (8) are both pluralized by means of –*yáal* suffixation, which bears its own feminine gender. As a consequence, both *madaxyáal* and *miisyáal* are feminine.
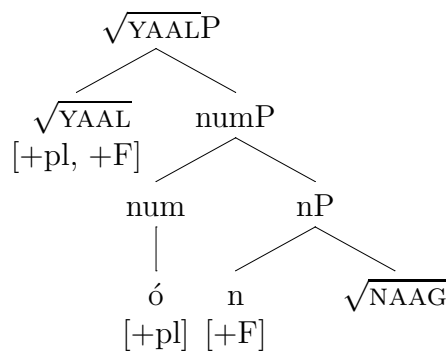
According to informants, all nouns can resort to -*yáal* suffixation in DJ[10], except for nouns of the types *náag* (F sg) and *sheekó* (F sg). Interestingly, the latter are all feminine in the singular. The bound root √ YÁAL, thus, bears an uninterpretable

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[10] In DJ, an M noun displays at least two different ways to pluralize: (1) the suffixation of -*yáal* and (2) the Standard Somali pluralization pattern to which it belongs (cf. 5).

feature [u -F] which can be checked only if it takes as a complement an xP containing a [-F] feature. In other words, the suffix *-yáal* applies only to masculine nouns.

We therefore further predict that *-yáal* could attach to plural nouns when masculine. Interestingly, *naagó* 'women' (M pl) is the base of a plural of plural (Lecarme 2002: 121-122): *naagayáal* /naag+o+yaal/ 'groups of women' (F pl). The plurals of plurals, although quite rare in Somali, are usually interpreted as 'groups of X' (Puglielli and Siyaad 1984: 92).[11] The structure in (9) illustrates the situation.

(9)   Plural of plural

```
              √YAALP
             /      \
        √YAAL        numP
      [+pl, +F]     /    \
                 num      nP
                  |      /   \
                  ó     n     √NAAG
                [+pl]  [+F]
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6. Conclusions

This article has been devoted to plural nouns in two Afroasiatic languages: Moroccan Arabic and Djibouti Somali. Within a syntactic approach to word-formation, it has been argued that not all plurals are located in the same syntactic position. In MA, regular (external) plurals were shown to be associated with the standard *Num* projection, whereas irregular (internal) plurals were associated lower in the structure with the *n* projection. This allows one to capture their morphological and semantic differences. Indeed, the lower location of the internal plurals accounts for their apparent irregularity, compared to the external plurals, which invariably resort to –at suffixation.

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[11] According to Puglielli and Siyaad (1984: 92-93), the plural of plural suffix is *-yow* (*-yáal* is not mentioned). The suffix *-yow* is always masculine.

In the same vein, it was shown that *-ó* and *-yáal* in DJ involve distinct syntactic structures. *-ó* is associated to numP and behaves as a regular plural suffix: it bears no inherent gender and applies to the majority of groups. In contrast, *-yáal* is analyzed as a bound root that selects for xPs (nP or numP) containing the feminine gender. This explains the common use of *-yáal* in DJ as well as the existence of the plurals of plurals.

References

Acquaviva, Paolo. 2008. *Lexical plurals: A morphosemantic approach*. Oxford University Press.

Andrzejewski, Bomugil Witalis. 1964. *The Declensions of Somali Nouns*, London: School of Oriental and African Studies.

Andrzejewski, Bomugil Witalis. 1979. *The Case System in Somali*. London: School of Oriental and African Studies.

Banti, Giorgio. 1988. "Two Cushitic Systems: Somali and Oromo Nouns". In *Autosegmental Studies on Pitch Accent*, H. van der Hulst and N. Smith (eds.). Dordrecht: Foris Publications, pp.11-50.

Banti, Giorgio. 2011. "Somali language". In *Encyclopaedia Aethiopica*, S. Uhlig (ed.). Wiesbaden: Harrassowitz, vol. 4, pp. 693a-696b.

Benhallam, Abderrafi. 1980. *Syllable Structure and Rule Types in Arabic*. PhD. thesis, University of Florida.

Chomsky, Noam. 2001. "Derivation by phase". In *Ken Hale: A Life in Language*, 1-52. MA: MIT Press.

Davis, Stuart. 1995. "Emphasis spread and Grounded Phonology". *Linguistic Inquiry* 26: 465-498.

Embick, David and Alec Marantz. 2008. "Architecture and Blocking". *Linguistic Inquiry* 39: 1-53.

Faust, Noam. 2011. *Forme et fonction dans la morphologie nominale de l'hébreu moderne : étude en morphosyntaxe*. PhD thesis, Université Paris Paris 7.

Ghazali, Salem. 1981. "La diffusion de l'emphase". *Analyses-Théorie* 1: 122-135.

Godon, Elsa. 1998. *Aspects de la morphologie nominale du somali : la formation du pluriel*. Master thesis, Université Paris 7.

Hammond, Michael. 1988. "Templatic transfer in Arabic broken plurals". *Natural Language and Linguistic Theory* 6: 247-270.

Heath, Jeffrey. 1987. *Ablaut and ambiguity: Phonology of a Moroccan Arabic dialect*. Albany: State University of New York Press.

Hyman, Larry 1981. "Tonal Accent in Somali". *Studies in African Linguistics* 12, 2: 169-201.

Idrissi, Ali. 1997. "Plural Formation in Arabic". In *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics*, volume X, Eid, Mushira and Robert R. Ratcliffe (eds.), 123-. Amsterdam: John Benjamins.

Kenstowicz, Michael and Nabila Louriz. 2009. "Reverse Engineering: Emphatic Consonants and the Adaptation of Vowels in French Loanwords into Moroccan Arabic". *Brill's Annual of Afroasiatic Languages and Linguistics 1*: 41-74.

Kihm, Alain. 2003. "Les pluriels internes de l'arabe : système et conséquences pour l'architecture de la grammaire". *Recherches Linguistiques de Vincennes 32*: 109-156.

Kihm, Alain. 2006. "Nonsegmental concatenation: a study of Classical Arabic broken plurals and verbal nouns". *Morphology* 16: 69-105.

Kramer, Ruth. 2012. "A split analysis of plurality : Evidence from Amharic". In *The proceedings of WCCFL 30*, Nathan Arnett and Ryan Bennett (eds.), 226-236. Somerville, MA: Cascadilla.

Lampitelli, Nicola. To appear. "The decomposition of Somali nouns". *Brill's Annual of Afroasiatic Languages and Linguistics 5*.

Lecarme, Jacqueline. 2002. "Gender polarity: Theoretical aspects of Somali Nominal Morphology". In *Many Morphologies*, P. Boucher (ed), 109-141. Somerville: Cascadilla Press.

Lowenstamm, Jean. 2008. "On *n*, nP, $\sqrt{\ }$ and types of nouns". In *The Sounds of Silence: Empty Elements in Syntax and Phonology*, J. Hartmann, V. Hegedűs and H. van Riemsdijk (eds), 105-144. Amsterdam: Elsevier.

Lowenstamm, Jean. To appear. "Derivational Affixes as Roots". In *The Syntax of Roots and The Roots of Syntax*, A. Alexiadou, H. Borer et Schäfer, F. (eds.). Oxford: Oxford University Press.

Marantz, Alec. 2001. *Words*. Ms, MIT.

Marantz, Alec. 2007. "Phases and words". In *Phases in the Theory of Grammar*, 191-222. Seoul: Dong In.

McCarthy, John and Alan Prince. 1990. "Foot and word in prosodic morphology: The Arabic broken plurals". *Natural Language and Linguistic Theory* 8: 209–283.

Newman, Paul. 2000. *The Hausa language: An encyclopedic reference grammar*. Yale: Yale University Press.

Orwin, Martin. 1995. *Colloquial Somali. A complete language course*. New York: Routledge.

Prunet, Jean-François. 2006. "External evidence and the Semitic root". *Morphology* 16: 41-67.

Puglielli, Annarita and Siyaad, Ciise Maxamed. 1984. "La flessione del nome". In *Aspetti Morfologici, lessicali e della focalizzazione*, (Studi Somali 5), A. Puglielli (ed.), 53-112. Rome: MAE, Dipartimento per la Cooperazione allo Sviluppo,.

Ratcliffe, Robert. 1997. "Prosodic templates in a word-based morphological analysis of Arabic". In *Perspectives on Arabic linguistics X,* Mushira Eid and Robert Ratcliffe (eds.), 147–171. Amsterdam: John Benjamins.

Ritter, Elizabeth. 1991. "Two functional categories in noun phrases: evidence from Modern Hebrew." In *Syntax and Semantics 26*, S. Rthstein (ed.), 37-62. San Diego: Academic Press

Saeed, John. 1993. *Somali Reference Grammar*. Kensington, Maryland: Dunwoody Press.

Wright, William. 2004. *Arabic grammar*. New York: Dover Publications.

Younes, Munther. 1993. "Emphasis spread in two Arabic dialects". In *Perspectives on Arabic Linguistics*, VI. C. Holes and M. Eid (eds.), 119-145. Amsterdam: John Benjamins.