Two phenomena in Cairene Arabic

These two separate phenomena in Cairene Arabic serve as evidence about syllable structure in this language. The goal of this exercise is to propose a (single consistent) criterion for dividing words into syllables that provides insight into both phenomena.

I. Pharyngealization ("emphasis") spread

All Arabic dialects contain what are traditionally called "emphatic" sounds. Acoustically, they are characterized by lowered second formant, and articulatorily by a constriction in the pharyngeal cavity caused by retracted tongue root. Spreading of pharyngealization is illustrated by the following forms from Cairene Arabic.

- In these examples, capital letters indicate pharyngealized sounds. (This is a non-IPA convention, used here for convenience.)
- The underlying source of pharyngealization is the following sounds: /T D S Z L R/.

```
/bart/
                            [bart]
                                                 'he spent the night'
                                                 'armpit'
/ba:T/
                            [BA:T]
/ti:n/
                            [ti:n]
                                                 'figs'
                     \rightarrow
/Ti:n/
                            [TI:N]
                                                 'mud'
/faSlu/
                                                 'his term'
                            [FASlu]
                                                 'man'
/Ra:gil/
                            [RA:gil]
/Ragle:n/
                            [RAGle:n]
                                                 'two men'
/La:Tif/
                            [LA:TIF]
                                                 'pleasant' (masc.)
                                                 'pleasant' (fem.)
/LaTi:fa/
                            [LATI:fa]
/faDDal/
                                                 'he preferred'
                            [FADDAL]
                     \rightarrow
                                                 'he preferred the boy'
/faDDal#ilwalad/ →
                            [FADDAlilwalad]
```

Propose an analysis to account for **how far pharyngealization spreads** in a word. Does your analysis explain why /Ragle:n/ 'two men' becomes [RAGle:n], *not* *[RAGLE:N] or *[RAgle:n]?

II. Epenthesis

In Cairene Arabic, epenthesis (=insertion) of the vowel [i] occurs under certain conditions. Try to characterize the conditions that lead to epenthesis. **Do any insights from Part I help us understand this pattern?**

```
/balad-na/
                                [baladna]
                                                      'our town'
/bint-na/
                                [bintina]
                                                      'our daughter'
/kalb-na/
                                [kalbina]
                                                      'our dog'
/?ul-t-l-u/
                                                      'I said to him'
                         \rightarrow
                                [?ultilu]
/katab-t-l-u/
                                [katabtilu]
                                                      'I wrote to him'
                         \rightarrow
/katab-t-gawa:b/
                                [katabtigawa:b]
                                                      'I wrote a letter'
/?ul-t-l-ha/
                                [?ultilha]
                                                      'I said to her'
/katab-t-l-ha/
                                [katabtilha]
                                                      'I wrote to her'
/katab-t-l-gawa:b/
                                [katabtilgawa:b]
                                                      'I wrote the letter'
```