Notes to Chapter 1: Introduction

2. But see Hunyadi (1999) for a different view, according to which LF (logical form) influences prosody directly.
3. Accents on certain vowel letters in Hungarian orthography (as in, for example, léphetnek or híd) indicate length of the vowel, not stress or melody. (See Hungarian Letter-to-Sound Correspondences on p. xvi.)
4. Syntactic structures like this will be explained in section 1.2.3.
5. More precisely, this kind of speech can be described as belonging to Educated Colloquial Hungarian, “the spoken language of educated people in Budapest”, the capital of Hungary (Nádasdy 1985: 225). However, from an intonational point of view this further specification seems unnecessary.
7. This translation is from F. Juhász (1968).

Notes to Chapter 2: Intonation, Paralanguage, Prosody

1. Pitch, loudness and quality are perceptual categories, whose acoustic counterparts are fundamental frequency (Fo), intensity and the spectrum, respectively. Duration is used in both perceptual and acoustic senses.
2. Although Cruttenden (1997: 173) does not regard the pause as a prosodic device, others (e.g. Crystal 1969: 128) do. The pause as a prosodic device can be defined as that section of the speech signal which has zero intensity (Bolla 1980).
3. In tone languages pitch patterns are also used for distinguishing words: they constitute lexical tones. Hungarian has no lexical tones, only intonation: it is not a tone language but an intonation language.
4. Paralanguage can be defined in different ways. For instance, it can be defined as that part of non-segmental phonation which is beyond prosodemes (see, e.g., Gumperz and Kaltman 1980), but also as the part of non-segmental phonation which is beyond prosodic devices, if such a distinction is made (e.g. Cruttenden 1997: 174–5). In the latter case paralinguistic features are interruptive: they include vocalizations, that is meaningful but non-verbal sound combinations such as, for example [pɔ] expressing contempt; whereas prosodic features are superimposed on sound strings and occur simultaneously with them. I am in favour of the Gumperz–Kaltman view and adopt Ladd’s criterion: paralanguage has a scalar or gradient nature while linguistic messages have a quantal or categorical structure (Ladd 1996: 36).
5. We are still a long way away from a precise identification of attitudes. The labels used to refer to them are too numerous, they often overlap and their semantic reliability is questionable (Crystal 1969: 294–7). At one time it was
hoped that more objective results would be obtainable from attitude scale investigations (Uldall 1960, 1964), but these were not carried out on a large scale.

6. While the traditional classification of sentences according to modal type yields too few categories, their classification according to speech acts might result in several thousand (Austin 1962: 149). Our communicative sentence types are probably closest to the types of direct illocutionary acts (cf. Searle 1975).

7. It is not always easy to see whether two, segmentally identical but prosodically different utterances are grammatically different (belong to different communicative sentence types) or only attitudinally different (belong to the same communicative sentence type). For instance, we can say that (5)a and (5)b illustrate two distinct communicative sentence types; the former being an exclamation, the latter being a statement (Károly 1964). However, it would be equally justifiable to say that both are statements, but (5)a is “happy” and “surprised”, while (5)b is “neutral”. On the relation between attitudes and communicative sentence types see section 2.3.5.

8. According to Tench (1996: 68), an echo yes–no question “is an identical wording of a part of, or the whole of, a previous utterance, usually for the sake of expressing disbelief or surprise or checking against mishearing.” He also says that strictly speaking such questions only consist of given information but are treated as if they contain the same information structure of given and new as the original utterance which they repeat.

9. Consider, for example, the difficulty of distinguishing exclamations from attitudinally special statements, in connection with examples (5)a and (5)b above.

Notes to Chapter 3: A Taxonomic Analysis of Hungarian Intonation

1. At first sight this kind of taxonomic analysis (based on the modified structuralist maxim “once a prosodeme, always a prosodeme”) may seem somewhat anachronistic, but it is a necessary first step, which was not made for Hungarian when structuralism was at its height.

2. The same analogy is explicit in Gussenhoven’s model of intonation, according to which “an intonation language . . . employs two phonetic resources to encode its morphemes” (Gussenhoven 1985: 117). One subsystem is encoded in spectral composition variations against time (this is the segmental kind of encoding which has always been recognized, giving us the “normal” morphemes of Hungarian), while the other subsystem is encoded in Fo variations against time, and thus contains the “intonational” morphemes of Hungarian.

3. The names “front-falling” and “end-falling” are translations of Deme’s (1962) terms elül eső and végén eső, respectively.

4. The bottom pitch (represented by the horizontal line at the bottom of each intonational diagram) coincides with the pitch of the baseline (as defined by Pierrehumbert 1980: 48), when the latter reaches the end of an intonation phrase; see also Cruttenden (1997: 18).
5. However, when the fall–rise is not utterance-final and is followed by another intonation phrase with a full fall in it, the fall–rise may be an emphatic replacement of the half fall (see section 5.4.7), and is not necessarily 'conflicting'.

6. The semantic glosses representing the “abstract meanings” of the intonation contours (Cruttenden 1997: 106) are general enough to always be valid, but may receive different pragmatic overtones (“local meanings”, Cruttenden 1997: 91ff) in different contexts. For instance, the general meaning of the fall–rise (“self-contained + conflicting”) may manifest itself in different local meanings, such as “reassuring” (when we want to dispel our partner’s unjustified fear), for example: ‘Nem fog fájni! ‘It won’t hurt.’; “warning”, for example: ‘Nem alszom! ‘I’m not sleeping.’ (implying: ‘You must believe I am asleep, that’s why you are walking on tiptoe, but I am not asleep.’); “ironic refusal” (when we sarcastically repeat our partner’s words as if we agreed with him/her, though in reality we do not agree with him/her at all), for example: ‘Nem forró! ‘It’s not hot.’ (implying: ‘It’s very hot.’); “hopeful yes–no question”, ‘De olvastad? ‘But you’ve read it?’ (implying ‘Although this is not obvious, I hope you have read it’); “impatient question-word question”, for example: ‘Mikor jönnek? ‘When are they coming?’ (implying ‘You seem to think I am not interested but I am!’). All these are the special local manifestations of the general meaning “self-contained + conflicting”. These facts are in line with Ladd’s opinion: “intonation affects the interpretation of utterances through the interaction of very general meanings and broad principles of pragmatics” (Ladd 1990: 808). My association of several “different” meanings with certain contours in Varga (1981), which Fónagy (1998: 331) partly criticizes, should be seen in this light.

7. The formal and functional differences between the various kinds of end-falling contours were first noticed by Molnár (1954). He related these differences to the magnitude of the angle between the two “wings” of the contour. In our framework, however, these differences are categorical rather than scalar because we distinguish three distinct forms in the left wing: rising, level and descending.

8. It is interesting that the end-falling characters cannot be used in imperatives that require long-lasting or significant activities, for example * ‘Olvasd el ezt a regényt! ‘Read this novel.’ This confirms Fónagy’s hypothesis (1966) that this use of the end-falling contours is a metaphorical extension of their use on yes–no question requests. Yes–no question requests are not used to require long-lasting or significant activities, either; for example * ‘Elolvasnád ezt a regényt? ‘Would you read this novel?’ cannot be used as a request, only as a real question.

9. This is so even if autosegmentally they may be given the same underlying representation as the yes–no question intonations of some other Eastern European languages (see Grice, Ladd and Arvaniti 2000). For the autosegmental analysis of the Hungarian rise–fall, see Chapter 4.

10. Hungarian learners of English often commit the double mistake of transferring to their English speech the characteristic early stress and rising–falling melody of Hungarian yes–no questions:
11. For special modifications of the basic, two-terraced form of the stylized fall, see Varga (1995).

12. In (22)b there are two major-stressed syllables: kész and va-, and both initiate a stylized fall; for more on this, see section 3.6.1 below; and also section 5.4.4.3.

13. The preparatory contour (to be discussed in section 3.5) is no part of the intonational lexicon because it has no meaning.

14. As has been pointed out in section 3.2.3, if a sustained contour starts with a syllable that has extra intensity, then that syllable is regarded as major-stressed, and the contour as a sustained character contour, rather than as a preparatory contour.

15. However, in a system where no intonation phrases are recognized, a special symbol to mark the beginning of the preparatory contour (for example, [±]) is necessary; see section 3.6.2.

16. The bracketed parts are optional. The structure shown in (32) clearly reminds us of the (Prehead) + (Head) + Nuclear Part division of English tone-groups in traditional British descriptions. The reason why I use different terms for the constituents of the Hungarian IP is that the English terminology suggests that the nuclear part is more prominent than the head. In a Hungarian IP, however, the scale and the terminal part both contain major-stressed syllables, and so the terminal part is not more prominent than the scale.

17. (34) belongs to “quotation-carrying utterances”, described in section 5.3.2, where it will be shown that the two IPs in (34) are in fact two utterances forming a compound utterance.

18. See note 16.

19. As a matter of fact, even English intonation can be, and has been, analysed without establishing IPs, as for example, in Bolinger (1986, 1989). Nevertheless, the general view is that the nucleus should be assigned theoretical status among the English pitch accents and, consequently, that IPs are in fact necessary in English. This is, for example, Ladd’s (1986, 1996) opinion.

20. The phrase Jól ülsz? ‘Are you sitting comfortably?’, with the rising–falling contour of a yes–no question, is often inserted in informal style in a sentence before a surprising constituent. It probably goes back to “Unless you are sitting firmly in your seat, you will fall down with surprise when you hear this.”

Notes to Chapter 4: An Autosegmental Analysis of Hungarian Intonation

1. By “syllable” I mean the traditional unit consisting of an optional onset and an obligatory rhyme, where the rhyme consists of an obligatory nucleus and an optional coda. For an analysis of Hungarian syllables see Törkenczy and Siptár (1999) or Siptár and Törkenczy (2000). For scholars who, like Harris (1994), reject the traditional notion of the syllable but retain syllabic constituents, it is the syllabic nuclei with which the melodic elements of intonation
can be associated. However, it is difficult to see how those newer frameworks which replace syllable strings with CV strings (Lowenstamm 1996) or VC strings (Szigetvári 1999), can be reconciled with the facts of intonation. These frameworks get rid of syllables and syllabic constituents, and the units they offer lack the intonational relevance which the traditional syllables (or their nuclei) have.

2. See our discussion of the intonation of echo and repetitive question-word questions, in section 3.2.4.

3. See Note 4 in Chapter 3.

4. In section 4.5.1 the tone \( H^* \) will eventually turn out to be superfluous and so the five levels here distinguished will be reduced to four; see (16).

5. The obligatoriness of the “Obligatory” Contour Principle has also been questioned by Goldsmith (1976: 132–4) and others (van der Hulst and Smith 1985: 16; see also Harris 1994: 172). We shall regard it as obligatory only when there is no reason for preserving the adjacent identical melodic elements. As we shall see, there is good reason for keeping the sequence HH in the case of the monotone-fall and so for ignoring the OCP in this case.

6. The meanings of the basic contours represent the medium degree of some kind of excitement. Applying the Closing Rule to these contours decreases the excitement. The various meanings which the Closing Rule adds to the meanings of the basic contours (that is “finished” for the full fall, “routine” for the descent and “exclaiming” for the descent-fall) can all be seen as the reduction of excitement, and can be generalized as \([-\text{open}]\); see section 3.2.5.

7. The meaning components added by the Opening Rule (“conflicting” for the fall–rise, “tense” for the rise, and “questioning” for the rise–fall) all increase the excitement inherently present in the meanings of the basic contours and can be generalized as \([+\text{open}]\); see section 3.2.5.

8. The initial element of the appended contour may be dropped: \((L)L\downarrow S\), especially when it follows a full fall.

9. As has been shown above, \( H^*.H\downarrow S \) is derived from \( H^*.H\uparrow S \) in the case of the descent, and from \( H^*.L\downarrow S \) in the case of the 2nd-type descent.

10. This list shows that character contours inevitably have at least one \( H \) melodic element in their representations, while the appended contour has no \( H \) element.

11. The association pattern shown in (28)c may change because the associations in the characters \( L^*.H\uparrow S \) and \( L^*.H.L\uparrow S \) can be rearranged; see section 4.8.

12. The association pattern shown in (29)c will not remain in this form because the association lines in the characters \( H^*.H\downarrow S \), \( H^*.H\downarrow L\uparrow S \), and \( H^*.H\downarrow + S \) will be rearranged; see section 4.8.

13. The association pattern of (30)c may change because the association lines can be rearranged; see section 4.8.

14. The association pattern of (31)c will not remain in this form because the association lines will be rearranged; see section 4.8.

15. The association pattern of (32)c will not remain like this because the association lines will be rearranged; see section 4.8.

16. After a full fall, however, the appended contour may be realized as a monotone at the bottom of the speaker’s voice; see note 8 in this chapter.

17. The third tone of the symmetrical three-tone contours \((H^*.L.H\uparrow S \) and \( L^*.H.L\uparrow S \) need not be realized at the same height as the first tone. What is
important is that it should be higher than the second tone in H*.L.H$, and lower than the second tone in L*.H.L.

18. On the “gradual”, “end-rising”, and “front-rising” phonetic variants of the rise or the rising part of the rise–fall, see also the relevant diagrams in (5) and (9) in section 3.2 above.

19. According to Grice, Ladd and Arvaniti (2000), the “front-rising” variant of the rising–falling contour is the typical yes–no question intonation of Transylvanian Hungarian.

20. This corresponds to Gussenhoven’s (1985) modification “delay”. Other scholars account for such phenomena by positing a leading tone before the starred one; see, for example, Pierrehumbert (1980), Beckman and Pierrehumbert (1986), Grice (1995).

21. R. Ladd (personal communication) thinks that the use of HL% to indicate sustained non-low final pitch is a specific claim of Pierrehumbert’s analysis of English intonational phonology but need not be carried over to a different language.

Notes to Chapter 5: The Melodic Segmentation of Hungarian Utterances

1. This is actually the second stage in the syntax–phonology mapping, the one following the stage of stress fixing, which will be described in Chapter 6, section 6.6. We assume that the stresses that are relevant in melodic segmentation have already been fixed in the previous stage and are available here. The reason why we are discussing melodic segmentation first is strictly methodological: stress fixing can be described more economically in Chapter 6, that is among the stress-related phenomena to which Part II of the book is devoted.

2. Example (2) is a declarative sentence that carries new information all the way through, that is why each lexical (i.e. non-function) word in it, apart from the verb, receives major stress. The verb is minor-stressed or unstressed when the F position before it is filled, see Chapter 6, sections 6.6.1 and 6.6.3.

3. Vogel (1987) distinguishes seven types of prosodic constituent in Hungarian: the syllable, the foot, the phonological word, the clitic group, the phonological phrase, the intonational phrase, and the phonological utterance (see also Nespor and Vogel 1986, Vogel and Kenesei 1987, Kenesei and Vogel 1989). However, some of these constituent types (the phonological word, the clitic group, the phonological phrase) are not needed for the purposes of our analysis, and the IP is defined differently in our framework (see section 3.6. above).

4. The highest-ranking sentence is not the same as the root sentence. A root sentence is any sentence that is not commanded by a VP node, see Downing (1970: 10). So a co-ordinated sentence like Péter fogorvos, a felesége ügyvéd ‘Peter is a dentist, his wife is a lawyer’ is one highest-ranking sentence, but two root sentences.

5. The term is taken from Hetzron (1980), who defines tonosyntax as that part of syntax which is expressed by intonational means.
6. Observing English examples analogous to Hungarian (8)a, (8)b and (8)c, Ladd (1986) found that, since the continuation after the inserted part shows downdrift, the inserted IP interrupts the matrix IP, so that there are only two IPs, one cutting the other into two discontinuous parts. For Ladd this means that the Strict Layer Hypothesis has to be abandoned. In my view, however, utterances like these can be analysed as having three IPs, and the downdrift observable in the last IP as an instance of inter-IP downdrift, and so the Strict Layer Hypothesis need not be abandoned (see section 3.6.2 above).

7. In (11)b we have one rising–falling character contour, which is interrupted by pauses before and after Angéla, but melodically the contour is undisturbed and constitutes one IP.

8. For an explanation of why the inorganic block here constitutes an appended contour and thus a separate IP rather than a continuation of the full fall that started before it, see section 3.3.

9. This is because a half falling character contour ending with a pause is a terminal contour, see section 3.6.

10. When the head of a constituent is postmodified by a restrictive relative clause, the head must contain, or be premodified by, a demonstrative expression referring to the restrictive relative clause.

11. Heads postmodified by non-restrictive relative clauses, either adjacently or non-adjacently, do not contain a demonstrative expression referring to the subclause.

12. ST6 and ST7 cannot be conflated because they behave differently. When the final block has a fall, the initial block of ST6 can have a sustained contour but the initial block of ST7 cannot; consider examples (49)a and (50)a vs. (51)a and (52)a below.

13. In (32) the major-stressed constituent in F position azért ‘that’s why’ forms a single CB with the unstressed verb feküdt ‘lay-3sg’ and the unstressed N-constituent le ‘down’; see section 5.4.1.

14. In (35) the major-stressed constituent in F position hova ‘where’ forms a single CB unit with the unstressed verb ment ‘went-3sg’.

15. In (37) the major-stressed constituent in F position Pétert ‘Peter-ACC’ forms a single CB with the unstressed verb küldik ‘send-3pl’.

16. The relevant blocks in (42) can also be treated as equivalent blocks, see section 5.4.5 below.

17. See also example (42) above.

18. The example displays other features of emphatic narratives as well. Such a feature is the stressing of words that would not normally be stressed, see Kálmán and Nádasdy (1994: 462–3). For instance, the verb (figyelmeztet), which is not normally major-stressed in post-focal position, is major-stressed here. The high monotone on the pronoun minket is an example of Contour Insertion, to be discussed in Chapter 8.

Notes to Chapter 6: Stress in Hungarian Words, Phrases and Sentences

1. This seems to have changed somewhat in the last few decades. According to Gósy (1997), the quality of vowels is often blurred and approximates to
a schwa in spontaneous Hungarian speech. However, since qualitative reduction may occur in both stressed and unstressed positions (even though more often in the latter), it cannot be used for distinguishing stressed syllables from zero-stressed ones.

2. A similar problem occurs in English when it has to be decided whether a post-tonic syllable whose vowel is unreduced is secondary stressed or unstressed, as in the final syllable of *anecdote* or *dynamite*. Burzio (1994: 48) complains that, in English, “perceptual evidence does not appear to be a reliable indicator of secondary stress with heavy syllables whose vowel is unreduced. We must therefore rely on other kinds of evidence to determine presence of stress, some necessarily theory-internal, but nonetheless valid.” In English, one kind of such evidence is provided, for example, by the *stylized fall*, whose second, lower, terrace is initiated by a post-primary secondary stress (see Chapter 3, section 3.2.7). In Hungarian, the possibility of Contour Insertion is a sign of minor stress (see Chapter 8, section 8.3).

3. The only exceptions are a few interjections in which the primary stress falls on the last syllable, as in *A’há! ‘Now I see!’, Ho’hó! ‘Oho! Not so fast!’*, *Apro’pó! ‘By the way! That reminds me!*.

4. Vogel’s (1987) list of prosodic constituent types includes both the *foot* and the *phonological word*, and it may at first sight seem that the latter is a more suitable domain of word stress. However, she defines the *phonological word* as the domain of vowel harmony and *n*-palatalization, which makes it irrelevant in our framework and so it need not concern us. This does not mean that it is unnecessary; it is simply a constituent which we do not have to take into consideration.

5. The objection that phrasal compounds are phrases rather than compounds can be refuted on grounds that the constituent words within these items have grown together through their constant co-existence (have been lexicalized into compounds). The existence of phrasal compounds is also recognized in English, see, for example, Fudge (1984: 144ff), Cinque (1993: 280ff). For instance, *‘Christmas tree* is an ordinary compound, *‘Christmas pudding* is a phrasal one. The changes that the stress pattern of a phrasal compound can undergo when it is embedded in a phrase will be described as rhythmical variation in Chapter 7.

6. In ordinary Hungarian compounds, even a branching second constituent is weaker than the first. Both *kerékcapság* in (11)a and *csapágy* in (11)b are branching constituents but nevertheless weaker than the first constituent in their respective words. By contrast, in an English compound, a branching second constituent is said to be stronger than the first, see for example, *law degree language requirement*; see Liberman and Prince (1977: 257ff), Cinque (1993: 273ff).

7. In a framework using grids, the equivalent of *Lexical Foot Erasing* would be *Line Conflation*, as Halle and Vergnaud (1987: 52) define it. LC means replacement of the material on Line 1 by the corresponding material on Line 2. (For Halle and Vergnand the bottom line is Line 0.) For instance:

<table>
<thead>
<tr>
<th>Line</th>
<th>2</th>
<th>x</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line</td>
<td>1</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Line</td>
<td>0</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
8. The compound word is a lexical unit and not a separate prosodic unit. Since its prosody develops within the lexical stratum of phonology, I do not subscribe to Vogel’s (1987) opinion that compounds belong to clitic groups, because the latter are formed in the postlexical stratum.

9. However, the speaker may deliberately suspend the otherwise obligatory Clash Deletion rule, and retain the minor stress if there is a need for disambiguation.

10. Hunyadi (1999) goes as far as saying that in some cases the minor stresses cannot be deleted at all, which, if correct, means that our UFE may be blocked. He would not allow the deletion of the minor stresses of an operator + scope complex which is embedded in the reduced scope of an operator, as, for example, in the following: 'Nem eheted meg csak a ,torta ,tetejét. 'You are NOT allowed to eat just the top of the cake.’ (Hunyadi 1999: 161).

11. The Hungarian definite article has the form a when the word following it begins with a consonant, and az when the word following it begins with a vowel.

12. Those monosyllabic function words that are contrasted or focused will be major-stressed, of course, and do not cliticize.

13. According to Vogel (1987) the prosodic constituent containing a non-clitic lexical item with or without clitics before and/or after it is the clitic group, which is the domain of a single primary stress. In a left-end based framework of feet, however, the clitic group can be dispensed with.

14. This is different from the case in which the function word is major-stressed for focus or contrast.

15. In rejecting the idea that non-clitic function words (including pronouns) are unstressed, I agree with Selkirk (1984: 342): “making the opposite assumption – that function words are basically unstressed (and thus that their stressed forms are derived by rule in certain specified circumstances) – requires considerable ad hoc complication in the grammar.”

16. By contrast, in English phrases and sentences conveying new information, the last stress tends to be noticeably stronger than the other stresses before it, due to the English Nuclear Stress Rule.

17. According to É. Kiss (1987–88), the topic of a sentence is typically minor-stressed before the major-stressed intitial constituent of the comment. In order to achieve minor stress on the topic, É. Kiss (1987–88: 12) proposes a filter which eliminates any pitch accent on it. In reality, however, in far too many cases the topic does carry a pitch accent, and so it is major-stressed. This major stress may be less strong than the one at the beginning of the comment, but this is irrelevant in our framework. Besides, the two may also be equally strong (Fónagy 1998: 340). In more recent work É. Kiss (1992: 95) herself admits this possibility.

18. According to some views (for example, Vogel 1987: 246), the verb is not only deaccented (i.e. minor-stressed) but also destressed (i.e. zero-stressed) after a filled F position. I do not agree with this because the first syllable of the verb may become the target of Contour Insertion (see Chapter 8): |'Kávét ′ízik a ′füldszinti ′büfében |, and so the verb must be minor-stressed. The verb is completely destressed when the F constituent before it is monosyllabic; this destressing is the result of Clash Deletion (see section 6.6.3).
19. The verb becomes zero-stressed here, due to Clash Deletion, to be discussed in section 6.6.3.

20. When the verb has no reduced complement, as in (i), or when the verb is accompanied by a negative or imperative operator, as in (ii) and (iii), respectively, the F can remain unfilled (cf. É. Kiss 1981):

(i) \( v[\text{Hívtam}] \ a \ \text{barátodat.} \)
   called-1sg the friend-your-ACC
   ‘I called your friend.’

(ii) \( v[\text{Nem hívtam}] \ a \ \text{barátodat.} \)
   not
   ‘I did not call your friend.’

(iii) \( v[\text{Hívd}] \ a \ \text{barátodat!} \)
    call-2sg-IMP
    ‘Call your friend.’

21. The reduced complement must move from the F position not only when the F position is filled by an emphatic complement, but also when it is filled by a complement modified by a “focusing” operator (i.e. a negative, interrogative, optative, or exclamative operator, the particle csak ‘only’, etc.); see É. Kiss (1981). In all these cases the F position lends major stress to the constituent if it does not bring major stress with it:

(i) \( \text{Mi isöt hívtuk meg, ‘It is him that we invited.’} \)

22. É. Kiss (1992: 167–71) explains sentences like (35)a as stylistic versions of sentences with the quantifier being in Q position, for example ‘Sokan ‘nem beszélték. For a detailed account of how operator and scope are prosodically expressed, see Hunyadi (1999).

23. Selkirk (1986), based on her suggestion for end-based mapping rules for prosodic constituents, regards this domain as a prosodic constituent: viz. the phonological phrase. This “phonological phrase” is different from Vogel’s (1987). The latter groups together a clitic group containing a lexical head X with all clitic groups on its non-recursive (i.e. right) side. So complements or modifiers on the left side of a head (as, for example, the word földszinti in a földszinti büfében ‘in the groundfloor snackbar’) can only be accommodated into a common phonological phrase with the head büfében by means of restructuring. This problem does not arise under Selkirk’s definition, which is therefore preferable. However, in our framework, in which the syntactic S-structure of the sentence is present in the course of the syntax–phonology mapping, the notion of the phonological phrase (in either Selkirk’s or Vogel’s sense) can be dispensed with.

Notes to Chapter 7: Rhythmical Variation in Phrasal Compounds

1. The term Trochaic Reversal is used as the opposite of Iambic Reversal, which is the name of the English counterpart of the process. It was first used by
Gussenhoven (1983b) for one of the rhythm rules of Dutch. However, Gussenhoven’s Trochaic Reversal is the durational restructuring of post-accentual syllables and does not involve changes of intonational pitch accents.


3. If the numerals in (5)a–b are followed by any of the words ezer ‘thousand’ or millió ‘million’ or milliárd ‘billion’, they remain double-accented and RV, for example ‘tizen’három ezer ‘13,000’ or ‘tizen’három millió ‘13,000,000’ or ‘tizen’három milliárd ‘13,000,000,000’. This is because the words ezer ‘thousand’, millió ‘million’, milliárd ‘billion’, (as well as the word száz ‘hundred’), when preceded by numerals in numeric compounds, do not receive a separate major stress, for example: ‘ötézer ‘5,000’, ‘tízmillió ‘10,000,000’; ‘hatszáz ‘600’.

4. As will be shown in section 7.2.2, Trochaic Reversal is blocked if its application leads to more than four interaccentual syllables. This considerably limits the possibilities of producing derivatively double-accented numeric compounds. For instance ‘kétszáz,tizen’hat ‘216’ is a derivatively double-accented numeral, produced by applying Trochaic Reversal to tizen’hat. However, ‘kétszáz,tizen’hat can hardly undergo Trochaic Reversal in ‘ezer’két száz,tizen’hat ‘1216’ to produce a double-accented *‘ezer,kétszáz,tizen’hat because the output would contain five syllables between the two remaining accents.

5. It seems that in addition to the RV numeric and ugyan-compounds there are a few stereotyped collocations which may also occasionally display rhythmical variation. These include semi-lexicalized phrases, for example, ‘két ’tojás ‘two eggs’, ‘egész ’nap ‘all day’, and double surnames or double first names within three-word names, for example, ‘Gór ’Nagy ’Mária, ‘Lázár ’Armand ’Péter.

(i) a. ‘Végy két ’tojást. ‘Take two eggs.’
   b. ‘Két tojás ’sárgája. ‘The yolk of two eggs.’
(ii) a. ’Aludt ’egész ’nap. ‘He was sleeping the whole day.’
    b. ’Egész ’nap ’aludt. ‘The whole day he was sleeping.’
(iii) a. ‘Gór ’Nagy ’Mária
    b. ’Lázár ’Armand ’Péter

However, collocations like these are sporadic, and they undergo rhythmical variation in a less systematic fashion than the double-accented numeric and ugyan-compounds do, so we do not deal with them here.

6. The syntactically proper analysis of year numbers is right-branching:
   ‘ezer’kilencszáz’ötven’hat.
   [E   [A   [B   C]]]

However, this analysis would only allow the reduction of major stress over the syllable öt-: ‘ezer’kilencszáz’ötven’hat. The fact that Hungarian native speakers prefer ‘ezer,kilencszáz’ötven’hat or ‘ezer,kilencszáz’ötven’hat shows that a re-analysis of year numbers as [[B1C1] [B2C2]] may take place.


8. Hungarian shows a relative constancy in the duration of syllables and a lack of vowel reduction, so each syllable has to be aligned not only with a demibeat on Level 1 (L1) but also with a basic beat on Level 2 (L2) (Selkirk 1984: 41).
These are features of syllable-timing, even though Hungarian is not a pure syllable-timed language. Since in Hungarian every syllable has an x on both L1 and L2, we could simplify our grids by leaving out L1 and starting with L2 as the bottom level. However, this could lead to confusion, and so it will not be done.

9. This condition says that if, by the application of Beat Addition, another syllable reaches the prominence level of the originally strongest stressed syllable of the phrase, then the originally strongest stressed syllable will be automatically promoted by one level.


11. In English, the corresponding two types of rhythmical variation, Iambic Reversal and Iambic Confirmation, are very general in their application and affect the same kinds of words (viz. words having two major stresses, not counting the lexical exceptions), and both types can be regarded as essentially belonging in stratum P1 of postlexical phonology.

12. If Trochaic Confirmation does not take place, the form ‘tizen’három ,negyven’öt becomes the output version.

Notes to Chapter 8: Rhythmical Secondary Stresses

1. In the words of Maranungku (a language spoken in Australia) “[p]rimary stress falls on the initial syllable, and secondary stress falls on every other syllable thereafter” (Kenstowicz, 1994: 555).

2. Szinnyei’s reference to the lightness of the third syllable is quite unique in the Hungarian linguistic literature, where syllabic weight is not normally regarded as having any relevance for phonological rules (though see Gráf 2001).

3. It can be pointed out that Contour Insertion is similar to Hayes’ (1995) diagnostics for secondary stress in English: a pitch accent is associated with a secondary stressed syllable. However, there is a difference. In Hayes (1995: 17), a rising contour (or rather its L* accent) “seeks out the vowel with secondary stress in preference to stressless vowels” but the secondary stress taking that contour remains a secondary stress. In Hungarian this cannot happen, because where pitch accent (i.e. intonational contour initiation) and extra intensity meet, we get a major stress. If a high monotone (or rise) is associated with a syllable which would be minor-stressed without it, the syllable becomes major-stressed (see section 3.2.1). In Contour Insertion the syllable with the newly introduced high monotone is not weaker than the syllable with the full fall after it.

4. There was only one exception to this: (10)d, which I included to check whether or not a stress clash mattered in the evaluation. This variant was received extremely unfavourably and obtained the lowest score in its block.

5. For the statistical analysis I am indebted to Anita Csölle, of Eötvös Loránd University, Budapest.

6. The fact that the rejected variants also scored points shows that (a) listeners were unable to make absolute judgements about such subtle differences; and that (b) even the rejected variants had been rendered in a natural enough
way, so as not to bias the participants against them, which demonstrates the reliability of the experiment. In any case, these score numbers show why the statistical significance calculations are especially important here.

7. In English, a pre-primary secondary stress may trigger Iambic Reversal (Liberman and Prince 1977: 319), and a post-primary secondary stress (actually, the first one of the post-primary secondary stresses) initiates the lower terrace of the Stylized Fall (Gussenhoven 1985: 124).

8. Secondary stresses in Spanish have also been shown to be postlexical (Roca 1986). Roca (1986: 341) claims that the domain of Spanish secondary stress is the “phonetic group”, which he does not define but says is parallel to Dell’s “tronçon”. Since this is “any stretch of utterance comprising no silence or intonational break” (Roca 1986: 365, note 2), it seems to be very close to our intonational phrase.
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