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Stress location and comparative forms in English

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英語における強勢の位置と比較級の形式

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要旨 : 英語の比較級は、形容詞に接尾辞 (-er) を付加する形態的比較形と more を形容詞の前に置く迂言的比較形がある。この2つの形の選択には、音韻的な要因がよると指摘されている (Mondorf 2003, Hilpert 2008)。本論は、この2つの形の交替を音韻的・類型的に検討する。世界の言語を、形態的比較形を持つ言語、迂言的比較形を持つ言語、両方を持つ言語に分けて、それらの語強勢の位置をデータベースで調べると、左寄りの語強勢を持つ言語は形態的比較級を持ち、右寄りの語強勢を持つ言語は迂言的比較級を持つことがわかる。両方の形式を持つのは、語の中間に強勢を持つ言語であり、英語はその一つである。データベースで共に「右寄り」(right-oriented) の強勢に分類されている英語とドイツ語などの強勢位置の違いについて論じ、英語が両方の比較形を持ち、ドイツ語などが形態的比較のみを持つことを説明する。

Key words: stress, comparative, adjectives, affix, inflection, compound

1. Introduction

Word-stress location in English has been discussed in terms of extrametricality in rule-based phonology (Liberman and Prince 1977, Hayes 1982), or in terms of the NonFinality constraint in Optimal Theory (Prince and Smolensky 1993). In this paper, I will investigate the nature of English stress from a

morphosyntactic and typological point of view. I will focus on a process at the interface between phonology and morphosyntax, that is, comparative forms in the languages of the world. In section 2, I will overview the two comparative forms in English, i.e. morphological comparative and periphrastic comparative. Section 3 classifies languages of the world into three types according to their comparative forms. In section 4, I show that this classification corresponds to the word-stress location in the languages. Section 5 is devoted to explaining why word-stress location correlates to the choice of comparative forms. Section 6 concludes the discussion.

2. Two forms of comparatives

English has two forms for comparatives: the morphological comparative with suffix (-*er*) attached to the adjective stem (e.g. *tall-er*, also called the inflectional/synthetic comparative) and the periphrastic comparative with *more* in front of adjectives (e.g. *more beautiful*, also called the analytic comparative). It has been pointed out that long adjectives tend to have the periphrastic form while short adjectives tend to have the morphological form. For example, Quirk et al. (1985: 461) categorize adjectives into three groups according to the number of syllables, as shown in (1).

- (1) a. Monosyllabic adjectives normally form their comparison by inflection: *low-lower-lowest*
- b. Many disyllabic adjectives can also take inflections, though they have the alternative of the periphrastic forms: *politer/more polite; (the) politest/(the) most polite*
- c. Trisyllabic or longer adjectives can only take periphrastic forms: *more beautiful/*beautifuller, the most beautiful/*beautifullest*

Quirk et al. note that “adjectives with the negative *un*-prefix, such as *unhappy* and *untidy*, are exceptions (*unhappier-unhappiest, untidier-untidiest*)” and that “particle forms which are used as adjectives regularly take only periphrastic forms: *interesting-more interesting-most interesting; wounded-more wounded-most wounded; worn-more worn-most worn*.”

Mondorf (2003) also points out that characteristics of the final segment affect the alternation of two

comparative forms in English. For instance, adjectives with a final consonant cluster are more likely to form the periphrastic comparative than adjectives that end in a vowel or a single consonant (e.g. *more correct*, *more compact*) (cf. Hilpert 2008: 395).

Although these studies successfully describe the distribution of morphological and periphrastic comparatives in English, this categorization does not give us any principled answer to the question why this is the case. Typological studies of comparative forms have just started, which may well help us to understand English comparatives better. Bobaljik (2012) gives a comprehensive analysis of comparatives in languages of the world. He looks into the morphological aspects of comparatives and does not pay much attention to phonology. In this paper, I will focus on which comparative form a language uses, and will explain from a phonological point of view why a language chooses that form(s). This investigation reveals why English and some other languages allow both forms for comparatives. In the next section, I show a typology of comparative forms in the world's languages.

3. A typology of comparative forms

3.1 Languages with the morphological comparative

To express comparative meaning, languages use different forms. Germanic languages such as German and Dutch add the comparative suffix (-er) to an adjective (the morphological comparative).¹

- (2) a. *wichtig-er* 'more important' (German)
- b. *interessant-er* 'more interesting' (Dutch)

Other languages use different suffix forms. Uralic languages use the morphological comparative with bilabial consonants, as shown in (3).

- (3) a. -mpi (Finnish): *pieni* 'small' → *pienempi* 'smaller'
- b. -bb (Hungarian): *drága* 'expensive' → *drág-bb* 'more expensive'

Icelandic and Faroese mainly use the suffix -ari, as shown in (4)

- (4) a. *gul-ari* 'yellower' (Icelandic)

- b. *dýr-ari* ‘dearer’ (Faroese)

These two languages use the periphrastic comparative for present participles, adjectives ending in -s (both of which are indeclinable) and certain compound adjectives (Thráinsson 1994: 156, Barnes 1994: 199), as shown in (5).

- (5) a. *meira hugsi* ‘more pensive’ (Icelandic)
 b. *meira fámæltur* ‘quieter’ (literally ‘more few-spoken’) (Faroese)

I include these two languages in the morphological comparative type because the use of the periphrastic comparative is limited to the cases described above.

A classical language, Latin, and an isolated language, Basque, use the morphological comparatives, as shown in (6).

- (6) a. *felix* ‘happy’ → *felic-ior* ‘happier’ (Latin)
 b. *garestia* ‘expensive’ → *garesti-agoa* ‘more expensive’ (Basque)

These languages only or mainly use the morphological comparatives.

In section 4, I argue that the languages with the morphological comparatives (2) to (6) have lefthand stress.

3.2 Languages with the periphrastic comparative

In contrast to the languages in the previous section, there are languages that use only (or mainly) the periphrastic comparative. First, Romance languages such as French put the comparative word (*plus*) in front of adjectives (the periphrastic comparative).

- (7) a. *più* (Italian)/*plus* (French)/*más* (Spanish) *grande* ‘bigger’
 b. *mai lung* ‘longer’ (Romanian)
 c. *més alt* ‘taller’ (Catalan)
 d. *mais alt* ‘higher’ (Portuguese)

Romance languages have the morphological comparatives for a specific class of words such as *bon* >

meilleur (good > better), *mauvais* > *pire* (bad > worse), *petit* > *moindre* (small > smaller) in French. See Togeby (1980: 117) for the history of comparative forms in Romance languages. However, I classify these languages as the periphrastic comparative only here.

Note that these Romance languages stem from Latin, which uses the morphological comparative instead of the periphrastic comparative, as we saw in the previous section.

In addition to Romance languages, there are others that use the periphrastic comparatives only. Bobaljik (2012) lists some languages as having the periphrastic comparatives rather than the morphological comparatives.

(8) a. Rapanui (Austronesian, Malayo-Polynesian)

Ata roa roa Ari ki a Rui

more long DUP Ari DAT PRS Rui

‘Ari is taller than Rui.’ (du Feu 1996: 83)

b. Maori (Austronesian, Malayo-Polynesian)

Teia te rakau roa ake i tena

this the tree big more on that

‘This tree is higher than that one.’ (Stassen 1985: 242)

These languages use an adverb ‘more’ modifying adjectives as Romance languages do. The next example is also classified as a periphrastic comparative by Bobaljik (2012).

(9) Mizo (Sino-Tibetan, Tibet-Burman (Kuki-Chin))

Sebang ui áin ásháng-zak

cow dog than high-more

‘A cow is taller than a dog.’ (Shaha 1884: 10)

However, as the hyphen between *ásháng* and *zak* shows in (9), *zak* may well be a suffix rather than an independent word. This is plausible because Mizo is a head-final language with OV order and postpositions, which usually has suffixes (Tokizaki 2011, Tokizaki and Kuwana (to appear)). Then,

Mizo comparative should be classified as morphological rather than periphrastic.

Also some languages that Bobaljik (2012) marks as the periphrastic comparatives only are in fact zero comparatives, as shown in (10).

- (10) a. Somali (Afro-Asiatic, Cushitic)

Náag-taas-u náag-tán waa + ay ká dhèer tahay.

woman-that-NOM woman-this DM+she from tall is

‘That woman is taller than this woman.’ (Saeed 1999: 107)

- b. Thai (Tai-Kadai)

dòk-bua sǎay kwàa dòk-kùlàap

lotus beautiful than rose

‘Lotus flowers are more beautiful than roses.’ (Iwasaki and Ingkaphirom 2005: 94)

In these examples, there is no comparative marker, neither a suffix nor a modifying adverb. The same zero comparatives are seen in a number of languages including Japanese, as shown in (11).

- (11) *Ano ie-wa kono ie-yori hurui.*

that house-TOP this house-than old

‘That house is older than this house.’

Another type that should be excluded from discussion here is the following type of construction, which is classified by Bobaljik (2012) as a periphrastic comparative:

- (12) Teiwa (Trans-New Guinea, Timor-Alor-Pantor)

Gelas axa’a tab ii’ ha ga-afo’o ga’an di oxoran.

glass this.one truly red then 3s-there 3s only thus

‘This glass is more red than that one over there.’

(‘This glass is truly red and the one over there is only so-so.’) (Klamer 2010: 121)

This language uses an emphatic adverb ‘very’ and another negative clause to show the standard of comparison.

Thus, I will not consider the languages in (9) to (12) as using the periphrastic comparatives. Then, we have a limited number of languages for the class of the periphrastic comparatives only: Romance and Malayo-Polynesian languages shown in (7) and (8). In section 4, I show that these languages have righthand word-stress.

3.3 Languages with morphological and the periphrastic comparatives

As we have seen in section 2, English shows multiple exponence of comparatives: the morphological comparative for shorter words (e.g. *taller*, *happier*) and the periphrastic comparative for longer words (e.g. *more beautiful*) (cf. Embick and Noyer 2001). Multiple exponence of comparatives is also seen in Swedish (Hilpert 2010), Danish (Allan et al. 2000: 45-47) and Norwegian (Askedal 1994: 236).

- (13) a. *hög-re* ‘higher’/*mer intressant* ‘more interesting’ (Swedish)
 b. *glad-ere* ‘higher’/*mere spændende* ‘more exciting’ (Danish)
 c. *vakr-are* ‘prettier’/*meir framand* ‘more foreign’ (Norwegian)

Similarly to English, these Scandinavian languages add a comparative adverb *mer*, *mere* or *meir* to multisyllabic adjectives, loanwords, compounds and those with particular suffixes (e.g. *-isk*, *-sk*, *-en*, *-et*, and *-ende* in Danish).

Somewhat different from these are Modern Greek and Slavic languages, which have multiple exponence of comparatives for the same adjectives (Stassen 1985, 2005, Bobaljik 2012), as shown in (14).

- (14) a. *orai-óteros/pio oraíos*
 good-CMPR/CMPR good
 ‘nicer’ (Modern Greek)
 b. *deshevl-e/boleeshëvy*
 cheap- CMPR/CMPR cheap
 ‘cheaper’ (Russian)

Note that the meanings of two comparative forms may be somewhat different in Russian. However, in order to concentrate on the alternation between morphological and periphrastic comparatives, the meaning difference between morphological and periphrastic comparatives is not considered here.

4. Stress-based typology of comparative forms

My research question is, ‘what allows some languages to have multiple exponence of the comparative?’ I argue that the canonical word-stress location in the language decides which form the language realizes as the comparative. The right-oriented stress (antepenult, penult or ultimate) in English allows either the suffix *-er* or the word *more* according to the length of adjectives.

Goedemans and van der Hulst (2005a, b) classify the stress systems of the world’s languages into fixed stress and weight-sensitive stress, as shown in (15).

- (15) a. Fixed stress: initial, second, third, antepenult, penult, ultimate, ...
 b. Weight-sensitive stress: left-edge (initial or second), left-oriented (initial second or third), right-oriented (antepenult, penult or ultimate), right-edge (penult or ultimate), unbounded, ...

In a weight-sensitive stress system, stress location changes according to the syllable weight.

According to the classification in (15), we find a correlation between word-stress location and exponence of comparatives in the languages shown in (16).

(16) <u>Language</u>	<u>Word-stress</u>	<u>Periphrastic cmpr</u>	<u>Morphological cmpr</u>
Finnish	initial	–	+
Hungarian	initial	–	+
Icelandic	initial	– (+)	+
Faroese	initial	– (+)	+
Basque	init/sec/L-ed/pen/R-ed	–	+
German	right-oriented	–	+
Dutch	right-oriented	–	+

Afrikaans	nd	+	+
English	right-oriented	+	+
Danish	right-edge and unbounded	+	+
Swedish	right-oriented	+	+
Norwegian	right-oriented	+	+
Latin	(right-oriented) ²	–	+
Frisian	nd	?	+
Yiddish	nd	+	+
Russian	unbounded	+	+(-)
Modern Greek	antepenult	+	+
French	right-edge	+	– (+)
Italian	right-edge	+	– (+)
Spanish	right-edge	+	– (+)
Romanian	right-edge	+	– (+)
Catalan	right-edge	+	– (+)
Portugese	right-edge	+	– (+)
Rapanui	penultimate	+	–
Maori	unbounded	+	–

This shows that the languages with lefthand stress (e.g. Finnish (initial), German (right-oriented)) have only the morphological comparative while languages with righthand stress (e.g. Romance (right-edge)) have only the periphrastic comparative. Languages with both morphological and periphrastic comparatives have rather middle stress-location (English (right-oriented), Danish (right-edge and unbounded), Russian (unbounded), Modern Greek (antepenult). Goedemans and van der Hulst (2005b) classify German and Dutch as well as English into right-oriented stress languages. However, German and Dutch stress may well be more lefthand than English. I will consider this point in the next section.

Note that Basque dialects have different stress locations: Sakana has initial stress, Bidasoa Valley and Onati second, Northern High Navarrese, Lekeitio and Roncalese penult, and Hondarribia and Souletin right-edge. Gernica Basque and Zeberio Basque have lexical stress. As Hualde (1991: 170) mentions, “the influence of the neighbouring Romance languages, Spanish and Gascon, cannot be overlooked.” As Romance languages have right-edge stress, it seems to be possible to argue that the original Basque stress is lefthand.

Note also that Icelandic and Faroese are marked with – (+) for the periphrastic comparatives because these languages use periphrastic forms for indeclinable adjectives (Thráinsson 2007: 111, Barnes 1994: 199), as we have seen in section 2.

Maori might seem to be a problem for the analysis presented here because it has unbounded stress system (stress can be anywhere) as shown in (16). However, Maori stress is assigned according to a hierarchy of syllable types: (C)ViVi > (C)ViVk > (C)V (Bauer 1993, cf. Harlow 2007: 81). I leave this matter open.

Now we need to explain the difference between English and German or Dutch. English uses morphological and periphrastic comparatives while German and Dutch use the morphological comparatives for almost all adjectives.

Van der Hulst (2010: 446) argues that English differs from German and Dutch in the extrametricality and the way in which quantity is computed. In German and Dutch, all open syllables are treated as light and only closed syllables as heavy. In English all final syllables are extrametrical while in German and Dutch only final VC is extrametrical. However, this difference in the nature of extrametrical syllables does not explain the difference in comparative forms. I will discuss the difference of stress in these languages in the next section.

5. Why does stress-location determine comparative forms?

The question to ask is why word-stress location determines the exponence of comparatives. The

answer I propose here is based on the idea that the morphological comparatives use an affix, thus adding a syllable to the stem, while the periphrastic comparatives do not change the number of syllables in an adjective. Lefthand stress languages allow the morphological comparative because the attachment of a comparative suffix does not violate the canon of word-stress location (e.g. *wichtig-er* ‘more important’ German). The righthand stress canon in Romance would be violated if a comparative suffix (e.g. *-er*) was attached to adjective stems (e.g. *plus grand*/**grand-er* ‘greater’ French).³ English has right-oriented stress (stress on one of the last three syllables in a word), which basically allows attachment of the comparative affix to adjectives of less than three syllables (e.g. *simpl-er*, *pleasant-er*): the derived word has the main stress on the penultimate or antepenultimate syllable. However, adjectives of three syllables would have the main stress on the fourth syllable from the right edge if they had *-er* attached to them (**béautiful-er*). Thus, these adjectives use *more* instead of *-er*: periphrastic compounds add no syllable to the adjective (*more beautiful*). This stress-based explanation also applies to other languages with multiple exponence of comparatives.

The next question to ask is why lefthand stress languages choose the morphological comparatives rather than the periphrastic comparatives, which also keep the lefthand stress of adjectives, as shown in (17).

- (17) a. * *mehr wichtig* (German)
 b. * *mere belangrijk* (Dutch)

These periphrastic comparatives are rarely found in these languages except for some specific adjectives in Dutch, such as those ending in *-isch* (e.g. *mere typisch/typischer*), those of nationality (e.g. *meer Hollands*) and past participles functioning as adjectives (e.g. *meer geïnteresseerd/geïnteresseerder*) (cf. Donaldson 1997: 92). I propose that languages prefer shorter forms to longer forms for economy. The morphological comparatives are more economical than the periphrastic comparatives in that comparative suffixes such as *-er* are unstressed and do not increase the number of words when they are attached to adjectives. Adverbs such as *more* receive some stress, and make a two-word constituent with adjectives.

Then, according to the economy principle, all languages should use the morphological comparatives as languages such as German and Dutch do. However, a comparative suffix adds a syllable to the stem adjective, deriving an inflected form with stress on more leftward than a simplex form. This lefthand stress location is allowed in languages such as German and Dutch but not in others such as Romance languages, as we have seen in (16).

Now we need to distinguish English, which uses both morphological and periphrastic forms, from German/Dutch, which use morphological forms only or mainly. In Goedemans and van der Hulst (2005a, b), all these languages are classified as right-oriented stress languages, where stress falls on one of the last three syllables in a word. However, one morpho-phonological difference between these languages is that German and Dutch allow the violation of the “three stress window” rule in the case of polymorphemic words (derived words and inflected words) and compound words. This is illustrated in the examples in (18) and (19), which are taken from Wiese (1996: 290) and Féry (1998: 131).

(18) a. *'Frei-heit-lich-keit*

free-ness-like-ness

‘liberality’

b. *'Arbeits-los-ig-keit*

work-less-ment-ness

‘unemployment’

c. *'Wissen-schaft-ler-in*

know-ship-er- FEM

‘a female scholar’

(19) a. *'fröhlich-ere*

merry-CMPR

‘more joyful’

b. *'Fußball-mannschaft*

football-team

‘soccer team’

As shown in (18), suffixes can be added to a stem iteratively. (19a) is an inflected word where an adjective makes a comparative with the initial stress. (19b) shows that compound nouns have stress on the initial syllable in German.

In English, the “three-syllable window” rule is generally observed in derived and inflected words. A limited number of words may violate the rule, as shown in (20).

- (20) a. détériorate
 b. hétéronym
 c. compénsatory
 d. dísciplinary
 e. sátisfyingly

The examples in (20a-d) are called Long Retraction by Liberman and Prince (1977: 276). (20b) contains the Greek prefix *hetero-* and (20c) a specific suffix *-atory*. Although these words are found in the English lexicon, I regard them as exceptional in English.

Note here that English compounds are similar to German compounds (19b) in that they can be recursive and have main stress on the initial constituent, as shown in (21).

- (21) a. wáste disposal
 b. wáste disposal plan

The initial stress in English left-branching compounds is the same as that in German ones, although English compounds are different from German in using space between constituents in orthography. English compounds as well as German compounds may violate the “three-syllable window” rule.

These facts show that English is different from German in derived and inflected words but not in compounds. The “three-syllable window” rule applies more rigidly in English derived and inflected words than in German ones.

We can support the stress-based approach to comparative forms by looking at other languages. Here, let us investigate some Germanic languages. Van Oostendorp (2012) shows some examples in Dutch, where stress falls on the initial syllable outside of the three syllable window:

- (22) a. toponyms : *Scheveningen*, *Amerongen* and *Wageningen*
 b. Latin grammatical terms: *infinitief*, *accusatief* and *nominatief* which all have initial stress.
 c. compounds: *reutemeteut* ‘caboodle’, *ammelaken* ‘table cloth’, *tingeltangel* ‘honkeytonk’,
Erlenmeyer ‘Erlenmeyer flask’

Van Oostendorp argues that these examples are exceptional because their number is limited. However, these examples show that the Dutch stress system also allows violation of the three syllable window.

Hilpert (2010: 28) compares the number of syllables in the host adjectives in morphological and periphrastic comparatives in English and Swedish. He finds that as adjectives become more complex, the ratio of the periphrastic comparatives increases more steeply in English than in Swedish. More than half of three-syllable adjectives in Swedish take a periphrastic comparative form. We need to investigate stress location in Swedish in more detail (cf. Frid 2001).

6. Conclusion

In sum, this study shows that multiple exponence of comparatives is governed by the word-stress location in languages of the world. Lefthand stress allows a comparative suffix, which is preferred for the sake of brevity. Righthand stress languages must use the periphrastic comparatives because the use of a comparative suffix would violate the languages’ canonical stress location in a word. English and some other languages have both types of comparatives because of their middle stress pattern. Their choice between two comparative forms depends on the length of the adjectives. A closer look at the difference between English and German/Dutch comparatives reveals a difference in the phonology of their derived and inflected words.

This study also supports an idea in the minimalist theory of grammar: parameters in phonology

derive variation in morphosyntax. Word-stress location is parametric and decides the morphosyntax of comparatives. This line of research will lead to the reduction of parameters in grammar, a desirable result.

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[Notes]

1) Donaldson (1997: 92) notes that “[T]he comparative with *mere* is known in Dutch but is not often compulsory ...”. In fact, periphrastic forms such as *mere interessant* can be found on the web. However, the number of periphrastic forms is far smaller than that of morphological forms. For example, a Google search gave 9,070,000 instances of *belangrijker* (*‘more important’*) while only nine instances of *mere belangrijk* were found.

2) Goedemans and van der Hulst (2005a, b) do not describe ancient languages. However, their database StressTyp (<http://www.unileiden.net/stresstyp/form2.htm>) lists Latin as having antepenultimate and penultimate stress.

3) According to Goedemans and van der Hulst (2005b), Romance languages have a right-edge stress system, which allows penultimate as well as ultimate stress. Then, **grand-er* should be acceptable. However, the morphological comparatives such as *meilleur* ‘better’, which is exceptional, show that the morphological comparatives have stress on the affix rather than the stem. Stressing the affix in **grand-er* would conflict with the general “stem stress.” Stressing the stem in **grand-er* would also violate the righthand stress in Romance.

References

- Adams, Matthew E. (2012) “Variation in the English comparative adjective: Conflict across prosodic levels.” Handout distributed at Exploring the Interfaces 1: Word Structure, McGill University, May 6-8 2012.
- Allan Robin, Philip Holmes and Tom Lundskær-Nielsen (2000) *Danish: An essential grammar*. London: Routledge.
- Askedal, John Ole (1994) “Norwegian.” In Ekkehard König and Johan van der Auwera (eds.) *The Germanic languages*, 219-312. London: Routledge.
- Barnes, Michael P. with Eivind Weyhe (1994) “Faroese.” In Ekkehard König and Johan van der Auwera (eds.) *The Germanic languages*, 190-218. London: Routledge.
- Bauer, Winifred A. (1993) *Maori*. London: Routledge.
- Bobaljik, Jonathan David (2012) *Universals in comparative morphology: Suppletion, superlatives, and the structure of words*. Cambridge, MA: The MIT Press.
- Donaldson, Bruce (1997) *Dutch: A comprehensive grammar*. London: Routledge.
- du Feu, Veronica (1996) *Rapanui*. London: Routledge.
- Embick, David and Rolf Noyer (2001) “Movement operations after syntax.” *Linguistic Inquiry* 32, 555-595.

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- Féry, Caroline (1998) "German Word Stress in Optimality Theory." *Journal of Comparative Germanic Linguistics* 2, 101–142.
- Frid, Johan (2001) "Swedish word stress in optimality theory" *Working Papers* 48, 25–40. Dept. of Linguistics, Lund University.
- Goedemans, Rob and Harry van der Hulst (2005a) "Fixed stress locations." In Haspelmath, Martin, Matthew S. Dryer, David Gil and Bernard Comrie (eds.), *The world atlas of language structures*, 62-65. Oxford: Oxford University Press.
- Goedemans, Rob and Harry van der Hulst (2005b) "Weight-sensitive stress." In Haspelmath, Martin, Matthew S. Dryer, David Gil and Bernard Comrie (eds.), *The world atlas of language structures*, 66-69. Oxford: Oxford University Press.
- Harlow, Ray (2007) *Māori: An linguistic introduction*. Cambridge: Cambridge University Press.
- Hayes, Bruce (1982) "Extrametricity and English Stress." *Linguistic Inquiry* 13, 227-276.
- Hilpert, Martin (2008) "The English Comparative – Language Structure and Language Use." *English Language and Linguistics* 12, 395-417.
- Hilpert, Martin (2010) "Comparing Comparatives. A corpus-based study of comparative constructions in English and Swedish." In H. Boas (ed.), *Contrastive studies in construction grammar*, 21-42. Amsterdam: John Benjamins.
- Hualde, José Ignacio (1991) *Basque phonology*. London: Routledge.
- Iwasaki, Shoichi and Preeya Ingkaphirom (2005) *A reference grammar of Thai*. Cambridge: Cambridge University Press.
- Klamer, Marian (2010) *A Grammar of Teiwa*. Berlin: De Gruyter Mouton.
- Liberman, Mark and Alan Prince (1977) "On stress and linguistic rhythm." *Linguistic Inquiry* 8, 249-336.
- Mondorf, Britta (2003) "Support for More-Support. In Günter Rohdenburg and Britta Mondorf (eds.), *Determinants of grammatical variation in English*, 251–304. Berlin: Mouton de Gruyter.

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- Prince, Alan and Paul Smolensky (1993) *Optimality theory: Constraint interaction in generative grammar*. Technical Report, Rutgers University and University of Colorado at Boulder, published in 2004. Malden, MA: Blackwell.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985) *A comprehensive grammar of the English language*. London: Longman.
- Saeed, John (1999) *Somali*. Amsterdam: John Benjamins.
- Shaha, Brojo Nath (1884) *A grammar of the Lúshái language*. Calcutta: Bengal Secretariat Press.
- Stassen, Leon (1985) *Comparison and universal grammar*. New York : Basil Blackwell.
- Stassen, Leon (2005) "Comparative constructions." In Haspelmath, M. et al. (eds.), 490-493.
- Thráinsson, Höskuldur (1994) "Icelandic." In *The Germanic languages*. ed. by Ekkehard König and Johan van der Auwera, 142-189. London: Routledge.
- Togeb, Knud (1980) "Romance historical morphology." In Rebecca Posner and John N. Green (eds.) *Trends in romance linguistics and philology*, 105-155. The Hague: Mouton.
- Tokizaki, Hisao (2011) "The nature of linear information in the morphosyntax-PF interface." *English Linguistics* 28, 227-257.
- Tokizaki, Hisao and Kuwana (To appear) "A Stress-Based Theory of Disharmonic Word Orders" In Theresa Biberauer and Michelle Sheehan (eds.) *Theoretical approaches to disharmonic word orders*. Oxford: Oxford University Press.
- van der Hulst, Harry (2010) "Word accent systems in the languages of Europe." In Harry van der Hulst, Rob Goedemans and Ellen van Zanten (eds.) *A survey of word accentual patterns in the languages of the world*, 429-507. Berlin: De Gruyter Mouton.
- van der Hulst, Harry, Bernadet Hendriks and Jeroen van de Weijer (1999) A survey of word prosodic systems of European languages. In Harry van der Hulst (ed.) *Word Prosodic Systems in the Languages of Europe*, 425-475. Berlin: Mouton de Gruyter.

van Oostendorp, Marc. (2012) "Quantity and the three-syllable window in Dutch word stress." *Linguistics & Language Compass*, 6(6), 343-358. doi:10.1002/lnc3.339

Wiese, Richard (1996) *The phonology of German*. Oxford: Clarendon Press.