

# GIMSON'S PRONUNCIATION OF ENGLISH

a ʌ ə h j t θ  
ŋ β t̄ ɔ m k  
b u ε ʒ æ  
ʒ ʔ v w ɔ̄

SIXTH EDITION

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Epenthetic /t/ may also occur before /θ,ʃ/ as in *anthem* /æn(t)θəm/, *pension* /pen(t)ʃən/, (but in the latter there is no coalescence to /tʃ/). Such alternation does not apply in RP following /l/, so that *else* and *melts* have distinct final clusters.

While epenthetic /t/ occurs between an /n/ and /θ,s,ʃ/, similarly, an epenthetic /p/ or /k/ may occur between an /m,ŋ/ and a following fricative, as in *triumphs* /traɪʌm(p)fs/, *warmth* /wɔ:m(p)θ/, *confuse* /kəm(p)fu:z/, *Kingston* /kɪŋ(k)stən/.

Epenthesis is less common before a voiced fricative, as in *wins* being pronounced the same as *winds* /wɪn(d)z/ and in *lambs* /læm(b)z/, *rings* /rɪŋ(g)z/. If there is epenthesis in *king-size*, note that it is a /g/ that is inserted, i.e. /kɪŋ(g)səz/, suggesting that *king* has a different base form from *Kingston* /kɪŋ(k)stən/.

### 10.9 Variability in the Phonemic Structure of Words

In connected speech, English words exhibit variations of accentual pattern and changes of a phonemic or phonetic kind, involving assimilation and elision, especially at word boundaries (see Chapter 12). There is also often a remarkable latitude in the choice of phonemes used in words when said in isolation by RP speakers. Even with the exclusion of cases of differing phonemic inventories—e.g. the choice between using /hw/ or /w/ for *wh* words or /ɔ:/ or /ɒ/ in words of the *bore* type—there remains a high degree of variability within the same variety of pronunciation. The permissible variations concern mainly vowels but cases of a choice of consonant also occur. The following are examples:

#### (1) Vowels

- /i:/-i/ acetylene, economy; -e/ economics, premature; -ei/ deity, detour;
- /aɪ/ Argentine, iodine
- /ɪ/-e/ alphabet, orchestra; -/aɪ/ privacy, dynasty; -/ei/ magistrate, holiday;
- /ə/ believe, system, adequate
- /e/-ei/ again, maintain; -/ə/ accent, emblem
- /æ/-/ɑ:/ graph, translate; -/ei/ patriot, amoral; -/eə/ larynx, pharynx; -/ə/ agnostic, vapidity
- /ʌ/-/ɒ/ constable, combat; -/ə/ bankrupt, dandruff
- /ɒ/-/ɔ:/ salt, wrath, Australia; -/ə/ obscure, obligatory
- /ɔ:/-/ʊə/ sure, poor
- /ʊ/-/u:/ room, groom
- /u:/-/ju:/ suit, supreme, allusion
- /ei/-/ɑ:/ data, esplanade
- /əʊ/-/ə/ allocate, phonetics

#### (2) Consonants

- /t/-/tj/-/tʃ/ amateur
- /tj/-/tʃ/ actual, Christian
- /dʒ/-/dʒ/ educate, grandeur
- /dʒ/-/ʒ/ garage
- /g/-/dʒ/ pedagogic
- /ntʃ/-/nʃ/ French, branch
- /ndʒ/-/nʒ/ revenge, strange

- /k/-/kw/ quoit
- /ŋk/-/ŋ/ anxious
- /ŋg/-/ŋ/ English
- /sj/-/sɪ/-/ʃɪ/ associate; /sj/-/ʃ/ issue, sexual
- /zj/-/ʒ/ usual, azure
- /ʃ/-/ʒ/ Asia
- /s/-/z/ usage, unison; /f/-/p/ diphthong, naphtha

### 10.10 Phonotactics

English does not exploit, in the word and the syllable, all the possible combinations of its phonemes. For instance, long vowels and diphthongs do not precede final /ŋ/;<sup>12</sup> /e.æ.ʌ.ɒ/ do not occur finally; and the types of consonant cluster permitted are subject to constraints in both initial and final positions. Initially, /ŋ/ does not occur; no combinations are possible with /tʃ,dʒ,ð,z/: /r,j,w/ can occur in clusters only as the non-initial element; initial sequences such as /fs,mh,stl,spw/ etc. are unknown. Finally, only /l/ may occur before non-syllabic /m,n/: /h,r,j,w/ do not occur in the type of phonemic analysis here used (see §8.5); and terminal sequences such as /kf,ʃp,ð,ʒbd/ etc. are unknown.

Although the general pattern of word-initial and word-final phoneme sequences is plain, there are certain problems:

(1) Some sequences are exemplified only by single words which are themselves of rare occurrence, e.g. /smj-/ *smew*, /gj-/ *gules*. Such sequences are generally included in the statements of potential clusters given under §10.10.1.

(2) Some sequences are exemplified only by their use in certain proper names, e.g. /gw-/ *Gwen* (and various other names of Welsh origin). Again, such sequences are generally included.

(3) Some sequences are exemplified only in recently imported foreign words, often themselves proper names, e.g. a number of words, including *schnapps* and *Schweppes*, involving initial clusters beginning with /ʃ/. If such words are judged to be in common use, the clusters they exemplify are included in the statements in §10.10.1.

(4) Sometimes a word or a group of words have more than one accepted pronunciation, one of which provides a unique sequence of phonemes. Thus *width*, *breadth*, *hundredth* have variants with /tθ/ or /dθ/: only the more common /tθ/ is included in §10.10.1, since /dθ/ is the less common pronunciation, and /tθ/ follows a common pattern whereby all final clusters involving plosives, fricatives and affricates are either wholly voiceless or wholly voiced. Words like *French*, *range* can be pronounced with /ntʃ,ndʒ/ or /ʃ,ʒ/: again, since the former is more common, the possibility of the latter is excluded. On the other hand, though many speakers do not distinguish the final clusters of *prince* and *prints* (see §10.6 above), the possibility is sufficiently widespread for both /-ns/ and /-nts/ to be considered as possible final clusters.

<sup>12</sup> It should be noted that such combinations do occur as a result of assimilation, see §12.4.5



ð +	d,	z
s + p, t, k		
z +	d	
ʃ + t		
ʒ +	d	

(b) Final CC clusters can be divided into two groups:

(i) Nasal, lateral, or /s/ plus another consonant, e.g. *jump, bend, dent, think* /θŋk/, *quilt, whist, cask, cusp*:

(ii) A consonant plus one of the apicals /t,d,s,z,θ/. The majority of such clusters arise from non-syllabic suffixation of past tense /t,d/; from possessive, plural, or third-person singular present tense /s,z/; or from ordinal or noun-forming /θ/ or noun-forming /t/, e.g. *laughed, behaved, dog's* or *dogs, cat's* or *cats, leads, hits, fifth, depth, product*. There are a few monomorphemic words of this sort, e.g. *axe, adze, lapse, corpse*.

(c) In the present analysis of RP /r,h,j,w/ do not combine with other consonants in final positions. (/r/ occurs in such positions in General American; and if the diphthongs /eɪ,aɪ,ɔɪ,əʊ,əʊ/ were analyzed as sequences /ej,aj,ɔj,əw,əw/ then /j,w/ would be said to occur in such positions (see §8.5). /g,ŋ/ do not occupy final position in a final CC cluster. /θ/ is of limited occurrence in this position: /-pθ/ occurs only after /e/, /-mθ/ only after /ɔ:/ and /fθ/ only after /t/. /-ln/ occurs only after /t/ and /lf/ only after /e/. Only /dz/ occurs after all vowels; /-nz, -lz/ occur after all but two vowels. All other CC clusters show considerable restrictions in their ability to combine with preceding vowels.

#### (9) Final VCCC

(a) Final VCCC clusters pattern as follows:

(i) Final /t/ preceded by one of the following sequences:

p + s
t + s
k + s
d + s
m + p
n + s, tʃ
ŋ + s, k
l + s, p, k, tʃ
s + p, k

(ii) Final /d/ preceded by one of the following sequences:

n + dʒ, z
l + dʒ, m, v

(iii) Final /s/ preceded by one of the following sequences:

p + t, θ
t + θ
k + t

m + p, f
n + t, θ
ŋ + k
l + p, t, k, f, θ
f + t, θ
s + p, t, k

(iv) Final /z/ preceded by one of the following sequences:

n + d
l + b, d, m, n, v

(v) Final /θ/ preceded by one of the following sequences:

k + s
n + t
ŋ + k
l + f

(b) Final CCC clusters can be divided into two groups:

(i) Those which involve a combination of the two types of CC clusters, i.e. /m,n,ŋ,l,s/ plus C plus /t,d,s,z,θ/. These nearly all involve suffixes, e.g. *jumps, cults, lists*, but there are a few monomorphemic words, e.g. *mulct, calx*.

(ii) Those which involve the double application of /t,d,s,z,θ/; the majority again involve suffixes, e.g. *fifths* /fɪfθs/, *products* /ˈprɒdʌkts/, *acts* /æktz/ (but these are all commonly reduced to /fɪfs/, /ˈprɒdʌks/, /æks/), but there are two common monomorphemic words, *text* and *next* pronounced /tekst/, /nekst/ when are not reduced, but also commonly reduced to /teks/ and /neks/.

(c) CCC clusters predominantly follow short vowels. Eleven of the 49 CCC final clusters occur after only one vowel (five after /t/, four after /e/, one after /ʌ/, one after /ə/).

(10) *Final VCCCC*—Final CCCC clusters occur only rarely, as a result of the suffixation to CCC of a /t/ or /s/ morpheme, e.g. /-mpts/ *prompts, exempts*; /-mpst/ *glimpsed*; /-lkts/ *mulcts*; /-lpts/ *sculptis*; /-lfθs/ *twelfths*; /-ksts/ *texts*; /-ksθs/ *sixths*; /-ntθs/ *thousandths*.

(11) Final clusters involving /t,d,s,z,θ/, as well as initial clusters beginning with /s/, violate the sonority hierarchy (see §5.5.1 above) and a much simpler statement about English phonotactics (particularly that part concerning final clusters) can clearly be made if such consonants, which are all apical sonorants, are treated as appendices and excluded from the basic statement.

(12) With a vowel inventory of 20 items and the possible initial and final consonant clusters given above, it is clear that a large number of potential combinations are not utilized. Thus, unused monosyllabic words such as the following conform to an already existing pattern: /faʊd, saɪdʒ, mɒmp, bru:tʃ, plɪk, splak, stredʒ/. If, in addition, gaps are filled on the grounds of general patterning, it would be possible to construct words of an English phonological character with, for instance, initial /tʃʊ-, rɜ:-, glɔ:-, skɪə-, sprəʊ-/ or final /-ɔ:ɔ, -aɪtʃ, -u:nt, -ɑ:ndʒ, -ʌkst/ etc.

### 10.10.2 Word-medial Syllable Division

Word-medial consonant sequences are of course longer than those in initial and medial positions since they combine syllable-coda and syllable-onset positions. While word-initial naturally equates with syllable-onset and word-final with syllable-coda, any word-medial sequence has to be divided between coda and onset. (In this section syllable division is marked by a stop, e.g. /ə.ˈræʊ.mə/.) Some of the criteria for dividing such sequences have already been discussed in §5.5.3. The three basic criteria are morphemic (syllable boundaries should correspond with morpheme boundaries); phonotactic (syllable division should accord with what we already know about syllable onsets and syllable codas from what we know of them in word-initial and word-final positions); and allophonic (syllable division should predict correct allophonic variation). These principles sometimes conflict or give no clear answer. A further principle is sometimes applied in such cases, the maximal onset principle,<sup>13</sup> which sets a preference for assigning consonants to onsets on the basis that onsets are more commonly complex in languages than codas. The little experimental evidence that there is<sup>14</sup> also suggests a general preference for onset syllabification.

The case of single medial consonants is exemplified by *motive* (with a long vowel in the accented first syllable) and by *butter* (with a short vowel in the accented first syllable). In the case of *motive*, the phonotactic principle is satisfied either way while the application of the allophonic principle is uncertain (there is no instrumental evidence about possible shortening before /t/, although it is probable that this does not apply). So, using the maximal onset principle, *motive* is generally syllabified as /ˈməʊ.tɪv/, as are other similar words with a long vowel, e.g. *autumn*, *suitor*, *survey*. In the case of *butter*, words do not end in /ʌ/ so the phonotactic principle suggests /ˈbʌt.ə/, which accords with the allophonic shortening of /ʌ/ before /t/ and the same syllabification is generally applied to similar words with a short vowel, e.g. *bitter*, *supper*, *knickers*.

Medial CC sequences are exemplified in *sequel* (with a long vowel in the accented first syllable) and *petrol* (with a short vowel in the accented first syllable). In the case of *sequel*, both /siː+/kwəl/ and /siːk.wəl/ are divisions which accord with the phonotactic principle. However /siː.kwəl/ accords better with the allophonic principle whereby the /w/ following /k/ is devoiced. This syllabification applies to other cases of CC following a long vowel, e.g. *programme*, *perfume*, *protein*, *awkward*. In the case of *petrol* /pet+/rəl/ accords with the phonotactic principle, but does not accord with the allophonic devoicing of /r/, whereas /pe+/trəl/ correctly predicts the devoicing of /r/ (following /t/), but does not accord with the phonotactic principle (words do not end in /e/). Applying the maximal onset principle resolves the problem in favour of the latter solution. In *window* the phonotactic and allophonic principles would allow both /ˈwɪn.dəʊ/ and /ˈwɪnd.əʊ/; the maximal onset principle decides in favour of /ˈwɪn.dəʊ/. The phonotactic principle would give us /ˈplæs.tɪk/ but the allophonic principle

suggests /ˈplæ.stɪk/ because of the unaspirated /t/ and this is endorsed by the maximum onset principle as well as being in accord with the experimental evidence.<sup>15</sup>

The case of longer medial sequences is exemplified by *extra*. The /k/ belong in the coda of the first syllable by both phonotactic and allophonic principles and the /tr/ belongs in the onset (/r/ is devoiced). These two principles give us no solution to the assignment of /s/, which we place in the second syllable by the maximal onset principle, giving /ˈek.strə/.

All the patterns which have been dealt with so far have concerned consonantal sequences following the primary accent. Examples preceding the primary accent most frequently involve consonants containing the typical vowels of unaccented syllables /ə/ and /ɪ/ and in such examples the phonotactic principle together with the maximal onset principle generally leads to the whole sequence being syllabified with the following syllable, e.g. /ə.ˈkwɪə/, /rɪ.ˈkwɛst/, /ə.ˈplɔːz/, /ə.ˈstjuːt/, /ə.ˈspærəgəs/. Similarly, in those, less frequent, cases where a full vowel precedes the primary accent the phonotactic principle and the maximum onset principle again generally apply unproblematically, e.g. /meɪn.ˈteɪn/, /sep.ˈtɛmbə/, /taɪ.ˈkʊm/, /əʊ.ˈbɪs/, /bæp.ˈtaɪz/.

Most of the examples above have concerned disyllabic words. The general principles apply in similar fashion in longer words, with clusters before and after secondary accent behaving the same as those around a primary accent, e.g. /en.ˈsaɪ.kləʊ.ˈpiː.dɪə/, /æl.juː.ˈmɪn.ɪəm/, /ˈkæŋ.gə.ˈruː/, /ˈmæk.ɪn.tɔʃ/. The morphemic principle applies regularly in compound words but note that inflexional /-ɪd/ and /ɪz/ regularly lead to resyllabification according to the patterns for monomorphemic words outlined above, e.g. /saɪt/ ~ /ˈsaɪ.tɪd/, /vaɪs/ ~ /ˈvaɪ.sɪz/.

An alternative solution to ambiguous medial sequences can be achieved with the notion of ambisyllabicity; by this means the /t/ in *butter*, the /t/ in *petrol* and the /s/ in *extra* are regarded as ambisyllabic, i.e. they straddle the syllable boundary. For plosives the compression stage could belong to the first syllable and the plosion and release to the second; for fricatives the boundary would simply be in the middle. Phonetically this seems a credible solution. Unfortunately, it would considerably complicate the overall statement of permissible clusters.

### 10.10.3 Inflexional Suffix Formation

Inflexional suffixes (which do not normally affect accent) follow certain rules which affect segmental aspects of pronunciation. The following regularities may usefully be listed here.

(1) *Past tense*—For regular verbs in which the past tense is signalled by the addition of an *-ed* ending, the following rules of pronunciation apply:

(a) If the stem ends in /t/ or /d/, add /-ɪd/ e.g. *exclude* /ɪksˈkluːd, ɪksˈkluːdɪd/; *guard* /gɑːd, ˈgɑːdɪd/; *rot* /rɒt, ˈrɒtɪd/; *target* /ˈtɑːɡɪt, ˈtɑːɡɪtɪd/. Otherwise:

<sup>13</sup> See Selkirk (1982)

<sup>14</sup> For experimental information on syllable division word-medially, see Fallows (1981), Treiman and Davis (1988) and Treiman *et al.* (1992). Such experimentation is based principally on speakers being asked to divide up nonsense words

<sup>15</sup> Treiman *et al.* (1992) confirmed /s/ in the onset in such sequences but found /f/ in the coda in sequences like /fl/ in *afflict*

(b) If the stem ends in any voiced sound (apart from /d/), add /-d/ e.g. *buzz* /bʌz, bʌzd/; *hammer* /ˈhæmə, ˈhæməd/; *kill* /kɪl, kɪld/; *listen* /ˈlɪsn, ˈlɪsnd/.

(c) If the stem ends in any voiceless consonant (apart from /t/) add /-t/, e.g. *arch* /ɑ:tʃ, ɑ:tʃt/; *immerse* /ɪmɜ:s, ɪmɜ:st/; *kick* /kɪk, kɪkt/; *sniff* /snɪf, snɪft/.

(2) Plural/possessive/third-person singular present tense

(a) If the stem ends in a sibilant (/s,z,ʃ,ʒ,tʃ,dʒ/), add /-ɪz/ e.g. *address* /əˈdres, əˈdresɪz/; *arch* /ɑ:tʃ, ˈɑ:tʃɪz/; *graze* /greɪz, ˈgreɪzɪz/; *judge* /dʒʌdʒ, ˈdʒʌdʒɪz/; *rush* /rʌʃ, ˈrʌʃɪz/. Exceptionally, the voicing of the fricative in *house* changes: /haus, ˈhauzɪz/. Otherwise:

(b) If the stem ends in any non-sibilant voiced sound, add /-z/ e.g. *blow* /bləʊ, bləʊz/; *pattern* /ˈpætn, ˈpætnɪz/; *regard* /rɪˈgɑ:d, rɪˈgɑ:dz/; *thrill* /θrɪl, θrɪlz/.

(c) If the stem ends in any non-sibilant voiceless consonant, add /s/ e.g. *laugh* /lɑ:f, lɑ:fs/; *pick* /pɪk, pɪks/; *resort* /rɪˈzɔ:t, rɪˈzɔ:ts/.

(3) *Present participle*—In all cases, add /-ɪŋ/ e.g. *kill* /kɪl, ˈkɪlɪŋ/; *laugh* /lɑ:f, ˈlɑ:fɪŋ/; *sing* /sɪŋ, ˈsɪŋɪŋ/; *trim* /trɪm, ˈtrɪmɪŋ/. For cases where the stem ends in /ɑ:,ɔ:,ɜ:,ə,ɪə,ə,ʊə/ see (6) below. For stems ending in syllabic [ŋ] or [l] the syllabic nature of the nasal or lateral is frequently retained, e.g. *handle* [ˈhændl, ˈhændlɪŋ]; *widen* [ˈwaɪdn, ˈwaɪdnɪŋ]. However, some speakers may insert a /ə/, retaining the same number of syllables, thus /ˈhændəlɪŋ, ˈwaɪdənɪŋ/; whilst for others the nasal or lateral may lose its syllabic function, thus [ˈhændl, ˈhændlɪŋ]. It should be noted that in such cases, the quality of the /l/ is altered, the dark [ɫ] of [hændɫ] being replaced by a clear [l]. (See also §10.8.)

(4) *Comparison of adjectives*—For those adjectives whose comparative and superlative degrees are formed by the suffixing of *-er* and *-est* respectively, the pronunciation of the stem remains unchanged except in the case of stems ending in /ŋ/ or /r/ (see (5) and (6) below). Thus /ə/ and /ɪst/ are regularly added, as in *easy* /ˈi:ziə, ˈi:zi:st/; *great* /gret, ˈgretə, ˈgretɪst/; *big* /bɪg, ˈbɪgə, ˈbɪgɪst/.

(5) *Stems ending in /ŋ/*—When the comparative and superlative suffixes are added to stems ending in /ŋ/, a /g/ is inserted, e.g. *long* /lɒŋ, ˈlɒŋgə, ˈlɒŋgɪst/. In all other cases, the /ŋ/ is followed immediately by the suffix, e.g. participle *-ing* in *longing* /ˈlɒŋɪŋ/, adjectival modifier *-ish* in *longish* /ˈlɒŋɪʃ/, or agentive *-er* in *hanger* /ˈhæŋgə/, *singer* /ˈsɪŋgə/. It should be noted that monomorphemic words (not formed of a stem and affix) exhibit the sequence /-ŋg-/ intervocally, e.g. *anger* /ˈæŋgə/, *finger* /ˈfɪŋgə/.

(6) */r/-links in suffix formation*—In the case of words which end in /ɑ:,ɔ:,ɜ:,ə,ɪə,ə,ʊə/ (usually corresponding to an <r> in the spelling), an /r/-link is regularly inserted between the final vowel of the stem and any initial vowel of the suffix, e.g. present participles *blur* /blɜ:, ˈblɜ:rɪŋ/; *secure* /sɪˈkjʊə, sɪˈkjʊərɪŋ/; *stare* /steə, ˈsteərɪŋ/; *store* /stɔ:, ˈstɔ:rɪŋ/; comparative and superlative adjectives (stem +/ə,ɪst/) *clear* /klɪə, ˈklɪərə, ˈklɪərɪst/. This process applies to derivational as well as to inflexional suffixes, e.g. adjectival *-y*, e.g. *star* /stɑ:, ˈstɑ:rɪ/; agentive noun *-er*, e.g. *murder* /ˈmɜ:də, ˈmɜ:dərə/; verb-forming *-ize*, e.g. *familiar* /fəˈmɪliə, fəˈmɪliərəɪz/. /r/-linking before inflexions where there is no orthographic <r> in the stem is unacceptable to some native speakers who have prescriptive opinions about the language, e.g. in *drawing*, *gnawing* /ˈdrɔ:rɪŋ, ˈnɔ:rɪŋ/.

#### 10.10.4 Acquisition of Phonotactics by Native Learners

Children often have special problems with the acquisition of consonant clusters in syllable-initial positions, even after they have individually acquired the individual members of the clusters. With two-term clusters consisting of fricative + C (most commonly /s/) and C+/l,r,w,j/, there is often a reduction to the single C, e.g. *smoke* → [məʊk], *spin* → [pɪn], *please* → [pi:], *queen* → [ki:n]. Clusters of /s+/l,r,w,j/ may be reduced to either element, e.g. *slow* → [səʊ] or [ləʊ]. In the case of the fricative plus C type, a possible, somewhat later, development (which may at first glance look like a regression) involves a feature merger, whereby a single consonant replaces the two consonants of the adult cluster, the single consonant taking at least one feature from each of the two consonants, e.g. *spin* → [fɪn], *fling* → [tɪŋ], *sleep* → [tɪ:p], *smoke* → [mʊəʊk]. When the two elements of the cluster are used, there may still be a difficulty in timing the relationship between the two elements: for example, a short intrusive, or EPENTHETIC, vowel (typically /ə/) may be inserted, or one of the elements may be improperly lengthened, e.g. *sport* → [sˈpɔ:t] or [s:pɔ:t], *slow* → [sˈləʊ] or [s:ləʊ].<sup>16</sup> Some sequences give particular problems: /st/ sometimes occurs with metathesis as /ts/ (no doubt because it is a homorganic sequence); clusters with /r/ are often very late acquisitions because /r/ as a single consonant is a late acquisition.

The course of development of syllable-final clusters is less well-known because the interval of time between the development of single consonants and clusters is shorter and because the development of word-final clusters is often partly a question of the learning of inflexions.

#### 10.10.5 Advice to Foreign Learners

Foreign learners may introduce epenthetic vowels into English consonantal clusters: so a word like *sport* may be pronounced as /səˈpɔ:t/ (and hence homonymous with *support*), or as /sˈpɔ:t/ (and hence homonymous with *a sport*). Difficult clusters can sometimes be acquired by pronouncing a sequence of consonants across a word boundary and then dropping the earlier part of the first word: thus /st/ may be acquired by practising first with a phrase like *bus stop*, or even medially in a bimorphemic word, e.g. *mistake*, and then reducing these to *stop* and *steak*.

Many languages have only open syllables, e.g. Hindi, Italian, and Bantu languages. Speakers of such languages should be careful not to introduce a postthetic vowel, e.g. a [ə] may be added to *bit* making it sound like *bitter*.

#### 10.11 Consonant Harmony in the Word Structure of Native Learners

Many of the common variations in the structure of words as they are acquired by children have been mentioned under the various sections dealing with individ-

<sup>16</sup> See Gilbert and Purves (1977)

ual phonemes, word accent, and phonotactics. However, one type of change which occurs in child language but which is generally unknown among historical changes in the language and among foreign learners is the phenomenon which is usually called CONSONANT HARMONY (and which is really a type of assimilation, although within words as opposed to those assimilations occurring at word boundaries which are mentioned in §12.4.5). Such consonant harmony occurs during the period when children are using only one-word utterances. It involves the assimilation of one consonant to another across an intervening vowel. Most frequently the process involves de-alveolarization (i.e. an alveolar sound is changed to something else), and is regressive (i.e. a later-occurring sound influences an earlier sound) e.g. *supper* → [ˈpʌpə], *duck* → [gʌk], *dog* → [gɒg], although occasionally the process can be progressive (i.e. in a forward direction), e.g. *cushion* → [ˈkʊkən], *bottom* → [ˈbɒpəm].

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# 11

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## Connected Speech

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### 11.1 Accent

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Connected speech, i.e. an utterance consisting of more than one word, exhibits features of accentuation that are in many ways comparable with those found in the polysyllabic word. Some parts of the connected utterance will be made to stand out from their environment, in the same way that certain syllables of a polysyllabic word are more prominent than their neighbours. Accentuation in connected speech differs, however, from the usual case of a polysyllable in that the situation of the accent in connected speech is determined largely by the meaning which the utterance is intended to convey, in the particular circumstances in which it is uttered. So, in terms of accent and reduced vowels, *She can* may be like the verb *insult* or like the noun *insult*, but not like *beacon*; and *She can go* may be like *telephone* or like *tobacco* or like *cigarette*, but not like *bachelor*.

Although accentual patterns of connected speech are freer than those of the word and are largely determined by the meaning to be conveyed, some words are predisposed by their function in the language to receive accent. These LEXICAL words are typically main verbs, adverbs, nouns, adjectives, and demonstrative pronouns. Other categories of words, such as auxiliary verbs, conjunctions, prepositions, pronouns, relative pronouns, and articles (FUNCTION words), are more likely to be unaccented, although they too may be exceptionally accented if the meaning requires it.

The examples given above illustrate the freedom of accentual patterning in utterances taken without a context. But the meaning of any utterance is largely conditioned by the situation and context in which it occurs. Thus, it must be expected that the freedom of accentual patterning of the utterance and, in particular, of the placement of the primary accent will be considerably curtailed by the constraints imposed by the contextual environment. In the case of an opening remark, or when a new topic is introduced into a conversation, there is only very limited scope for variations of meaning pointed by accentuation. Rather more accentual freedom is possible in responses; thus, in response to the statement *She*