

Two Spurious Counterexamples  
To the Principle of Phonology-Free Syntax\*

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1. **Ditransitive verbs in English.** It has occasionally been suggested<sup>1</sup> that the contrast between verbs like give in (1) below and those like donate in (2) indicates that the English grammatical alternation known as "Dative Movement" is conditioned in some way by the phonological makeup of the governing verb--by the number of syllables in the verb, or its stress pattern, or both.

- (1) a. I gave \$50 to the Save-A-Kitty Fund.
- b. I gave the Save-A-Kitty Fund \$50.
- (2) a. I donated \$50 to the Save-A-Kitty Fund.
- b. \*I donated the Save-A-Kitty Fund \$50.

There are three separate analytical problems here. First, what is the property that distinguishes the ditransitive verbs that occur in both the (b) and the (a) constructions from those that occur only in the (a) constructions? Second, does the fact that a verb has this property determine the verb's ability to occur in the (b) form, or does the existence of a (b) form determine that a verb has this property? Third, at what level of structure is this property relevant--the level at which Dative Movement applies, or surface structure? Cases like (1) and (2) would be relevant to the PFFS only if the possibility of the (b) forms was related to some phonological property of verbs (rather than, say to the historical stratum to which a verb belongs), and then only if that phonological property determined the possibility of a (b) form (rather than the reverse), and then only if the phonological property acted as a condition on the applicability of a syntactic rule governing the Dative Movement alternation (rather than as, say, a filter applying to a postsyntactic level containing information about both syntactic categories and syllable structure).

These matters are examined by Green (1974, 77-9). For to-datives (as opposed to the related for-dative in *I bought a raccoon coat for Zelda/I bought Zelda a raccoon coat*), she considers four phonological conditions having to do with the governing verb ((1) the verb is a monosyllable, (2) it is a disyllable with initial stress, (3) it is a disyllable with final stress, or (4) it is a trisyllable) and one nonphonological attribute (whether it belongs to the Anglo-Saxon stratum of the modern English vocabulary or not). She effectively dismisses the possibility that surface phonological form is at issue by observing that progressive forms obey the same constraints as their stems even though they have one more syllable than their stems:

- (3) a. I am giving \$50,000 to the Fitzgerald Fund.  
 b. I am giving the Fitzgerald Fund \$50,000.
- (4) a. I am donating \$50,000 to the Fitzgerald Fund.  
 b. \*I am donating the Fitzgerald Fund \$50,000.

What remains is the possibility that a syntactic rule feature determined by the phonological properties of the lexical entry for the verb stem is at work.

But in fact Green gives examples that frustrate all the remaining hypotheses having to do with phonology, as well as those having to do with lexical strata, no matter which direction of determination is at issue. The data can be summarized in a table of verbs as categorized by their properties, with verbs that permit Dative Movement—that is, verbs that occur in both the (a) and (b) constructions above—marked by a "+", and with verbs that prohibit Dative Movement—that is, verbs that occur in the (a) but not in the (b) construction above—marked by a "-"; "\*\*\*\*\*" indicates that there are probably no examples of the appropriate sort (see Table 1.

Table 1. Phonological and etymological properties of ditransitive verbs

	ANGLO-SAXON	NON-ANGLO-SAXON
MONOSYLLABLE	+give +tell +show	+cite +quote
	+mail +toss	+cede
	-lift -raise	-prove -voice
	-lisp -yell	
DISYLLABLE, INITIAL STRESS	+carry +cable	+promise +offer
	-broadcast -mutter	-donate -transfer
DISYLLABLE, FINAL STRESS	*****	+advance +permit
	*****	-admit -confess
TRISYLLABLE	*****	+deliver +guarantee
		+telephone +radio
	*****	-exhibit -illustrate
		-recommend

The judgments in this table are Green's, and not everyone agrees on each example; but there are some cases of each type for every speaker of English we have investigated. Thus, in contrast to *give* (+) versus *donate* (-) above, there are the phonologically, and stratally, similar *yell* (-) versus *promise* (+):

- (5) a. She yelled the password to Quentin.
- b. \*She yelled Quentin the password.
- (6) a. She promised a daffodil to Ramon.
- b. She promised Ramon a daffodil.

Phonology is not directly relevant even in finally stressed disyllables and in trisyllables; compare *advance* (+) versus *confess* (-) and *guarantee* (+) versus *recommend* (-):

- (7) a. Margaret advanced twelve shillings to Owen.
- b. Margaret advanced Owen twelve shillings.
- (8) a. Peter confessed his sins to Shirley.
- b. \*Peter confessed Shirley his sins.
- (9) a. The company guarantees a feast to its customers.
- b. The company guarantees its customers a feast.
- (10) a. Your mother recommended a leap into the sea to us.
- b. \*Your mother recommended us a leap into the sea.

We believe that there are no genuinely significant generalizations to be made about the syllable structure or stress pattern that characterizes Dative Movement verbs. There does not even seem to be any real correlation (in the statistical sense) between occurrence in the Dative Movement construction on the one hand and monosyllabicity and/or initial stress on the other; monosyllabic and initially stressed verbs predominate in the lexicon in any event, and we have no reason to think that there is a statistically significant increased frequency of them among the Dative Movement verbs as opposed to the general population of verbs (we offer this as a challenge to any reader who might like to conduct a rigorous statistical study).

Nor does the behavior of speakers suggest that verbs that go against the putative phonological generalizations (either by permitting Dative Movement when they "ought not" to, like *guarantee*, or by failing to permit Dative Movement when they "ought" to, like *yell*, are felt to be in any way aberrant; there is no observable inclination for speakers to avoid these constructions, or for the constructions to disappear from the language through time, by the usual processes of regularization.

Certainly, there might be real generalizations about membership in the class of Dative Movement verbs—Green (1974) proposes rather complex semantic conditions and Storm (1977) suggests a correlation between morphological simplicity (monomorphematicity) and Dative Movement—but phonology appears to have nothing to do with the matter, exactly as our thesis would predict. To emphasize this point, we observe that the two most exception-free and productive generalizations we know of in this area have nothing to do with phonology: manner-of-speaking verbs (like *lisp* and *yell* in the table above) uniformly fail to occur in the Dative Movement construction, regardless of their phonology, and denominal means-of-communication verbs (like *cable*, *telephone*, and *radio* in the table above) uniformly permit the construction, again regardless of their phonology.

2. **Verbs taking particles in English.** Fraser (1976, sec. 1.3) examines the factors that determine which verbs can occur in the constructions illustrated in (11).

- (11) a. She bolted down the flange plates.  
b. She bolted the flange plates down.  
(12) a. He ladled out a bowl of soup.  
b. He ladled a bowl of soup out.

He concludes that there is some semantic determination, but that

Surprisingly enough, it is the phonological shape of a verb that determines to a large extent whether or not it can combine with a particle. Kennedy (1920), Whorf [(1956)], and Fraser (1965) have all independently noted that the majority of verbs occurring with particles are monosyllabic and that the remainder are made up primarily of bisyllabic words which are initially stressed. Kennedy found in 988 cases...only one trisyllabic case, this being *partition* as in *partition up* and *partition off*. (There is also *apportion out* and *telephone in*.) We find that while there are numerous phonetically bisyllabic verbs occurring in verb-particle combinations, many of these cases may be analyzed as phonologically monosyllabic...In particular, these phonetically monosyllabic verbs...contain a final syllable liquid or nasal...Relatively few initially stressed phonologically bisyllabic verbs combine with particles...(Fraser 1976, 13-4)

Examples of the various types are listed in Table 2 below.

Table 2. English verbs occurring with particles

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I.	Monosyllables: act, bear, cut, drag, egg, flag, get, hand
II.	Disyllables ending in syllabic sonorants: banter, clutter, fritter, ladle, parcel, saddle, siphon, tighten, widen
III.	Other disyllables with initial stress: carry, auction, harness, measure, follow, cancel
IV.	Disyllables with final stress: balloon, cement, collect, connect, consign, divide, explain
V.	Trisyllables: apportion, partition, separate, summarize, telegraph, telephone

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Fraser's proposal is that phonological shape constrains the ability of a verb to combine with a particle: monosyllables and initially stressed disyllables are suitable candidates, but verbs of other phonological shapes are not.

First, we note that (as in the case of the Dative Movement verbs in the previous section) it cannot be surface structure phonology that is relevant here, for the progressive forms of verbs have the same properties as the base forms: the trisyllabic forms in *siphoning out* and

*cluttering up* are just as acceptable as the initially stressed disyllabic forms *siphon out* and *clutter up*. If there is a generalization here, it concerns a phonologically determined rule feature.

However, there are exceptions (Fraser's complete lists are given in IV and V of Table 2), and these exceptions do not stand out in any way as being peculiar or as sounding semigrammatical when they occur with particles:

- (13) a. Julius explained away his odd behavior by saying that Martians had gotten control of his mind.
- b. Julius explained his odd behavior away by saying that Martians had gotten control of his mind.
- (14) a. Robert telephoned in his grades: ten D's.
- b. Robert telephoned his grades in: ten D's.

So we seem to have at best a tendency rather than a rule.

Moreover, again paralleling the case of Dative Movement verbs, the generalization fares very badly even as a tendency. Since the most common verbs in English are predominantly monosyllables and initially stressed disyllables, a predominance of these two phonological types in the list of particle-taking verbs is not surprising. No one has argued that these two phonological types occur in the list of particle-taking verbs significantly more than they occur in the whole population of verbs, which is what would be required to back up a claim that a phonologically governed tendency was at work. Even if such a tendency could be demonstrated, the history of the verb-particle combination would provide a straightforward reason, and sufficient explanation, for the predominance of two phonological types in the list of particle-taking verbs: the origin of the construction is in the Anglo-Saxon stratum of the vocabulary, the stratum in which virtually all the root morphemes are monosyllables or initially stressed disyllables. The construction has, however, been freely extended to the Romance stratum, as can be seen from the fact that the roots in IV and V of Table 2, all of them of Romance (or scientific Greek) origin, now occur with particles, as do such Romance-derived verbs as *flag*, *parcel*, and *cancel* in the earlier parts of the table.

Fraser gives two arguments that "the phonological shape of the verb does indeed play a dominant role in determining the possibility of a combination" (Fraser 1976, 14): first, that near-synonyms with different phonological structure have different properties:

- (15) a. The chemist mixed up the solutions.
- b. \*The chemist combined up the solutions.
- (16) a. She will fix up the error in the book.
- b. \*She will rectify up the error in the book.

and second, that the addition of one of the productive English prefixes both alters the phonological structure of the verb and changes its properties:

- (17) a. Herman sewed up the hole in his shirt.
- b. \*Herman resewed up the hole in his shirt.

- (18) a. The shopkeeper tried to polish up the counter.  
b. \*The shopkeeper tried to overpolish up the counter.

The first of these arguments carries little weight, since the historical explanation we offered above suffices to account for the differences in (15) and (16). The second argument can be countered by the observation that there is an independent, nonphonological, reason for the failure of prefixation in (17b) and (18b): the addition of a particle to a verb "freezes" the combination<sup>2</sup> in the same way that the addition of a productive prefix does. There are thus no combinations of two such prefixes (\**reoverpolish*, \**overpreheat*), or of two true particles<sup>3</sup> (\**grow up out*, \**hand out down*), or of a particle with a prefix (as in the examples above), or even of a particle with a suffix of derived nominalization (compare (19) with (20)).

- (19) a. Jeremy quickly grew.  
b. Jeremy quickly grew up.  
(20) a. Jeremy's quick growth was astonishing.  
b. \*Jeremy's quick growth up was astonishing.

We have argued that Fraser's phonological generalization about verbs taking particles is spurious. However, even if it had survived scrutiny, it would not have been a serious threat to the PPFS. To see this, notice first an important difference between the putative constraint in the previous section and the putative constraint in this section. What was at issue in the first case was, in transformational terms, the applicability of a rule of Dative Movement--in more neutral terms, the existence of one construction type (with a ditransitive verb) as an alternative to another (with a transitive verb in construction with a prepositional phrase with *to*).

What is at issue here is not, in transformational terms, the applicability of a transformational rule; in particular, it has not been claimed that the rule of Particle Movement is constrained by the phonological form of the verb. Instead, it is the very ability of a verb to combine with a particle (whether the particle is adjacent to the verb or separated from it) that is the object of the putative constraint. We are still dealing with a syntactic principle, however (in transformational terms, with a phrase structure rule rather than a transformational rule), and ordinarily a phonological constraint on a phrase structure rule would be as contrary to the PPFS as a phonological constraint on a syntactic principle relating two constructions. What makes the current example special is the lexical character of verb-particle combinations.

It is well known that particles do not combine freely with verbs. There are many apparently arbitrary gaps: *fritter away*/\**fritter off*, \**parcel away*/*parcel off*, and the like. Moreover, the semantics of the occurring combinations is often not compositional; there are many examples like *cut out* 'stop' and *give up* 'abandon'. Both of these facts suggest that many, possibly most, verb-particle combinations must be listed as lexical items. The syntactic component should then not be duplicating the information about which verb-particle combinations happen to occur. Rather, the combination of V (of the appropriate subclass of verbs) and Prt occurs in the preterminal structures supplied by the syntactic component; pointers to individual verbs and particles are added

in terminal structures; and then only certain of these combinations of verb pointers and particle pointers, namely those for which there are lexical entries, will have words inserted into them.

On this analysis, the syntactic component has no constraints, phonological or otherwise, on which verbs can take particles. If there were a real generalization governing the matter, it would be a generalization about the internal properties of a set of phrasal combinations that happen to occur in the lexicon, analogous to generalizations about the internal properties of a set of actually occurring (rather than potential) words. There is some question in our minds as to whether it makes sense to speak of "actually occurring" (rather than potential, or possible) phrasal combinations, just as there is about talk of "actually occurring" words. And if the question is a sensible one, we are not convinced that generalizations about the internal properties of such combinations can have phonological content. But if they did, that would be a fact about the contents of the lexicon, not about syntactic rules.

#### Notes

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<sup>1</sup>The issue we raise here was first brought to our attention by J. Bruce Fraser; it appears not to have received any significant discussion in print until Green (1974) dealt with it.

<sup>2</sup>This useful metaphor is due to J. R. Ross.

<sup>3</sup>See Fraser (1976, ch. 2) for a treatment of elements that are only apparent particles.

**References**

- Carroll, John B. (ed.). 1956. Language, thought, and reality: Selected writings of Benjamin Lee Whorf. New York: Technology Press and Wiley.
- Fraser, J. Bruce. 1965. An examination of the verb-particle construction in English. Ph.D. dissertation, MIT.
- Fraser, J. Bruce. 1976. The verb-particle combination in English. New York: Academic Press. Original publication 1974, Tokyo: Taishukan.
- Green, Georgia M. 1974. Semantics and syntactic regularity. Indiana Univ. Press.
- Kennedy, A. G. 1920. The Modern English verb-adverb combination. Language and Literature 1.1. Stanford CA: Stanford Univ.
- Storm, Peter. 1977. Predicting the applicability of dative movement. CLS Parasession, 101-2.
- Whorf, Benjamin Lee. 1956. Thinking in primitive communities. In Carroll 1956, 65-86.