

Branching and Non-Branching Syllabic Constituents in Spoken Iraqi Arabic

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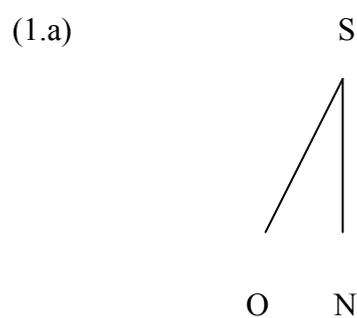
Abstract

Within the framework of Government Phonology syllabic constituents are described as being either branching or non-branching. This categorisation suggests different governing relations holding among these constituents. Verbal and nominal forms in Spoken Iraqi Arabic are found to have branching and non-branching syllabic constituents. Moreover, word-initial branching onsets attested in this language are of the two types of sonority : rising sonority and falling sonority. This finding is contra factual to traditional accounts of word-initial branching onsets. This, in turn, suggests the need to amend some UG-generalisations.

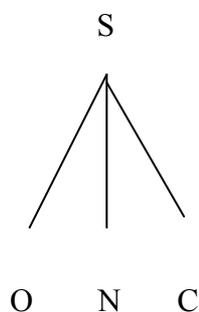
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1.Introduction :

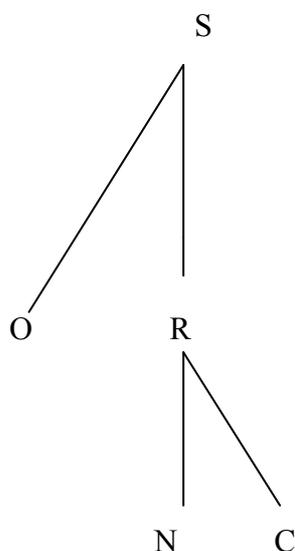
Different syllabification models suggest different phonological organisations of words. Words are said to be composed of concatenated strings of consonantal elements followed by vocalic ones. A syllable may be constructed of an onset followed by a nucleus as shown in (1.a) below :



Or it may be composed of an onset followed by a nucleus which is followed by a coda as in (1.b) below :



Or,still,it may be structured of an onset followed by a rime (or rhyme).The latter element usually dominates a nucleus that can be followed by a consonant (or a coda) ,as exhibited in (1.c) below :



This article is an attempt ,first , to examine the validity of traditional accounts of word-initial clusters (such as Selkirk 1984 , Clements 1990) as being always of rising sonority ,second ,to find out the type of syllabic constituents characteristic of Spoken Iraqi Arabic (henceforth SIA).

2.Preliminary Remarks :

In (1985) Kaye , Lowenstamm , and Vergnaud analysed *the internal structure of phonological elements* in terms of their theory of Government Phonology.According to them syllable structure is

composed of three syllabic constituents , namely: Onset, Nucleus , and Rime. The latter immediately dominates a nucleus as its left branch. Governing domains are formed by these syllabic constituents. The term ‘government’ can be defined as that relation of dominance which can hold between the head and the operator of a compound , or the head and the margin of a syllable , or the head and the non-head of a foot. “Government” ,states Kaye (1990b:132), “may be characterized as being (a) strictly local , and (b) strictly directional.” He (ibid) explains these two characterizations ,saying that “ [t]his government is strictly local in the sense that it applies to adjacent skeletal points and that the adjacency requirement must be met for all projections.” He (ibid) adds that “ [t]his government is strictly directional in that it is invariably left-to-right (head initial).” ‘Skeletal points’ are positions that partly make up a phonological string , indicated by a series of ‘Xs’ , as exhibited in (2) below :

(2)

$$X_1 \quad X_2 \dots X$$

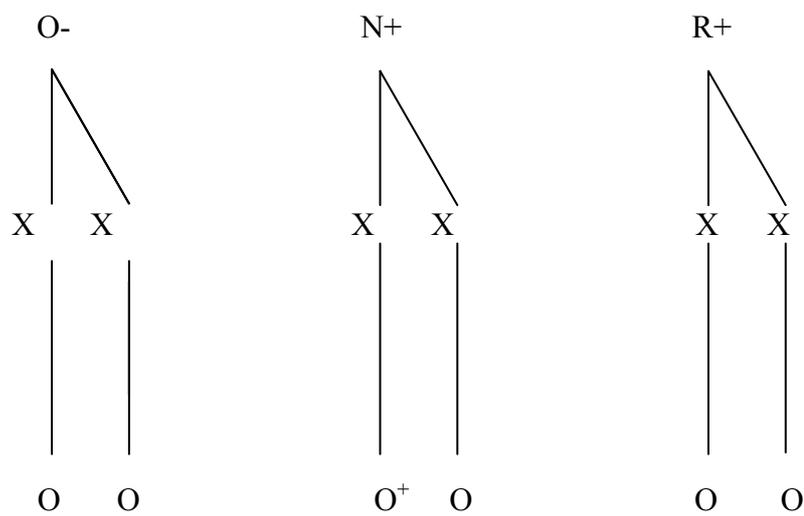
The above indexed adjacent positions construct the ‘skeleton’ of a phonological string which (i.e.,the skeleton) composes the hierarchy of the syllabic constituents structure.

In government phonology syllabic constituents are maximally binary , but they can be unary or even null , as shown in (3) below :

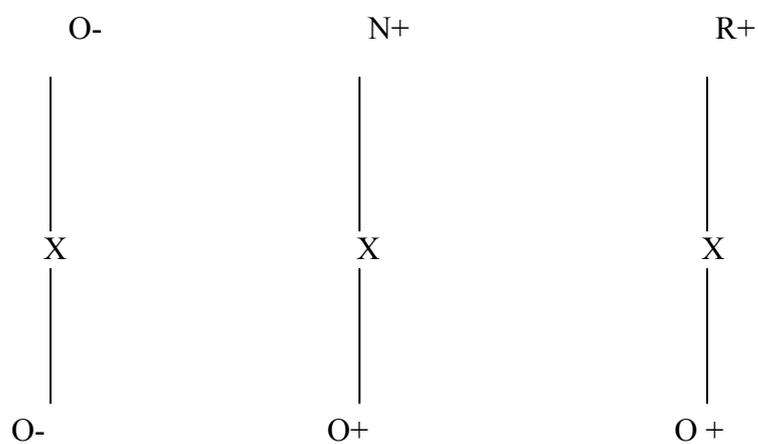
(3)

a.

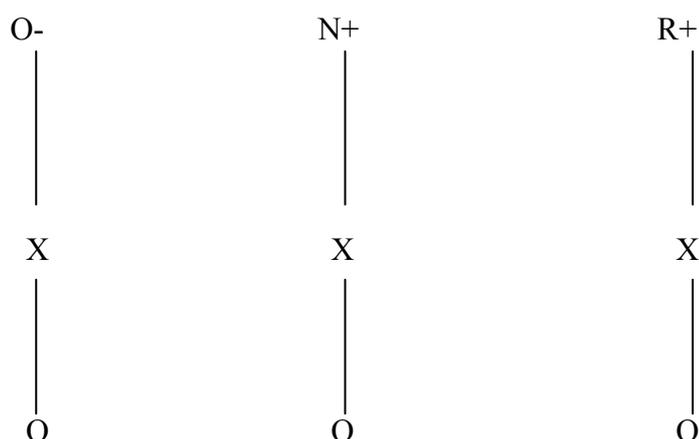
$$(\quad \varepsilon \quad)$$



b.



c.

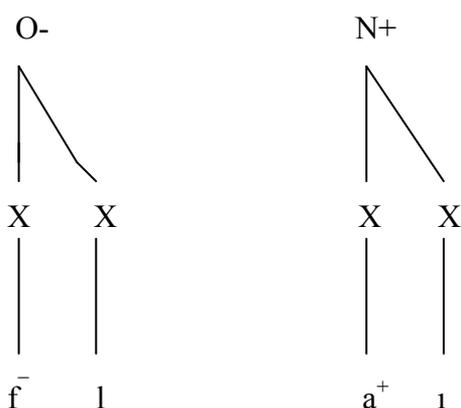


It can be seen in (3.a) above that each of the syllabic constituents : Onset (O) , Nucleus (N) and Rime (R) has its maximal structure by dominating two skeletal points or positions ; hence they are branching syllabic constituents. A branching onset represents a two-consonant cluster , a branching nucleus represents a long vowel or a heavy diphthong , and a branching rime corresponds to a closed (VC) syllable. The consonant is informally dopped in the coda , although strictly speaking there is no coda constituent in government phonology. In (3.b) and (3.c) these constituents are unary and null , respectively. As for the superscripts carried by these constituents , they refer to their ‘charm’ values.

Charm theory was first proposed in (1985) and then was extended in (1987) by Kaye , Lowenstaum and Vergnaud. In this theory the possible governors and gover- nees are given charm values. Thus, charmed elements are governors and charmless elements are governees. Kaye (1990 b.:135) contends that “ [n]uclear governors will have positive charm , non-nuclear governors will have negative

charm , and gover- nees will have neutral charm (are charmless).”
 Governors (i.e., heads) are always represented by the left branch of a
 syllabic constituent , that govern the skeletal points of governees to
 their right. For instance, ‘fly’ /fla1/ has the following government tem-
 plate :

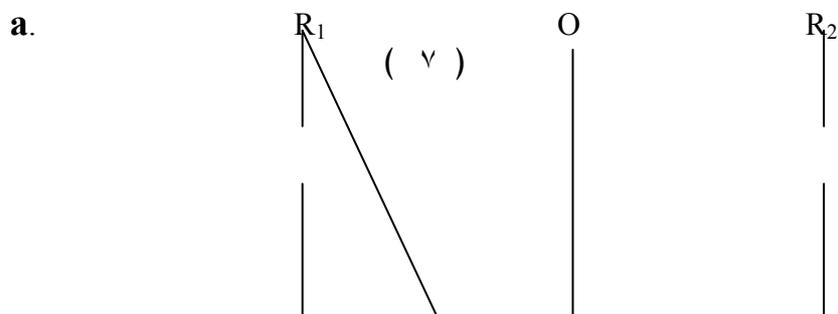
(4)

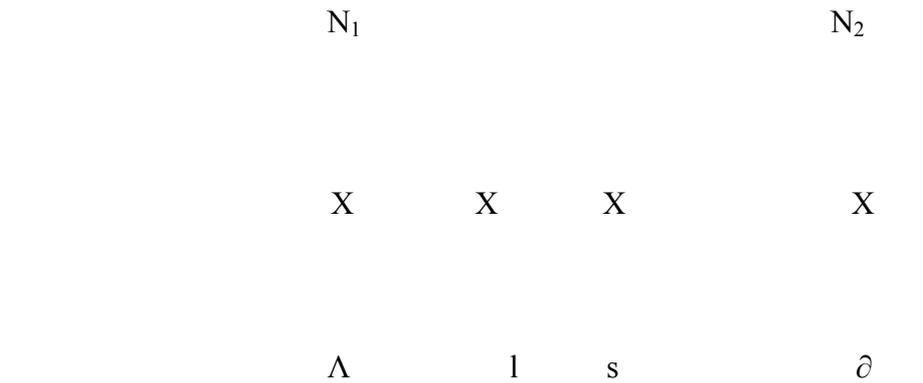


In (4) , /f/ is the negatively charmed governor and head of the
 branching onset and /l/ is the charmless governed segment. This
 branching onset is followed by a branching nucleus , in which /a⁺/ is a
 positively charmed nuclear governor and /l/ is the neutral , governed
 nuclear segment.

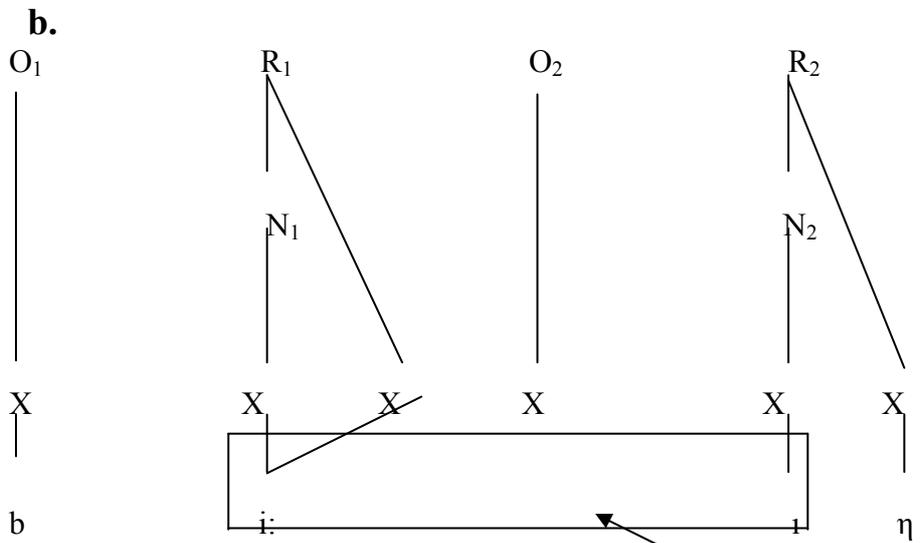
Governing relations may hold inter-constituently ;however, this
 time government is head –final. In other words, governing relations in
 such a case are from right to left. Typical cases of this type of
 government are represented by a sequence of a postnuc- lear
 segment and a following onset , or a sequence of nuclei that are
 separated by an empty onset. Consider the transconstituent government
 templates of ‘ulcer’ /ʌlsə/ and ‘being’ /bi:1 η/ in (5) below :

(5)





a governing domain



a governing domain

In (5.a) above , there is an inter-constituent government holding between the post- nuclear rimal ‘governed’ segment /l/ and the following onset ‘governor’ segment /s/. In (5.b) the inter-constituent governing relation holds between the first nucleus /i:/

(^)

which is governed by the second /1/.Kaye (1990 b.:137) affirms that “[a]ll things being equal , transsyllabic consonant clusters should be mirror images of well- formed (branching) onsets.” It can be seen that in the above example /ʌlsɔ/ the trans- syllabic cluster /-ls-/ is a ‘mirror image’ of well-formed branching onsets , as in ‘slay’ /sleɪ/ , ‘sleeve’ /sli:v/ , and ‘slop’ /slop/.

A third type of governing relations can be detected at the level of nuclear pro- jection.It is associated with prosodic phenomena such as stress assignment and vowel harmony.It differs from the above mentioned two types of government in neither being strictly local nor strictly directional.

Governing relations are subject to certain universal principles among which the Projection Principle and the Empty Category Principle figure prominently.The Pro- jection Principle reads as follows :

Governing relations established at the level of lexical representation are maintained at all levels of representation. And the Empty Category Principle (ECP) states that :

Empty skeletal positions are subject to a special form of Government (they must be properly governed)¹ . (Ibid : 138)

¹For more information , see Kaye (1990 b.) , Charette (1991) , Gussmann & Kaye (1992) ,among others.

According to the first principle such relations are defined at the level of lexical representation and they remain constant throughout a phonological derivation . The properly governed empty category is a skeletal position with no phonological material viz. this category is P-licensed.P-licensing covers the following cases :

- 1.Domain –final (empty) categories are P-licensed (parameterised)
- 2.Properly governed (empty) nuclei are P-licensed
- 3.A nucleus within an inter-onset domain

When an empty category is licensed this means that it becomes inaudible.As for proper government , certain conditions should be available.So, X properly governs Y if :

- 1.X and Y are adjacent on the relevant projection.
- 2.X is not itself licensed , and
- 3.Neither X nor Y are government licensers.

A government licenser is a nuclear position whose onset governs a preceding rimal complement , or whose onset is the head of a branching onset.With these preliminary remarks acting as a theoretical background for the present study , we can proceed to- wards the categorisation of syllabic constituents in SIA.

3.A Government - Phonology Categorisation of SIA Syllabic Constituents :

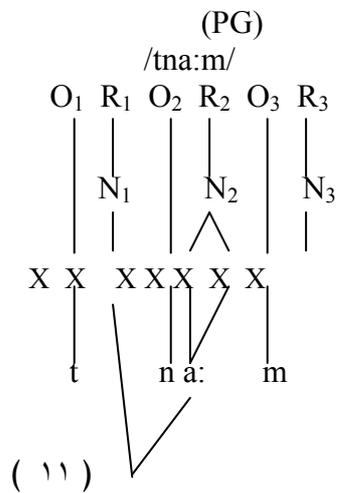
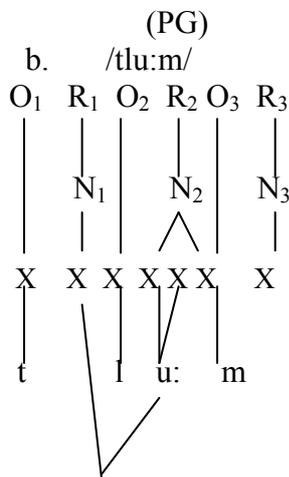
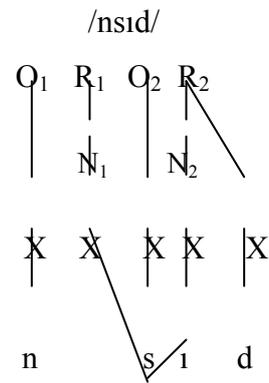
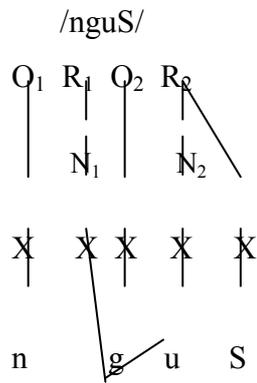
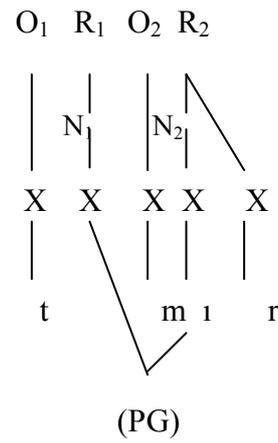
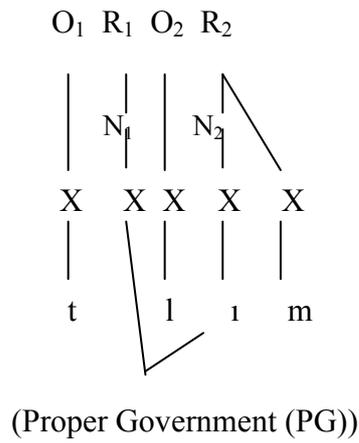
Let us, first ,examin the verbal templates of the following forms ² :

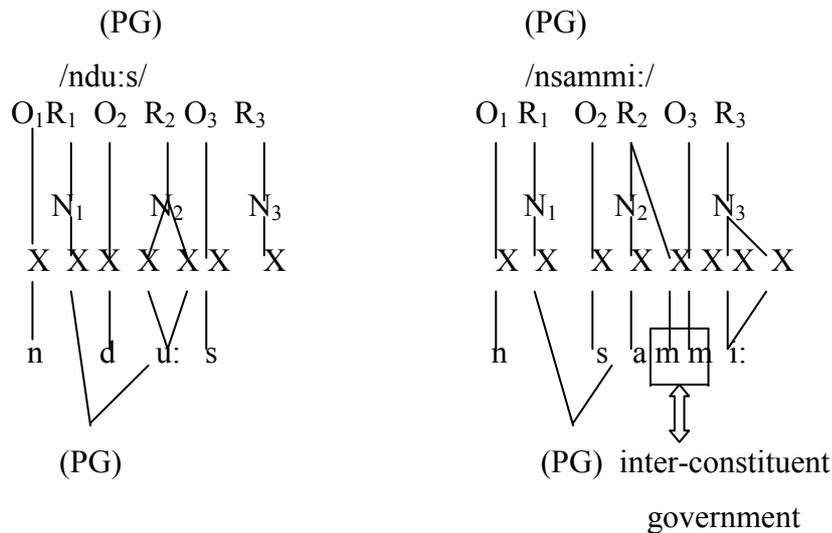
²In such verbal forms the consonantal prefixes /t-/ and /n-/ indicate the present simple tense.

- | | | |
|---------------------------------|---|------------------------------|
| a./tlim/ (you/she gather(s)) | ; | /tmir/ (you/she pass(es) by) |
| /nguS/ (we cut) | ; | /nsid/ (we close) |
| b./tlu:m/ (you/she complain(s)) | ; | /tna:m/ (you/she sleep(s)) |
| /ndu:s/ (we trip on) | ; | /nsammi:/ (we name) |

(6)

- | | | |
|----|--------|--------|
| a. | /tlim/ | /tmir/ |
|----|--------|--------|





In (6.A) all four forms are composed of a replication of the syllable pattern onset + rime. That is, there are in each of them two onsets followed by two rimes. However the two rimes do not have the same structure. R₁ dominates a nuclear position which is sandwiched between the two onsets O₁ and O₂; hence, it is P-licensed since it forms an inter-onset domain. According to Kaye (1990 :6) this P-licensed category is empty, and therefore it does not have any phonetic interpretation. Then, N₁ is both invisible and inaudible. As for R₂, it is a branching rime for it straddles two slots (or skeletal positions), namely: the nuclear position which is filled by a vowel, and the coda (or post-nuclear position) which is occupied by a consonant.

Concerning the governing relations holding among the elements of these syllabic constituents, we may start with the governing relation holding between the consonants filling the positions of O₁ and O₂ that are separated by an empty nuclear position. The consonantal sequences

filling these two adjacent slots form binary branching onsets , since they do not violate the two universal constraints of Strict Locality and Strict Directionality. Thus, the first consonant in these onsets domains is the head and governor that governs the immediately following (governed) consonant within the same sequence. It was mentioned previously that the N_1 is empty ; that is , it is both inaudible and P-licensed. According to the ECP such a skeletal position must be properly governed by a following (non-empty) nucleus. The only nucleus that is not empty and not licensed in these forms is N_2 . Then, N_2 should govern the immediately preceding empty N_1 and we get an inter-constituent (or a transsyllabic) governing relation which is, this time, from right to left.

To sum up , the above four verbal forms are composed of branching onsets followed by branching rimes. There are initial empty nuclei that are properly governed by the following nuclei. One last note concerning the branching onsets of these forms : sonority within such onsets may increase or decrease.

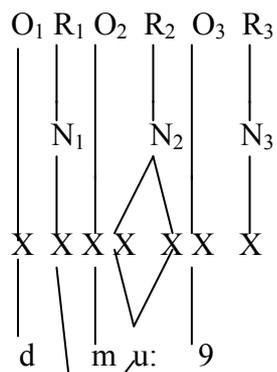
As for the syllabic structures of the verbal forms in (6.b) , they are composed of three replicated onset+rime sequenses. Consider first the syllabic structure and governing relations of the first three forms /tlu:m/ , /tna:m/ , and /ndu:s/. Again , R_1 dominates N_1 which is an inter-onset domain ; thus it is P-licensed , empty and does not have any phonetic content. This allows it to be properly governed by N_2 which is dominated by R_2 . Consequently , we get branching onsets composed of $O_1 + O_2$ of both types : rising sonority and falling sonority. The licenser and governor N_2 in these forms is a branching one : dominating two slots filled by a long vowel. N_3 which is

X X X X X X X

k n u: z

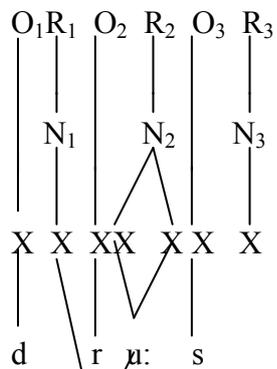
(PG)

/dmu:9 /



(PG)

/dru:s/



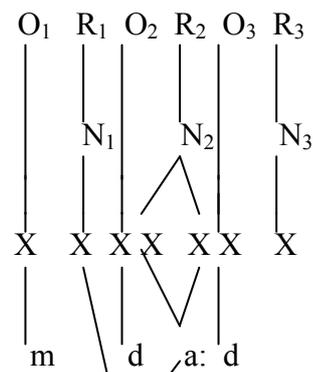
(PG)

X X X X X X X

n k a: t

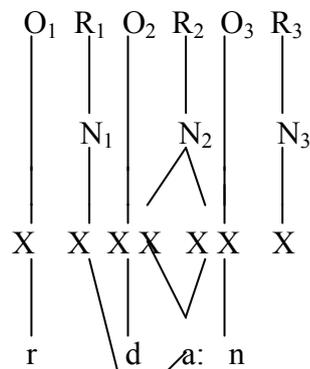
(PG)

/mda:d/



(PG)

/rda:n/



(PG)

All of these forms share the same syllabic structure and governing relations with those of (6.b). They are presented here as further evidence for the type of structure syllabic constituents have in SIA. It can be noticed that both branching and non-branching syllabic constituents exist in this dialect. Furthermore, it can be observed that sonority may increase or decrease within word- initial clusters (viz. initial onsets). These findings suggest that in this dialect there are as many branching syllabic constituents as there are non-branching ones. One more note that needs to be highlighted is that initial onsets can also be non-branching as displayed by the past tense forms of (6.a) :

(8.a) /lam/ (he gathered) ; /mar/ (he passed by)
/gaS/ (he cut) ; /sad/ (he closed)

And those of (6.b) :

(8.b) /la:m/ (he complained) ; /na:m/ (he slept)
/da:s/ (he tripped on) ; /samma/ (he named)

This applies also to the singular forms of the plurals of (7) :

(8.c) /kanz/ (a treasure) ; /nikta/ (a joke)
/dam9a/ (a tear) ; /madda/ (a carpet)
/daris/ (a lesson)

4. Conclusions :

One can conclude out of the above stated discussion that SIA is a dialect enriched with different structural types of syllabic constituents. It contains both branching as well as non-branching constituents. Initial onsets of both types of sonority (i.e., rising sonority and falling sonority) exist in this dialect. This last finding

comes as an empirical contra-evidence to the traditional claim that word-initial branching onsets are universally only of the rising sonority type (see Selkirk 1984 , and Clements 1990).

Viewing SIA as another bare exception to a set of constraints or markedness conventions (together with the many occidental Afro-Asiatic languages such as Berber and Moroccan Arabic , and modern slavic languages like Russian , Czech , and Serbo-Croatian) will not help avoiding the loss of a Universal Grammar –generalisation about branching onsets.³Moreover , this leads to the inevitable conclusion that some ‘universal’ generalisations need to be amended.

³ For a related viewpoint , see Scheer (2000).

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