Some Apparent Irregularities in English

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This paper deals with a fair number of apparent irregularities in English, especially as they relate to verbs, nouns, adjectives, and orthography as well as phonology. It provides, or at least attempts to provide, principled accounts for numerous surface irregularities often encountered in the structure of the English language. As such, this paper demonstrates that most surface irregularities in English are not genuine irregularities and thus English is much more regularly patterned and much more learnable than it is often made out to be.

0. Introduction

In this paper, we will show that veins of regularity often underlie patterns of surface irregularity that we occasionally encounter in the structure of English. We will attempt to prove that much of what is superficially irregular is, in fact, underlyingly very regular. This will hopefully demonstrate that English is much more regularly patterned than is generally thought to be and is thus much more learnable than would otherwise be the case.

For convenience of exposition, we will discuss cases of apparent irregularity in English in four separate sections. The first section is devoted to veins of subsurface regularity connected with several classes of irregular verbs. The second section focuses on apparent irregularities related to certain plural and genitive forms of nouns. The third section deals with apparent irregularities to be encountered in modifiers, especially adjectival modifiers. The fourth section concentrates on apparent irregularities in spelling and sound, especially the former.

1. Verbal Irregularities

All English verbs that do not take the regular past (participle) suffix *-ed* are said to be irregular verbs. For example, *find* is said to be an irregular verb because its past (participle) form, i.e. *found,* does not take the regular *-ed* suffix.

Incidentally, it turns out that *find* is not really that irregular if we take a closer look at its conjugation. In fact, every monosyllabic irregular verb with its infinitive ending in *-ind* /aind/ is (sub)regular in that this *-ind* changes to *-ound /aund/* in its past (participle) form. Thus we have *find/found/found, grind/ground/ground, bind/bound/bound,* and *wind/wound/wound.*

In fact, veins of subsurface regularity run much deeper than this lone example would suggest. Let us consider the following class of irregular verbs.

(1) a. cut/cut/cut
b. hurt/hurt/hurt
c. let/let/let
d. put/put/put
e. set/set/set
f. rid/rid/rid
g. shed/shed/shed
h. spread/spread/spread

It is to be noted here that all the verbs in (1) above are invariant from the infinitive to the past (participle) form. Thus these verbs do not take the regular past (participle) suffix *-ed* at all.

The reason that the verbs in (1) above do not take the regular past (participle) suffix is that they already end in an alveolar stop, with which the alveolar stop of the regular past (participle) suffix would collide. A collision of this sort, if allowed, would violate the constraint on proximate repetition, which is a constraint not peculiar to English but common to all human languages (Park 1977a, 1977b, 1982, 1983, and 1984).

We may take the following additional examples in support of our contention.

(2) a. meet/met/met
b. sit/sat/sat

c. shoot/shot/shot
d. spit/spat/spat
e. bleed/bled/bled
f. lead/led/led
g. feed/fed/fed
h. hold/held/held
i. stand/stood/stood

The verbs in (2) differ from those in (1) in that the former, but not the latter, change their stem vowels from the infinitive to the past (participle) form. However, the verbs in (2) are identical to those in (1) in that they do not take the regular past (participle) suffix, either, for exactly the same reason. That is, they do not take the regular suffix *-ed* so as not to violate the constraint on proximate repetition by avoiding a word-final juxtaposition of alveolar stops.

The verbs in (3) below are essentially similar to those in (1) and (2) above in conjugational behavior.

(3) a. send/sent/sent
b. bend/bent/bent
c. build/built/built
d. spend/spent/spent

Although the infinitive-final /d/ is replaced by /t/ as the verbs in (3) change from the infinitive to the past (participle) form, the regular past (participle) suffix *-ed* is not in evidence here, either. Note that the addition of the regular suffix *-ed* to the infinitive here would lead to a violation of the constraint on proximate repetition, which is why it is not used here.

The following verbs are considered irregular because of the tense-lax stem-vowel alternation associated with their conjugation.

(4) a. feel/felt/felt
b. keep/kept/kept
c. mean/meant/meant

Note here that in English a tense vowel generally becomes lax when it is followed by a cluster of consonants. Thus the verbs in (4) are far from irregular since the laxing of the tense stem vowel here is triggered by the

consonant cluster that follows. The vowel alternation in question here is something to be expected and thus quite regular.

Vocalic laxing does not occur in *feels, keeps,* and *means* despite the fact that these verb forms also end in consonant clusters. This is because the cluster-final consonant is a sibilant, which is a lightweight consonant. This may indicate that the ultimate mass or weight of the cluster-final consonant is crucial in determining whether or not the tense stem vowel in question gets laxed.

The "irregular" verbs in (5) below manifest a similar vowel alternation except that they are even more irregular than those in (4) in that they involve a devoicing of the infinitive-final soft consonant as well.

(5) a. leave/left/left
b. cleave/cleft/cleft
c. lose/lost/lost

It appears that the devoicing here occurs under the assimilative influence of the voiceless alveolar stop /t/ that comprises the suffix. Exactly the same sort of devoicing occurs in the derivation of *gift* from *give,* of *drift* from *drive,* of *fifth/fifty* from *five,* etc. Thus the devoicing in the above example is far from idiosyncratic, so that the verbs in (5) above are anything but irregular.

Note incidentally that we encounter in (6) below a vowel alternation and consonant devoicing similar to that observed in (4) and (5) above, which further supports our claim that the verbs in (4) and (5) are anything but irregular.

(6) a. describe/descriptive
b. scribe/script
c. conceive/concept
d. lose/loss

We can assume here that *loss* is underlyingly something like /luːzs/, which through vowel laxing and consonant devoicing becomes /lɔːss/. The word-final /s/ in /lɔːss/ gets lost under the pressure of the constraint on proximate repetition, giving rise to the final surface form /lɔːs/. Needless to say, the devoicing of the stem-final consonant in all the examples of (6) is explainable in exactly the same way as the devoicing of /v/ to /f/ in (5).

It is interesting that we can observe a similar vowel alternation in the examples given in (7) below despite the fact that the past (participle) forms here do not end in a consonant cluster.

(7) a. breed/bred/bred
b. lead/led/led
c. meet/met/met

We can provide quite a plausible account for the vowel alternation here by positing an "invisible" past (participle) suffix, say, /D/ or /T/. In other words, we might assume that the underlying forms /breedD/, /leadD/, and /meetT/ give rise to the intermediate forms /bredD/, /ledD/, and /metT/, which eventually become the superficial forms /bred/, /led/, /met/. If this assumption is correct, the vowel alternation observable in (7) above is exactly identical in nature to that observed in connection with (4) and (5).

Note that the vowel alternation observable in the example below can also be accounted for along similar lines.

(8) flee/fled

We can posit an underlying stem-final consonant for the infinitive form here, say, "gh," which is historically justifiable. Thus the infinitive form here may be represented underlyingly as something like "fleegh." Given this hypothetical underlying infinitive form, we may argue that the underlying /fleeghD/ gives rise to the intermediate /fleghd/, which in turn gives rise to the superficial /fled/. We assume that the vocalic laxing here is triggered by the word-final consonant cluster /ghD/. Explained along these lines, the vocalic laxing illustrated by (8) above is in compliance with a very general rule of vocalic laxing in English phonology and is thus far from irregular.

The vowel alternation exemplified in (9) below may be accounted for in a roughly similar manner.

(9) say/said

The infinitive form ends in a semi-consonantal glide, which is not quite a consonant but close to one. Furthermore, this consonant-like glide historically originates in the velar stop /g/. Thus we may argue that the past (participle) form ends in an underlying consonant cluster of sorts, which

reduces the originally tense stem vowel to a lax vowel. If this is correct, then the vowel alternation represented by (9) above is far from irregular. Incidentally, it is argued elsewhere (Park 1993) that the light meaning content of the stem here is probably another factor involved in the laxing of the stem vowel.

We will turn our attention now to those verbs with both regular and irregular past (participle) forms. Let's consider the two alternant past tense forms of the verb *spell*, as used in the sentence pair below.

(10) a. She *spelled* her name like this.
b. She *spelt* her name like this.

Other things being equal, the regular alternant *spelled* implies a process of longer duration than does the irregular alternant *spelt*. Note that *spelled* ends in the voiced alveolar stop /d/ while *spelt* ends in its voiceless cognate /t/. Since a voiced consonant generally involves an articulation of longer duration than does its voiceless cognate, it may be only natural that *spelled* implies longer duration than does *spelt*. If this point of view is correct, then the so-called irregular alternant here is not irregular at all and neither is the alternation between the regular *spelled* and the irregular *spelt*.

Put in black and white terms, the regular *spelled* is "durative/processive" whereas the irregular *spelt* is "non-durative/stative." This dichotomy appears to throw a great deal of light on data such as the following.

(11) a. The *burned* animal looks awful.
b. The *burnt* animal looks awful.

Note that the regular past participle form focuses on the durative (and deliberate) process of burning to which the animal was or has been subjected while its irregular counterpart focuses on the non-durative state in which the animal finds itself after having been burned or burnt. In other words, the meaning conveyed by the verb is heavily stative for the irregular variant while it is heavily processive for its regular counterpart.

The point we are making here may also be illustrated by the following sentence pair.

(12) a. He was *bereaved* of his wife during the war.
b. His cheek was *bereft* of color.

The regular alternant *bereaved* focuses on the process whereby he was deprived of his wife while the irregular alternant *bereft* focuses on the state in which his cheek found itself after being deprived of color.

Note in this connection that the irregular *spilt* is used in the proverb below.

(13) It's no use crying over *spilt* milk.

The irregular *spilt* is used here probably because the verb in question refers to a state rather than to a process. Were *spilt* replaced by its regular counterpart, i.e. *spilled,* this proverb would have to be assigned a slightly different interpretation.

The dichotomy between processive and stative meaning often translates into a dichotomy between more and less deliberate intent on the part of the subject with which the verb in question is in construction. This dichotomy can be illustrated by the following sentence pair.

(14) a. The tree *fell.*
b. He *felled* the tree.

The irregular *fell* conveys a far less deliberate or purposive intent on the part of the subject than does the regular *felled.* Note that *fell* with its zero suffix arguably implies much less duration and thus much less deliberateness than does *felled* with its regular suffix *-ed.*

Similar in nature to the diad in (14) are the triad in (15) below.

(15) a. He *rose* early every morning.
b. What *roused* him so early this morning?
c. He *raised* his hand at once.

Note that meaning-wise *rose,* which takes the irregular, zero suffix is less purposive than either *roused* or *raised,* both of which take the regular suffix *-ed.*

It seems to be in order at this point to note that the following pair may also be used to illustrate the point we have already made with respect to the verb pair in (14).

(16) a. He *lay* dead on the floor.
b. He *laid* the baby on the floor.

We may observe here that *lay* with its irregular, zero suffix has a far less purposive meaning than does *laid* with its regular suffix /d/. Note that *laid* is irregular orthographically only. It is phonologically regular in that it is perfectly regular pronunciation-wise.

We may also point out that *freeze,* which is irregular, often has a less purposive meaning than does either *unfreeze* or *deep-freeze,* which is often regular. At any rate, it is quite significant that relative processiveness of meaning or relative purposiveness of intent translates into relative regularity of verb conjugation in (10-16).

We may cite the following additional examples supportive of our contention here.

(17) a. The sun *shone* brightly all day long yesterday.
b. *The sun *shined* brightly all day long yesterday.
c. *The boy *shone* my shoes twice a day.
d. The boy *shined* my shoes twice a day.

(18) a. They *hung* their clothes on the line.
b. *?They *hanged* their clothes on the line.
c. *?They *hung* the criminal to death.
d. They *hanged* the criminal to death.

It is quite clear here that the irregular *shone* and *hung* are much less purposive in meaning than are their regular counterparts, i.e. *shined* and *hanged.*

Similar in nature is the variation between regular and irregular conjugation for the verb *speed,* as illustrated in the sentence pair below.

(19) a. John *sped* across the field.
b. John *speeded* across the field.

(19a) is likely to mean "John walked or ran across the field very rapidly" whereas (19b) is likely to mean "John drove (a car) or rode (a bike) across the field very rapidly." The point we are trying to make is that the mode of locomotion involved here is likely to be more purposive in nature in (19b) than in (19a).

It is interesting to note at this point that the first sentence below is natural while the second is not.

(20) a. Production of the new model must be *speeded up.*
b. ?*Production of the new model must be *sped up.*

The phrasal verb *speed up* manifests a higher degree of purposiveness or intent on the part of the logical subject than does the simple verb *speed.* This is apparently why only regular conjugation is acceptable for *speed* in the phrasal verb *speed up.*

Given this kind of division of semantic labor between the regular and irregular conjugation of one and the same verb, we can provide a principled account for the difference of meaning between the two expressions below.

(21) a. *cleft* lips
b. *cleaved* lips

A cleft lip refers to a permanent congenital defect, that is, a permanent defective state or condition in which some people are born. On the other hand, a cleaved lip refers to a defective condition cruelly and deliberately inflicted on a person by somebody else.

Similarly explicable is the difference of meaning between the two cognate de-participial adjectives *bended* and *bent,* as used in the following sentence pair.

(22) a. On *bended* knee(s), he asked her to marry him.
b. On *bent* knees, he asked her to marry him.

The regular *bended* here implies a deliberate process of bending to which "his" knees had been subjected. In contrast, the irregular *bent* implies a permanent congenital or disabled state in which "he" finds himself. So we can say that *bended* has a processive meaning while *bent* has a stative meaning.

There seems to be another division of labor between regular and irregular conjugation for certain de-participial adjectives. Of a cognate de-participial pair of adjectives such as *wedded/wed,* for example, the regular variant is often preferred prenominally to its irregular counterpart, as is evident from (23) below.

(23) a. Jane is my *wedded* wife.
b. ?*Jane is my *wed* wife.

We may invoke the constraint on proximate repetition to provide a princi-

pled account for the preference of the regular participle over its irregular counterpart in the data here. Note that there is a clash of tonic syllables in *wed wife*, but not in *wedded wife*, which is why (23a) is acceptable while (23b) is not. Note that the regular *-ed* suffix serves as a buffer of sorts between the two tonic syllables that would otherwise clash with each other in violation of the constraint on proximate repetition.

The data below is amenable to an explanation similar in nature to that given for (23) above.

(24) a. She had a *lighted* candle.
b. ?She had a *lit* candle.

Note in this connection that, unlike in (24) above, *lit* is preferred to *lighted* in (25) below.

(25) a. It was a moon*lit* night.
b. *?It was moon*lighted* night.

Note that *-lit* is atonic so that it serves as a buffer between the two tonic syllables represented by *moon-* and *night*. Furthermore, *moonlight* is denominal so that it is devoid of inherent intent or purposiveness, which makes the irregular *-lit* doubly preferable.

For some de-participial adjectives, the buffer suffix often takes the form of the irregular *-en*, rather than the regular *-ed*, as can be seen from the following data.

(26) a. He was arrested for *drunken* driving.
b. (?)He was arrested for *drunk* driving.
(27) a. I saw the *sunken* ship.
b. (?)I saw the *sunk* ship.
(28) a. The clean *shaven* man is a professor of English.
b. ?*The clean *shaved* man is a professor of English.

Note that the irregular suffix *-en* is an atonic monosyllable and is thus well suited to serve as a buffer. On the other hand, the regular suffix *-ed* is not syllabic in *shaved* and, therefore, not qualified to serve as a buffer, which is why (28b) above is not natural.

For our final example of irregular verb conjugation, let us take a look at the following sentence pair.

(29) a. *It's *lightninging* outside.
b. It's *lightning* outside.

Note that attaching the regular present participle suffix *-ing* to the infinitive *lightning* would lead to a violation of the constraint on proximate repetition, for it would result in a cluster of two tokens of *-ing*. Thus the constraint on proximate repetition helps explain why the regular present participle suffix is unacceptable here while the apparently irregular, zero present participle suffix is acceptable.

In this connection, we may note that an *-ing* cluster of this sort does not always lead to the unacceptability of the resulting structure. For example, the following sentences are perfectly natural even though they contain similar *-ing* clusters.

(30) a. He enjoys *singing* in public.
b. He kept *ringing* the bell.
c. He was *flinging* something at the dog.
d. They were *clinging* to one another for comfort.

We argued elsewhere (Park 1982, 1984) that an *-ing* cluster is acceptable if it occurs in a word of not more than two syllables. The point we are trying to make here is that the unacceptability of (29a) stems not just from **lightninging* violating the constraint on proximate repetition but from its polysyllabicity as well.

Our next point has to do with the shape of the infinitive that follows the auxiliary verb *ought*. Let us examine the following data.

(31) a. He *ought to go* now.
b. *He *ought go* now.
(32) a. *Ought* he *to go* now?
b. *Ought* he *go* now?
(33) a. He *oughtn't to go* now.
b. He *oughtn't go* now.

Since *ought* is normally followed by the infinitive marker *to*, the absence of *to* from (32b) and (33b) is often thought to be anomalous. However, we will soon see that this absence is only apparently anomalous.

Note here that *to* may be deleted only when something else comes be-

tween the auxiliary verb *ought* and the main verb *go*. Note also that a similar behavior of *to* is observable in connection with the auxiliary *need*, as can be seen from the following data.

(34) a. We *need to go* now.
b. *We *need go* now.
(35) a. **Need we to go* now?
b. *Need we go* now?
(36) a. *We *needn't to go* now.
b. We *needn't go* now.

Note that *to* must be deleted here when something else comes between the auxiliary verb *need* and the main verb *go*. The only difference between *ought* and *need* is that deletion is optional for the former and obligatory for the latter, that is, when something else intervenes either auxiliary and the infinitive that follows.

In connection with (31)-(36), we may argue that the deletability of *to* may be explained in terms of a sphere of influence. It appears that every linguistic element has its sphere of influence such that its influence on another linguistic element weakens as the distance between the two increases. Thus we may argue that the power of the auxiliary *ought* (or *need*) to govern the infinitive marker *to* decreases in proportion to the distance between the auxiliary and the main verb.

Given this sphere-of-influence concept, we can also offer a principled account for the devoicing of the *used*-final consonants in (37b) and (37c) below.

(37) a. He *used* a very good book.
b. He *used to* come here very often.
c. He *is used to* hard training.

Note that *used* occurs in close construction with *to* in (37b) and (37c) above while this is not the case in (37a). Thus the final consonant in *used*, which is originally the voiced alveolar stop /d/, comes under the immediate influence of the voiceless /t/ in *to* and thus gets devoiced to /t/. This devoicing does not affect the *used*-final /d/ in (37a) because *used* is not followed by a voiceless-initial word with which it is in close construction.

A similar explanation is applicable to the devoicing that normally affects

the *supposed*-final /d/ in (38b) below.

(38) a. No one *supposed* that an atomic bomb was going to be used.
b. What's that *supposed to* mean?

Note that *supposed* is in close construction with *to* in (38b) so that the word -final voiced alveolar stop /d/ comes under the immediate influence of the voiceless /t/ in *to*, which is why it normally gets devoiced to /t/. On the other hand, this is not the case with the *supposed*-final /d/ in (38a) because *supposed* does not occur in a similar environment, that is, it is not in close construction with a voiceless-initial word.

The sphere of influence concept is also instrumental in explaining why we have /z/ in the first member of each word pair below, as opposed to /s/ in the second.

(39) a. re*s*erve vs. re-*s*erve
b. re*s*ign vs. re-*s*ign
c. re*s*olve vs. re-*s*olve
d. re*s*ound vs. re-*s*ound

The prefix *re-* is in closer construction with the stem in the first member of each pair in (39) above than it is in the second member. As a result, the stem initial *s-* comes more immediately under the assimilative influence of the vowel that precedes it in the first member of each word pair here than in the second member. This is why this stem-initial *s-* is voiced in the first member while it is not in the second member.

Incidentally, the sphere of influence concept also helps explain why the /n/ in the negative prefix *in-* assimilates to the stem-initial consonant that follows while the /n/ in the negative prefix *un-* does not. Let us consider the following data focusing on the negative prefixes *in-* and *un-*.

(40) a. i*nd*ependent
b. i*ll*egal
c. i*rr*esponsible
d. i*mp*ossible
(41) a. u*nd*eniable
b. u*nl*eaded
c. u*nr*eadable
d. u*np*aid

The negative prefix *in-* is in closer construction with the stem that follows than the negative prefix *un-* is. Thus *in-* comes more immediately under the assimilative influence of the stem than *un-* does so that the former assimilates to the stem-initial sound in a predictable manner while the latter does not so assimilate at all.

We will now turn to a derivational irregularity connected with the verbal suffix *-en*. Let's consider the behavior of this *-en*, as exemplified below.

(42) a. wide/widen, broad/broaden, deep/deepen, sharp/sharpen, white/whiten, black/blacken, dark/darken
b. long/length/lengthen, strong/strength/strengthen, high/height/heighten

The suffix *-en* is often used to derive a verb from an adjective. The examples given in (42a) are cases in point. The examples given in (42b) deviate from this derivational norm and are thus thought to be exceptional or irregular.

Note that the adjectives in (42b) all end in a sonorant sound, which would collide with the sonorant suffix *-en* if the suffix were added to them. We may thus argue that the obstruent noun suffix /θ/ or /t/ is added to the adjective here before the verb-forming suffix *-en* is added in order to steer clear of such a collision. Viewed in this way, neither *lengthen* nor *strengthen* nor *heighten* is irregularly derived. Thus from the perspective of the constraint on proximate repetition, the anomaly in question here is only apparent anomaly.

2. Nominal "Irregularities"

The first nominal irregularities that we will discuss in this section are related to pluralization with special reference to nouns that do not take the regular plural suffix *-(e)s*. We will begin our discussion by noting that irregular plural nouns are often actually quite regular as members of given subsets of nouns. For one thing, nouns of learned origin ending in *-is* normally pluralize by getting this *-is* replaced by *-es*, as can be seen in (43) below.

(43) a. oas*is*: oas*es*
b. cris*is*: cris*es*
c. analys*is*: analys*es*

For another, nouns of Latin origin ending in *-us* normally pluralize by getting this *-us* replaced by *-i*, as shown in (44) below.

(44) a. alumn*us*: alumn*i*
b. fung*us*: fung*i*
c. stimul*us*: stimul*i*

Parenthetically, it has been argued elsewhere (Park 1984) that the singular-plural alternations of the sort illustrated in (43) and (44) are explainable in terms of the constraint on proximate repetition. If this is correct, it should count as another reason why these alternations are anything but irregular.

Over and above these etymologically conditioned subregularities, there are phonologically conditioned subregularities also, such as those illustrated by the singular/plural pairs below.

(45) a. knife: knives, wife: wives
b. leaf: leaves, sheaf: sheaves
c. self: selves, shelf: shelves
d. half: halves, calf: calves

Every noun in (45) has a long (and thus complex) stem vowel. The regular pluralization rule would require that the voiceless sibilant plural suffix /s/ be added to the singular noun here because it ends in the voiceless fricative /f/. Then each plural noun here would end in a long, complex vowel followed by a cluster of two voiceless consonants.

This juxtaposition of a complex vowel and a voiceless consonant cluster would render the resulting plural noun phonologically overweight or overcrowded, so to speak. If this is correct, then we may argue that the voicing of the plural-final consonant cluster /fs/ to /vz/ is designed to help alleviate this overweight or overcrowding. For, other things being equal, a voiced consonant is less heavy or dense than its voiceless equivalent.

Note at this point that the plural-final cluster /fs/ does not get voiced to /vz/ in words such as the following.

(46) a. safe: safes (*saves)
b. belief: beliefs (*believes)
c. proof: proofs (*prooves)

It is generally believed that there is a historical explanation for the blocking of voicing for the plural-final cluster /fs/ here. Most scholars believe that the nouns in question here came into English well after the voicing phenomenon in question had already affected plural forms of native English singular nouns ending in /f/.

Over and above this, we may note that the voicing of the plural-final cluster /fs/ to /vz/ here would result in plural nouns identical in form with the third-person-present-singulars of their cognate verbs. We may thus argue that the voicing here is also blocked in order to help prevent such a confusing result. If our arguments are correct, then the examples given in (46) are not genuine counterexamples to the point we are making.

The voicing of the plural-final fricative cluster under discussion here may not be quite as idiosyncratic as it might appear at first sight. A similar phenomenon is observable in the following data.

(47) a. mouth/mouths
b. path/paths

The voicing of the plural-final cluster *-ths* is obligatory for *mouths* here; it is optional for *paths* in that some people do not voice this cluster. This may have to do with the fact that the complex vowel in question is more complex in *mouths* than in *paths* so that the former is more overcrowded phonologically than the latter.

Based on our discussion, we can now offer a principled account for the optionality of voicing for the plural-final fricative cluster in each of the the following words.

(48) a. truths: /tru:θs/ or /tru:ðz/
b. oaths: /ouθs/ or /ouðz/
c. sheaths/ʃi:θs/ or /ʃi:ðz/
d. youths/ju:θs/ or /ju:ðz/

The stem vowel in each word here is arguably so weakly complex that the plural form is phonologically not too overweight or overcrowded. The result is that the plural-final fricative cluster may get only weak pressure to get voiced so that it may or may not get voiced.

Note that our discussion here throws light on the voicing of the plural-final sibilant "cluster" in (49b) below.

(49) a. house /haus/
b. houses /hauziz/

The voicing exemplified here has essentially the same motivation as the voicing observed in connection with (45)-(48). Thus given our perspective, *houses* /hauziz/ is by no means an irregular plural.

Let us turn our attention now to some so-called irregular genitives. We will begin our discussion here with a look at the following data.

(50) a. This is *his* book.
b. This book is *his*. / *This book is *hiss*.
(51) a. This is *her* book.
b. *This book is *her*. / This book is *hers*.
(52) a. This is *its* book.
b. (?)This book is *its*. / *This book is *itss*.
(53) a. This is *their* book.
b. *This book is *their*. / This book is *theirs*.

Note that we derive the genitive pronouns from the corresponding cognate genitive adjectives by suffixing *-s* thereto. That is, with the exception of the genitive pronouns *his* and *its*, from which the pronominal suffix *-s* is absent.

Note also that the genitive pronouns *his* and *its* are not irregular at all in that the absence of the pronominal suffix therefrom is phonologically conditioned. The suffix is suppressed here to keep the awkward cluster /ss/ from being formed, thereby rendering the resulting structure more compliant with the constraint on proximate repetition.

The zero genitive suffix, as opposed to the regular genitive suffix *-'s* (as in *John's book*), is normally considered to be something out of the ordinary. Let us consider the following sentence pairs illustrating an environment in which this zero suffix occurs.

(54) a. I did so for convenience' *sake*.
b. *I did so for convenience's *sake*.
(55) a. Stop it for goodness' *sake*.
b. *Stop it for goodness's *sake*.

We can see from this data that the environment is such that the use of the

regular genitive suffix would result in an unacceptable cluster of three proximately repeated sibilants. It is clear then that we keep from using the regular genitive suffix in the acceptable first member of each pair above in order to steer clear of this unacceptable cluster and thus better comply with the constraint on proximate repetition.

It may be noted at this point that the regular genitive suffix may not be used in the second member of each sentence pair below for about the same reason that it is not used in (54a) and (55a).

(56) a. This is the *boy's* father.
b. This is the *boys'* father. / *This is the *boys's* father.
(57) a. This is a *girl's* high school.
b. This is a *girls'* high school. / *This is a *girls's* high school.

Note that the use of the regular genitive suffix in the second member of each pair above would lead to the formation of a sibilant cluster. This would be in violation of the constraint on proximate repetition, which is why the regular genitive suffix has to be zeroed out.

Nouns ending in a sibilant also often take this zero genitive suffix, especially in written English, for a similar reason. That is, they often resort to the zero genitive suffix so as to render the resultant string more compliant with the constraint on proximate repetition. Let us consider the following data.

(58) a. *Burns'* poems vs. *Burns's* poems (written)
b. *Burns's* poems vs. *Burns'* poems (spoken)
(59) a. *Jones'* shoes vs. *Jones's* shoes (written)
b. *Jones's* shoes vs. *Jones'* shoes (spoken)
(60) a. *Dickens'* novels vs. *Dickens's* novels (written)
b. *Dickens's* novels vs. *Dickens'* novels (spoken)

The first version in each pair above is generally preferred to the second version in the same pair. Thus *Burns' poems* is preferred to *Burns's poems* in written English while it is the other way around in spoken English. It would seem then that the constraint on proximate repetition exerts more pressure for regular genitive-suffix deletion in written English than in spoken English. This may be because the two sibilants in question are juxtaposed closer to each other in written English than in spoken English. For the un-

stressed schwa intervenes the two sibilants in spoken English, but not in written English.

Also of relevance to our discussion here is the fact that polysyllabic Greek names ending in *-s* tend to prefer the zero genitive suffix in both spoken and written English. (61) and (62) below present two cases in point.

(61) a. What was the name of *Socrates'* wife?
b. ?What was the name of *Socrates's* wife?
(62) a. *Pericles'* speech moved the audience to tears.
b. ?*Pericles's* speech moved the audience to tears.

The constraint on proximate repetition is evidently in force here, resisting the formation of the clumsy sibilant cluster that would result if the regular suffix were used. Another factor that militates against the use of the regular suffix here is the general English antipathy to polysyllabic words. Note that the use of the regular genitive suffix in the above examples would add one more syllable to the already polysyllabic Greek names, thereby compounding the problem of polysyllabicity still further.

3. Modificational "Irregularities"

Premodification, that is, pre-nominal modification, is the norm in English so that the first sentence below, but not normally the second, is acceptable.

(63) a. *Wonderful things* happened today.
b. ??*Things wonderful* happened today.

Given the fact that premodification is the norm, all instances of postmodification should be definitely exceptional or irregular. However, we do encounter cases of perfectly natural postmodification such as that illustrated by (64b) below.

(64) a. **Wonderful something* happened today.
b. *Something wonderful* happened today.

On the surface, the postmodification of this type does appear to be quite irregular indeed. On closer inspection, however, we can see that the postmodification here is far from irregular. Note that *wonderful* postmodifies

-thing, the head of the indefinite pronoun *something,* and that the postmodification serves to locate the modifier maximally close to the head. We may say that this kind of postmodification serves a very useful purpose because it is stylistically ideal for a modifier to be maximally close to the (head) noun that it modifies.

Note that if the head *-thing* were premodified, *some-* would have to stand between the head and its premodifier *wonderful,* for the premodifier cannot occur inside the pronoun *something.* Seen in this light, the postmodification of the sort under discussion here is clearly well motivated and is by no means exceptional or irregular.

Let us now consider instances in which one and the same adjective can either pre- or postmodify a noun. Let us take, for example, *Korean,* which pre- and postmodifies *things* in (65a) and (65b) respectively.

(65) a. He wants *Korean things.*
b. He wants *things Korean.*

The postmodification structure in *things Korean,* which is apparently irregular, is only apparently irregular. Note that the adjective *Korean* varies in semantic weight between the two sentences. *Korean* is heavier in (65b), in which it menas "characteristic of Korea," than in (65a), in which it means "from or of Korea." The noun *things* also appears to vary in semantic weight between the two sentences. In terms of reference, *things* is definitely more concrete in *Korean things* than in *things Korean* with the result that it is apparently heavier in the former phrase than in the latter.

At any rate, it is clearly the case that *Korean* is heavier than *things* in (65b), which is not the case in (65a). Since the normal communicative dynamism of English dictates that lighter elements precede heavier ones, it is natural for *things* to precede *Korean* in (65b). Thus the example of postmodification given in (65b) is only apparently irregular or exceptional.

We can offer a similar explanation for the difference between pre- and postmodification illustrated by the sentence pair below.

(66) a. What's the *proper role* of the press?
b. How would you define *linguistics proper?*

The adjective *proper* is less heavy in semantic content in the first sentence than in the second. It means "correct" in the first sentence and "correctly

or strictly defined" in the second. At any rate, *proper* appears to be semantically heavier than *linguistics* in (66b) while it is very likely not heavier than *role* in (66a). As a result, both the premodified noun phrase in (66a) and the postmodified noun phrase in (66b) are in compliance with the normal communicative dynamism of English. If this is correct, then the use of *proper* as a postmodifier in (66b) is by no means irregular.

On the basis of our discussion in connection with (63)-(66), we can now offer a principled account for the idiomatic postmodification illustrated by such phrases as those given in (67) below.

(67) a. *since time immemorial*
b. *in years past*

We can say that *immemorial* and *past* are heavier than *time* and *years* respectively so that the postmodification here is in compliance with the normal communicative dynamism of English and thus anything but anomalous.

Let us turn now to apparent irregularities related to adjectival comparison. According to most grammarians, adjectives of three or more syllables take only periphrastic comparison whereas those of fewer syllables normally take inflectional comparison although they often admit of periphrastic comparison as well.

There are numerous exceptions to this widely accepted rule, however, as can be seen from (68)-(72) below.

(68) a. *John is *tireder* than Bob.
b. *John is the *tiredest* boy here.
c. John is *more tired* than Bob.
d. John is the *most tired* boy here.

(69) a. *John is daringer than Bob.
b. *John is the daringest boy here.
c. John is more daring than Bob.
d. John is the most daring boy here.

(70) a. *John is *carefuler* than Bob.
b. *John is the *carefulest* boy here.
c. John is *more careful* than Bob.
d. John is the *most careful* boy here.

(71) a. *John is *childliker* than Bob.
b. *John is the *childlikest* boy here.

c. John is *more childlike* than Bob.
d. John is the *most childlike* boy here.

(72) a. *John is more *famouser* than Bob.
b. *John is the *famousest* boy here.
c. John is *more famous* than Bob.
d. John is the *most famous* boy here.

(73) a. *John is *contenter* with life than Bob.
b. *John is the *contentest* boy here.
c. John is *more content* with life than Bob.
d. John is the *most content* boy here.

None of the adjectives in the sentences of (68)-(73) comprises more than two syllables and thus should take inflectional (or periphrastic) comparison. As it turns out, however, these adjectives take periphrastic comparison only and are thus apparent counterexamples to the general rule that adjectives of less than three syllables normally take inflectional comparison.

Evidently there is something wrong with the rule here. Perhaps the number of syllables should not be the crucial criterion. The crucial criterion should rather be whether or not the adjective in question ends in a clearly discernible and relatively productive suffix. Note that the adjectives in (68)-(73) end in such suffixes, i.e. *-ed, -ing, -ful, -like, -ous,* and *-ent*. Note further that juxtaposing these productive suffixes with *-er* or *-est,* either of which is even more productive as a suffix, would result in a cluster of two productive suffixes. This cluster would violate the constraint on proximate repetition, which is most likely why inflectional comparison is not acceptable for the adjectives in (68)-(73).

We say "clearly discernible and relatively productive" here to rule out such fossilized adjective suffixes as *-y* (as in *easy*) and *-ly* (as in *manly*). Speaking of the *-ly* suffix, it is interesting that it is far more productive and far more clearly discernible as an adverbial suffix than as an adjectival suffix. One consequence of this difference is that adjectives in *-ly* normally take either inflectional or periphrastic comparison while adverbs in *-ly* take periphrastic comparison only, as can be seen from examples such as the following.

(74) a. John is *sicklier* than Bob.
b. John is the *sicklest* boy here.

c. John is *more sickly* than Bob.
d. John is the *most sickly* boy here.

(75) a. *John did it *quicklier* than Bob.
b. *John did it (the) *quickliest* here.
c. John did it *more quickly* than Bob.
d. John did it (the) *most quickly* here.

Adjectives ending in *-est* are apparently idiosyncratic in that they always take periphrasis for the superlative degree while they take either inflection or periphrasis for the comparative degree. This idiosyncrasy is readily observable from the data below.

(76) a. John is *honest*.
b. John is *honester* than Bob./John is *more honest* than Bob.
c. *John is the *honestest* boy here./John is the *most honest* boy here.

(77) a. John is *modest*.
b. John is *modester* than Bob./John is *more modest* than Bob.
c. *John is the *modestest* boy here./John is the *most modest* boy here.

We can see here that the comparative in *-er* does not lead to a violation of the constraint on proximate repetition and is thus well-formed while the superlative in *-est* does lead to a violation thereof and is thus ill-formed. We resort to periphrasis for the superlative degree here in order to avoid violating the constraint on proximate repetition. Given this principled explanation, we can say that the idiosyncratic behavior of adjectives ending in *-est* under discussion here is only apparently idiosyncratic.

Some adjectives ending in *-er* are thought to be similarly idiosyncratic in that they take only periphrasis for the comparative degree while they take either inflection or periphrasis for the superlative degree. The kind of idiosyncrasy under discussion here is illustrated in (78) below.

(78) a. John is *eager* to leave.
b. ?*John is *eagerer* to leave./John is *more eager* to leave.
c. John is (the) *eagerest* to leave./John is (the) *most eager* to leave.

Our explanation consists in saying that the comparative in *-er* results in a violation of the constraint on proximate repetition and is thus ill-formed while the superlative in *-est* does not and is thus well-formed. Thus ex-

plained, the anomaly in question here is not genuine anomaly.

We will now turn our attention to a deviation from regular plural suffixation, which occurs typically in premodifier position. The regular plural suffix is normally deleted from semantically plural nouns used as prenominal modifiers, as can be seen from examples such as the following.

(79) a. I know a *boy* who is *ten years old.*
b. I know a *ten-year old boy.*
(80) a. It was a *ride* that lasted *ten minutes.*
b. It was a *ten-minute ride.*
(81) a. Write an *essay* consisting of *seven paragraphs.*
b. Write a *seven-paragraph essay.*

We can begin our analysis of this data by observing that a premodifier is in closer construction with the noun it modifies than a posmodifier is. The information carried by a premodifier is also more given than that carried by a postmodifier. Other things being equal, a premodifier is thus less dense and weighty than a postmodifier both structurally and informationally. It is also the case that, other things being equal, a premodifier is less dense and weighty than the head it modifies both structurally and informationally.

We may arguably delete the regular plural marker from the premodifiers in (79-81) above in order to render them more in line with their relatively low density and weight as premodifiers. Note in this connection that the deletion of the regular plural suffix does not do too much damage information -wise because the plurality of the noun phrase in question is already conveyed by the plural numeral in the premodifier.

The alternation between *Dr.* and *doctor,* between *Mrs.* and *Mistress,* and between *Mount* and *mountain* in (82-84) below can now be accounted for along essentially identical lines.

(82) a. *Dr. Kim* graduated from Yale.
b. Mr. Kim is *a doctor.*
(83) a. *Mrs. Kim* is from Honolulu.
b. *His mistress* is from Honolulu.
(84) a. *Mt. Everest* is in Asia.
b. Everest is *a mountain* in Asia.

Note that *doctor, mistress,* and *mountain* get shortened to to *Dr., Mrs.,* and

Mt. in premodifier position while they retain their original long forms as heads of noun phrases. It appears that the shortening here is motivated to reflect the reduction in density and weight that premodifiers are normally subjected to as carriers of relatively peripheral information vis-a-vis the heads they modify.

The complimentary distribution between the two *underlined* forms in each pair below can also be esplained in a similar manner.

(85) a. It was an *indoor* concert.
b. The concert was held *indoors.*
(86) a. He enjoys *outdoor* work.
b. He enjoys working *ourdoors.*
(87) a. They will soon start on their *homeward* journey.
b. They were driving their cattle *homeward(s).*

The alternation between the two *underlined* forms in each pair below may also be similarly accounted for.

(88) a. He was playing with *a live snake.*
b. He was playing with *a snake that was alive.*
(89) a. I came across *a lone gunman.*
b. I came across *a gunman that was alone.*

Subject to a similar account is the alternation between *my* and *mine,* as shown in (90) below.

(90) a. This is *my* book.
b. This book is *mine.*

Needless to say, the *alternation* between *thy* and *thine* can be *similary* explained.

4. Orthographic/Phonological "Irregularities"

Many scholars believe that English is riddled with notorious orthographic irregularities. We will attempt to prove them wrong in the next couple of pages. We will lead off our discussion with the following adjectives.

(91) a. big/bi*gg*er/bi*gg*est
b. mad/ma*dd*er/ma*dd*est

c. fit/fi*tt*er/fi*tt*est
d. hip/hi*pp*er/hi*pp*est

Note that the stem-final consonant is doubled when either the comparative or the superlative suffix is added to the stem. This consonant doubling is often regarded as exceptional or irregular since no such doubling is encountered in most adjectival comparatives or superlatives.

Far from being irregular, however, this consonant doubling is very well motivated in that it is designed to keep us from misreading the comparatives and superlatives in question. Suppose that the stem-final consonant is not doubled here. Then we would get words like *biger* and *fiter* for *bigger* and *fitter* respectively. Note that, spelt *biger* and *fiter*, the comparatives in question would most likely be misread as /baidʒər/ and /faitər/ respectively.

Thus we can see that the consonant doubling here is designed to guarantee that the words in question be assigned their correct pronunciations and is, in that sense, anything but irregular. The consonant doubling observable in the verbs of (92) below can, of course, be accounted for along similar lines.

(92) a. pat/pa*tt*ed/pa*tt*ing
b. rip/ri*pp*ed/ri*pp*ing
c. bed/be*dd*ed/be*dd*ing
d. rub/ru*bb*ed/ru*bb*ing
d. bug/bu*gg*ed/bu*gg*ing

Incidentally, the following data exemplify an especially interesting case of consonant "doubling" amenable to a similar explanation.

(93) a. picnic/picni*ck*ed/picni*ck*ing
b. traffic/traffi*ck*ed/traffi*ck*ing
c. panic/pani*ck*ed/pani*ck*ing
d. politic/politi*ck*ed/politi*ck*ing

Suppose that *k* were not added to the stems here before the verbs are suffixed with *-ed* or *-ing*. Then when the stems are suffixed with *-ed* or *-ing*, the stem-final *c* would most likely be misread as /s/, not as the desired /k/. Thus the addition of *k* here serves the very useful purpose of helping keep the stem-final consonant /k/ intact.

Incidentally, the letter *c* is not doubled here probably for the reason that the letter cluster *cc* would most likely be misread as /ks/, not as /k/ as desired. Thus instead of using *cc* we resort to adding *k* to *c* here. Note parenthetically that the letter k is a graphemic cousin of the letter c, which is probably why k gets to fill in for an additional c here. Thus the doubling here in the form of -ck- is only apparently irregular just as are the other instances of bona fide consonant doubling considered in connection with (91) and (92).

The rationale for consonant doubling of the sort under discussion here becomes even more evident when we consider minimal-pair examples such as the following.

(94) a. hope/hoped/hoping
b. hop/hopped/hopping
(95) a. bare/bared/baring
b. bar/barred/barring
(96) a. bate/bated/bating
b. bat/batted/batting

Suppose that the stem-final consonant in the second member of each pair above were not doubled in its particle forms. Then it would be hard to tell apart the participle forms of the two different verbs comprising each pair. The spellings would be quite confusing and misleading as clues to pronunciation. This clearly shows that the consonant doubling is not something irregular but something with a clear and useful purpose to serve.

Let us now turn our attention to the orthographic irregularity of the sort represented by (97) below.

(97) a. lie/lying/*liing
b. die/dying/*diing

The stem-final silent *-e* is regularly deleted when *-ing* is added to a verb stem, so that we should expect to get **liing* and **diing* from *lie* and *die* respectively. These expected participle forms turn out to be non-occurring forms, however. For the orthographic sequence *ii* is in violation of the constraint on proximate repetition with the result that *liing and *diing are ill-formed.

Thus we resort to changing the stem-vowel letter *i* to *y* before suffixing

-ing to the stem in order to render the resultant spelling more compliant with the constraint on proximate repetition. In light of this perspective, the change from *i* to *y* here is not really quite as irregular as it at first appears.

It is in order at this point to note that normally the stem-final silent *-e* gets deleted when the stem is suffixed with *-ed* or *-ing* because its retention would constitute a misleading clue to pronunciation. Suppose for the sake of argument that we spelt the two participles of *invade* as follows, retaining the stem-final *-e*.

(98) a. *invad*ee*d (instead of the correct "invaded")
b. *invad*ei*ng (instead of the correct "invading")

Spelt thus, both *-ee-* and *-ei-* here are likely to be rendered as a heavily accentuated high-front diphthong. This would result in strong nuclear vowels for the two inflectional suffixes here. Such prominently rendered inflectional suffixes would be something of an abnormality because all other inflectional suffixes are phonetically very weak. The point here is that the stem-final *-e* has to be deleted in front of *-ed* and *-ing* to avoid creating this kind of abnormality.

However, the rule that the stem-final *-e* gets deleted before *-ing* is apparently violated in a few cases such as (99) below.

(99) a. singe
b. singed/*singeed
c. *singing/singeing

Note here that *-e* is deleted before *-ed,* but not before *-ing.* We may argue that the formation of **singing* from *singe* is blocked by the already existing *singing,* the present participle/gerund of the verb *sing.* On the other hand, the formation of *singed* is not blocked because there is no already existing **singed.* Besides, **singeed* would be quite misleading pronunciation-wise. Thus we can say that it is far from irregular to retain the stem-final silent *-e* in *singeing* and to suppress it in *singed.*

The retention of the stem-final *-e* before *-ing* in the data below has exactly the same motivation and is thus not really exceptional.

(100) a. tinge
b. tinged/*tingeed
c. *tinging/tingeing

The formation of **tinging* here is blocked by the already existing form *tinging*, i.e. the *-ing* form for the verb *ting*.

In this connection, note that *plunge*, for one, behaves differently than *singe* with respect to the formation of its present participle.

(101) a. plunge
b. plunged/*plungeed
c. plunging/*plungeing

We do not have the verb *plung* so that we do not have the already existing **plunging*, which is why the formation of *plunging* from "*plunge+-ing*" is not blocked.

Amenable to a similar explanation is the deletion of the stem-final *-e* in front of *-ing* in (102) and (103) below.

(102) a. lunge
b. lunged/*lungeed
c. lunging/*lungeing
(103) a. binge
b. binged/*bingeed
c. binging/*bingeing

The concept of blocking may also be invoked to explain the apparently irregular retention of the stem-final silent *-e* before the *-ing* suffix in (104) below.

(104) a. dye
b. dyed/*dyeed
c. *dying/dyeing

Note that the form **dying* is blocked here by the already existing *dying*, i.e. the *-ing* form for the verb *die*, which we have already discussed. Thus explained, the retention of the stem-final *-e* here is anything but irregular.

Let us now consider the following word pairs, which are generally thought to represent one of the inexplicable quirks of English orthography.

(105) a. F*inn*+-*land*=F*in*land/*F*innl*and
b. La*pp*+-*la*nd=La*pl*and/*La*ppl*and

Suppose that the stem-final consonant letter in *Finn* and *Lapp* did not get

deleted when the stem enters into construction with *-land* to form a compound. Then we would end up with a compound-medial orthographic consonant cluster consisting of three members. Note that it is the medial member of this three-member consonant-letter cluster that gets deleted. Thus what we encounter here is the orthographic equivalent of consonant cluster simplification in phonology.

Note also that two constituent words have been squeezed into the space of just one (compound) word in both *Finland* and *Lapland,* so that they may be bursting at the seams, so to speak. It may thus be the case, at least in part, that the stem-final consonant letter here gets squeezed out to make room for the rest of the compound word. If our arguments in this paragraph and the preceding one are correct, then the loss of the stem-final consonants in (105) above does not appear quite as quirky as it is popularly thought to be.

Let us now take a look at the seemingly anomalous alternation between the regular suffix *-ed* and the irregular suffix *-t* in the past (participle) forms of certain verbs, as illustrated in (106) below.

(106) a. spe*ll*: spe*lled*/spe*lt*/**spellt*
b. spi*ll*: spi*lled*/spi*lt*/**spillt*

We can see here that the stem-final consonant-letter cluster remains intact in the regularly conjugated past (participle) forms while the second member of the same letter cluster gets lost in their irregularly conjugated versions. Note that we can account for the loss of the stem-final *l* before the irregular suffix *-t* here as resulting from the orthographic equivalent of consonant cluster simplification, which line of reasoning was already resorted to in our discussion of (105) above. The alternation here is thus not quite as idiosyncratic as it at first seems.

Note that orthographic consonant cluster simplification is also apparently at work in each derivation below.

(107) a. pa*ss*+*-t*=pa*st*
b. a*ll*+*r*eady=a*lr*eady
c. a*ll*+*m*ost=a*lm*ost

We may note at this point that orthography is often psychophonologically real in that it tends to be a faithful reflex of actual pronunciation. For ex-

ample, such orthographic gemini as *nn* and *pp* in (105), *ll* in (106) and (107), and *ss* in (107) are phonetically longer than their single-letter counterparts. For one, /s/ is phonetically longer in *pass* than in *past*. For another, /n/ is longer in Finn than in Finland. For still another, /p/ is longer in *Lapp* than in *Lapland*.

It is interesting that the stem-nuclear double vowel letter also often gets simplified when followed by the irregular past (participle) suffix *-t*. Note for example that the stem-nuclear geminate vowel-letter cluster loses the second constituent vowel letter in front of the past (participle) suffix *-t* in (108) below.

(108) a. f*eel*/f*elt*
b. k*eep*/k*ept*

The suffix /t/ here is strong enough to combine with the stem-final consonant /l/ to exert sufficient pressure for laxing on the tense stem vowel represented by the digraph *ee*. We delete one *e* from this digraph to represent the phonetic weakening that it undergoes as a result of this vocalic laxing.

Note at this point that the third-person-singular-present forms for the verbs in (108) above end in the suffix *-s*. This suffix is not that heavy or dense so that it is not powerful enough to combine with the stem final consonant to squeeze out the second of the two tokens of the letter e here. Thus we end up with the first form, not the second, in each pair below.

(109) a. f*eels*/*f*els*
b. k*eeps*/*k*eps*

In connection with orthographic cluster simplification, we may point out that closeness of the suffix to the stem may also be a major variable. Let us take the following example.

(110) a. spi*ll*: spi*lls*/spi*lth*
b. ti*ll*: ti*lls*/ti*lth*

Note that the inflectional suffix *-s*, which is an alveolar fricative, is probably about the same phonetic weight or density as the derivational suffix *-th*, which is an interdental fricative. However, the derivational suffix *-th* here is in closer construction with the stem than is the inflectional suffix -s. This may be why the derivational suffix can apply pressure on the stem to drop

the second of its two tokens of *l* while the inflectional suffix cannot.

We can now provide a principled account for the variation in British English between *-our* and *-or-*, as illustrated by lexical derivations such as those given in (111) below.

(111) a. hon*our*+-ary=hon*or*ary/*hon*our*ary
b. lab*our*+-ious=lab*or*ious/*lab*our*ious
c. od*our*+-ous=od*or*ous/*od*our*ous

Note that squeezing a noun and an adjective suffix into one word in each derivation here may create the problem of orthographic overcrowding for the resulting word. Thus *-our* may arguably lose *-u-* here in order to help resolve this spatial problem.

A similar explanation is possible for the deletion of *-u-* from the suffix *-ous* illustrated by the following lexical derivations.

(112) a. gener*ous*+-ity=gener*o*siity
b. pomp*ous*+-ity=pomp*o*sity
c. religi*ous*+-ity=religi*o*sity

Orthographic consonant cluster simplification combines with the constraint on proximate repetition to provide an explanation for the deletion of an *n* in the derivation of *can't*. Let us take a look at the derivations given in (113) below with special reference to (113e).

(113) a. is+-n't=isn't
b. was+-n't=wasn't
c. have+-n't=haven't
d. had+-n't=hadn't
e. can+-n't=can't/*cann't
f. could+-n't=couldn't

On the analogy of the derivation of, say, *couldn't* from "*could+n't*," we should expect to derive *cann't* from "*can+n't*." This expected form **cann't* is ill-formed, however, because it violates the rule of orthographic consonant cluster simplification as well as the constraint on proximate repetition. These two violations can be resolved by deleting the second of the two *n*'s from the expected, but ill-formed **cann't*. Thus viewed, the derivation of *can't* from "*can+-n't*" is by no means idiosyncratic.

Note in this connection that all auxiliaries normally alternate between strong and weak forms. When an auxiliary combines with the negative contraction *-n't*, as in *haven't* or *can't*, however, only the strong form may be used so that the alternation in question does not apply. This anomaly is only apparent, however, considering that the addition of the negative element renders the auxiliary here that much heavier semantically and thus phonologically as well.

Incidentally, consonant cluster simplification can be invoked to provide a principled account for the second alternative pronunciation for each word in (114) below.

(114) a. lunch/lʌntʃ/or/lʌnʃ/
b. lunge/lʌndʒ/or/lʌnʒ/
c. belch/beltʃ/or/belʃ/
d. bulge/bʌldʒ/or/bʌlʒ/

Of the two alternative pronunciations for each word here, the second is often considered to be slightly substandard. Given the rule of consonant cluster simplification and a phonemic reanalysis of the words to be proposed below, however, the second alternative pronunciation can be shown to be perfectly natural and thus regular.

Note here that the two-member consonant cluster consisting of *l* or *n* followed by an affricate may be reanalyzed as a three-member cluster consisting of (1) *l* or *n* followed by (2) an alveolar stop and (3) a palatal fricative. The stop and the fricative here agree with the original affricate in voicing. The rule of consonant cluster simplification applies to the thus reanalyzed cluster to delete the medial member of the cluster, i.e. either /t/ or /d/, thereby giving rise to the second alternative pronunciation. Incidentally, the reanalysis suggested here is quite plausible in that an affricate is in fact a blend of a stop and a fricative.

The medial /t/ and /d/ in the clusters of (114) above get deleted for exactly the same reason that the medial /t/ and /d/ in the clusters of (115) below get deleted.

(115) a. Chris*t*+-*mas*=Chris*t*mas
b. hand+-some=ha*nd*some

Consonant cluster simplification can also provide an explanation for the

silent letters in words such as the following,

(116) a. *k*nife
b. *g*naw
c. *m*nemonic
d. *p*sychology

(117) a. lam*b*
b. bom*b*
c. com*b*

The word-initial letters in (116) and the word-final letters in (117) are thought to be highly idiosyncratic in that they are not sounded. We can resolve this idiosyncrasy by assuming that every word is preceded and followed by an inaudible sound characterized by silence or voicelessness. Since a consonant is typically (or primordially) voiceless, we may further assume that this inaudible sound is a very weak consonant. Then we can posit a three-member consonant cluster word-initially for every word in (116) and word-finally for every word in (117). Given this three-member consonant cluster analysis, we can say that the medial member of the cluster goes unpronounced in compliance with the rule of consonant cluster simplification.

In fact, the silence of the word-final *n* in (118) below can be explained in exactly the same way.

(118) a. autum*n*
b. dam*n*
c. condem*n*

We may note at this point that the silent word-final letters here may come alive when they immediately precede certain suffixes. In (119) below, for example, the underlined letters are sounded before such suffixes as *-al*, *-ard*, and *-ation* while they are silent before the suffixes *-ing*, *-ed*, and *-er*.

(119) a. bom*b*ing/bom*b*ed/bom*b*er vs. bom*b*ard
b. condem*n*/condem*n*ed/condem*n*er vs. condem*n*ation

It appears that *-ing*, *-ed*, and *-er* are much less tightly suffixed to the stems here than are *-ard* and *-ation*, with the result that there is arguably much more of a pause before *-ing*, *-ed*, and *-er* than before *-ard* and *-ation*. We may interpret this greater pause before *-ing*, *-ed*, and *-er* here as a silence

or voicelessness, which is something like a weak consonant. If this is correct, then we can explain the alternation between the silence and non-silence of the letters *b* and *n* here as a perfectly predictable and thus regular phenomenon.

Note that our discussion here casts light on the fact that word-final consonants in the words below are either very weakly pronounced or even altogether unpronounced.

(120) a. lan*d*
b. ol*d*
c. fin*d*
d. fel*t*
e. cos*t*

Let us now turn to the apparently irregular alternation between the silent and non-silent *h* in the following pairs of words.

(121) a. pro*h*ibit vs. pro*h*ibition
b. ve*h*icle vs. ve*h*icular

The silent *h* here, which is etymologically real, is generally regarded as something of a mystery. We can readily see, however, that the *h* here is silent immediately preceding an unstressed vowel while it is sounded pretonically. Given the fact that all consonants are weakened more or less before an unstressed vowel, the silent *h* in front of an atonic vowel here is anything but anomalous.

Our last example in this section has to do with the first-person-singular pronoun in English. This pronoun is highly idiosyncratic orthographically in that it is spelled with an upper-case letter while all other pronouns are normally spelled with lower-case letters. We have argued elsewhere (Park 1992) quite convincingly that this is because the single letter representing the pronoun in question is in fact a condensation of more than one letter, i.e. of the three letters of the Middle English *ich*. Something like the law of conservation is arguably in operation here in the derivation of *I* from *ich*.

The use of the capital *I* for the first-person-singular pronoun is anything but idiosyncratic, as can be seen from an examination of the following words.

(122) a. A-bomb (=atomic bomb)
b. H-bomb (=hydrogen bomb)
c. POW (=prisoner of war)
d. STD (=sexually transmitted disease)
e. TV (=television)

The capital letters here all kind of compensate for the letters suppressed in the derivation of the abbreviations in question. In other words, we get each uppercase letter here as a condensation of a series of letters.

5. Closing Remarks

We have thus far dealt with a fair number of interesting irregularities to be found in the structure of English, providing in the process a principled account for most of them. However, the present paper has left out of account apparent irregularities in English word order. It has also failed to pay anything like adequate attention to apparent irregularities related to English word formation processes.

Word order "irregularities" have been treated in fairly sufficient detail in Park (1985), which shows most of them to be only apparent irregularities. As for "irregularities" in word formation processes, we will take an in-depth look at them in a forthcoming paper (Park, in preparation). Among other things, this paper will deal with the complementary distribution between *-th* and *-t*, two alternants of one and the same noun-forming suffix -th, as used in (123) and (124) below respectively.

(123) a. high+*-th*=heig*ht*
b. fly/flee+*-th*= fligh*t*
c. weigh+*-th*=weight
(124) a. deep+*-th*=dep*th*
b. heal+*-th*=heal*th*
c. spill+*-th*=spil*th*

We will show in this paper that the suffix *-th* changes to *-t* when the stem-final consonant is a fricative, either superficially or underlyingly, while it remains intact elsewhere. We will further argue that this alternation is due mostly to the constraint on proximate repetition.

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