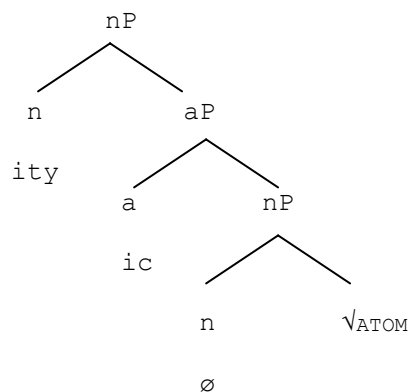# Derivation by Phase and Affixes as Roots

O. This presentation comprises three parts: First, I address three seemingly unrelated issues: a) the failure of derivation by phase, *under current assumptions about the nature of affixes*, to satisfactorily handle the phonological behavior and semantic contribution of English 'cyclic' or stress-shifting affixes; b) a looseness in the spellout mechanisms of DM with respect to the heads of xP's (a, v, n); c) the categorial ambiguity of a great number of affixes. Second, I show how all three problems are solved if affixes themselves are viewed as roots. Third, I discuss the consequences of the proposal, viz. a series of correct predictions, and a very minor readjustment of our overall construal of what roots are.

1. Three issues.
Issue 1. Consider the structure in (1) for *atomicity*.

```
                        nP
                   ╱         ╲
                  n           aP
                              
                ity       ╱       ╲
                         a          nP
                                   
                        ic      ╱      ╲
                               n        √ATOM

                               ø
```

Derivation by phase is infinitely more restrictive than Chomsky & Halle's (1968) cyclic derivations, even supplemented by Kean's Strict Cycle Condition. Indeed, if a) every xP in (1) determines a phase and triggers phonetic interpretation, and b) phases are impenetrable, then the output of one phase cannot be modified at the next higher xP. As a result, stress cannot 'shift', say from *átom* to *atómic*, then to *atomícity*; neither can the attendant patterns of vowel reduction be implemented. In this respect, neither will the distinction between 'strong' and 'weak' phase (Chomsky, 2001) help, nor will Marvin's (2002) revised version of the Phase Impenetrability Condition, as will be demonstrated.

(1) fails to deliver the desired output in another area, as well. Based on Arad's findings (Arad, 2005), one would expect *atomicity* to be semantically compositional. Yet, the expected compositionality follows no more from (1) than the right phonetics, to wit (2):
(2)
the atomicity of the bomb

Issue 2. Consider adjectives such as *obvious* or *normal*. Current versions of DM will describe the spellout of **a** in terms of competition for insertion, (Embick & Noyer, 2006). However, it is entirely unclear in what sense *–ous* and *–al* compete for insertion in [$_{Adj}$ _ √OBVI] or [$_{Adj}$ _ √NORM] any more than √OBVI or √NORM themselves, in contexts such as [$_{Adj}$ al _] or [$_{Adj}$ ous _], respectively.

Issue 3. Compare adjectives such as *normal* and *fat*. Unaffixed *fat* is adjectival by virtue of a feature [$_{Adj}$] associated with the head of aP. The same feature must, of necessity, be present on the head of aP in *normal*. Hence, the contribution of *–al* itself to the adjectivalness of *normal* can be discarded, a point rendered all the more plausible when the many non-

adjectival *–al* xP's such as *mammal, tribunal, finial*, etc. are taken into consideration (a similar generalization can be made for the indifference of *–ian* to category: *reptil-ian*ADJ vs. *librar-ian*N) . But then, if *–al* and other affixes are not categorial exponents, what are they ?
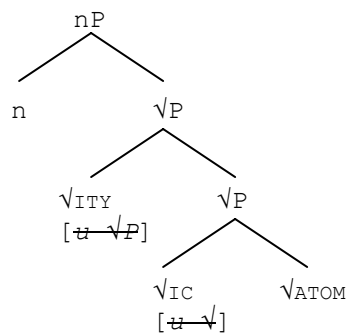
2. The proposal.

I propose that affixes are bound roots, their bound character being represented by an uninterpretable feature which will require them to select a complement in order to project at the phrasal level. Roots come in three varieties according to their associated uninterpretable feature: $\sqrt{}_{[u \sqrt{}]}$, $\sqrt{}_{[u \sqrt{P}]}$, or $\sqrt{}_{[u xP]}$. Complex roots thus formed will merge with a category assigning head in the usual way. *atomicity* can then be represented as in (3).
(3)

```
                        nP
                      /    \
                    n       √P
                          /    \
                      √ITY      √P
                      [u̶ √̶P̶]    /  \
                             √IC    √ATOM
                             [u̶ √̶]
```

Under this account, the only interpretive episode is at nP. Phonetic interpretation will thus affect the entire phasal chunk dominated by nP in one swoop, and stress will be assigned, yielding *atomícity* just as in an unanalyzable noun, e.g. *Aristóphanes*. The non-compositionality of *atomicity* follows, as well.

3. The Predictions

Fabb (1988) proposes a number of descriptive generalizations regarding the co-occurrence of English affixes. Those generalizations that are correct will be shown to follow from the proposal in (3). Those that are incorrect will be shown to be a) inexpressible in the framework advocated here, and b) empirically refuted. Two examples are given:

FABB 1 (correct): Some suffixes, e.g. *–age*, never attach to an already-suffixed word

Those are, of course, $\sqrt{}_{[u \sqrt{}]}$ roots: as they attach directly to their required complement, no intervening √ will be tolerated (4a).

FABB2 (incorrect): Denominal *–ism* does not tolerate any intervening suffix

This generalization can not be correct: if √ISM selects an nP (i.e. if it is of the $\sqrt{}_{[u xP]}$ variety), it cannot possibly access the internal structure of its complement (4b). Indeed: gang-ster-ism, trick-ster-ism
(4)

```
    a.                              b.        √P
              √P                            /    \
            /    \                       √ISM      nP
         √AGE    √STEER                  [u̶ x̶P̶]    /\
         [u̶ √̶]                                    /__\
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