Is there vowel reduction in English?
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(1) aims
   a. to reduce redundancy
   b. to rid phonology of nonphonological “processes”
   c. to understand what stress is

(2) textbook views
   a. stress is scalar: primary, secondary, tertiary, etc (“five degrees must be distinguished” Wells 1990: 683), reduced vowels only occur in the lowest degree;
      SPE stress is cyclically assigned and potentially has infinite degrees
   b. word stress is relational: a given syllable is stressed if the adjacent syllable is less stressed, and it is not stressed if the adjacent syllable is more stressed
   c. stress and reduced vowels
      i. reduced vowels occur in unstressed syllables or
      ii. vowels are reduced in unstressed syllables

(3) symptoms of stress
   a. syllable may receive tonic (undebated, some claim this is the only symptom of stress, eg Ladefoged 2001, Bolinger 1986): T-stress
   b. syllable initiates a foot (how to detect this?): Fo-stress
   c. syllable contains a full vowel (but what is a full vowel?): Fu-stress

(4) scalar stress?
   a. unlike (?) in Hungarian, in English a one-root word may contain multiple stresses
   b. in the citation form of a multiply stressed word, which is a tone unit(!), the tonic falls on the last stress, but this has nothing to do with the word, this does not mean that this syllable is inherently stronger (ie “primary” stressed): Piccadilly
   c. in a phrase with a multiply stressed word followed by another word the tonic may fall on the first stress, again this is independent of the word itself: Piccadilly Circus (nb in the default case, tonic would fall on Cír-!)
   d. conclusions
      i. primary = secondary stress
      it’s not just that the difference is predictable, there is no difference
      ii. a lexical item may contain maximally two T-stresses
         the tonic never falls on -bi- in ámbiobiográfical or on -B- in FBI

(5) being foot initial (Fo-stress)
   Harris (in press) shows that the beginning of a foot is much less prone to lenition than other places
   a. no [r] loss: foray fíre, ferrite fírait vs America améfaka, very véñ
   b. no [h] loss: Abraham éjbrahám, Stockholm sdókhówm vs Graham gréjám, Denholm déñam (Denholme, WÝks déñholm)
(6) a symptom of a full vowel (Fu-stress)
no flapping/voicing: atoll átál vs atom árom, modem modalità vs modal módal
≈ aspiration: atoll áthul vs atom *átham (Bolinger 1986)

(7) Fo-stress = Fu-stress (hereafter F-stress), further symptoms
a. no syncope: separate sépâat vs sépâerjt
b. no high vowel gliding: affiliate âfiljâat vs âfiljâerjt, *âfiljâerjt;
   graduate gráðwât vs gráðowrjt, *gráðowrjt
   nb high vowel gliding = syncope!
c. no yod-dropping: value váljow vs absolute ábsalowt
   menu ménju vs avenue ávenu

(8) all of the above restrictions also hold in the case of T-stress!
both Bolinger and Ladefoged claim that syllables with a full vowel that are not potential
hosts for the tonic are unstressed, it is only their length that make us feel they are stressed
(Ladefoged 2001: 95); it is suspicious though that the same phenomena occur together with
these F-stressed vowels as with T-stressed ones

(9) full vs reduced vowels
a. Bolinger’s (1986) system: no overlap
   i. full vowels: i e æ a o u + ai ao ei
   ii. reduced vowels: i o o (Kenyon & Knott (1953) have i o o!)
b. Wells’ (1990) system: some overlap
   i. full vowels: iː i e æ a o uː oː uː + ai ao ei + ɪ oʊ oː oː
e. reduced vowels: iː e o (ʊ oː uː)
c. the CUBE (2013) system: full overlap: RV ⊂ FV
   i. full vowels: iː j ɪ e æ a oː oː uː oː w + oː aw oː j + iː eː oː
   ii. reduced vowels: iː j ɪ o (aw) ow

(10) “vowel reduction”
a. is never caused by word-level affixation
b. alternations only in some function words (of əv, əv, but off əf, *əf)
c. the relationship of barometer bɔrəmətə ~ barometric barmətrik is not phonological, only
   semantic (like that of sing sɪŋ ~ sang sɑŋ ~ sung sɑŋ ~ song sɔŋ): only the consonants are
   identical in the allomorphs

REFERENCES
Arnold.
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