

Is the Stress Pattern the Only Criterion of Noun Compounds?

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1. Introduction

The definition of the term compound or compound word, which is made up of two (or more) words, is intolerably vague in spite of its frequent appearances in linguistic literature. In some cases of nominal compounds, the clear-cut distinction between noun compounds and simple noun phrases is difficult to make. It is often pointed out that the dividing line between compounds and syntactic phrases can be drawn on the basis of the stress pattern: If a given combination has single stress (¹-|-) it is classified as a compound, whereas it is simply a syntactic phrase if it has double stress (¹-|¹-).¹⁾ This is indeed the case with ¹White |House 'the official residence of the United States' and ¹white ¹house 'a house which is white,' where the former is a compound whereas the latter is a phrase.

Though the stress pattern criterion in distinguishing between compounds and phrases is generally applicable, it should be noted that this is not the one and only criterion. Besides its single stress, the compound ¹White |House has developed a special meaning which can not be reduced to the simple semantic addition of the elements. We must also note that since compounds are single words, they display many word-like characteristics such as inseparability. Is it all right to forget the fact that the differences in their meanings and rigidity of their elements also play an impor-

1) In this paper, we use the marks (¹) and (|). The mark (¹) is put before the syllable that has primary stress, and the mark (|) before the syllable that has secondary stress. In *Random House College Dictionary* 1991 (henceforth *RHCD* 1991) from which most of the combinations illustrated in this paper are derived, however, the mark (') follows the syllable having primary stress, and the mark (ˊ) follows the syllable having secondary stress.

tant role in distinguishing them? This paper aims to show that the phonological criterion alone is not enough to prove the combination in question is a compound or a phrase. We must take into consideration semantic and paradigmatic factors as well.

2. Phonological Criterion in American Structuralism²⁾

Bloomfield (1933) pays attention to the fact that an English word usually has only one primary stress, which tends to be put on the first syllable. He clearly maintains that compounds and phrases can be distinguished according to whether the given combination has single primary stress or double primary stress, and entirely rejects semantic criterion:

In meaning, compound words are usually more specialized than phrases; . . . It is a very common mistake to try to use this difference as a criterion. We cannot gauge meanings accurately enough; moreover, many a phrase is as specialized in meaning as any compound: in the phrases *a queer bird* and *meat and drink*, the words *bird*, *meat* are fully as specialized as they are in the compounds *jailbird* and *sweetmeats*. . . *ice-cream* [¹ajs-|krijm] is a compound, but *ice cream* [¹ajs |krijm] is a phrase, although there is no denotative difference of meaning (pp. 227-228).

Bloch and Trager (1942) also try to define compounds in terms of their stress patterns. They maintain that in order to distinguish compounds from phrases, some sort of formal criteria must be sought. As the criteria of compounds, they give phonemic modification, junctural change, stress pattern, and the combination of these features. They explain as follows:

Thus the compound *blackbird* differs from the phrase *black bird* only in stress; the compound *altogether* differs from the phrase *all together* in both stress and juncture; and the compound *gentleman* differs from the phrase *gentle man* in stress, juncture and modification of the second member from /man/ to /mən/.

2) Among American structural linguists, who strictly keep the notion of the "levels of analysis," an analysis of morphological structure must be made on the basis of phonology and semantic consideration is refused in this stage. Therefore the term compound is restricted to the combinations with single stress among them.

Marchand (1969) applies the stress pattern criterion to adjective + noun combinations though he adopts what he calls “underlying concepts” for others. According to him, a compound must display some morphological characteristic distinguished from the parallel syntactic construction. Therefore, in the case of adjective + noun combinations which is structurally identical with regular noun phrases and where the conventional stress pattern is double stress, single stress is regarded as the criterion of compounds. He states that “we could not modify the first elements of *black market*, *Black Sea* by *very*, yet the phrases are not compounds, as they do not enter the stress type of *blackbird* (p. 21),” and further he says “any syntactic group may have a meaning that is not the mere additive result of the constituents (p. 122).” He considers even ¹*free*¹*wheel* ‘a device in the transmission of a motor vehicle or rear bicycle wheel’ and ¹*best* ¹*man* ‘the chief attendant of the bridegroom at a wedding’ to be the examples of syntactic phrases because of their double stress. For him, phonological criterion sometimes overrides semantic criterion.

So far, we have seen that some linguists tried to characterize compounds and phrases in terms of their characteristic stress patterns. To what extent, however, are their attempts viable?

3. Semantic Criterion

Thus there seem to be some problems about making a distinction between compounds and phrases based on the stress pattern criterion alone. For one reason, it is often rather difficult to know with certainty whether a given combination takes single stress or double stress. In fact, the stressing of English compounds seems to vary considerably not only from dialect to dialect but also from individual to individual as *the Webster's Seventh New Collegiate Dictionary* (1967) states as follows:

Some speakers stress a compound one way, and other speakers another way. To make rules that would cover the stress of compounds seems impossible. Certain conditions seem to make for one kind of stress or the other; these conditions leave the stress on many compounds unexplained (p. 1200).

According to Bolinger (1986), stress pattern vacillations often result

from the semantically half fused nature of the combinations. Among such combinations we can find *apple pie*, *ice cream*, *oatmeal*, *electric chair*, etc. Note that these combinations are just in the period of transition from unfused phrases to highly fused compounds. Bolinger observes “there are speakers who say ¹*apple* ¹*pie*, ¹*ice* ¹*cream*, ¹*oat*¹*meal*, and ^e*lectric* ¹*chair*, and others who continue the older “phrasal stress” with ¹*apple* ¹*pie*, ¹*ice* ¹*cream*, ¹*oat*¹*meal*, and ^e*lectric* ¹*chair* (p. 117).” Accordingly, it is arguable to say that *ice cream* is a compound for some speakers while it is a phrase for others without considering the fact that the combination *ice cream* is semantically wavering between an unfused phrase and a highly fused compound.

This proves the difficulty to explain the difference between compounds and phrases only in terms of the stress pattern of the given combinations. We must take into consideration semantic characteristics as well, focusing on the ways in which a given combination has developed special meanings.

4. Paradigmatic Criterion

Besides the semantic criterion, we also need the paradigmatic criterion. The substitutability of the two elements is also considered to be crucial in distinguishing between compounds and phrases. A syntactic phrase allows high degree of substitutability in each element, and the meaning is clearly known from the semantic combination of the elements. Thus the first element of the simple phrase ¹*red* ¹*book* ‘a book which is red’ may be freely replaced by *blue*, *large*, *thin* and so on without deviating from its structural meaning ‘a book which is . . .’ In the same way, the second element of the phrase ¹*old* ¹*building* ‘a building which is old’ may admit innumerable alternatives such as *chair*, *man*, *book* and so on without any effect to the semantic framework of ‘. . . which is old.’ All of these combinations can be classified as phrases because their elements admit very high substitutability typical of syntactic combinations.

On the other hand, the meaning of a compound is so solid that we cannot replace any of the elements without forfeiting its established meaning. For instance, if we replace the first element of ¹*blue* ¹*stocking* by ¹*white*, the result is a nonsense word ¹*white* ¹*stocking*. Thus, whether the elements

of a combination can be replaced by others freely or not is highly important for the distinction between compounds and phrases.

5. Phrase-like Combinations with Single Stress

When we reexamine all the combinations taking these semantic and paradigmatic criteria into consideration, we can find many single-stressed combinations which are akin to phrases.

5.1. Single-stressed combinations often occur when they consist of a verb-derived noun at the second element and the semantic object at the first element: *That which or a person who* —s *X* generally take the stress pattern 1X —er. Thus we have a large number of combinations with *maker* in the second element;

1car maker, 1coffee maker, 1dress maker, 1noise maker, 1pace maker
 1peace maker, 1trouble maker, 1watch maker (RHCD 1991).

This combination pattern *X-maker* is so productive that we can easily create such nonce words as 1pi ano maker, 1tube maker with single stress. We can cite a large number of examples of this sort; 1English teacher, 1fortune -teller, 1lie detector, 1pen holder, 1sun -worshiper. More generally, this phenomenon is widely seen in the combinations with verbal nouns in their second elements. For instance, 1bed making, 1fox hunting, 1house keeping, are the cases with gerunds, and 1blood test, 1flower arrangement, 1pro duction control are the cases with verb-derived nouns. Since they always take single stress, they appear to be compounds with respect to the phonological criterion. For this type of combinations, however, the single stress is only a syntactically determined stress pattern. Considering the fact that they admit of a fairly large number of substitutable alternatives in their first element and that they have transparent, combinatory meanings, we might regard them as phrases rather than compounds.

5.2. Single-stressed combinations often result when the second elements are rather general in their meaning and less informative than the first element, or also when the contrast with other combinations is intended on their first elements. The words such as *disease*, *land*, *room*, *school*, and *system* which frequently occur in the second element of a combination are

less important than the first elements which are the modifiers, and this explains their single stress:

1Alzheimer 's 1di sease, 1Hansen 's 1di sease, 1Parkinson 's 1di sease,
 1dream land, 1flat land, 1high land, 1dressing room, 1guest room, 1rest
 room, 1grammar school, 1military school, 1night school, 1feudal sys-
 tem, 1decimal system, 1nervous system.

Here again, they are apparently compounds in that they have single stress. But this time, their stress pattern seems to be determined by semantical or pragmatical factors. They may be similar to syntactic phrases rather than to compounds in that they admit high degree of separability and substitutability and exhibit combinatory meanings which often characterize syntactic phrases.

6. Compounds with Double Stress

On the contrary, we can also find a large number of double-stressed combinations whose other properties suggest that they are compounds. They are apparent simple phrases in that they have double stress. From substitutability and semantic points of view, however, they have more or less fused meaning and consequently each element of the combination is rather fixed and allows very low degree of substitutability. Examining some entries in English dictionaries, we can find a number of such combinations. In what follows, I would like to show such combinations of adjective + noun that I collected chiefly from RHCD.

Double-stressed compounds are divided into two groups according to their semantic nature: *endocentric compounds* and *exocentric compounds* (Bauer 1983: 30). In the first group, the compound is a hyponym of the grammatical head which is the second element. Here what we often find is the *specialization of meaning* of the whole combinations.

On the other hand, since the compound in the second group is not a hyponym of the second element, specialization of meaning is not often applicable. Actually, what we find about this group is *transfer of meaning* rather than specialization of meaning; a completely different sense from the sense of the second element is given to the whole combinations. Trans-

fer of meaning is a kind of figure of speech, in which our conceptual association connects the literal (or sometimes already specialized) meaning with the transferred meaning. Combinations in this group fall into two categories according to their kind of association underlying them: *similarity* and *contiguity*.

In the next two sections, I consider double-stressed combinations which have changed in meaning. To those used as technical terms or jargon, technical labels are added in the abbreviated forms³⁾ put in parentheses immediately after the examples. Note that polysemic combinations are being entered into separate categories according to their difference in meaning. Cross-references are available by arrow signs.

6.1. Specialization of Meaning (A)

6.1.1. There are many double-stressed combinations which have been so specialized in meaning that we can hardly deduce their meaning from the additive sum of the elements. In some cases, specialization of meaning has not gone further enough to fail to derive their correct meanings:

¹big ¹toe, ¹little ¹toe, ¹little ¹finger.

However, they can be modified by the adjectives whose meanings are contradictory to the first adjective elements and not by *very*, which proves that they have undoubtedly attained a certain level of "compoundness." Thus, we can say *little* ¹big ¹toe, but we cannot say *very* ¹big ¹toe in this meaning.

6.1.2. Semantic specialization very often results when a combination with additive meaning is in a certain group of people or in a particular field of activity or profession. These examples range from slightly to highly fused combinations. In spite of their double stress, we can no longer derive their meanings exactly from their general meaning or refer to such combi-

3) Full forms of the abbreviated subject labels used in this paper are as follows:

Aeron./autics	Cath./olic	Liter./ature	Path./ology
Anat./omy	Comp./uting	Med./icine	Print./ing
Astron./omy	Cook./ing	Mil./itary	Rail./way
Bibl./ical	Electron./ics	Mus./ic	Theatr./ical
Bot./any	Entom./ology	Opt./ics	Zool./ogy
Chem./istry	Ling./uistics	Paint./ing	

nations as simple syntactic phrases.

¹black/¹brown/¹white ¹belt (Judo) waistbands → C, ¹black ¹letter (Print.) a heavy-faced type, ¹blue ¹ribbon: first prize → B, ¹broad/¹narrow ¹gauge (Rail.) distances between the rails, ¹compact ¹disk (Electron.), ¹double ¹bar (Mus.) a double vertical line on a musical staff, ¹dry ¹eye (Path.) an abnormal eye condition, ¹First ¹Family/¹Lady, ¹first ¹night (Theatr.) evening of the first performance, ¹floppy ¹disk (Comp.), ¹free ¹agent (Sports), ¹free/wheel: a device in the transmission of a vehicle, ¹full ¹house (Theatr.) an occasion when every seat is occupied → B, ¹green/¹red/¹yellow ¹light: traffic lights → B, ¹grand ¹tour: an extended tour of Europe formerly made by young British gentlemen, ¹Great ¹War: World War I, ¹hard ¹disk (Comp.) a rigid disk for storing large amounts of data, ¹hard/¹soft ¹lens (Opt.) contact lenses, ¹heavy/¹light ¹metal (Chem.) kinds of metals → B, ¹heavy ¹water (Chem.) water in which hydrogen atoms have been replaced by deuterium, ¹hind ¹wing (Entom.) second or posterior wings, ¹high(-) ¹hat: a top hat, ¹Lost ¹Generation (Liter.), ¹lost ¹tribes (Bibl.) ancient Israeli taken into captivity, ¹lower/¹upper ¹case (Print.) trays for holding small/capital letters → C, ¹middle ¹distance (Paint.) the part between the front and the back, ¹missing ¹link (Zool.) between the anthropoid apes and humans, ¹near ¹miss (Aeron., Mil.), ¹New ¹Style: of the Gregorian calendar, ¹New/¹Old ¹World, ¹next ¹friend (Law) other than a guardian, ¹Old/¹Middle/¹Modern ¹English (Ling.), ¹old ¹master (Paint.) an eminent artist of an earlier period → C, ¹Oval ¹office: in the White House, ¹red ¹carpet: for welcoming important visitors, ¹red ¹hat (Cath.) the official hat of a cardinal → C, ¹short/¹long ¹wave: radio waves, ¹Siamese ¹twins (Med.) twins joined by fleshly band,⁴⁾ ¹slow ¹motion (Movies or TV), ¹soft ¹soap (Chem.) the semifluid soap → B, ¹special ¹effects (Movies or TV), ¹third ¹degree (Law) intensive questioning and rough treatment in order to get a confession, ¹white ¹elephant: award by the King to a disagreeable courtier → B, ¹white ¹flag: symbol of surrender, ¹yellow ¹card (Sports) a warning.

4) This combination originated with two Siamese men (1811-74) who were congenitally joined together.

6.1.3. There are a few extreme cases in which the original meaning of a combination has completely disappeared.

¹*best* ¹*man*: the chief attendant of the bridegroom at a wedding,⁵⁾
¹*black* ¹*box* (Aeron.) flight recorder, ¹*white* ¹*book*: an official government report.

Note that these are not combinations “semantically transferred” in that the referent has always been the same. However, they can be considered examples of radical specialization due to historical change or usage limitation. Their “compoundness” is supported by the possibility to put an adjective whose meaning is contradictory to the first adjective element before the combination *an unde¹sirable* ¹*best* ¹*man* and *an* ¹*orange* ¹*black* ¹*box* are completely acceptable. In these combinations adjectives *best* and *black* have lost their original function as modifiers and are totally fused with the following nouns.

6.2. Transfer of Meaning

When the meaning of a combination of words transferred from one field of sense to another, we often find it difficult to derive its meaning. Such combination is no longer simple phrase in that its meaning is not reducible to the mere additive sum of the components, and that it allows less substitutability on each component.

6.2.1. Transfer of Meaning Based on Similarity (B)

Semantically transferred combinations fall into two categories in terms of the kind of association between the literal (or sometimes already specialized) meaning and the transferred meaning. Combinations based on some kind of *similarity* or common feature in their form, state, or function, which are generally referred to as *metaphor*, form one group. The following are the examples whose meanings are transferred on the basis of similarity and hence cannot be considered hyponyms of the second elements.

5) This combination originated in Scotland, where a plundering marriage was customarily practiced and a bridegroom used to select the bravest friend for his assistant in plundering the bride.

¹*back* ¹*door*: a secret or unfair method or means, ¹*back* ¹*number*: a person or thing out-of-date, ¹*back* ¹*room*: a place from where an indirect control is exercised, ¹*back* ¹*seat*: a secondary or inferior position, ¹*big* ¹*stick*: political or military force used as a threat, ¹*big* ¹*wheel*: an important or influential person, ¹*blue* ¹*ribbon*: the highest award or distinction ← A, ¹*dead* ¹*duck*: a person or thing beyond help or hope, ¹*floating* ¹*island* (Cook.) a dessert of boiled custard, ¹*full* ¹*house* (in Poker) consisting of three of a kind and a pair, ¹*free* ¹*lunch*: something given with no expectation of repayment or obligation, ¹*free* ¹*ride*: something obtained without effort or cost, ¹*golden* ¹*club* (Bot.) aquatic plant, ¹*gray* ¹*urn* (Bot.) a mushroom, ¹*green* ¹*light*: permission to proceed ← A, ¹*heavy* ¹*hitter*: a very important or influential person, ¹*Indian* ¹*pipe* (Bot.) a plant, ¹*lame* ¹*duck*: a useless person, ¹*leading* ¹*light*: an important or influential person, ¹*left*/¹*right* ¹*wing*: political groups, ¹*Little* ¹*Dipper* (Astron.) a constellation, ¹*lone* ¹*wolf*: a person who prefers to act alone, ¹*loose* ¹*cannon*: a reckless person, ¹*loose* ¹*ends*: an unsettled or unfinished detail, ¹*open* ¹*door*: policy of trading with all nations on an equal basis, ¹*plain* ¹*sailing*: an easy and unobstructed course, ¹*red* ¹*carpet*: a display of courtesy or deference ← A, ¹*red* ¹*light*: a warning ← A, ¹*round* ¹*window* (Anat.) inner wall of the middle ear, ¹*second* ¹*fiddle*: a person serving in a subsidiary capacity, ¹*silver* ¹*bell* (Bot.) a North American shrub, ¹*small* ¹*beer*/¹*change*/¹*potatoes*: an insignificant person or thing, ¹*soft* ¹*soap*: persuasive talk ← A, ¹*straight* ¹*arrow*: a person devoted to clean or conventioned living, ¹*sudden* ¹*death* (Sports) extra play to break a tie, ¹*wet* ¹*blanket*: a person who prevents others from enjoying themselves, ¹*white* ¹*elephant*: something expensive but useless ← A.

6.2.2. Transfer of Meaning Based on Contiguity (C)

Those based on some kind of relation other than similarity, that is, *contiguity* — spatial or temporal proximity — form another group. They are sometimes referred to as *metonymy*. Some of them have a producer-product or container-content relation, and the like. Within the metonymic relations, the relation of ‘part for the whole’ is so remarkable that it is often treated as a separate category under the heading of *synecdoche*. Combinations based on contiguity are as follows:

¹*big* ¹*name*: a recognized leader, ¹*black*/¹*brown*/¹*white* ¹*belt* (Judo) an

expert/intermediate/beginning player ← A, *'blue 'helmet*: a UN peace-keeping forces, *'greasy 'spoon*: a cheap and unsanitary restaurant, *'lower/'upper 'case* (Print.) small/capital letters ← A, *'old 'master* (Paint.) a work by an eminent artist ← A, *'Red 'Cross, 'red 'hat* (Cath.) a cardinal ← A, *'red 'tape*: unnecessary official rules that delay.⁶⁾

7. Conclusion

As we have seen, English compounds are not always single-stressed. There exist many double-stressed compounds with high degree of fused meanings and low degree of substitutability of components. On the other hand, there are also many single-stressed combinations to which we hesitate to refer as paradigm examples of compounds. They admit high degree of element substitutability and still exhibit compositional, transparent semantics. Thus, the clear-cut formula which distinguishes between compounds and phrases based solely on the stress pattern would lead to the misclassification of these two types of combinations.

To recap, we need not only phonological but also semantic and paradigmatic criteria in regarding a given combination of words as a compound or a phrase.

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6) This combination originated after the red tape used to tie official documents.

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