

## 10. Word accent systems in the languages of Asia

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### 1. Introduction

This chapter surveys accentual systems in the languages of Asia. Our objective has been to provide information on as many languages as we could lay our hands on, given the inevitable limitations on the time for this project and on access to sources in this period. This survey, then, does not claim anything near completeness. In a way, it presents an agenda for further studies especially witnessed by the many sections where little or no information on accentual systems is presented. We are not defending these limitations by claiming that the basic descriptive work has not been done in all these cases, although for many languages this is probably true. We have no doubt, however, that a lot of useful information on word accent has been gathered and is present in the countless language descriptions that we have been unable to consult. There may even be typological surveys that focus on word accent that we have overlooked. With all these limitations and shortcomings, we hope that this chapter still offers a useful inventory which will stimulate further typological and theoretical research.

In section 2, we outline the contents of this chapter, motivating its organization and introducing the conventions which guide the presentation of accentual data. Section 3 explains on which materials this survey is based. Sections 4, 5, 6 and 7 present data on word accent systems in

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1 the languages of North-East Eurasia, Asia Minor and Central Eurasia,  
2 South and West Asia, and Mainland South East Asia, respectively. Finally,  
3 in section 8 we offer some general observations and conclusions.

4

5

## 6 **2. Contents of this chapter**

7

8 The following table of contents summarizes the organization of the  
9 present chapter:

10

1. Introduction

11

2. Contents of this chapter

12

13 3. A note on the information on which this chapter is based

14

15 4. North-East Eurasia (Eastern Siberia)

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4.1. Chukotko-Kamchatkan

17

4.2. Isolates

18

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19

4.2.2. Yukaghir

20

4.2.3. Nivkh

21

4.2.4. Ainu

22

23 5. Asia Minor and Central Eurasia (Altaic)

24

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25

5.2. Mongolic

26

5.3. Tungusic

27

5.4. Korean

28

5.5. Japanese

29

30 6. Southern Asia

31

6.1. Indo-European: Indo-Iranian

32

6.1.1. Indo-Aryan

33

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34

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35

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36

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37

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38

39 7. Mainland East and South East Asia

40

7.1. Sino-Tibetan

40

7.1.1. Chinese

- 1 7.1.2. Tibeto-Burman
- 2 7.2. Austroasiatic: Mon-Khmer
- 3 7.3. Hmong-Mien
- 4 7.4. Tai-Kadai

5  
6 In order to facilitate access to the wealth of accentual data included in  
7 this chapter, we subdivided Asia into four broad areas following roughly  
8 a north to south direction, starting with North-East Eurasia (roughly  
9 Eastern Siberia), proceeding to Asia Minor and Central Eurasia (covering  
10 the languages subsumed under Macro-Altai), followed by South and  
11 West Asia, and finally reaching Mainland East and South East Asia. The  
12 coverage of language families in Section 4 to 7 will be outlined in a brief  
13 introductory note at the beginning of each section. The organization of the  
14 subsections with accentual data adheres to the following scheme:

- 15
- 16 a. ***Genetic structure of the (sub)family.*** Language classifications are taken  
17 from Ruhlen (1991), Comrie et al. (2003), R. Gordon (2005) and other  
18 more specialized sources that offer classifications for the language  
19 families to be discussed. The genetic information is sometimes followed  
20 by some archeological-historical and dating information, often based  
21 on the draft edition of Ruhlen (1991). We have tried to strike a com-  
22 promise in cases of conflicting groupings. In each case, (sub)family  
23 names are presented in capitals, while the names of sample languages  
24 appear in italics. Bold print marks languages that are included in  
25 StressTyp (see section 3), whereas languages which are discussed in  
26 this chapter but are not included in StressTyp are underlined.
- 27 b. ***Extracts from StressTyp entries*** (language name followed by StressTyp  
28 Code and examples). More complete extracts (including references) are  
29 offered in Part II of this volume and, of course, in StressTyp itself. This  
30 stress information is presented unchanged, i.e. as it can be found in the  
31 database and Part II.
- 32 c. ***Additional accent information.*** This might involve additional informa-  
33 tion on languages already in StressTyp, or information on languages  
34 that are not in StressTyp. (In some larger families that are treated in  
35 one section we present the StressTyp extracts and additional informa-  
36 tion per subfamily.)
- 37 d. ***Generalizations.*** We have tried to make general statements about the  
38 accentual patterns in the relevant (sub)families, in some cases accom-  
39 panied by remarks about diachronic developments or the data's impact  
40 on current theorizing.

1 If (b) is absent, (c) is labeled ‘accent information’. Sometimes (c) and (d)  
2 are conflated into a single section.

3  
4

### 5 **3. A note on the information on which this chapter is based**

6  
7

8 The first source for the accentual data presented here is StressTyp (see  
9 chapter 1, 2, 11 and Part II of this book). In addition, for European lan-  
10 guages and languages bordering Europe, i.e. Altaic, we rely on the collec-  
11 tion of articles in van der Hulst (1999). Thirdly, we consulted books that  
12 offer surveys of language families or languages in a specific geographical  
13 area (e.g. Johanson and Csató (eds.) 1998, Thurgood and LaPolla (eds.)  
14 2003, Comrie 1981, Kaye (ed.) 1997a, b). Fourthly, we have consulted  
15 grammars of individual languages as well as research articles discussing  
16 accentual data for a theoretically-oriented readership. Fifthly, we have  
17 sent email queries to colleagues; where we rely on information that they  
18 directly have given to us (via email or in personal communication) we  
19 note this in the text.

20 In line with the second author’s previous work on word accentual sys-  
21 tems, we prefer to use the term ‘word accent’ where many others would  
22 use the term ‘word stress’. We refer to van der Hulst (1999, 2002, 2006)  
23 and chapter 1 of this volume for a justification and clarification of this  
24 terminological choice.

25  
26

### 27 **4. North-East Eurasia (Eastern Siberia)**

28  
29

30 This part of Eurasia is roughly coextensive with Eastern Siberia, stretching  
31 approximately from the river Ob’ in the West to the Bering Sea in the East  
32 and from the Northern borders of Mongolia and China in the South to the  
33 Laptev Sea, the East Siberian Sea and the Chukchi Sea in the North  
34 (Comrie 2007: 244–245). In this area, languages of five language families  
35 and several language isolates are spoken:

36  
37

- 38 • Indo-European (Russian, see Chapter 8, section 4.1.4.)
- 39 • Altaic (Turkic, Mongolian and Tungusic, see Section 5 of this chapter)
- 40 • Uralic (Samoyedic and Finno-Ugric, see Chapter 8, section 4.5.)
- Chukotko-Kamchatkan
- Eskimo-Aleut (see Chapter 5, section 3.1.)
- Isolates: Ket, Yukaghir, Nivkh, Ainu

1 With most of these language families discussed in other chapters of this  
 2 volume, the present survey focuses on the Chukotko-Kamchatkan family,  
 3 located in the Far East of the area delimited above and on the language  
 4 isolates spread over Eastern Siberia.

5  
 6 *4.1. Chukotko-Kamchatkan*

7  
 8 ***Genetic information***

9 The Chukotko-Kamchatkan family, located in Eastern Asia Russia, is fur-  
 10 ther subdivided into a Northern and a Southern branch, with the former  
 11 encompassing the two sub-branches Chukot and Koryak-Alyutor.  
 12

13 **CHUKOTKO-KAMCHATKAN**

14 **NORTHERN:**

15 **CHUKOTIAN:** *Chukchi (Chukot)*

16 **KORYAK-ALYUTOR:** *Alutor, Koryak, Kerek*

17 **SOUTHERN:** *Itelmen*  
 18

19 ***StressTyp extracts***

20 **Chukchee; Chukot [I;S]**

- 21  
 22 • Accent usually occurs at the beginning of the word.  
 23 • To give emphasis to the word, the accent may be placed on the last  
 24 syllable, the vowel of which then changes to /o/.  
 25

26 'pariñin 'shoulder blade' pi'ñepi 'snowstorm'

27 u'wema 'while cooking' 'pirirkin 'he takes'  
 28

29 ***Additional information***

30  
 31 According to Dunn (1999: 54), primary stress in the Telqep variety of  
 32 Chukchi occurs on the first syllable of the word with a consonant onset  
 33 and a full vowel. Secondary stress is placed on every second syllable  
 34 before and after that.  
 35

- 36 (1) a. /'nu.tec.qə.cə.ku.kin/ 'smth. from the surface of the ground'  
 37 b. /qə.'jet.ɣ<sup>2</sup>i/ 'come!'  
 38 c. /,kər.ɣə.'re.c<sup>2</sup>ə.kin/ 'smth. made of dry stumps'  
 39 d. /a.'tok.tor.kə/ 'without a doctor'  
 40 e. /a.'mo.ʔe.qaj/ 'bark (DIM)'

1 For this variety, the emphatic vocative prosody is exemplified in (2),  
 2 where the final syllable of the vocative form of *Tələlʔən* appears with a  
 3 lengthened /o/.

- 4 (2) ənkʔam n-in-iw-iyəm Tələlʔ-o::n  
 5 and HAB-TR-say-1sg personal.name-E.VOC-3sgABS  
 6 ‘And I said to him: ‘Tələlʔən!’’  
 7

8 In what follows, we add some more detailed descriptions that are based on  
 9 summaries and partial translations of Russian sources provided to us by  
 10 Oksana Tarasenkova. We have edited and abbreviated this information,  
 11 but in view of the fact that little is known about these languages we have  
 12 tried to preserve as much information as possible. In particular, the data  
 13 presented below exemplify in detail how different morphological structures  
 14 relate to the stress domain in Chukchi.

15 Skorik (1961) discusses word accent in ‘Standard Chukchi’ in some detail.  
 16 The following is based on his account. Accent never occurs outside the  
 17 domain of the word stem. Given that accent is ‘stem bound’, if a one-syllable  
 18 stem is combined with a suffix, the accent is always on the stem vowel:

- 19 (3) a. **pojg**-a ‘spear-instr.’ b. **kejŋ**-e ‘brown bear-instr.’  
 20 c. **wəkw**-a ‘stone-instr.’ d. **mirg**-e ‘grandfather-instr.’  
 21 e. **puwt**-e ‘can-instr.’ f. **iw-ək** ‘say’  
 22 g. **ret-ək** ‘bring’ h. **tejk-ək** ‘make’  
 23  
 24

25 The same pattern is attested for words in which the suffix is a partial  
 26 reduplicant of the stem in (4):

- 27 (4) a. **tanŋ-ə-tan** ‘stranger’ b. **korg-ə-kor** ‘joy’  
 28 c. **tirk-ə-tir** ‘the sun’ d. **tilm-ə-til** ‘sea eagle’  
 29 e. **tumg-ə-tum** ‘comrade’ f. **tutʔ-ə-tut** ‘haze’  
 30 g. **təlg-ə-təl** ‘thaw’ h. **təmg-ə-təm** ‘silence’  
 31  
 32

33 (The linking vowel -ə- creates an extra open syllable preceding the con-  
 34 sonant initial reduplicative suffix.)

35 A polysyllabic stem that is combined with a suffix always has accent on  
 36 its last syllable, as shown in (5).

- 37 (5) a. **ekwet-ək** ‘leave’ b. **pelat-ək** ‘stay’  
 38 c. **wiriŋ-ək** ‘defend’ d. **reqoka-lgən** ‘polar fox’  
 39 e. **inejpelʔ-ən** ‘docker’ f. **migčiret-ək** ‘to work’  
 40 g. **kətgəntat-ək** ‘to run’ h. **gənrəret-ək** ‘to guard’

1 The accent location does not change when the number of suffixes is  
 2 increased. The accent, remaining on the last syllable of the stem, thus  
 3 appears further from the end of the word in (6b–c).

- 4  
 5 (6) a. winret-ək ‘to help’  
 6 b. winret-ərkən ‘help-3SG’  
 7 c. winret-ərkənitək ‘help-2PL’  
 8

9 Apparently exceptional are the cases where the stem ends in a vowel.  
 10 Unlike the above observation, most of such stems are accented on the  
 11 preceding syllable which is the first stem syllable in the examples in (7).

- 12  
 13 (7) a. wane-wan ‘no’ b. weni-wen ‘bell’  
 14 c. čeri-čer ‘dirt’ d. keli-kel ‘paper, book’  
 15

16 Such a change in the location of the accent can be explained in two ways.  
 17 The last vowel of the stem can be considered a linking vowel, similar to  
 18 the linking vowel ə in the earlier examples in (4) (*tung-ə-tum* ‘comrade’,  
 19 etc.). Another account appeals to a ranking of vowels according to their  
 20 height: /i/ ~ /e/ ~ /a/. We could then say that accent falls on the lowest,  
 21 most sonorous vowel. This alternative is supported by the data in (8).

- 22  
 23 (8) a. kəlka-kəl ‘shell’ b. nute-nut ‘land, country’  
 24 c. piŋe-piŋ ‘snowfall’ d. jilʔe-jil ‘arctic ground squirrel’  
 25

26 The following examples suggest that in case of equal height, accent falls  
 27 on the second vowel.

- 28  
 29 (9) a. jara-ŋə ‘house’ b. welo-lgən ‘ear’  
 30

31 The accentual pattern is different when the word has no affix, or has a  
 32 non-syllabic suffix. If the stem is combined with a suffix that is composed  
 33 of a consonant only (10b, d, f), the accent is located on the penultimate  
 34 or, as in (10d) even antepenultimate syllable of the stem.

- 35  
 36 (10) a. titi-ŋə ‘needle-SG’ b. titi-t ‘needle-PL’  
 37 c. melota-lgən ‘hare-SG’ d. milute-t ‘hare-PL’  
 38 e. qora-ŋe ‘deer-SG’ f. qora-t ‘deer-PL’  
 39

40 If the word has no overt suffix (i.e. a zero suffix), accent also appears on  
 the penultimate syllable of the stem in (11b, d, f, h).

- 1 (11) a. **riʃit**-ti ‘belt-PL’                      b. **riʃit** ‘belt-SG’  
 2            c. **warat**-te ‘people-PL’                d. but **warat** ‘people-SG’  
 3            e. **jatjɔl**-te ‘fox-PL’                        f. **jatjɔl** ‘fox-SG’  
 4            g. **jeɟwɛl**-ti ‘orphan-PL’                h. **jeɟwɛl** ‘orphan-SG’  
 5

6 These examples suggest that primary accent cannot be word final. This  
 7 would, however, require stem-penultimate rather than antepenultimate  
 8 accent in the example **milute**-t ‘hare-PL’; another generalization, con-  
 9 sistent with the facts in 10b, d, f, would be that final accent is avoided by  
 10 placing the accent on the stem-initial syllable.

11 The accent shift to the penultimate (or first) syllable in the word forms  
 12 without suffixes causes vowel reduction in the open last syllable, as in  
 13 (12b, d, f, h):

- 14 (12) a. **wala**-ɟpə ‘from knife’                      b. **walə** ‘knife’  
 15            c. **aŋqa**-ɟpə ‘from sea’                        d. **aŋqə** ‘sea’  
 16            e. **rərka**-ɟpə ‘from sea lion’                      f. **rərəkə** ‘sea lion’  
 17            g. **omqa**-ɟpə ‘from polar bear’                h. **umqə** ‘polar bear’  
 18

19 In words with root repetition but no suffixes the penultimate (or first)  
 20 syllable of the stem is accented, cf. (13). This is also consistent with reluc-  
 21 tance to have final accent.

- 22 (13) a. **kawkaw** ‘bread crust, biscuit’                b. **pʔoŋpʔoŋ** ‘mushroom’  
 23            c. **melmel** ‘good weather’                      d. **tintin** ‘ice’  
 24            e. **nəmnəm** ‘settlement’  
 25

26 Prefixation, as illustrated in (14) usually does not influence the location of  
 27 the accent.

- 28 (14) a. **kojɟən** ‘cup’  
 29            b. **ga-kojɟəma** ‘with cup’  
 30            c. **jarar** ‘drum’  
 31            d. **ga-jararma** ‘with drum’  
 32            e. **kulilʔetək** ‘to yell’  
 33            f. **ge-qulilʔet-lin** ‘yell-3SG-past’  
 34            g. **ge-requlilʔetlin** ‘trying to yell-3SG’  
 35            h. **čaatak** ‘catch with a lasso’  
 36            i. **na-šaanmək** ‘catch with a lasso-3SG-past-SUBJ/1PL-OBJ.’  
 37            j. **nara-saanmɛk** ‘catch with a lasso-3SG-future-SUBJ/1PL-OBJ.’  
 38  
 39  
 40





1 also get a shift leftward to the penultimate syllable if the vowel in the  
2 designated accent syllable is a schwa.

3 According to Muravyova (1979), Alutor word forms are divided into  
4 two classes depending on their rhythmic organization:

- 5 (i) Word forms in which one of the initial syllables is more prominent.  
6  
7 (ii) Word forms which are unaccented.

8 The accentual pattern of the accented words can be described with refer-  
9 ence to a distinction between light and heavy syllables. A light syllable is  
10 of the type Cə (which cannot be accented), all other syllable types con-  
11 stitute heavy syllables. The following three informal rules capture accent  
12 placement in Alutor.

- 13  
14 (i) The accent can be located either on the first or on the second sylla-  
15 ble, the latter being a more preferred option.  
16 (ii) Only a heavy syllable can be accented, light syllables are always  
17 unaccented.  
18 (iii) The last syllable of the word cannot be accented.

19 As a result of these rules, monosyllabic accented words are prohibited  
20 since the only syllable of such forms constitutes the word-final syllable.  
21 Monosyllabic words are function words, such as, e.g. the conjunctions *to*  
22 ‘and’ and *mej* ‘hi’. In disyllabic words, accent is realized on the first heavy  
23 syllable, as exemplified with the data in (18).  
24

- 25 (18) a. **ʔakək** ‘son’                      b. **tatul** ‘fox’  
26            c. **kəttil** ‘forehead’            d. **wala** ‘knife’  
27

28 With monosyllabic roots and disyllabic roots with an initial light syllable,  
29 several strategies which add syllabic substance are employed in the nomi-  
30 native case: i) a syllabic vowel ə is inserted, as in *lawət* ‘head’ (/lawt/),  
31 ii) a suffix is added, as in *milgən* ‘fire’ (/milg-n/) and *ɣəralɣən* ‘knee’  
32 (/ɣra-lɣən/), iii) reduplication applies, for example in *piɣ-piɣ* ‘ash’ or  
33 *nəm-nəm* ‘settlement’. Such complexity can also be achieved by the gemi-  
34 nation of the last consonant and a schwa-insertion after the geminate, for  
35 instance in *ɣajjə* ‘mountain’ (/ɣaj/) and *qəɬippə* ‘bread’ (/qəɬip/). Gemi-  
36 nation does not only occur in unaffixed words, but also in forms with  
37 mono-consonantal suffixes, e.g. *ɣəvuɣjə* ‘he began’ (/ɣvu-j/), but not in  
38 *piɣku-j* ‘jump-3SG/masc-past’. With some suffixes, however, /i/ is inserted  
39 instead of a schwa vowel, cf. *ɣəra-tti* ‘two knees’ (/ɣra-t/) vs. *gətka-t* ‘two  
40 legs’ and *gəva-kki* ‘to stumble’ (/gva-k/) vs. *piɣku-k* ‘to jump’.

1 In trisyllabic words, accent falls on the second syllable if it is heavy, for  
 2 example in *vitatək* ‘to work’, *ɣəralɣən* ‘knee’ and *vagəlɣən* ‘nail’. Other-  
 3 wise, the first syllable is accented, if it is heavy and the second syllable is  
 4 light, as in e.g. *tɪlpəqal* ‘shoulder’ or *tərgətər* ‘meat’.

5 In more formal terms, accent assignment in Alutor can be captured by  
 6 the following rules.

7 (i) In a word consisting of one heavy syllable the accent is realized on  
 8 this syllable:

9 # H # → # H #

10 e.g. *ɣajjə* (/ɣaj/) ‘mountain’, *gəmmə* (/gəm/) ‘T’

12 (ii) In a disyllabic word, accent is assigned to the first syllable, if it is  
 13 heavy or to the second syllable, if the first syllable is light:<sup>3</sup>

14 a. # H H # → # H H #

15 e.g. *tatul* ‘fox’, *kəttil* ‘forehead’, *paɣkan* ‘hat’

17 b. # L H # → # L H #

18 e.g. *pəɣunnə* (/pəɣun/) ‘mushroom’, *gəvakki* (/gəva + k/) ‘to stick’<sup>4</sup>

19 (iii) In a polysyllabic word, the second syllable is accented, if it is heavy  
 20 or the first syllable is accented if it is heavy and the second syllable is  
 21 light:

22 a. # H/L H ... → # H/L H ...

24 e.g. *quraja* ‘deer’, *ɣənpəqlavul* ‘old man’, *ɣatɣalka* ‘it hurts’,  
 25 *nəmalqin* ‘good’, *nəcəqqin* ‘cold’

26 b. # H L ... → # H L ...

27 e.g. *ɣənpəɣav* ‘old woman’, *niɣəqin* ‘white’, *ɣotəqin* ‘thin’

29 The rule in (iiia) has one exception: the root /aw(ə)ji/ ‘to eat’. This root  
 30 has two allomorphs, i.e. /awəji/ in the causative *tawəjatək* ‘to feed’ and  
 31 /awji/ (phonetically reduced to [oji]) in the non-causative verb *ɣojik*. All  
 32 forms of the verb *ɣojik* are accented as if they were derived from the allo-  
 33 morph /awəji/, for example *tojitkən* (= \**tawəjitkən*) ‘I eat’, but not as  
 34 \**tojitkən*.

35 After the rules of accent assignment have been applied, it might turn  
 36 out that the last syllable of the word is accented (see the rules in (i) and  
 37 (iib)). In these cases, the following rules of syllable expansion apply.

38  
 39 3. Alutor has no accented bi-syllabic word forms with a second light syllable.

40 4. Alutor has no word forms of the type CəCV (where V is any vowel).

- 1 (iv) In a form with an accented final syllable, the last consonant is gemi-  
2 nated and a schwa is inserted:

$$3 = C_1VC_2 = \rightarrow = C_1VC_2 = C_2\emptyset =$$

4 e.g. *ŋajjə* (/ŋaj/) ‘mountain’, *pəŋunnə* (/pəŋun/) ‘mushroom’

- 5  
6 (v) In a form with an accented final syllable where the last consonant is  
7 a separate morpheme, this consonant is geminated and either schwa  
8 or /i/ is inserted. /i/ is inserted after -k or -t, schwa is inserted else-  
9 where:

$$10 a. = C_1V + C_2 = \rightarrow = C_1V + C_2 = C_2i = / C_2 = k \text{ or } C_2 = t$$

11 e.g. *gəva + kki* (/gəva + k/) ‘to stick’, *ləla + tti* (/ləla + t/) ‘two  
12 eyes’

$$13 b. = C_1V + C_2 = \rightarrow = C_1V + C_2 = C_2\emptyset = / C_2 \neq k \text{ or } C_2 \neq t$$

14 e.g. *tənu + nnə* (/tənu + n/) ‘I ate him’

15  
16 The cases of syllable expansion can best be described by already introduc-  
17 ing two morphs in the lexicon (*naj/najjə*, *k/kki*, *t/tti*, *n/nnə*) because there  
18 is no information about accent at the stage of derivation where the word  
19 morphs have to be chosen.

20 Finally, (19) provides some examples of rhythm assignment in accented  
21 words derived from the same root but having different structures.

- 22  
23 (19) a. /# t + pr + n #/ → = təp = rən = (iia) → = **təp** = rən =  
24 ‘I took him off’

- 25 b. /# pr + n #/ → = pə = rə + n =  
26 (iib) → = pə = **rə + n** = (vb) → = pə = **rə + n** = nə =  
27 ‘he took him off’

- 28 c. /# t + ta + pr + ŋ + n #/ → = tə + tap = rə = ŋən =  
29 (iia) → = tə + **tap** = rə = ŋən =  
30 ‘I will take him off’

- 31 d. /# ta + pr + ŋ + ni + n#/ → = tap = rəŋ = nin =  
32 (iia) → = tap = **rəŋ** = nin =  
33 ‘he will take him off’

- 34 e. /# ga + pr + lin #/ → = gap = rə = lin =  
35 (iib) → = **gap** = rə = lin =  
36 ‘he is taken off’

37  
38  
39 Zhukova (1972) notes that accent in Koryak falls, in the majority of cases,  
40 on the first syllable of a disyllabic word (20).

- 1 (20) a. **va-jat** 'people'  
 2 b. **a-nok** 'spring'  
 3 c. **wa-jew** 'the base piles of the yarangha (type of house)'  
 4 d. **pe-lak** 'leave someone / something'  
 5 e. **aj-ŋon** 'a long time ago'  
 6 f. **met-yaŋ** 'good'  
 7 g. **giw-lin** 'he said'

8  
 9  
 10 Evidence from longer words suggests that the second stem syllable is  
 11 accented, cf. (21) and (22). However, the data thus far could also be  
 12 accounted for if final accent avoidance is assumed, with penultimate  
 13 accent being the chosen pattern:

- 14 (21) a. **wa-la** 'knife'  
 15 b. wa-**la**-ta 'knife – instr.'  
 16 c. gaj-ki-wa-**la**-ta 'with knife'  
 17  
 18 (22) a. **ve-tat** 'work'  
 19 b. ve-**ta**-tik 'to work'  
 20 c. ve-**tal**-laj 'they worked'  
 21 d. ko-**ve**-ta-tin 'he works'

22  
 23  
 24 Only example (22d) points to the second syllable rather than the penulti-  
 25 mate pattern.

26 In words consisting of four or more syllables, accented and unaccented  
 27 syllables alter relatively rhythmically, as shown in (23). In these cases, the  
 28 difference between primary and secondary accent is not obvious.

- 29 (23) a. mič-**čaj**-go-**čaw**-ŋi-la 'we studied'  
 30 b. **čaw**-či-**wač**-ye-naŋ 'in Koryak'  
 31 c. ga-**ve**-taŋ-**ŋvo**-la-ta 'work a little'

32  
 33  
 34 All forms are *incompatible* with the penultimate interpretation of primary  
 35 accent. If the first accent is primary then (23a) and (23c) confirm the  
 36 second syllable pattern. This pattern is clearly present in the Palansk  
 37 dialect of Koryak discussed below. (23b) perhaps has initial rather than  
 38 second syllable accent because the initial vowel is more prominent than  
 39 the second vowel, which is also confirmed by the form in (24a). An analysis  
 40 which accounts for all attested accent placements thus begs future research.



- 1 i. **timitim** ‘raft’ j. **riqutkən** ‘achieves, overcomes’  
 2 k. **junetək** ‘live’ l. **lepʔetəŋ** ‘swan-dat.’  
 3 m. **ʔelmulqən** ‘heap of snow’  
 4

5 In tetrasyllabic words, accent falls on the second syllable, as exemplified  
 6 in (28).

- 7 (28) a. **ŋiterɣere** ‘together (both)’ b. **jitevineŋ** ‘towel’  
 8 c. **uŋuŋupi** ‘baby’ d. **čaŋetavək** ‘get scared’  
 9 e. **miletatək** ‘swipe’ f. **torovatak** ‘say hello’  
 10

11 In a trisyllabic word in which the second syllable contains a schwa (/ə/),  
 12 the first syllable gets the accent instead of the second one, cf. (29).  
 13

- 14 (29) a. **wutəkku** ‘here’ b. **ʔottəŋtak** ‘go get the wood’  
 15 c. **tomɣəlɣən** ‘comrade’ d. **ɣuttəlɪn** ‘forest-like’  
 16 e. **niwtəkin** ‘low’ f. **nikməkin** ‘short’  
 17 g. **kayərɣən** ‘the mouth of the river’  
 18

19 If all syllables in a word contain a schwa, accent appears on its default  
 20 locus, which is the second syllable, i.e. *mənyəlɣən* ‘hand’.

21 In the Palansk variety, secondary accent usually falls on the last syllable  
 22 of a word, as illustrated in (30).

- 23 (30) a. **ilqətɣik** ‘close eyes very tightly’ b. **ʔusʔqeʔus** ‘bridge’  
 24 c. **taqətʔaw** ‘alyki’ d. **ŋelvelʔən** ‘group of animals’  
 25 e. **mulləmɣul** ‘blood’ f. **uluʔul** ‘sivuch’  
 26 g. **ʔuttəʔut** ‘tree’  
 27

28 To summarize, accent in Palansk Koryak is placed on the second syllable  
 29 of a word in the default case, i.e. unless this is the final syllable and unless  
 30 this syllable contains a schwa while the first syllable contains a full vowel.  
 31 As such, this pattern is similar to the one proposed above for the other  
 32 dialect of Koryak.

33 According to Bobaljĭk (p.c.) accent in Itelmen is located on the first  
 34 syllable (whether the head is a full vowel or schwa), excluding agreement  
 35 prefixes (of which only two are syllabic). There is no rhythmic/metrical  
 36 alternation, but the prominence tapers off from the accented syllable  
 37 towards the right edge of the word (much like a list intonation in English).  
 38 Syllables containing a glottal stop or a glottalized consonant have an  
 39 increased prominence relative to their neighbors, regardless of their linear  
 40 position in the word.

1 **Generalizations**

2 In all cases discussed, except Standard Chukchi (as described in Skorik  
3 1961), accent is on the left edge (initial or second syllable). However, in  
4 Standard Chukchi there is a predominant stem-final pattern with avoid-  
5 ance of word final accent leading to either the penultimate or indeed initial  
6 syllable.

7 In his comparative Chukotko-Kamchatkan dictionary, Fortescue (2005:  
8 13) hypothesizes that primary word accent in the proto-language was pre-  
9 sumably on the penultimate syllable. The domain for this accent assign-  
10 ment references the stem (including the first part of reduplicated forms  
11 and partial reduplications of disyllabic stems) or the combination of stem  
12 and syllabic suffix. This principle of accent placement is still traceable in  
13 the Chukchi data presented above. It should be evident from the previous  
14 survey that Chukotko-Kamchatkan still offers rich research opportunities  
15 in the study of word accent. In particular, the mapping of accent domains  
16 to morphological structures with varying degrees of complexity and the  
17 interaction of accent and phonotactics are poorly understood. The rele-  
18 vance of onsets in Chukchi accent placement (see (1d, e) above) is only  
19 one of various phenomena instanced in these languages which could  
20 be of major interest to phonological theory (see also Everett (1988) and  
21 M. Gordon (2005) on onset-sensitive accent systems).

23  
24 4.2. *Isolates*

25 Apart from the major language families located in East Siberia, we also  
26 find four language isolates which are spread over the area. We start with  
27 Ket in Central Siberia, proceeding to Yukaghir in the East, followed by  
28 Nivkh and Ainu in the South East of North-East Eurasia.

30  
31 4.2.1. Ket32 **Genetic information: Isolate**

33 Ket is spoken in several regions and valleys east of the Khanti and Mansi  
34 in central Siberia. It is related to Yugh with which it forms the Yeniseian  
35 language group.

36  
37 YENISEIAN

38 *Ket*  
39 *Yugh*



1 *Accent information*

2 As the only language of the area, Ket has been reported to have phonemic  
 3 tone oppositions (Comrie 1981: 262). Following Werner (1996), this typo-  
 4 logical feature characterizes the entire Yeniseian group, including Yugh  
 5 and the extinct Kot language, and can be reconstructed for the proto-  
 6 language. According to Werner (1997b: 20–25), Ket distinguishes four  
 7 tones: (i) a high-even or slightly rising tone distributed over a half-long  
 8 vowel, e.g. <sup>1</sup>*a:m* ‘mother’, (ii) a short, rising-falling tone accompanied by  
 9 laryngeal stricture or a full glottal stop, e.g. <sup>2</sup>*iʔ* ‘day’, (iii) a long rising-  
 10 falling tone without laryngealization or glottalization, e.g. <sup>3</sup>*a:ŋ* ‘hot’, and  
 11 (iv) a short falling tone <sup>4</sup>*aŋ* ‘rope’.<sup>5</sup> Apart from monosyllables, these four  
 12 tones can, in principle, also occur on any syllable of a polysyllabic word,  
 13 e.g. <sup>1</sup>*di*<sup>3</sup>*tA:l* ‘I’m cold’. However, in a number of polysyllabic words, and  
 14 sometimes dependent on speech rate, tone is only retained on one syllable  
 15 in the surface form, cf. (31).

- 16 (31) a. <sup>1</sup>*di*ʃaɟ ‘I leave’  
 17 b. aʃ<sup>2</sup>*kA*<sup>3</sup>*t* ‘fairytale’  
 18 c. <sup>3</sup>*a:ŋ*ʒat ‘to heat up’  
 19 d. <sup>4</sup>*dɔn*’-tɛt ‘I hit him’  
 20 e. <sup>3</sup>*di*ʃtaŋ ‘I carry her’  
 21  
 22

23 Assuming that tone is only realized on the accented syllable of these  
 24 forms, the words in (31a, c–e) would be accented on the first syllable and  
 25 the one in (31b) would be accented on the second syllable.

26 Additionally, polysyllabic words may also surface with a high-low  
 27 (32a–b) or low-high (32c–d) accent pattern.

- 28 (32) a. *ú*tàɟ ‘to hold’  
 29 b. *dón*ùl’aŋ ‘handles of a knife’  
 30 c. àmmás ‘stepmother’  
 31 d. *tàv*ùl’aŋ ‘bare-footed’  
 32

33 In such cases, the syllables with higher pitch, i.e. the first syllables in (32a–  
 34 b) and the second syllables in (32c–d), respectively, are perceived as being  
 35 accented. These accent patterns also distinguish the grammatical number  
 36 opposition in pairs such as *dúm*gít ‘birdie’ vs. *dùm*gít ‘birdies’.

37  
 38 5. With respect to the phonetic realization of the fourth tone, the several Ket  
 39 dialects show considerable variation, see Vajda (2004: 9) for a brief overview  
 40 and Werner (1996) for details.

1 Although the manifestation of tonal opposition in Yugh deviates from  
 2 the one encountered in Ket, its accentual system parallels the one described  
 3 above. The interested reader is referred to Werner (1996, 1997a, b) and  
 4 Vajda (2004) for detailed comparisons and further analyses of accent in  
 5 Yeniseian.

#### 6 4.2.2. Yukaghir

##### 8 *Genetic information: Isolate*

9 Yukaghir, usually subdivided into a Northern and a Southern variety, is  
 10 spoken in Yakutia and on the Kamchatka peninsula. Together with the  
 11 now extinct languages Chuvantsy and Omak it constitutes the Yukaghir  
 12 language group.  
 13

#### 14 YUKAGHIR

15 *Yukaghir*, †*Chuvantsy*, †*Omok*

##### 17 *StressTyp extracts*

##### 18 **Yukaghir [L/L]**

- 19 • Stress falls on the last syllable that is closed by a consonant or has a
- 20 long vowel.
- 21 • Else stress falls on the last syllable of the word.
- 22 • There are exceptional bisyllabic (C)V<sub>C</sub>e forms with initial stress.

24 'a:s'e	'domestic deer'	le'gul	'food'
25 a'ro:je	'kind of fish'	'āolhoro	'hare'
26 šana'jāq	'fur coat'	čolō'lok	'just so' <sup>6</sup>
27 mo'ro	'hat'	cōbi'ne	'spear'

##### 29 *Additional information*

30  
 31 The exceptional behavior of bisyllabic (C)V<sub>C</sub>e forms is exemplified with  
 32 the words in (33), taken from the same source that the StressTyp entry  
 33 and all following discussion is based on, i.e. Maslova (2003: 58–59).

- 34 (33) a. 'leme 'what'  
 35 b. 'kød'e 'larva'  
 36 c. 'mure 'shoe'

37  
 38  
 39 6. This line gives additional examples not originally included in the StressTyp  
 40 entry.

1 The accent placement rules summarized above also apply within derived  
 2 words, such as augmentative derivatives (34a–b) and causative derivatives  
 3 (34c–d).

- 4 (34) a. 'šowhe 'plate'                      b. šow'hotke 'plate'  
 5            c. šel'ges' 'break (intr.)'        d. šel'ge'dejm 'break (trans.)'  
 6

7 In the first derivation, the concatenation of the suffix *-tke* and resyllabifi-  
 8 cation conspire to create a heavy penultimate syllable /hot/ which attracts  
 9 accent. In the second derivation, the suffix *-dE-(j)-* itself provides a final  
 10 heavy syllable onto which the word accent moves.

11 In her reconstruction of Proto-Yukaghir phonology, Nikolaeva (2006:  
 12 75) discusses two scenarios for the historical development of disyllabic  
 13 stems. Starting from the observation that certain stems show synchronic  
 14 variation with respect to accent placement and vowel length, e.g. '(C)V:Cə  
 15 vs. (C)V'CV, the first reconstruction assumes that the difference in initial  
 16 vs. final accent placement was already present in the proto-language. In a  
 17 second step, vowel lengthening of the accented initial syllable and vowel  
 18 reduction in the unaccented final syllable yielded the segmental template  
 19 '(C)V:Cə. The second reconstruction, adopted by Nikolaeva, takes the  
 20 vowel length to be prior and assumes accent attraction to this heavy sylla-  
 21 ble. This second reconstruction thus projects the analysis for modern  
 22 Yukaghir to Proto-Yukaghir.  
 23

#### 24 4.2.3. Nivkh

##### 25 *Genetic information*

26 The Language Isolate Nivkh (Gilyak) is spoken in the far east of Russia,  
 27 along the Amur River and on Sakhalin Island. Three dialects can be dis-  
 28 tinguished: the Amur dialect spoken on mainland Russia, and the East  
 29 and North Sakhalin dialects spoken on the respective regions of Sakhalin  
 30 Island.  
 31  
 32

##### 33 *StressTyp extracts*

##### 34 **Gilyak; Nivkh [LEX]**

- 35
- 36 • Stress often falls on the first vowel of the word.
  - 37 • Sometimes stress is lexically determined.
  - 38 • Suffixes of the vocative, the imperative, and the conditional converb, are  
 39 always stressed.  
 40

1	'xaunt	'(someone) calls'	xa <sup>1</sup> unt	'(someone) dries'
2	'to:lkar halil	'(it became) very flat'	'pati:kur	'slowly'
3	'itiŋka:	'father'	vi-'ja	'go.sec.sg.imp'
4				
5	ymyk-'a	'mother.voc'		

6 ***Additional information***

7  
8 In addition to the general rules of accent placement and the examples  
9 given above, Gruzdeva (1998: 12–13) also notes some cross-dialectal dif-  
10 ferences in accentuation. For instance, the word for '(someone) walks/  
11 walked' is accented on the initial syllable in the Amur dialect (<sup>1</sup>*amamd*)  
12 and on the second syllable in the East Sakhalin Island dialect (*a<sup>1</sup>mamnt*).  
13 In a similar vein, Panfilov (1962: 22) notes forms which are accented on  
14 the second syllable, e.g. *um<sup>1</sup>gu* 'woman' and *ut<sup>1</sup>ku* 'man'. An example for  
15 the auto-stressed conditional converb marker is presented in (35).

16 (35) vi-'ŋaj... 'If [I] go...'

17 Shiraishi (2006: 30–31) additionally discusses phrasal accent, which does  
18 not differentiate between compounds and phrases, as is shown with the  
19 examples in (36).

- 20  
21 (36) a. 'ŋaɤ ajs (eye gold) 'glasses'  
22 b. 'kins ŋiŋk (devil face) 'devil's face'  
23 c. 'pilkar ŋiŋk (big face) 'a big face'  
24

25 In both compounds (36a) and phrases (36b–c), the first constituent has  
26 primary accent on the initial syllable. With respect to phonetic correlates  
27 of accent, Shiraishi (2006: 30) notes high pitch and for some speakers  
28 palatalization of the consonant before the front vowels /i, e/.  
29

30 4.2.4. Ainu

31 ***Genetic information***

32  
33 Ainu is presently spoken on the Japanese Kuril Islands (Tsushima),  
34 Hokkaido and in Russia. Formerly, it has also been spoken on the South  
35 Sakhalin Island. From the at least 19 original dialects, the following  
36 dialects can be distinguished at present: Sakhalin (Saghilin), Taraika,  
37 Hokkaido (Ezo, Yezo) and Kuril (Shikotan, Tsushima). The last speaker  
38 of Sakhalin dialect died in 1994. (The question of whether Ainu should  
39 be included into the Altaic language family remains a controversial issue;  
40 see for instance Ruhlen 1991).

1 *Accent information*

2 Ainu has a pitch-accent system in which the rise from low tone to high  
 3 tone marks the accented syllable. According to the descriptions in Refsing  
 4 (1986: 73–74), Dettmer (1989: 43–50) and Tamura (2000: 21–23), accent  
 5 placement is governed by the following rules. The following data demon-  
 6 strate the application of the most basic weight-sensitive rule by which  
 7 accent is placed on the initial syllable if it is closed or contains a diph-  
 8 thong, i.e. if it is heavy (37a–c), and on the second syllable otherwise  
 9 (37d–f).

- 10  
 11 (37) a. 'nonno 'flower'  
 12 b. 'tapsut 'shoulder'  
 13 c. 'aynu 'Ainu'  
 14 d. sa'pa 'head'  
 15 e. sa'paha 'his/her/its head'  
 16 f. ku'sapaha 'my head'<sup>7</sup>  
 17

18 There are four sources of deviation from this pattern. First, there are  
 19 words which are realized with accent on an initial, open syllable, cf. 'nisap  
 20 'sudden' vs. ni'sap 'shin'. Note that in such pairs, the locus of accent is dis-  
 21 tinctive. Diachronically, this aberrant accent placement may be due to the  
 22 loss of vowel length in the first syllable. As Tamura (2000: 22) points out,  
 23 the more conservative Sakhalin dialect has an initial long vowel in such  
 24 words, which attracts accent following the weight-sensitive rules sum-  
 25 marized above, e.g. 'miina 'to laugh'. In the Hokkaido dialect, the initial  
 26 vowel got shortened, but initial accent placement got preserved, yielding  
 27 the form 'mina. A tendency to prolong the vowel of an accented open syl-  
 28 lable has also been noted by Refsing (1986: 73) for the Shizunai dialect.  
 29 Secondly, contracted forms with preposed personal forms may also exhibit  
 30 irregular accent placement. For instance, when the first vowel of the word  
 31 ko'otopihi 'my hair' is deleted, accent surfaces on the initial open syllable  
 32 of the contracted form 'kotopihi. Thirdly, certain personal prefixes, such as  
 33 eci- (second person plural), are not integrated into the accent domain and  
 34 do not affect accent placement, e.g. 'eci-sa'pa-ha 'your (plural) hair'.  
 35 Fourthly, in derived words, accentuation is sensitive to morphological  
 36

37  
 38 7. The accentuation of these last two words differed in southwestern Hokkaido  
 39 dialects around 1955, i.e. sapaha 'his/her/its head' kusa'paha 'my head', sug-  
 40 gesting accent on the third syllable.

1 structure such that the stem receives accent in combinations like 'e-re  
2 (eat-CAUS) 'cause to eat', and that compounds are accented on the first  
3 member, e.g. 're-kor (name + have) 'to have a name' and ka'muy-mosir  
4 (god + country/homeland) 'the Gods' world'.

## 5. Asia Minor and Central Eurasia (Altaic)

8 This section is concerned with the Altaic languages. Whereas the genetic  
9 affiliation of Turkic, Mongolian and Tungusic under the ('Micro-')Altaic  
10 node is by now accepted (see Georg et al. 1999 for an overview), the addi-  
11 tional inclusion of Korean, Japanese and Ainu into this family (see e.g.  
12 Ruhlen 1991) has long been debated. More recently, Robbeets (2005,  
13 2007a, b) compiled substantial lexical and morphological evidence in  
14 favor of this 'Macro-Altaic' hypothesis.

15 Adopting the broader conception of Altaic, this section presents accen-  
16 tual data from Turkic, Mongolic, Tungusic, Korean and Japanese and  
17 thus covers an area which stretches from the Mediterranean and Black  
18 Sea in the West (Turkey) to the Pacific Ocean in the East (Korea and  
19 Japan), forming a middle layer from Aisa Minor to Central Eurasia.

### 5.1. Turkic

#### *Genetic information*

24 Turkic is generally believed to be a direct descendant of Altaic proper.  
25 The Ethnologue (R. Gordon 2005) distinguishes six major branches within  
26 the family (see Johanson 1998 and Róna-Tas 1998 for the history and  
27 reconstruction of Turkic). The accentual data surveyed in this section  
28 cover all major subbranches, however, to the exclusion of Urum.

#### TURKIC

31 BOLGAR: *Chuvash*

32 EASTERN: *Ainu, Chagatai, Ili Turki, Uyghur, Northern Uzbek,*  
33 *Southern Uzbek, West Yugur*

34 NORTHERN: *Southern Altai, Northern Altai, Shor, Dolgan,*  
35 *Karagas, Khakas, Yakut, Tuvin*

36 SOUTHERN: *Crimean Turkish, Salar*

37 AZERBAIJANI: *South Azerbaijani, Northern Azerbaijani,*  
38 *Turkic Khalaj, Qashqa'i, Sakchuq*

39 TURKISH: *Balkan Gagauz Turkish, Gagauz, Khorasani Turkish,*  
40 *Turkish*

- 1           TURKMENIAN: *Turkmen*  
 2           WESTERN: *Urum*  
 3           ARALO-CASPIAN: *Karakalpak, Kazakh, Kirghiz, Nogai*  
 4           PONTO-CASPIAN: *Judeo-Crimean Tatar, Karaim, Karachay-*  
 5                               *Balkar, Kumyk*  
 6           URALIAN: *Bashkir, Chulym, Tatar*

7  
 8           ***StressTyp extracts***

9           **Chuvash [L/F]**

10          *Altaic, Turkic, Bolgar. Chuvash republic (Russian Federation).*

- 11          • Stress falls on the last syllable with a full vowel, else on the first syllable.

12  
 13          la'ʃa       'horse'       'alāk     'door'

14          sarla'ka   'widely'       'ěslěpěr   'we shall work'

15  
 16          **Uzbek, Northern [U]**

- 17          • Primary stress normally falls on the final syllable.  
 18          • In words of three syllables a secondary stress may appear on the first  
 19            syllable.  
 20          • In longer words a tertiary stress can appear in between the primary and  
 21            secondary stress.

22          dʒɔ'nim   'my soul'       quʃ'ca   'little bird'

23  
 24          **Turkish; Osmanli [F/L;LEX]**

- 25          • Stress normally falls on the final syllable.  
 26          • Stress may also appear anywhere in the word on lexically marked  
 27            syllables.  
 28          • In placenames and loans stress is antepenultimate if that syllable con-  
 29            tains a long vowel or is closed and the penult is light, otherwise stress  
 30            falls on the penultimate syllable.

31          ta'nı                   'know'

32          tanıdıkla'рім       'my acquaintances'

33          tanı'dık               'acquaintance'

34          ta'nımadıklarımız   'those we do not know'

35          tanıdık'lar           'acquaintances'

36          ak'şamleyin         'at evening'

37          is'tanbul             'istanbul'

38          'ankara               'ankara'

1 **Bashkir; Basquort [U]**

- 2 • Stress falls on the final syllable of the word (including suffixes).

3 k<sup>h</sup>i't<sup>h</sup>ap<sup>h</sup> 'book' k<sup>h</sup>it<sup>h</sup>ap'lar 'books'4 k<sup>h</sup>it<sup>h</sup>ap<sup>h</sup>larɣ<sup>h</sup>bɣð 'our books'6 *Additional information*

7  
8 We will start our elaboration of the accentual patterns in Turkic with the  
9 most divergent Turkic language *Chuvash*, representing the Bolgar branch  
10 and being spoken in the Chuvash Autonomous Republic in the Russian  
11 Federation. This language has an accentual system that is remarkably sim-  
12 ilar to that of Armenian (cf. 8.4.1.6.). Clark (1998: 435–436) locates stress  
13 on the final syllable, unless this syllable contains a reduced vowel, in which  
14 case accent occurs on the penult. The accent keeps moving to the left to  
15 find the rightmost full vowel; if no such vowels occur in the word, accent  
16 is placed initially. Thus, Chuvash can be analysed as a LAST/FIRST sys-  
17 tem, in which full vowels count as heavy (cf. Krueger 1961 and Hayes  
18 1995). Chuvash is divergent from other Turkic languages in that the posi-  
19 tion of accent is dependent on vowel quality. It may have inherited this  
20 feature from the Uralic languages which are its neighbours geographically.  
21 This could have been, for example, a mutual influence between Chuvash  
22 and Cheremis, Cheremis having inherited the LAST value from Chuvash,  
23 while Chuvash has inherited the default FIRST value from Cheremis.

24 Gordon (2000) offers a discussion of Chuvash word accent, based on  
25 Dobrovolsky's (1999) measurements of intensity, duration and funda-  
26 mental frequency. According to these results, intensity and/or durational  
27 increase is a property of heavy syllables that are accented according to  
28 the rule that the rightmost heavy syllable is accented (hH, IH, HI). If the  
29 default (when there is no heavy syllable) is 'leftmost', we predict that in ll  
30 words the initial syllable carries accent. However, initial syllables in such  
31 words do not have such phonetic correlates. Instead, all initial syllables  
32 carry a fundamental frequency peak, with fundamental frequencies going  
33 down toward the end of the word. This is a normal declination effect.  
34 Dobrovolsky sees this initial high frequency as intonational in nature,  
35 such that the pitch range tends to decline over time. If indeed the alleged  
36 initial accent (in words with light syllables only) is merely caused by an  
37 initial high fundamental frequency, one would expect that words would  
38 only surface with this feature if they occur in initial position of an intona-  
39 tional domain. Whether this is indeed the case, remains to be tested.  
40 Meanwhile, one must wonder whether it is 'reasonable' to assume that an  
accent language has words that are accentless.



1 Comrie (1997c: 923–925) shows that Uyghur, another representative of  
 2 the Eastern branch, deviates from the final accent pattern prevailing  
 3 across Turkic in being sensitive to syllable weight. If the final syllable is  
 4 light and the penult heavy, we find penultimate accent.

- 5  
 6 (38) a. māšīna 'machine'  
 7 b. mašīnı-dá ōzám 'myself'

8  
 9 As the second example shows, when a suffix is added and the long vowel is  
 10 outside the two-syllable window, stress is final. Stress is also final if both  
 11 the penultimate and the final syllable are heavy. Vowels that do not have  
 12 primary stress lose their length, but the rightmost non-stress (underlying)  
 13 long vowel will have a secondary stress, so the second form is actually  
 14 /mašīnı-dá/ (see also Hahn 1991).

15 Word accent in Yakut, our major representative from the Northern  
 16 branch, normally falls on the last syllable of a word (Krueger 1962: 70).  
 17 However, there are exceptions to this default accent placement, most evi-  
 18 dently in deictics, as listed in (39).

- 19  
 20 (39) a. 'subu 'this'  
 21 b. 'siti 'that'  
 22 c. 'uonna 'then, and'  
 23 d. 'ittene 'backwards'  
 24 e. 'bičıkay 'little, itty-bitty'

26 We now turn to the Southern Turkic languages. Of these Turkish, the  
 27 main language of Turkey, is most intensively studied (see Kornfilt 1997,  
 28 Lewis 2000, and Göksel and Kerslake 2005 for reference grammars). In  
 29 the default case, Turkish primary accent falls on the final syllable of a  
 30 word. There are, however, numerous deviations from this pattern (for dis-  
 31 cussion of Turkish accentual data see Sezer 1981, Kaisse 1985, Barker  
 32 1989, Comrie 1997a, Csató and Johanson 1998). The regular pattern can  
 33 be illustrated with the following examples.

- 34  
 35 (40) a. tanı-dík 'acquaintance'  
 36 b. tanı-dık-lár 'acquaintances'  
 37 c. tanı-dık-lar-ím 'my acquaintances'

38  
 39 Special rules of accent placement apply within a part of the vocabulary  
 40 consisting of native and foreign place names, person names and recent  
 borrowings. Although the latter mostly conform to the phonotactics of

1 Turkish, their accent pattern is deviant.<sup>8</sup> The examples in (41), taken from  
 2 Sezer (1981) and Barker (1989), are arranged according to the weight of  
 3 their final syllables. The lowered dots represent syllable boundaries.

- 4  
 5 (41) a. O.dí.pus 'Oedipus'  
 6 Gö.ré.me 'Göreme'  
 7 Ke.né.di 'Kennedy'  
 8 Pi.to.lé.mi 'Ptolemy'  
 9 In.di.ya.na.pó.lis 'Indianapolis'  
 10 b. Sa.mu.él.son 'Samuelson'  
 11 Va.şing.ton 'Washington'  
 12 lo.kán.ta 'restaurant'  
 13 Ha.li.kár.nas 'Halicarnassus'  
 14 c. án.ka.ra 'Ankara'  
 15 şa.mán.dı.ra 'buoy'  
 16 pén.ce.re 'window'  
 17 şév.ro.le 'Chevrolet'<sup>9</sup>  
 18 d. Men.dél.son 'Mendelssohn'  
 19 Kam.çát.ka 'Kamchatka'  
 20 Ay.zın.hó:.ver 'Eisenhower'  
 21  
 22  
 23

24 On the basis of such data, Sezer and Barker draw the following conclu-  
 25 sions with respect to accent placement in this part of the vocabulary.  
 26

- 27 (42) a. If the antepenult is heavy and the penult is open with a short  
 28 vowel, accent falls on the antepenult  
 29 b. otherwise accent falls on the penult  
 30

31 As a second major group of lexical exceptions, adverbs are usually ac-  
 32 cented on the first syllable, e.g. *sónra* 'after', *áncak* 'only' and *búrada*  
 33 'here'. Furthermore, accentuation in morphologically complex words is  
 34 sensitive to the accentual properties of suffixes. Some suffixes, such as  
 35 *yap-arak* 'by doing' and *gid-ince* 'having gone', are auto-stressed in carry-  
 36

37  
 38 8. This class of items is also discussed by Sezer (1981) and Kaisse (1985).

39 9. Note that /vr-/ is not a licit syllable onset, so that *şevrole* must be syllabified as  
 40 indicated.

1 ing primary accent on their initial syllable. There are also bound  
 2 morphemes which trigger primary accent on the syllable immediately pre-  
 3 ceding them. In the following examples, taken from Barker (1989), these  
 4 morphemes are underlined.

- 5  
 6 (43) a. taní-ma-dık-lar-ım-ız ‘those we do not know’  
 7 b. koalisyón-la ‘with coalition’  
 8 c. tanı-dık-lar-ım-íz-mi ‘our acquaintances?’  
 9

10 The negation marker *-mA* in (43a) is a genuine verbal suffix, the bound  
 11 morpheme in (43b) is the suffixed variant of the postposition *ile* ‘with’,  
 12 while the question particle *mI* in (43c) is generally considered a clitic. In  
 13 terms of their contribution to accent placement, these bound morphemes  
 14 can be considered pre-accenting. The formal expression of this generaliza-  
 15 tion has triggered a debate in which, amongst others, Kaisse (1985) and  
 16 Barker (1989) have participated. More recently, the Turkish data fed a  
 17 controversy between proponents of lexical pre-specification (Kabak and  
 18 Vogel 2001) and proponents of co-phonologies (Inkelas and Orgun 2003).

19 Bashkir, a Western Turkic language spoken in the *Bashkir* autonomous  
 20 Republic of the Russian Federation is also described as having final accent  
 21 in its native vocabulary (Poppe 1964). Loanwords from Arabic, Persian  
 22 and Russian, among other languages, keep their original accent pattern.  
 23 When suffixes are added to a stem the accent shifts, with a small number  
 24 of exceptions. As in Turkish, when several suffixes are added the last one  
 25 takes the accent: *kitáp* ‘book’, *kitaplár* ‘books’, *kitaplaribö* ‘our books’,  
 26 *kitaplariböđán* ‘from our books’.

27 The same holds true for *Tatar*, another Western Turkic language  
 28 spoken in Tatarstan and adjacent areas within the Russian Federation,  
 29 e.g. *balá* ‘child’ and *balalár* ‘children’. Comrie (1997b: 909–912) provides  
 30 more detail on exceptional stress in Tatar, including initial stress in second  
 31 person imperative forms of the verb and interrogative pronouns and  
 32 adverbs. He also lists several unstressed suffixes and shows that enclitics  
 33 do not get stressed.

34 The patterns described above, i.e. default final accent placement with  
 35 lexically conditioned deviations, are mostly identical across the family.  
 36 For more accentual data on individual languages see Boeschoten and  
 37 Vandamme (1998) on Chaghatay, Boeschoten (1998) on Uzbek, Schönig  
 38 (1998a) on Azerbaijani, Brendemoen (1998) on Turkish dialects, Kerslake  
 39 (1998) on Ottoman Turkish, Schönig (1998b) on Turkmen, Berta (1998a)  
 40 on Tatar and Bashkir, Berta (1998b) on the West Kipchak languages

1 Kumyk, Karachay-Balkar, Crimean Tatar, Karaim, Kirchner (1998a) on  
 2 Kazakh and Karakalpak, Csató and Karakoç (1998) on Noghay, Kirchner  
 3 (1998b) on Kirghiz, Hahn (1998a, b) on Uyghur, and Stachowski and Menz  
 4 (1998) on Yakut.

### 6 **Generalizations**

7 Johanson (1998a: 34–35) makes the following general remarks about  
 8 word prosodic phenomena in Turkic languages: accent is the capacity to  
 9 bear high pitch. Most words have accent on their final syllable which will  
 10 thus carry pitch. Suffixes may be accented or unaccented. Personal suffixes  
 11 of the pronominal type, copula markers, negation suffixes, and enclitic  
 12 particles (such as /dA/ ‘and, too’) are unaccented, which means that they  
 13 cause the accent to be on the syllable preceding them (cf. 43). He also  
 14 notes an interacting changeable dynamic stress-accent, characterized by  
 15 more energy of articulation. This stress accent tends to fall on the first  
 16 syllable and is thought to be the source of the left-to-right vowel harmony  
 17 system and rhyme patterns in Old Turkic poetry (cf. also Johanson 1998b:  
 18 111). Csató and Johanson (1998) remark that the initial stress-accent in  
 19 Turkish *often* falls on the first syllable, especially when this syllable is  
 20 heavy, i.e. containing a long vowel or being closed. Though typically at  
 21 opposite ends of the words, both accents may coincide on the same syllable.  
 22 This occurs when the location of accent is exceptional, non-final, as  
 23 happens in the exceptional cases discussed above. In these cases, it is said  
 24 that the pitch- and stress accent fall on the same syllable. In accordance  
 25 with these generalization it is possible to describe the location of accent  
 26 as follows: accent falls on the rightmost lexically marked syllable (i.e. the  
 27 exceptional cases) otherwise on the last syllable. Stated this way, Turkish  
 28 is a last/last system (cf. van der Hulst 1999).  
 29

### 31 5.2. *Mongolic*

#### 32 **Genetic information**

33 Whereas the Ethnologue (R. Gordon 2005) considers Mongolic a direct  
 34 descendant of Altaic, other language classifications, for instance Ruhlen  
 35 (1991), posit an intermediate node ‘Mongolian-Tungus’. This latter view  
 36 suggests that Mongolic is more closely related to Tungusic than to Turkic.  
 37 Within Mongolic, an Eastern and a Western branch are distinguished. The  
 38 following discussion, as well as the StressTyp entries, focuses on Khalkha  
 39 Mongolian as a representative of the Eastern Mongolian branch.  
 40

- 1 MONGOLIAN  
 2 EASTERN:  
 3 DAGUR: *Daur*  
 4 MONGOUR: *Kangjia, Tu, Bonan, Dongxiang, East Yugur*  
 5 OIRAT-KHALKHA:  
 6 KHALKHA-BURIAT:  
 7 BURIAT: *China Buriat, Mongolia Buriat, Russia*  
 8 *Buriat*  
 9 MONGOLIAN PROPER: *Khalkha Mongolian,*  
 10 *Peripheral Mongolian*  
 11 OIRAT-KALMYK-DARKHAT: *Darkhat,*  
 12 *Kalmyk-Oirat*  
 13 WESTERN: *Mogholi*

14  
 15 ***StressTyp extracts***

16 **Mongolian; Khalkha [F/F]**

- 17 • Stress falls on the first syllable that contains a long vowel.  
 18 • Otherwise stress falls on the first syllable of the word.

19  
 20 bos'guul 'fugitive' 'axe 'elder brother'  
 21 'uŋʃisəŋ 'having read' mori'ooroo 'by means of his own horse'

22  
 23 ***Additional information***

24  
 25 In the philological literature, there is considerable disagreement about the  
 26 formulation of accent placement rules in Mongolian. Bosson (1964) and  
 27 Poppe (1970) describe the pattern as follows: primary accent is assigned  
 28 to the *rightmost* non-final syllable containing a long vowel or diphthong.  
 29 If such a syllable occurs *only* finally, accent is placed on the ultima. If no  
 30 such syllables are present, accent is realized initially. This would make  
 31 Mongolian a *last/first* system, instead of a *first/first* system as is stated in  
 32 *StressTyp*. Street (1963) and Walker (1995) furthermore state that heavy  
 33 syllables that do not carry primary accent surface with a secondary accent.  
 34 Also, all initial syllables – heavy or light – may carry an initial accent in  
 35 words that contain heavy syllables.<sup>10</sup>

36 Matthews (1951: 60), on the other hand, diagnoses default *initial* accent  
 37 for Mongolian, accompanied by a tone on the final syllable. It is this pitch  
 38 phenomenon which may give the false impression of final 'stress'. Note

39  
 40 10. Walker (1995) notes that Buriat accentuation is essentially the same as Khalkha.

1 that in his description, accent placement is completely independent of  
 2 vowel length. Such an analysis closely resembles Johanson's (1998a: 34–  
 3 35) characterization of Turkic word prosody in terms of initial stress and  
 4 final pitch-accent (cf. 5.1.).

5 Contrary to what is suggested by the examples in StressTyp and the  
 6 previous statements, Svantesson et al. (2005) claim that long vowels in  
 7 Mongolian only occur in initial syllables. The interested reader is referred  
 8 to their summary and discussion of the six different analyses proposed  
 9 for Mongolian accent: i) initial accent, combined with final high pitch  
 10 (cf. Matthews as cited above), ii) accent on the first long, phonemic, non-  
 11 reduced vowel, initial accent elsewhere (cf. StressTyp), iii) accent on right-  
 12 most long vowels, initial accent elsewhere (cf. Bosson and Poppe as cited  
 13 above), iv) final accent, v) accent on the first long vowel, final accent else-  
 14 where, and vi) initial accent if the initial syllable contains a long vowel,  
 15 accent on the second syllable elsewhere. They further speculate that re-  
 16 searchers differ widely in their views on the location of accent because  
 17 accent is not phonologically relevant, i.e. non-contrastive.

### 19 5.3. *Tungusic*

#### 21 ***Genetic information***

22 Following up on the discussion of Mongolic's position in the Altaic family  
 23 tree (cf. 5.2.), Tungusic is either considered a direct descendant of Altaic  
 24 (R. Gordon 2005) or the sister of Mongolic in the subgroup 'Mongolian-  
 25 Tungus' (Ruhlen 1991). Within Tungusic, a Northern and a Southern  
 26 branch are indubitably distinguished. In order to substantiate the empiri-  
 27 cal coverage of Southern Tungus, the StressTyp extracts in this section are  
 28 complemented with additional accentual data from Udihe.

#### 31 TUNGUS

##### 32 NORTHERN:

33 EVEN: *Even*

34 EVENKI: *Evenki, Oroqen*

35 NEGIDAL: *Negidal*

##### 36 SOUTHERN:

##### 37 SOUTHEAST:

38 NANAJ: *Nanai, Orok, Ulch*

39 UDIHE: *Oroch, Udihe*

40 SOUTHWEST: *Jurchen, Manchu, Xibe*

1 ***StressTyp extracts***2 **Evenki; Tungus [U/U]**3 *Tentative*

- 4
- 5 • In words of two syllables, stress mostly falls on the second syllable.
  - 6 • If a disyllabic word has either a long vowel or cluster of consonants in the middle of the stem, stress falls on the first syllable.
  - 7
  - 8 • In a disyllabic word with two long vowels, stress falls on the second syllable.
  - 9
  - 10 • If a word has more than two syllables with short vowels, stress falls on the last syllable.
  - 11
  - 12 • Some polysyllabic words with final stress have an antepenultimate secondary stress.
  - 13

14 bi'ra 'river' o'ron 'reindeer' 'halka 'hammer'  
 15 'i:kte 'tooth' mo:'ka:n 'stick' ,ngina'kin 'dog'

17 **Orok; Oroc [U]**

- 18 • Stress falls on the final syllable of the word.

19 ***Additional information***

20

21 Accent placement in Evenki can be further elaborated on with the following examples taken from Nedjalkov (1997: 316–317). In bisyllabic words, accent falls either on the initial syllable (44a–d) or, more often, on the second syllable (44e–h).

- 22
- 23
- 24
- 25 (44) a. úlle 'meat'
- 26 b. óllo 'fish'
- 27 c. húlla 'blanket'
- 28 d. hálka 'hammer'
- 29 e. birá 'river'
- 30 f. girán 'step'
- 31 g. sa:chá:s 'you knew'
- 32 h. mo:ká:n 'stick'
- 33
- 34
- 35

36 Initial accent is typically found if the first syllable of a bisyllabic word contains a long vowel or is closed by a coda consonant, as for example in (44d). In a similar vein, final accent placement is often found in words with final closed syllables, such as e.g. (44f). If a bisyllabic word has two long vowels, as in (44g–h), accent falls on the second syllable.

37

38

39

40

1 The accentual patterns of words consisting of more than two syllables  
2 are exemplified in (45).

- 3 (45) a. emerén 'he came'  
4 b. giramná 'bone'  
5 c. biradúk 'from the river'  
6 d. emed'én 'he will come'  
7 e. singílgen 'snow'  
8 f. in'ékted'eren '(s)he is laughing'  
9 g. bòkonón 'he caught up with someone'  
10 h. silkid'arán 'she washes up'

13 In the absence of long vowels, such polysyllabic words are usually ac-  
14 cented on the final syllable (45a–d). The words in (45e) and (45f) show  
15 that non-final, closed syllables attract stress, resulting in patterns of penul-  
16 timate accent and accented second syllables, respectively. Some poly-  
17 syllabic words are realized with two accents: a primary accent on the final  
18 syllable and a secondary accent on the antepenultima, cf. (45g–h).

19 In morphologically complex words, accent usually shifts to the suffixes,  
20 unless the stem contains a long vowel, in which case accent will remain on  
21 this vowel. Certain suffixes, such as the causative suffix *-vkAn* and the  
22 volition marker *-mu*, are always accented. In (46), these suffixes are under-  
23 lined.

- 25 (46) a. ùllivkénen 'she made someone sew'  
26 b. gikumúd'aran 'he wants to go'

28 All in all, these data support the StressTyp U/U-analysis which places  
29 accent on the rightmost heavy syllable in a right-edge two-syllable window  
30 and on the final syllable if this window contains only light syllables.

31 Nikolaeva and Tolskaya (2001: 90–95) classify Udihe as a language  
32 with an unbounded quantity-sensitive accent system in which accent is  
33 placed on the rightmost heavy syllable or, if there are no heavy syllables,  
34 on the last syllable. The data in (47) provide the empirical basis for this  
35 characterization.

- 37 (47) a. u.ta.w'a 'that (ACC)'  
38 b. a.na.n'a 'long ago'  
39 c. 'a:n.ta.zi.ga 'women (PL)'  
40 d. e.m'e:.me.i 'have come' <come-PP-ACC-2SG>



- 1 e. b'a.ta.wa 'boy (ACC)'  
 2 f. k'o.lo.lo 'in the mitten (LOC)'  
 3 g. dog.b'o 'night'  
 4 h. zab.da.l'a 'grass snake (LOC)'  
 5 i. na.uŋ.za.k'a 'boy'  
 6 j. zu.e.z'e 'table'

9 In the default case, cf. (47a–b), primary accent falls on the final syllable of  
 10 a word. If a word contains a bimoraic – i.e. long or laryngealized – vowel,  
 11 primary accent shifts to this vowel, as shown in (47c–f). Note that closed  
 12 syllables (47g–h) and vowel clusters (47i–j) do not constitute bimoraic  
 13 domains for the sake of accent placement.

14 If a word contains more than one bimoraic syllable, accent falls on the  
 15 rightmost bimoraic syllable, as illustrated in (48).

- 17 (48) a. te:.g'iek 'he sat' <sit-REP-PAST-EXPR>  
 18 b. su:.s'i:.ni 'he extinguishes' <extinguish-3SG>  
 19 c. s'a.i.d'a:.ni 'he salted' <salt-PAST-3SG>

21 These data confirm that the system is of the L/L variety. In other words  
 22 Udihe displays the unbounded version of the bounded U/U system in  
 23 Evenki.

24 In morphologically complex forms, this general accent pattern gets  
 25 obscured by the special prosodic behavior of different morpheme classes.  
 26 First, word-final syllables with high vowels (/i/ and /u/) are extrametrical  
 27 with respect to accent placement. However, this extrametricality is only  
 28 restricted to inflectional affixes.

- 30 (49) a. a.di.l'i 'net'  
 31 b. zo.m'i.mi 'stealing' <steal-INF>  
 32 c. de.gu.m'u 'poles for drying fish'  
 33 d. sa.kin.de.z'e.mu 'we will clap' <clap-SEM-SUBJ-1PL.EX>

35 The word-final /i/ in (49a) is prosodically integrated into the accent  
 36 domain and receives regular word-final primary accent. In (49b), on the  
 37 other hand, the word-final /i/ shuns final accent as it belongs to the infini-  
 38 tive suffix *-mi*. Parallel evidence is given for word-final /u/, such that the  
 39 final syllable regularly receives accent if the high vowel belongs to the  
 40 root in (49c), and shuns word-final accent if constituting the inflectional

1 suffix *-u* in (49d). As an exception to this rule, the dative suffix *-du* typi-  
 2 cally bears accent, e.g. *o-d'u* ‘here’ <this-DAT>, *zugdi-d'u* ‘in the house’  
 3 <house-DAT>.

4 The second major deviation from the general accent pattern concerns  
 5 the prosodization of enclitics. Unlike suffixes containing non-high vowels,  
 6 clitics are outside the domain of accent assignment. Consider the data  
 7 in (50).

- 8  
 9 (50) a. *abuga-l'a* ‘at the father (LOC)’  
 10 b. *tada-w'a* ‘arrow (ACC)’  
 11 c. *abug'a-da* ‘and the father’  
 12 d. *jaz'a-ta* ‘and of course’  
 13

14 (50a–b) demonstrate that the locative and accusative suffix are prosodi-  
 15 cally integrated into the accent domain: in the absence of bimoraic sylla-  
 16 bles, the word-final syllable receive primary accent, which results in the  
 17 accentuation of the suffix vowel in both cases. In (50c–d), on the other  
 18 hand, the focus enclitics *-dA* and *-tA* remain outside the accent domain  
 19 and word-final accent is realized on the syllables immediately preceding  
 20 them.

### 22 **Generalizations**

23  
 24 The uncertainty concerning Mongolian accent makes it difficult to draw  
 25 conclusions. However, in most analyses, some weight-sensitive form of ini-  
 26 tial accent is typical of this language. The Tungusic languages Evenki and  
 27 Udihe, on the other hand display a final weight-sensitive pattern, either  
 28 bounded (U/U) or unbounded (L/L). The latter type of system is also  
 29 prevalent in the Turkic branch of Altaic. According to Poppe (1960) these  
 30 different systems have developed from a common source which had accent  
 31 on the first heavy syllable and a musical pitch-accent on the final syllable.  
 32 In the Turkic languages, the final pitch-accent has apparently attracted the  
 33 default accent, while Mongolian seems to have capitalized on the left-edge  
 34 aspect of this system.

### 36 5.4. Korean

#### 37 **Genetic information**

38  
 39 In the organization of this chapter, we have adopted the hypothesis that  
 40 Korean ultimately belongs to the Altaic phylum (see Robbeets 2005,

1 2007a, b). Ruhlen (1991) considers Korean a sister of Japanese in his  
 2 'Korean-Japanese' subgroup of Altaic. R. Gordon (2005) makes no com-  
 3 mitment to potential affiliations of Korean with other languages or groups  
 4 and thus classifies Korean as a language isolate.

5

6

### 7 *Accent information*

8

8 There is considerable variation in the word prosodic systems of Korean  
 9 dialects. The following overview follows the typology proposed by Fukui  
 10 (2003), which makes a major distinction between distinctive and non-  
 11 distinctive tonal patterns.

12

13

#### 14 *I. Distinctive tonal patterns*

15 In systems of this sort, words of equal length and syllabic make-up can  
 16 have different tonal patterns.

17

##### 18 *I.a. Multipattern systems*

19 In multipattern systems, the limit on the number of patterns is dependent  
 20 on how many syllables the words/accental domains can have.

21

22

##### 23 *I.a.i. n (+1) systems: Hamgyeongdo*

24 In this context Fukui (2003) mentions the Yanbian Longjing dialect in the  
 25 north eastern part of China, which he says is similar to the Hamgyeongdo  
 26 system that has been described in Ramsey (1978). Each word has at most  
 27 one accent and each syllable in a word can bear that accent which, thus,  
 28 has to be lexically marked. This accent is associated with a high tone.  
 29 Words can also be unaccented in which case the H tone associates to  
 30 the final syllable in the accentual domain. This system is comparable to  
 31 Tokyo Japanese (which, in addition, has leftward spreading of the high  
 32 tone; cf. section 5.5.). This is a  $n + 1$  system ( $n$  being the number of syl-  
 33 lables in the word, each of which can carry an accent,  $+1$  adding the accent-  
 34 less option). In a system of this sort, the number of patterns increases with  
 35 word length because the accent/high tone can be on any syllable. Fukui  
 36 reports that younger speakers of this dialect seem to be losing the un-  
 37 accented class (which merges with the final accent class), which would  
 38 make their dialect an 'n system'. This system is said to be closer to  
 39 that of Middle Korean than any other system.

40

1 *I.a.ii. n + 2 systems: Gyeongsangdo (e.g. North G.: Daegu; South G.:*  
 2 *Busan, Changnyeong dialects)*<sup>11</sup>

3 According to Fukui (2003), the Changnyeong dialect (at the northern  
 4 border of South Gyeongsangdo) has a class of words that, as in Hamg-  
 5 yeongdo, can carry an accent on every syllable. There do not seem to be  
 6 unaccented words, so this part of the system is an n system. In addition,  
 7 this dialect has two classes of words that have a ‘double H pattern’: initial  
 8 HH followed by Ls or initial LHH followed by Ls. This adds two pat-  
 9 terns, hence n + 2. Additionally, Cho (2003) notes vowel length in North  
 10 Gyeongsangdo, but not in South Gyeongsangdo.

11  
 12 *I.b. N-pattern systems: West Gyeongsangdo (including some Chonnam*  
 13 *dialects)*

14 These systems have a fixed number of patterns (N), i.e. the number of  
 15 patterns is not dependent on word length. Fukui (2003) presents the  
 16 Chonnam Gwangyang Jinsang dialect, which has 4 patterns, hence N = 4,  
 17 as a representative of this type. Two of the tonal patterns are double high  
 18 tone patterns as in the Changnyeong dialect. The two others are single H  
 19 patterns with accent either falling on the initial or penultimate syllable.

20  
 21 *II. Non-Distinctive tonal patterns*

22 *II.a. One pattern systems*

23 In these systems, there is no tonal contrast. All words have the same  
 24 pitch contour. Fukui (2003) illustrates this type with two examples. In  
 25 Pyeong’ando there is a phrase final high pitch, or, if the phrase is utterance-  
 26 final, a penultimate high pitch. A second type is found in many Chonnam  
 27 dialects, which have high pitch either on the second syllable or on the  
 28 first syllable, if the syllable starts with /s/, /h/, an aspirated or reinforced  
 29 consonant, or contains a long vowel. One might say that in such systems  
 30 the location of the high pitch is fully predictable and therefore cannot be  
 31 contrastive.

32  
 33 *II.b. Zero-pattern systems*

34 Finally, it would seem that the Seoul dialect is not a pitch accent system at  
 35 all. This does not mean that words are always ‘flat’ because intonational  
 36 tones are still present. We now turn to a more detailed discussion of the  
 37 Seoul system.

38  
 39 \_\_\_\_\_  
 40 11. Gyeongsang = Kyongsang = Kyungsang; Hamgyeongdo = Hamgyong.

1 *The Seoul dialect*

2 Several studies deal with the Seoul dialect, which is often referred to as  
 3 (standard) Modern Korean. Indeed, instead of postulating a pitch-accent  
 4 system, many studies assume that Modern Korean has a stress-accent  
 5 system, for which several accent placement rules can be proposed (see  
 6 Kim 1998, Lim 2000).

7 (51) *accent the first syllable if heavy; otherwise accent the second*  
 8 *syllable*<sup>12</sup>

- 9 a. kyó:doso ‘prison’  
 10 b. sí:caŋ ‘market’  
 11 c. náksən ‘rejection’  
 12 d. iyáki ‘story’  
 13 e. kəúl ‘a mirror’

16 (52) *accent the first heavy syllable; otherwise accent the last syllable*

- 17 a. sá:ram ‘people’  
 18 b. núnbora ‘snow storm’  
 19 c. barám ‘wind’  
 20 d. pihæŋki ‘an airplane’  
 21 e. aú ‘a younger sibling’  
 22 f. imá ‘forehead’

24 All of the second set of examples have accent on either the first or the  
 25 second syllable, which implies that the formulation ‘accent the first sylla-  
 26 ble if heavy; otherwise accent the second syllable’ can be said to hold for  
 27 both sets of words. The perception study reported in Lim (2000) indicates  
 28 that the third syllable in trisyllabic words (for example LLL, or LLH) is  
 29 never perceived as prominent.  
 30

31 We also find a third approach to the analysis of Korean prosody, which  
 32 heavily relies on lexical accent (Ko 2010). Consider the data in (53).

- 33 (53) a. kí:l-ta ‘be long’  
 34 b. kil-í ‘length’  
 35 c. ká:m-to ‘persimmon-also’  
 36 d. ká:m-i ‘persimmon-NOM’  
 37

38  
 39 12. CVV and CVC count as heavy, CV is light. Note that vowel length has disap-  
 40 peared in Modern Seoul Korean.

1 The analysis is based on the assumption that the initial long vowels in (53)  
 2 are not underlyingly long but underlyingly accented. Accordingly, accent  
 3 falls on the first syllable if underlyingly specified for this position and on  
 4 the second syllable otherwise. The surface length of the vowel in the  
 5 first syllable is considered a phonetic correlate of accent. This accentual  
 6 analysis is supported by the fact that certain suffixes cause a shift of the  
 7 accent to the second syllable. Those suffixes do not seem to have an overt  
 8 phonological property causing the shift. In fact, in some cases there is a  
 9 homophonous suffix which does not cause the shift. In some cases, these  
 10 suffixes may cause a shift away from a closed syllable (if accented), as  
 11 shown in (54).

- 12  
 13 (54) a. *sá:lm-ta* 'boil-inf.'  
 14 b. *sa:lm-a [salmá]* 'boil-connective'

15  
 16 These shifts point to an accentual analysis because they can be accounted  
 17 for by assuming that the shifting suffixes have an accent which causes the  
 18 deletion of the stem-accent. In a non-accentual analysis, the shifts cannot  
 19 so easily be explained.

20 In still other accounts, word accent is denied and the impression of  
 21 'stress' is attributed to pitch contours which form part of the (phrasal)  
 22 intonational phonology (Jun 1993, Kim 2004). In this analysis, reference  
 23 is made to the fact that the location of the alleged word accent differs  
 24 depending on the broader prosodic context which, if true, undermines (or  
 25 weakens) the idea of there being a word-level accent. These researchers  
 26 suggest that the pitch patterns that were assumed to be properties of  
 27 the word domain (and dependent on word accent) are properties of a  
 28 larger domain, called the Accentual Phrase, a unit within the Intonational  
 29 Phrase.

30 From this perspective, the impression of stress accent on the first or  
 31 second syllable is interpreted as resulting from an edge or boundary tone  
 32 at the beginning of the so-called accentual phrase. However, in such an  
 33 analysis it must be assumed that the alignment of the tone is sensitive to  
 34 the weight of the initial syllable (Lim 2000; De Jong 1994). This is, of  
 35 course, a possible analysis although it might be argued that sensitivity to  
 36 syllable weight is perhaps more characteristic of word level accent place-  
 37 ment than of phrasal tone anchoring. With the accent in place, it would  
 38 then be the case that the intonational tone anchors to the accented sylla-  
 39 ble. One way or the other, the sensitivity to syllable structure has to be  
 40 stated.

1 **Generalizations**

2 Lee and Ramsey (2000) provide a brief synopsis of Korean dialectology.  
 3 In regard of tonal properties, they remark that distinctive tone/pitch and  
 4 distinctive length are almost in complementary distribution, although  
 5 there are some dialects that have both and some that have neither. On  
 6 Cheju Island and scattered over North Korea there are such dialects. Pre-  
 7 sumably, Seoul Korean, for speakers who have lost the length opposition,  
 8 also falls in this category. It would seem that the discussion on the inter-  
 9 pretation of the Korean prosodic system is ongoing and it is, as yet, not  
 10 clear whether there is a word-level prosodic system.  
 11

12 5.5. *Japanese*13 **Genetic information**

14 For a putative Altaic subgrouping ‘Korean-Japanese’ in which Japanese is  
 15 a sister to Korean see the introductory remarks in section 5.4. As stated  
 16 there, we follow the Macro-Altaic hypothesis in treating Japanese as  
 17 belonging to the Altaic phylum. Within Japanese, Ryukyuan and Japa-  
 18 nese have to distinguished, the former encompassing several subbranches  
 19 and dialects. Being considered a separate language of disputed origin, it  
 20 exhibits Altaic traits in grammar, but also Austronesian traits in the sound  
 21 system and prefixation. Like Korean, Japanese has many dialects which  
 22 differ especially in their word prosodic systems. Representative of the  
 23 Western dialects is *Kyoto*, of the eastern dialects *Tokyo*. See Shibatani  
 24 (1990) for a general overview of the languages of Japan.  
 25  
 26

## 27 JAPANESE

## 28 RYUKYUAN:

## 29 AMAMI-OKINAWAN:

30 NORTHERN AMAMI-OKINAWAN: *Southern Amami-*  
 31 *Oshima, Kikai, Northern Amami-Oshima, Toku-No-Shima*

32 SOUTHERN AMAMI-OKINAWAN: *Oki-No-Erabu,*  
 33 *Central Okinawan, Kunigami, Yoron*

34 SAKISHIMA: *Miyako, Yaeyama, Yonaguni Japanese*  
 35  
 36

37 **Accent information**

38 A broad variety of Japanese dialects exists which, among other aspects,  
 39 differ in their word prosodic systems. An overarching property of all  
 40

1 systems is the relevance of pitch movements at the level of the ‘word’, or,  
2 as some researchers prefer to put it: the ‘accentual domain’. Even with  
3 reference to the Tokyo variety of Japanese, which is probably the best  
4 studied dialect, interpretations of the nature of the pitch contour vary,  
5 relating either to the characterization of the locus of pitch movement  
6 (through accents or lexically specified tone) or to the domain and/or inter-  
7 action between word-level contours and intonational properties that are  
8 introduced at higher levels, such as the accentual phrase or the intonation  
9 phrase. Here we are mostly interested in the variety that results from  
10 differences that relate to the contrastiveness or non-contrastiveness of  
11 tonal contours and differences that involve the locus of accent (or lexically  
12 specified tone).

13 Meanwhile the study of Japanese tonology has come a long way in  
14 particular in the context of studying the melodic structure of prosodic  
15 constituents of varying size and the interaction between word tone and  
16 intonational tones, in particular various boundary tones. An important  
17 work is Pierrehumbert and Beckman (1988). A recent discussion of Tokyo  
18 Japanese, as well as further references, can be found in Gussenhoven  
19 (2004, chapter 10).

20 An interesting overview in the context of autosegmental theory of  
21 dialectal differences is offered by Haraguchi (1988), who divides Japanese  
22 dialects into two broad categories: pitch-accent systems and unaccented  
23 systems. Cross-classifying with this dichotomy, he suggests a ‘universal’  
24 inventory of melodies (H, L, HL, LH and LHL) from which a system  
25 may pick one or two at most. Additional ways in which dialects can be  
26 different lie in the presence or absence of tone spreading rules. Thus in  
27 Tokyo Japanese, the H tone spreads leftward (leaving an initial mora  
28 low, possibly due to a boundary L tone that comes with the accentual  
29 domain; cf. below).

30 Here we are mostly interested in the accentual aspect of the Japanese  
31 systems, i.e. the location of the accent. The system of Tokyo Japanese is  
32 such that the constituents of words (stems, affixes) can be accented or  
33 unaccented (or, in the case of affixes, pre-accented). When more than one  
34 accent is present in the accentual domain (which can be larger than the  
35 word and therefore needs a careful definition; Gussenhoven (2004) calls  
36 it the  $\alpha$ -domain, the first (or leftmost) accent predominates, i.e. will  
37 attract the high pitch/tone. If no accent is present, the high pitch occurs  
38 on the last (rightmost) syllable. This FIRST/LAST pattern constitutes  
39 an unbounded system. In fact, Haraguchi (1988) notes that three of the  
40 possible unbounded patterns occur in Japanese dialects.



1	(55)	Systems with unaccented words	Systems without unaccented words
2		First/First	Kumi First Fukuoka
3		First/Last	Tokyo, Osaka
4		Last/First	– Last –
5		Last/Last	Hirosaki

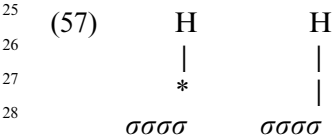
7 Note that systems without unaccented words have no default.

8 Haraguchi (1977, 1988) also recognizes unaccented systems, i.e. systems  
 9 in which no word is accented. He mentions Sendai (H), Miyakonojo (LH)  
 10 and Kagoshima (LH, LHL). Perhaps one might analyse systems of  
 11 this type as cases in which, as one might put it, only the default  
 12 can apply, such that the default accent would determine the direction of  
 13 association:  
 14

15 (56) Systems with only unaccented words

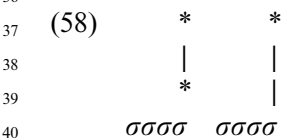
16 First  
 17  
 18 Last

19 Haraguchi (1977, 1988), following Goldsmith (1975) marks the lexical posi-  
 20 tion of the pitch-accent with a diacritic (effectively ‘an accent mark’). The  
 21 pitch/tone associates to this accent mark or to an edge syllable if there is no  
 22 accent mark. This makes the pitch that associates to an accent representa-  
 23 tionally different from a pitch that associates to an unaccented edge syllable.  
 24



30 This is a welcome result since the pitch height of finally accented words is  
 31 higher than that of unaccented words (Gussenhoven 2004: 190–191).

32 In unbounded accentual systems, the analogue to this situation would  
 33 be that, whereas in words with heavy syllables, the rightmost or leftmost  
 34 heavy syllable ends up with a grid column consisting of two marks, words  
 35 without heavy syllables would have just one mark, cf. (58).



1 One could, in fact, argue that this representation (making no reference to  
 2 tones) can be used for pitch-accent systems as well, at least in those cases  
 3 in which the pitch properties are seen as phonetic interpretations of \*  
 4 rather than as phonological entities. We refer to a discussion of these  
 5 two ways of dealing with pitch-accent systems in van der Hulst (1999). A  
 6 phonological tonal analysis seems more likely for those systems in which  
 7 either tone spreading takes place (that cannot be analyzed as phonetic  
 8 interpolation) or more than one tonal melody is present, one of which  
 9 minimally would need to be specified.

10

### 11 *Generalizations*

12

13 Japanese accentology displays a rich and interesting typological variation,  
 14 just like Korean and, perhaps another comparable case, Basque accentology  
 15 (cf. Chapter 8, section 4.2.). Many of the theoretical issues, as  
 16 illustrated in our discussion of Japanese, apply to these other systems  
 17 as well.

18

19

## 20 **6. Southern Asia**

21

22 In our definition of Southern Asia, we essentially follow Asher (2007),  
 23 who delimits the area with reference to Iran in the west and Bangladesh  
 24 in the east. In this region, eight language families are spoken:

25

- 26 • Turkic (see Section 5.1.)
- 27 • Indo-European: Indo-Iranian
- 28 • Dravidian
- 29 • Austroasiatic (see also Section 7.2.)
- 30 • Tibeto-Burman (see Section 7.1.)
- 31 • Tai-Kadai (see Section 7.4.)
- 32 • Andamane
- 33 • Burushaski

34

35 Turkic has already been discussed in Section 5. Tibeto-Burman and Tai-  
 36 Kadai will be surveyed in Section 7. With respect to Austroasiatic, we  
 37 will discuss the Munda languages in this section, while elaborating on  
 38 Mon-Khmer in Section 7. The main rationale for this decision stems  
 39 from the former's geographical location in the region delimited above.  
 40

1 6.1. *Indo-European: Indo-Iranian*2 **Genetic information**

3 Indo-Iranian, as a major daughter of Indo-European, consists of two large  
4 and ancient groups, namely Indo-Aryan ('Indic') and Iranian. Nuristani  
5 is sometimes mentioned as a third major branch of the family (Ruhlen  
6 1991). Recent classifications, such as R. Gordon (2005), however, treat  
7 this group as a subbranch of Indo-Aryan (see Watkins 1993: 26–31 for  
8 details on the principal branches of Indo-European and Sims-Williams  
9 2002 on the classification of Indo-Iranian languages).  
10

## 11 INDO-IRANIAN

## 12 INDO-ARYAN

## 13 IRANIAN

14 UNCLASSIFIED: *Badeshi, Luwati*

15 Indo-Iranian, as the largest Indo-European subfamily, broke off around  
16 2000 BCE and remained fairly homogenous until 1000 BCE. The modern  
17 Indic languages all derive from Classical Sanskrit, the Iranian languages  
18 from Avestan (6th century BCE). This family spread over Iran, Afghani-  
19 stan, India, and Pakistan. Hindi and Urdu, two official languages of India  
20 and Pakistan are very similar.  
21

## 22 6.1.1. Indo-Aryan

23 **Genetic information**

24 Most recently, at least eight subbranches of Indo-Aryan are distinguished  
25 which sometimes exhibit considerable genetic complexity. The following  
26 presentation follows R. Gordon (2005), however, without taking a stance  
27 towards its adequateness. The interested reader is referred to Masica  
28 (1991: 8–60) for exhaustive discussion. The eleven languages included in  
29 the StressTyp sample cover six subbranches of the family.  
30  
31

## 32 INDO-ARYAN

## 33 CENTRAL ZONE:

34 BHIL: *Pauri Bareli, Rathwi Bareli, Bauria, Bhili, Bhilali, Palya*  
35 *Bareli, Chodri, Dhodia, Dubli, Dungra Bhil, Adiwasi Garasia,*  
36 *Gamit, Rajbut Garasia, Mawchi, Nahali, Noiri, Pardhi,*  
37 *Rathawi, Wagdi*

38 DOM: *Domari*

39 GUJARATI: *Aer, Kachi Koli, Gujarati, Jandavra, Parkari Koli,*  
40 *Wadiyara Koli, Saurashtra, Vasavi, Vaghri*

- 1 KHANDESI: *Ahirani, Dhanki, Khandesi*  
2 PANJABI: *Eastern Panjabi*  
3 *Powari*  
4 RAJASTHANI:  
5 MARWARI: *Dhatki, Dhundari, Goaria, Godwari, Loarki, Marwari*  
6 *(Pakistan), Marwari (India), Merwari, Mewari,*  
7 *Shekhawati*  
8 UNCLASSIFIED: *Bagri, Gujari, Gurgula, Harauti, Lambadi,*  
9 *Gade Lohar, Malvi, Nimadi*  
10 ROMANI:  
11 BALKAN: *Balkan Romani*  
12 NORTHERN: *Carpathian Romani, Kalo Finnish Romani, **Baltic***  
13 *Romani, Sinte Romani, Welsh Romani*  
14 VLAX: *Vlax Romani*  
15 UNCLASSIFIED: *Parya, Sonha, Dangaura Tharu, Kathoriya Tharu,*  
16 *Mewati*  
17 WESTERN HINDI:  
18 BUNDELI: *Bundeli*  
19 HINDUSTANI:  
20 *Hindi*  
21 SANSI: *Kabutra, Sansi*  
22 *Urdu*  
23 UNCLASSIFIED: *Haryanvi, Bhaya, Kanauji, Braj Bhasha,*  
24 *Chamari, Ghera, Gowli*  
25 EAST CENTRAL ZONE: *Awadhi, Bagheli, Dhanwar, Fijian*  
26 *Hindustani, Chhattisgarhi*  
27 EASTERN ZONE:  
28 BENGALI-ASSEMBESE: *Assamese, **Bengali**, Bishnupriya, Chakma,*  
29 *Chittagonian, Hajong, Halbi, Kurmukar,*  
30 *Kharia Thar, Kayort, Mal Paharia, Nahari,*  
31 *Rajbanshi, Sylheti, Tangchangya, Mirgan*  
32 BIHARI: *Angika, **Bhojpuri**, Caribbean Hindustani, Kudmali, Magahi,*  
33 *Maithili, Majhi, Sadri, Oraon Sadri, Surajpuri, Musasa,*  
34 *Panchpargania*  
35 ORIYA: *Bodo Parja, Bhatri, Bhunjia, Desiya Oriya, Kupia, Oriya,*  
36 *Adivasi Oriya, Reli*  
37 UNCLASSIFIED: *Bote-Majhi, Degaru, Chitwania Tharu, Kochila*  
38 *Tharu, Rana Tharu, Buksa*  
39 NORTHERN ZONE:  
40 CENTRAL PAHARI: *Kumauni*  
EASTERN PAHARI: *Nepali, Palpa*

1 **GARHWALI:** *Garhwali*

2 **WESTERN PAHARI:** *Mahasu Pahari, Bhadrawahi, Bhattiyali,*  
3 *Chambeali, Churahi, Dogri, Gaddi, Hinduri,*  
4 *Jaunsari, Bilaspuri, Kullu Pahari, Harijan*  
5 *Kinnauri, Mandeali, Pangwali, Pahari-*  
6 *Potwari, Sirmauri, Kangri*

7 **NORTHWESTERN ZONE:**

8 **DARDIC:**

9 **CHITRAL:** *Khowar, Kalasha*

10 **KASHMIRI:** *Kashmiri*

11 **KOHISTANI:** *Bateri, Chilisso, **Kalami**, Gowro, Indus Kohistani,*  
12 *Tirahi, Torwali, Wotapuri-Katarqalai, Kalkoti*

13 **KUNAR:** *Dameli, Gawar-Bati, Grangali, Shumashti*

14 **PASHAYI:** *Northeast Pashayi, Northwest Pashayi, Southwest*  
15 *Pashayi, Southeast Pashayi*

16 **SHINA:** *Brokskat, Domaaki, Phalura, Kohistani Shina, Shina,*  
17 *Savi, Ushojo*

18 **LAHNDA:** *Southern Hindko, Northern Hindko, Jakati, Mirpur*  
19 *Panjabi, Western Panjabi, Seraiki, Khetrani*

20 **SINDHI:** *Jadgali, Kachchi, Lasi, Sindhi Bhil, **Sindhi***

21 **NURISTANI:** *Ashkun, Kati, Prasuni, Tregami, Waigali, Kamviri*

22 ***Sanskrit***

23 **SINHALESE-MALDIVIAN:** *Maldivian, Sinhala, Veddah*

24 **SOUTHERN ZONE:**

25 **KONKANI:** *Goanese Konkani, Kukna, Katkari, Konkani, Phudagi,*  
26 *Samvedi, Varli*

27 *Marathi*

28 **UNCLASSIFIED:** *Bhalay, Deccan, Gowlan, Varhadi-Nagpuri*

29 **UNCLASSIFIED:** *Chinali, Dhanwar, Darai, Kanjari, Kumhali, Lahul*  
30 *Lohar, Memoni, Mina, Od, Pali, Tippera, Usui,*  
31 *Vaagri Booli*

34 ***StressTyp extracts***

36 **Gujarati [U/P;P/A]**

- 37 • In bisyllables, stress is final if the vowel is /a/, if both vowels are non-/a/  
38 or the first syllable contains a schwa and is closed, stress is penult; if the  
39 penult is an open schwa there is free variation.  
40 • In longer words, stress the penult if it is not schwa (but schwa + coda  
is stressed) or /i/ and the antepenult is not /a/. If the antepenult is /a/

1 there is free variation. If the penult is schwa and open, stress is ante-  
2 penultimate.

3 'bidi 'a type of cigar' nak'san 'damage'  
4 khə'butər 'pigeon' 'akrəmən 'invasion'  
5 jə'jənti 'birthday' 'tajeter or ta'jeter 'recently'  
6

7 **Romani, North Russian (dialect of Romani, Baltic) [U]**

- 8 • Stress falls on the final syllable (with lexical exceptions).  
9

10 duratu'no 'far' o'mestir 'from a gypsy'

11 **Hindi [U%A]**

- 12 • Stress falls on final syllables of the form VVC or VCC.  
13 • Otherwise stress is on penultimate long vowels or closed syllables.  
14 • If the final is not superheavy, and the penult is not heavy stress shifts to  
15 a heavy antepenult (or even to the pre-antepenult).  
16

17 ka'maal 'wonders' in'saaniyat 'humanness'  
18 'anumati 'permission' 'kamal 'lotus'  
19

20 **Awadhi-Bagheli [P/P]**

- 21 • Stress falls on the penultimate syllable, except when the final is heavy  
22 and the penult is not, then stress is final.

23 pi'sa:n 'flour' 'ba:is 'twenty two'  
24 kʌ'fi:sj 'he said' 'sa:ʃha: 'share'  
25

26 **Bengali [I]**

- 27 • Stress falls on the first syllable.

28 'bisselʃon 'analysis' 'ɔbostha 'condition'  
29

30 **Bhojpuri [A-U/P]**

- 31 • Primary stress falls on the antepenultimate syllable of words with 4  
32 syllables or more.  
33 • Primary stress falls on the penultimate syllable elsewhere, except when  
34 the final vowel is checked, in which case stress is final.  
35 • Secondary stress falls on long vowels, final closed syllables and to the  
36 left of the main stress on the only syllable preceding it, or two to the left.

37 ,ga'lab 'to melt' ,ba'hini 'sister'  
38 ,kʰa'tamka,rab 'to finish' ,kʰaju'a:ib 'to scratch'  
39  
40

1 **Maithili (dialect of Maithili; Bihari) [P%A/P]**

- 2 • Primary stress falls on the penultimate syllable if it contains a long  
3 vowel.  
4 • If the penult contains a short vowel and the final is long, stress is final.  
5 • If both the penultimate and the final vowel are short, stress is antepen-  
6 ultimate if that vowel is long, else penultimate.  
7 • Secondary stress falls on initial syllables.

8 'ma:ti 'earth dir. base' ,adhə'la:ne 'bad'  
9 ,patə'hi: 'thin' 'ga:bhinu 'pregnant'

11 **Nepali; Gurkhali; Gorkali [I/I]**

- 12 • Stress falls on the first syllable, except when the second vowel is long  
13 and the first is not.

14 **Kalami; Kalam Kohistani [U (Tone)]**

- 15 • Stress falls on the final syllable, except in words with a HL tone, where  
16 stress varies.

18 ʃʌr'da 'quickly' 'ʃo:li: 'rice in the field' [hl tone]

19 **Sindhi [L/P]**

- 20 • Stress falls on the last heavy syllable and on the penult if there are no  
21 heavy syllables.

22 **Sanskrit [F/F (pitch)]**

- 23 • Stress falls on the first high pitched syllable, else on the first.  
24 • Claimed to be pitch-accent system rather than stress.

25 'apaciti 'retribution' dha:'rayati 'holds'  
26 nama'syati 'respects' apara:h'ʕa 'afternoon'

27 **Additional information**

28 Mistry (1997: 660) reports that Gujarati accent occurs on the first syllable  
29 except when the second syllable has /a/ and the first syllable has a vowel  
30 other than /a/ (cf. StressTyp above):

- 31 (59) a. 'sabu 'soap'  
32 b. 'prəclit 'prevalent'  
33 c. 'tarik<sup>h</sup> 'day, date'  
34 d. u'taru 'passenger'

35  
36  
37  
38  
39  
40

1 Hindi does not show the same effect of /a/'s attracting stress away from  
 2 the right edge:

- 3 (60) Hindi Gujarati  
 4 a. ga'rīb 'garib 'poor'  
 5 b. nuk'sān nuk'sān 'loss'

7 Vijaykrishnan (p.c.) provided us with the following more detailed infor-  
 8 mation concerning accent placement in Gujarati.

- 10 (61) Bisyllables:  
 11 a. Stress is initial (penult), but:  
 12 b. /a/ in final syllable always attracts stress (unless it is a  
 13 nominative ending)  
 14 c. If schwa in open initial syllable, initial stress varies freely with  
 15 non-initial stress (Schwa in closed syllable *will* get initial stress)  
 16  
 17 Trisyllables:  
 18 d. Stress is penult, but:  
 19 e. If the penult contains a schwa in open syllable, stress is initial  
 20 f. If the initial syllable contains /a/ than there is free variation  
 21 between initial and penultimate stress  
 22

23 We summarize this as follows: the leftmost non-final occurrence of /a/ is  
 24 stressed, otherwise the penult is stressed (if not open schwa in which case  
 25 stress is leftward in trisyllables or rightward in bisyllables).

26 With respect to Punjabi, Vijaykrishnan (p.c.) shared the following  
 27 insights with us. There are three degrees of syllable weight: L(ight),  
 28 H(eavy) and S(uperheavy), where superheavy syllables occur only in final  
 29 or penultimate position (unless there are suffixes). Accent has an impact  
 30 on the prosodic system, such that it provides the domain for tone and  
 31 that phonological and morphological rules make reference to it. The fol-  
 32 lowing rules predict accent placement.  
 33

- 34 (62) a. Accent the final syllable if S (inflectional suffixes leave that  
 35 stress in place)  
 36 b. Stress the penultimate syllable if H and the final syllable is  
 37 H or L  
 38 c. Any sequence of two H or L syllables has accent on the first  
 39 (both in disyllables and before a S syllable)  
 40



- 1 d. Heavy prefixes attract accent  
 2  
 3 e. Superheavy suffixes get accent (with secondary accent two  
 4 syllables to the left)  
 5 f. Causative forms receive accent on the causative suffix

6 The only Indic language that is spoken in Europe is Romany, the lan-  
 7 guage of the Gypsies. As a language of a nomadic people it is spoken all  
 8 over Europe and the Near East. As a result of a long period of separation  
 9 from the other Indic languages, Romany has developed many properties  
 10 of its own, and many regional variants, although all of these are still  
 11 clearly Indic in their morphology and basic vocabulary. Romany consists  
 12 of three major mutually unintelligible dialects: Syrian (or Asiatic), Arme-  
 13 nian and European (Comrie 1981). The European dialect group in turn  
 14 consists of a number of subdialects. The dialect described here is a North  
 15 Russian dialect. The following description is based on Ventzel (1983).

16 Romany primary accent always falls on the final syllable in underived  
 17 native stems. In derived words, accent only falls on the penultimate sylla-  
 18 ble in oblique case forms of nouns and in certain inflected verbs: *romés*  
 19 ‘man, Gypsy (nom.)’, *roméske* ‘man, Gypsy (dat.)’. It would seem then  
 20 that inflection is mainly accent-neutral. Antepenultimate accent only  
 21 occurs on adjectives with possessive or diminutive suffixes and abstract  
 22 nouns. These all have disyllabic suffixes which must be considered accent-  
 23 neutral. Other derivational suffixes seem to be accent-sensitive.

24 Vijaykrishnan (p.c.) gives the following information concerning the  
 25 accentual system of Hindi.

- 26  
 27 (63) a. S syllables are always accented  
 28 b. Penult H syllables are always accented  
 29 c. H is accented if preceding an accented syllable  
 30 d. LLH has antepenult accent (i.e. final H is not stressed)  
 31 e. Disyllables without S have initial accent  
 32 f. There are alternating accents to the left of the primary accent  
 33 (not sensitive to L/H distinction)  
 34  
 35

36 Kaye (1997: 650) remarks that accent in Hindi-Urdu is not phonemic and  
 37 that there is a considerable degree of free variation. Most words take  
 38 penultimate accent as inherited from Middle Indo-Aryan. Old Indo-  
 39 Aryan presumably had a pitch-accent which developed into a stress-accent  
 40 system.

1 Baart (1997) offers the following rule for the accent systems of Hindu-  
 2 Urdu and Punjabi: If we assume that the final segment is extrametrical,  
 3 then we can say that accent falls on the rightmost heavy syllable. In the  
 4 default case, the penultimate syllable is accented. The causative suffix *-aa*,  
 5 which is always accented, would be an exception to this pattern.

6 Vijaykrishnan (p.c.) describes Adwadhi word accent as follows:

- 7 (64) a. the leftmost long vowel is accented  
 8  
 9 b. the antepenultima is accented if the penult contains a long  
 10 vowel or schwa  
 11 c. if the initial syllable in disyllables is closed, final long vowels  
 12 can be overlooked

13 According to Mahanta (2002), primary accent in Assamese is assigned to  
 14 the second syllable, if it is heavy. Otherwise primary accent is realized on  
 15 the initial syllable. Secondary accent is then placed on (i) the first of the  
 16 remaining alternating light syllables, or (ii) a heavy syllable if not preceded  
 17 by a stressed heavy syllable. Overall, the accentual pattern thus avoids  
 18 stress clashes. Morphologically speaking, accent is insensitive. Note fur-  
 19 thermore that only closed syllables count as heavy in the absence of  
 20 distinctive vowel length. The data in (65) exemplify these patterns.

- 22 (65) a. [árad<sup>h</sup>əna] ‘worship’  
 23 b. [ób<sup>h</sup>b<sup>h</sup>abək] ‘guardian’  
 24 c. [álusəna] ‘criticism’  
 25 d. [ə<sup>h</sup>ad<sup>h</sup>rən] ‘extra-ordinary’  
 26 e. [upóst<sup>h</sup>pən] ‘present’  
 27 f. [ábərzəna] ‘garbage’  
 28 g. [hájbid<sup>h</sup>anik] ‘constitutional’  
 29 h. [əttalika] ‘palace’  
 30 i. [mənurənjən] ‘entertainment’  
 31 j. [həmpərkitə] ‘related’  
 32 k. [hənnibistə] ‘included’  
 33 l. [ənukəmpa] ‘compassion’  
 34  
 35  
 36  
 37

38 The opinions on accent placement in present-day Bengali differ. Generally,  
 39 default initial accent placement is assumed (see e.g. Hayes and Lahiri  
 40 1991: 55), presumably at a level higher than the word (Chatterji 1991).

1 However, we also find cases where the leftmost (non-final) heavy syllable  
 2 is accented, e.g. [cidám̩bərəm] (a name).

3 Hayes and Lahiri (1991) provide a detailed analysis of Bengali intona-  
 4 tional phonology which also encompasses a thorough description of accent  
 5 assignment at various levels of prosodic structure. According to their  
 6 rules, the initial syllable gets accented. Within the phonological phrase,  
 7 the leftmost non-clitic word is the strongest. At the level of the intona-  
 8 tional phrase (I), focus has an impact, such that a phonological phrase  
 9 (P) bearing narrow focus will receive the strongest accent in the intona-  
 10 tional phrase. Under neutral focus, on the other hand, the rightmost  
 11 phonological phrase in the intonational phrase is strongest. The applica-  
 12 tion of these rules is illustrated in the following data taken from Hayes  
 13 and Lahiri (1991: 56).

14  
 15 (66) a.

16  
 17  
 18  
 19  
 20  
 21  
 22  
 23

			X
		X	X
X	X	X	X
X	X	X	X

[[šæmoli]<sub>P</sub> [ram-er bari]<sub>P</sub> [d̪<sup>h</sup>ukeč<sup>h</sup>ilo]<sub>P</sub>]<sub>I</sub>  
*Shamoli Ram-'s house entered*  
 'Shamoli entered Ram's house.' (neutral focus)

24  
 25 b.

26  
 27  
 28  
 29  
 30  
 31  
 32

			X
X		X	X
X	X	X	X
X	X	X	X

[[šæmoli]<sub>P</sub> [or bari]<sub>P</sub> [d̪<sup>h</sup>ukeč<sup>h</sup>ilo]<sub>P</sub>]<sub>I</sub>  
*Shamoli his/her house entered*  
 'Shamoli entered his/her house.' (neutral focus)

33  
 34 c.

35  
 36  
 37  
 38  
 39  
 40

		X	
X		X	X
X	X	X	X
X	X	X	X

[[šæmoli]<sub>P</sub> [ram-er bari]<sub>P</sub> [d̪<sup>h</sup>ukeč<sup>h</sup>ilo]<sub>P</sub>]<sub>I</sub>  
*Shamoli Ram-'s house entered*  
 'Shamoli entered Ram's house.' (narrow focus)

1 Note that the proclitic possessive marker in (65b) shuns phrase-initial  
2 prominence. Furthermore, focus clitics in Bengali show a genuine prosodic  
3 behavior in contributing an H\* tone as shown by Lahiri and Fitzpatrick-  
4 Cole (1999).

5 According to Wali and Omar (1997: 307), Kashmiri is a syllable-timed  
6 language and ‘stress’ does not play any role in the prosodic system. No  
7 lexical pitch distinctions or word-level pitch contours are reported.

8 With respect to Kalami, Baart (1997) argues that it does not have pitch  
9 or stress accent, but that it is a pure tone language. The perception of  
10 accent is triggered by changes in the pitch contour from high to low or  
11 low to high. The perceived location can be different depending on the  
12 location of a word in the sentence. Tonal patterns (five of them) associate  
13 to words from right-to-left.

14 Gilgiti Shina (Radloff 1999) is described as a lexical pitch accent sys-  
15 tem. Each word has exactly one accent which is realized as high pitch. In  
16 long vowels, the accent can be on the first or the second mora.

17 The system described in the StressTyp entries for Sanskrit is of course  
18 that of Vedic Sanskrit. Classical Sanskrit has different stress patterns.  
19 Sanskrit has a lexical accent (uda-tta) that is marked by high pitch. Laz-  
20 zaroni (1993: 107) reports that since a mark indicates accent in Vedic  
21 texts, we base our knowledge of Sanskrit accent on this variety. The loca-  
22 tion of the pitch accent essentially corresponds to the location of accent in  
23 PIE. There is a present-day pronunciation of Vedic which has stress accent  
24 located within a right-edge bisyllabic window.

25 For Marathi, Pandharipande (1997: 555–559) proposes the following,  
26 weight-sensitive accent placement rules which are equally applicable to  
27 nouns and verbs. In a word with only one heavy or super-heavy syllable,  
28 this very syllable is accented regardless of its position within the word:

- 29 (67) a. ku'the ‘where’<sup>13</sup>  
30 b. 'dzhāḍa ‘trees’  
31 c. 'duṣṭa ‘evil/wicked person’  
32 d. sa'masta ‘entire’  
33 e. mhā'tārpaṇa ‘old ages’  
34  
35

36 In bisyllabic words, the initial syllable is accented if both syllables are  
37 either heavy (68a–c) or light (68d–g).

38  
39 13. Note that /e/ and /o/ pattern with the long vowels /ī/, /ū/, and /ā/ in terms of  
40 syllable weight.

- 1 (68) a. 'tārā 'star'  
 2 b. 'śāḷā 'school'  
 3 c. 'mūrtī 'statue'  
 4 d. 'phaḷa 'fruit (pl.)'  
 5 e. 'muḷa 'roots'  
 6 f. 'bara 'all right!'  
 7 g. 'suta 'threads'

8  
 9  
 10 With respect to trisyllabic words, no such forms exist which contain only  
 11 light syllables. If the first two syllables are heavy, or if all syllables are  
 12 heavy, accent falls on the first syllable, cf. (69a–b) and (69c–f), respec-  
 13 tively. If only the second and third syllables of such words are heavy, the  
 14 second syllable receives accent (69g–i). For trisyllabic words with only one  
 15 heavy syllable, the first rule applies, cf. (67d–e) and *gari'bī* 'poverty'.

- 16 (69) a. 'dhīrāna 'courageously'  
 17 b. 'bhāwātsa 'brother's'  
 18 c. 'āḍhāwā 'estimate'  
 19 d. 'mhātārā 'old man'  
 20 e. 'ādzārī 'sick'  
 21 f. 'pāwsāḷā 'rainy season'  
 22 g. tʃa'lākhī 'cleverness'  
 23 h. sa'mādhī 'the state of transcendence from the phenomenal  
 24 world'  
 25 i. pu'dzārī 'priest/worshipper'

26  
 27  
 28  
 29 One way to generalize over these patterns would be to formulate a rule  
 30 which places accent on the leftmost heavy syllable within the word, where  
 31 V: is heavier than VC (Vijaykrishnan, p.c.).

32 Das (1973: 34) notes that accent in Malto is not phonemic; see also  
 33 Steever (1998d). A syllable containing a long vowel is always stressed,  
 34 e.g. *qēn* ([qe:n]) 'guiltless'. With two consecutive syllables containing a  
 35 long vowel, the last one is accented. In polysyllabic words, it appears to  
 36 accent the first long vowel from the right, otherwise, the initial syllable.

### 37 *Generalizations*

38  
 39 In the languages discussed we see many examples of weight-sensitivity,  
 40 sometimes with three degrees of weight. In the majority of cases the loca-

1 tion of the accents are predictable (non-phonemic) which may be one of  
 2 the causes for why different descriptions provide different rules. As Hayes  
 3 (1995: 162) observes with reference to Hindi, “the published descrip-  
 4 tions almost all disagree with one another, and seldom mention the  
 5 disagreement.”

6 Several languages have tonal properties. Masica (1991: 118–122) sum-  
 7 marizes the word prosodic systems of Indo-Aryan languages as follows.  
 8 There are a few languages that have contrastive tone, the best known  
 9 example being Punjabi. In this language the domain of tone is said to be  
 10 two syllables. There are three contrastive tones:

- 11 (70) a. kòṛa ‘horse’  
 12 b. kōṛa ‘whip’  
 13 c. kóṛa ‘leper’  
 14

15 The so-called ‘neutral tone’ is the most common one. Historically, con-  
 16 trastive tone derived from the loss of aspiration. In some other languages,  
 17 murmur (or breathy voice) evolved in the course of this diachronic pro-  
 18 cess, e.g. in Gujarati (where murmur is accompanied by low tone) and  
 19 in Marathi. Lahanda and the Western Pahari dialect have also been  
 20 mentioned as having contrastive tone.

21 Those languages that have accent are said to be syllable or mora-timed  
 22 rather than stress-timed and the location of accent is generally predictable.  
 23 In Assamese (Goswami 1966), however, there are minimal pairs like those  
 24 in (71).  
 25

- 26 (71) a. 'pise ‘he is drinking’  
 27 b. pi'se ‘then’  
 28

29 A good example of a fixed initial pattern is Bengali where the domain is  
 30 referred to as the ‘breath group’ rather than the word, cf. Chatterji (1991:  
 31 23–24). Sinhalese and Nepali are described as having ‘dominant weak  
 32 initial stress’. For the remaining languages, rather complicated rules have  
 33 to be formulated in order to predict accent placement. These typically  
 34 make reference to the number of syllables, whether they are open or  
 35 closed, and the nature of their vowels.

36 Baart (2003) provides a survey of 30 languages. 18 of those have tonal  
 37 systems (for 5 of these there is still some uncertainty).<sup>14</sup> 12 have no tonal  
 38 system (for 6 of these there is some doubt on that). The first mentioned 18

39 \_\_\_\_\_  
 40 14. In Baart (2003) this number has gone up to 25.

1 languages are grouped into 3 types of tonal systems (in some cases the  
2 assignment to this class is tentative):

- 3 A. As in Shina (see above), thus with a lexically determined accent  
4 and a high pitch associated with the accent: Burushaski, Dameli,  
5 Gawar-Bati, Khowar, Indus-Kohistani, Palula, Shina, Bateri, Chilisso,  
6 Gowro, Ushojo.<sup>15</sup>
- 7 B. As in Punjabi, thus with a three-way distinction (high-falling, low-  
8 rising, level). Baart proposes to specify low tones lexically in the first  
9 two and assign a default high tone which makes the level tone a high  
10 tone. If the level tone would be analyzed as low, we could analyse  
11 this type of system as Shina, with the level tone being the result of  
12 the absence of accent.
- 13 C. As in Kalami, thus with more tonal distinctions which necessitates  
14 the specification of tonal melodies that spread over the word.  
15

16 Baart says that in all tonal systems the tone features associate with the  
17 ‘stressed’ syllable, because the pitch pattern occur on or near this syllable.  
18 However, in type A and B the ‘stress’ would be where the lexical accent is,  
19 whereas in Kalami (as stated in Baart 1997), the impression of stress is  
20 caused by changes in the pitch contour.

#### 21 6.1.2. Iranian

##### 22 *Genetic information*

23  
24  
25 Two subbranches are generally distinguished within Iranian, namely the  
26 Eastern and Western Iranian languages. R. Gordon (2005), from which  
27 the following family tree has been adapted, treats *Tangshewi* as unclassifi-  
28 able in terms of the two major branches (for details on the history of the  
29 Iranian languages see Schmitt 2000).

#### 30 IRANIAN

##### 31 EASTERN:

32 NORTHEASTERN: *Avestan, Osetin, Yagnobi*

##### 33 SOUTHEASTERN:

34 PAMIR: *Munji, Sanglechi-Ishkashimi, Wakhi, Yidgha*

35 SHUGNI-YAZGULAMI: *Shughni, Sarikoli, Yazgulyam*

36  
37  
38 15. Baart (p.c.) observes a close similarity between Shina and Lithuanian. In a  
39 branching nucleus accent can be on either mora and both languages also  
40 have a regressive accent shift (called de Saussure’s law for Lithuanian).

- 1 PASHTO: *Southern Pashto, Northern Pashto, Central Pashto,*  
2 *Waneci*
- 3 WESTERN:
- 4 NORTHWESTERN: *Khalaj*
- 5 BALUCHI: *Southern Balochi, Western Balochi, Eastern Balochi,*  
6 *Bashkardi, Koroshi*
- 7 CASPIAN: *Gilaki, Mazanderani, Shahmirzadi*
- 8 CENTRAL IRAN: *Ashtiani, Northwestern Fars, Zoroastrian Dari,*  
9 *Gazi, Khunsari, Natanzi, Nayini, Parsi-Dari,*  
10 *Parsi, Sivandi, Soi, Vafsis*
- 11 KURDISH: *Central Kurdish, Northern Kurdish, Laki, Southern*  
12 *Kurdish*
- 13 ORMURI-PARACHI: *Ormuri, Parachi*
- 14 SEMNANI: *Lasgerdi, Sangisari, Semnani, Sorkhei*
- 15 TALYSH: *Alviri-Vidari, Eshtehardi, Gozarkhani, Harzani,*  
16 *Karingani, Koresh-e Rostam, Razajerdi, Rudbari,*  
17 *Shahrudi, Takestani, Talysh, Upper Taromi, Maraghei,*  
18 *Kho'ini, Kajali, Kabatei*
- 19 UNCLASSIFIED: *Dezfuli*
- 20 ZAZA-GORANI: *Bajelani, Dimli, Gurani, Kirmanjki, Shabak,*  
21 *Sarli*
- 22 SOUTHWESTERN:
- 23 FARS: *Southwestern Fars, Lari*
- 24 LURI: *Bakhtiari, Northern Luri, Southern Luri, Kumzari*
- 25 PERSIAN: *Aimaq, Bukharic, Dehwari, Darwazi, Hazaragi, Dzhidi,*  
26 *Western Farsi, Pahlavani, Eastern Farsi, Tajiki*
- 27 TAT: *Judeo-Tat, Muslim Tat*
- 28 UNCLASSIFIED: *Tangshewi*

29 *StressTyp extracts*

30 **Osetin; Ossete; Ossetic [I/S]**

- 31 • Stress falls on the first syllable if it contains a long vowel, else on the  
32 second.

33 'suudzaag 'burning' bæ'laas 'a tree'

34 **Pashto [LEX]**

- 35 • Stress location is lexically determined.

36 'guta 'knot' gu'ta 'pochard'

37 'vulambedə 'he took a bath' stoma:nti'a: 'fatigue'



1 **Farsi, Western; Persian [U]**

- 2 • Stress falls on the final syllable.

3 za'nān 'women' sanda'li 'chair' xari'dam 'i bought'

4 **Dari (dialect of Persian) [U]**

- 5 • Primary stress falls on the final syllable.
- 
- 6 • Secondary stress is located on the initial syllable

7 zəndæ'gi 'life' ʔəʃpæzxa'næ 'kitchen'

8 **Tajik (dialect of Persian) [U]**

- 9 • Stress falls on the final syllable.

10 **Additional information**11  
12 Concerning Avestan accentuation, we find differing characterizations.  
13 Whereas Sims-Williams (1993) assumes free accent, Hale (2004: 753)  
14 describes it as having penultimate stress; see also Testen (1997a).15  
16 Ossetic, an Iranian language spoken in Russia and Georgia, has accent  
17 on the initial syllable of the phrase, if this syllable contains a long vowel;  
18 otherwise the second syllable of the phrase is accented. Accentless short  
19 vowels in initial position tend to reduce or delete. The Ossetic accent sys-  
20 tem thus appears to be weight-sensitive and lacking a word-level accent  
21 rule. According to Testen (1997b: 727–729), Ossetic has two major dia-  
22 lects: *Digor* (the western dialect) and *Iron* (the eastern dialect on which  
23 the literary language is based). Accent placement is sensitive to vowel  
24 quality, such that certain vowels pattern together as 'strong' or 'weak'.  
25 The vowel groupings for Iron and Digor are given in (72).26  
27 (72)            Strong    Weak  
28            Iron    a e o i u    æ i  
29            Digor   a e o    æ i u  
3031 In the Iron dialect, accent falls on the first syllable, if it contains a strong  
32 vowel and otherwise on the second. Personal names are always stressed on  
33 the second syllable *ustíæ* 'women' and *čizzítæ* 'girls'. An Arabic loan such  
34 as *saqát* 'shortcoming' is accented on the second of two strong vowels.  
35 Some words synchronically have initial stress on a weak vowel because  
36 the initial syllable has been lost diachronically, cf. Iron *sístin* 'stand (inf.)'  
37 vs. Digor *isistun*. In the same vein, Digor has an indefinite article /i/ which  
38 was lost in Iron. As a consequence, we see accent location as a marker of  
39 definiteness, if the first vowel in the accentual domain is weak, for instance  
40 in *kwirój* 'a mill' vs. *kwíroj* 'the mill'.

1 Digor accentuation is different and less well understood. It looks like a  
 2 Last/Last stem system since accent falls (a) on the rightmost strong vowel  
 3 and (b) if no strong vowels are present, on the last vowel. The data in (73)  
 4 illustrate this point.

- 5 (73) a. raxastón 'I bought'  
 6 b. fælváræ 'the year before (last)'  
 7 c. yurumúq 'rough'  
 8 d. næ tikís 'our car'  
 9 e. fidæ 'father'  
 10 f. ær-min-cæydæ 'play for me'  
 11  
 12

13 The examples in (73e–f) also demonstrate that the weak /æ/ can only be  
 14 accented in bisyllables.

15 Elfenbein (1997c: 737–738) characterizes accent in Pashto as phonemic,  
 16 which is unusual among the Iranian languages. Accent can fall on any  
 17 syllable, but is mainly located on the first, penult or last syllable. He gives  
 18 minimal pairs like those in (74).

- 19 (74) a. gorá 'European'  
 20 b. góra 'look!'  
 21 c. palitá 'wick'  
 22 d. palíta 'whore'  
 23  
 24

25 Accent also serves a grammatical function in distinguishing aspect and mood  
 26 in verbal forms. Compare the pairs in (75a–b) and (75c–d), respectively.

- 27 (75) a. kḡenāstóləm 'I was sitting'  
 28 b. kḡénāstələm 'I sat down'  
 29 c. preḡdém 'I leave'  
 30 d. préḡdem 'that I leave'  
 31  
 32

33 Elfenbein further distinguishes three degrees of accent, i.e. weak, medium  
 34 and strong. The following data exemplify the distribution of the different  
 35 accent degrees within single words.

- 36 (76) a. prewatól 'to fall, they (m.) were falling' (strong)  
 37 b. préwatəl 'they (m.) fell' (strong, weak)  
 38 c. prewátay 'fallen (m.sg.)' (medium)  
 39  
 40

41 With respect to the domain of accent, Elfenbein states that accent rules do  
 not apply within the word but rather within a larger, phrasal unit. Such

1 units typically consist of strings of a modifier and its head, or a noun and  
 2 its postposition, or an object and the following verb. These domains  
 3 are also said to display secondary accent(s). This is interesting in view of  
 4 Gordon (2000) who provides evidence that other unbounded systems  
 5 would appear to operate in larger domains than the word.

6 In Balochi, accent is located on the first long vowel or diphthong, or, if  
 7 no such nuclei are present, on the first syllable (Elfenbein 1997a: 774).  
 8 Final /i:/ is only stressed in the word *marročī* ‘today’. It would thus  
 9 appear that Balochi has a First/First unbounded system.

10 McCarus (1997) analyzes Kurdish accent as predictable only in terms  
 11 of morphological structure. Stem-final syllables are regularly accented,  
 12 but some affixes inherently carry accent, such as, for instance, the de-  
 13 finite marker *-aká*, the plural suffix *-án*, the comparative/superlative  
 14 ending *-tír/-trín.*, and the negative prefix. Vocative forms are accented on  
 15 the first syllable. The data in (77) exemplify this morphologically condi-  
 16 tioned accent placement.

17

- 18 (77) a. *karaká* ‘the donkey’  
 19 b. *kurán* ‘sons’  
 20 c. *gawratír* ‘bigger’  
 21 d. *nánun* ‘I don’t sleep’  
 22 e. *mámōsta!* ‘teacher’  
 23

24

25 Since accent falls on the last syllable of the stem, this effectively means  
 26 that inflectional suffixes in the default case are not accented. Derivational  
 27 suffixes which create new stems do get accented, e.g. *dirēž* ‘long’ vs. *dirēž-í*  
 28 ‘length’. McCarus lists subregularities for both types of complex words. In  
 29 some cases, inflectional suffixes do get accent, and in some cases deriva-  
 30 tional suffixes do not. Also, in verbs, certain prefixes (such as the negative  
 31 prefix and the subjunctive/imperative prefix) take primary accent, but  
 32 the negative prefix for nouns and adjectives does not get accented. Both  
 33 the imperative form of verbs and the vocative of nouns get initial accent.  
 34 In adjectives, degree suffixes, though inflectional, take accent. Many parti-  
 35 cles are accented on the first syllable.

36 Schmitt (2004: 275) reports that for Old Persian the accent location is  
 37 not well-known. In the development from Old to Middle Persian, final syl-  
 38 lables disappeared. The free pitch accent of IE has left traces in Avestan  
 39 and some Modern Iranian languages (such as Pashto) and was perhaps  
 40 still present in around 500 BCE. Avestan and Old Persian accent is  
 unknown (Beekes 1995: 149).

1 Windfuhr (1997: 684–685) characterizes Persian accent as non-phonemic,  
 2 dynamic and predictable, with accent falling on the final syllable of the  
 3 base word, or the derivational suffix. However, there are subregularities.  
 4 ‘Discourse insertives’ have initial accent, and vocatives also have initial  
 5 accent (inherited from IE, also said to be present in Semitic and Turkish).  
 6 The negative prefix is accented.

### 7 8 **Generalizations**

9 According to Sims-Williams (1993: 135–136) we can infer the location of  
 10 accent in Old and Middle Iranian from phonological processes. Such evi-  
 11 dence suggests that the location of accent in Avestan is free, perhaps on  
 12 the same syllable as in corresponding Vedic forms. The older phases of  
 13 the Iranian languages may or may not have retained pitch accent, but the  
 14 middle and modern languages all have stress accent. Most of these are  
 15 governed by weight-sensitive rules, while some modern eastern Iranian  
 16 languages may reflect the IE free accent location.

### 18 19 6.2. *Dravidian*

#### 20 **Genetic information**

21 The Dravidian family consists of four major, geographically delimited  
 22 branches (see, e.g., Andronov 1970, Steever 1998b). R. Gordon’s (2005)  
 23 family tree, however, leaves eight languages unclassified. In Comrie et al.  
 24 (2003), Kolami-Parji is not grouped together with Telugu-Kui. Likewise  
 25 Steever (1998b) and Krishnamurti (2003) treat both as separate groups,  
 26 the former being referred to as Central Dravidian and the latter as  
 27 South Central. Also, Steever groups Brahui together with Ruhlen’s (1991)  
 28 Northeast group as North Dravidian. Steever (1998b: 37) characterizes the  
 29 putative genetic linkage of Elamite and Dravidian, as in e.g. Ruhlen  
 30 (1991), as ‘dubious’.

#### 32 33 **DRAVIDIAN**

##### 34 **CENTRAL:**

35 **KOLAMI-NAIKI:** *Northwestern Kolami, Southeastern Kolami*

36 **PARJI-GADABA:** *Mudhili Gadaba, Pottangi Ollar Gadaba, Duruwa*

37 **NORTHERN:** *Brahui, Kumarbhag Paharia, Kurux, Nepali Kurux,*  
 38 *Sauria Paharia*

##### 39 **SOUTH CENTRAL:**

40 **GONDI-KUI:**



1 **Malayalam [I/I]**

- 2 • Primary stress falls on the initial syllable, except when the first vowel is  
3 short and the second is long.  
4 • Secondary stress on syllables with a long vowel.

5 'kuuʈtam 'crowd' 'pukavaŋʈi 'train'  
6 'muta,laaʈi 'boss' paʈ'taaʈak,kaaran 'soldier'  
7

8 **Additional information**

9  
10 Kolami, as described by Emeneau (1961: 8–9), is our only representative  
11 of the Central Dravidian branch. It is reported that the first syllable of a  
12 word has a stress-accent of medium intensity. Within phrases, it is the first  
13 accent which is strongest. With respect to intonation, it has been impres-  
14 sionistically noted that the degree of accent does not impose restrictions  
15 on the realization of pitch; see also Subrahmanyam (1998).

16 Turning to the Northern Dravidian languages, Brahui exhibits non-  
17 phonemic accent which is sensitive to vowel length, such that the first  
18 long vowel within a word gets accented. Polysyllabic words lacking long  
19 vowels receive default initial accent (Elfenbein 1998: 394, see also Elfen-  
20 bein 1997b).

21 More information is available on Kurukh accentuation (Hahn 1908: 9).  
22 In disyllabic words, accent is always initial, e.g. 'puddā 'short'. Trisyllabic  
23 verbs, such as *ti'signā* 'to open', are usually accented on the second sylla-  
24 ble; except for those ending in *ba'anā* which are accented on the third  
25 syllable. Initially accented verbs, for instance *'nisigna* 'to dress a wound',  
26 are rare. Most tri- or quadrisyllabic nouns take initial accent; cf. *'dumbari*  
27 'fig tree' and *'dārhimissi* 'beard'. Adverbs always exhibit initial stress,  
28 irrespective of their length. In compounds, the first syllable of the second  
29 member receives accent.

30 South Central Dravidian is represented by Gondi, Konda, Koya and  
31 Telugu in our sample. Steever (1998a: 274) characterizes accent in Gondi  
32 as non-phonemic and word-initial.

33 According to Krishnamurti and Benham (1998: 244–245), the initial  
34 syllable of polysyllabic words receives primary accent, if it contains a long  
35 vowel. If the initial syllable contains a short vowel, the second syllable  
36 receives primary accent instead. Within the word, primary or secondary  
37 accent alternates rhythmically with unstressed syllables, e.g. /aʈ<sub>1</sub>bazi'nad/  
38 'she is crying' (see also Krishnamurti 2003: 60).

39 In Telugu (Krishnamurti 1998; 2003: 59–60), accent is initial in words  
40 with two short syllables, or when the first syllable is long and the second

1 one is short. If the second syllable is long or if both syllables are long,  
2 accent is placed on the second syllable. The data in (78) illustrate these  
3 rules of accentuation in bisyllabic words.

- 4 (78) a. 'gadi 'room'  
5 b. 'tāta 'grandfather'  
6 c. da'gā 'deceit'  
7 d. bā'kī 'debt'

9 In trisyllabic words, the penultimate syllable is accented in the default  
10 case. But if the initial syllable is long, it attracts accent, cf. (79).

- 11 (79) a. 'kūturu 'daughter'  
12 b. pa'laka 'slate'  
13 c. ta'passu 'penance'  
14 d. tu'pākī 'gun'  
15 e. sāl'tāni 'a weaver caste'

18 These rules of accent placement have also been tested in an experimental  
19 study by Lisker and Krishnamurti (1991).

20 Finally, in the South Dravidian languages, the following patterns are  
21 observed. For Kannada, very little information about the word prosodic  
22 system is available. Whereas Sridhar (1990: 301) only recognizes accent  
23 in the realms of emphasis, Steever (1998c: 131) notes non-contrastive accent  
24 on the initial syllable of every word.

25 Neither is accent contrastive in Kodava (Kodagu), as described by  
26 Ebert (1996: 9). Word-initial syllables carry a strong accent and word-final  
27 syllable are realized with a weaker accent. If medial syllables contain a  
28 long vowel or a vowel followed by a geminate, such syllables also carry  
29 accent. Word-medial syllables with the shape CV or CVC are unstressed  
30 and undergo vowel centralization and reduction.

31 Tamil is often described as a language with very weak accent. Utterances  
32 are generally perceived as consisting of successions of evenly accented  
33 syllables (Asher 1982: 230). More subtle phonetic studies enable us to infer  
34 rules of word accent placement from higher level intonation patterns.  
35 An utterance comprising the words [ka:ðe] 'ear-acc.', [t̪aləvi] 'felt' and  
36 [pa:tt̪ā:] 'he saw' will be pronounced ['ka:ðe't̪aləvi'pa:tt̪ā:] 'He felt the  
37 ear', with initial accent on the first and second word (Balasubramanian  
38 1980: 456). Such evidence backs up brief descriptions which state that Tamil  
39 has non-phonemic accent on the first syllable of the word (Annamalai &  
40 Steever 1998: 104).

1 Ashthamurthy (2003) reports a minimal difference between Malayalam  
 2 and Tamil. Contrary to the StressTyp description, Malayalam retains  
 3 accent on the first syllable (when the second contains a long vowel) if this  
 4 syllable is closed, i.e. initial closed syllables count as heavy. In Tamil,  
 5 which is claimed to have the same general pattern as Malayalam (retraction  
 6 to second syllable if it contains a long vowel), initial closed syllables  
 7 are not weightful and thus do not keep the accent initial. This, however, is  
 8 not a commonly held position. Keane (2001) offers a detailed phonetic  
 9 analysis of accent correlates in Tamil. Vowel reduction data seems to sup-  
 10 port fixed initial accent rather than a quantity-sensitive system like the one  
 11 that has been suggested for Malayalam.

12

### 13 **Generalizations**

14 Krishnamurti (2003: 59) concludes that “very little has been written about  
 15 stress and intonation” in Dravidian languages.<sup>16</sup> As a consequence, most  
 16 of the accentual descriptions are tentative and invite further research.  
 17 Nevertheless, initial, non-contrastive accent placement seems to be typical  
 18 for the entire family (Steever 1998b: 18). In some languages, vowel length  
 19 and other quantity factors have an impact on accentuation such that they  
 20 attract main prominence. In the light of the overall weak phonetic corre-  
 21 lates of accent, approaching word prosody from higher level intonational  
 22 phonology seems to be a promising route for future research.

23

### 24 6.3. *Austroasiatic: Munda*

25

#### 26 **Genetic information**

27 The discovery of the Austroasiatic phylum goes back to Francis Mason  
 28 (1854), who observed a number of correspondences between the Mon-  
 29 Khmer language Talaing (Mon) and the Munda language Kole (Ho). In  
 30 the early 20th century, Wilhelm Schmidt pioneered in establishing the  
 31 Austroasiatic family on a scientific basis and formulated a first explicit  
 32 classification (Schmidt 1906). After him, Heinz-Jürgen Pinnow contributed  
 33 substantially to the unraveling of the genetic affiliations within the family  
 34 (Pinnow 1959, 1960, 1963). Diffloth’s (2005) most recent classification dis-  
 35 tinguishes three major branches: Munda, Khasi-Khmuic, and Khmero-  
 36 Vietic/Nico-Monic. Although the inner structure of the phylum is still an  
 37 open question, the genetic affiliation of Munda and Mon-Khmer as two  
 38 immediate daughters of Proto-Austroasiatic, as adopted in R. Gordon’s

39

40 16. For comparative Dravidian segmental phonology see, for instance, Emeneau  
 (1970).



1 (2005) tree given below, is generally agreed on (see Sidwell 2006 for the  
2 history of Austroasiatic studies).

3 For the purposes of this chapter and following its geographically ori-  
4 ented organization, we discuss the word accent systems of the Munda  
5 languages spoken in India in this section. The accentual data from Mon-  
6 Khmer languages will be detailed in the section on Mainland East and  
7 South East Asian languages in 7.2. Within Munda, a northern and a  
8 southern branch are distinguished (see Anderson 2001 on the classification  
9 of South Munda and Anderson 2008 for an overview of the language  
10 family). While StressTyp contains Mundari as the only representative for  
11 the whole family, we complement the survey with additional data from  
12 selected north and south Munda languages.

13  
14 AUSTROASIATIC

15 MON-KHMER (see Section 7.2.)

16 MUNDA:

17 NORTH MUNDA:

18 KHERWARI: *Agariya, Bijori, Koraku*

19 MUNDARI: *Asuri, Birhor, Koda, Ho, Korwa, **Mundari***

20 SANTALI: *Mahali, Santali, Turi*

21 KORKU: *Korku*

22 SOUTH MUNDA:

23 KHARIA-JUANG: *Juang, Kharia*

24 KORAPUT MUNDA:

25 GUTOB-REMO-GETA':

26 GETA': *Gata'*

27 GUTOB-REMO: *Bondo, Boda Gadaba*

28 SORA-JURAY-GORUM:

29 GORUM: *Parenga*

30 SORA-JURAY: *Juray, Lodhi, Sora*

31  
32 *StressTyp extracts*

33 **Bhumij; Mundari [U/P]**

- 34 • If the final syllable is closed, it is accented.  
35 • Else the penultimate syllable is accented.

36 'lija 'a cloth'  
37

38 *Additional information*

39  
40 In the North Munda language Santali, word prosody is based on trochaic  
footing, such that the initial syllable of a bisyllabic word gets accented.

1 If the second syllable of such a word, however, is bimoraic, this syllable  
 2 will attract the accent (Neukom 2001: 8). The data in (80) illustrate this  
 3 pattern.

- 4 (80) a. 'dare 'tree'  
 5 b. 'era 'wife'  
 6 c. se'dae 'old times'  
 7 d. u'pəi 'measure'  
 8 e. bə'tər 'fear'  
 9 f. o'rak' 'house'  
 10 g. 'edre 'anger'  
 11 h. 'ultəu 'reverse'  
 12 i. 'dalpaŋ 'half-naked'

15 In the South Munda language Kharia, the phonological word consists  
 16 of at least one prosodic foot and potentially a varying number of 'extra-  
 17 metrical' enclitics. Prosodic feet, which are usually bisyllabic, less com-  
 18 monly monosyllabic and rarely polysyllabic, begin with a low-tone pitch.  
 19 Throughout the remainder of the foot, the pitch level gradually rises.  
 20 Accordingly, the word *rocho<sup>2b</sup>* 'side', like all lexical elements in the lan-  
 21 guage, will be pronounced with a low-high pitch pattern. In monosyllabic  
 22 feet, such as, for instance, *lay* 'tongue', this pitch pattern is condensed into  
 23 a rising contour. At the sentential level, Kharia speech is characterized by  
 24 a gradual decrease of intensity and pitch over the utterance, i.e. falling  
 25 phrasal prosody (Peterson 2006: 18–33).

26 In contrast to Peterson, Rehberg's (2003: 23–28) analysis explicitly  
 27 makes reference to word accent. This accent is always, i.e. irrespective of  
 28 the morphological composition of the form, assigned to the first syllable of  
 29 a word. It is realized by a lower pitch, whereas the following unaccented  
 30 syllables within the word have higher pitch, cf. (81).

- 31  
 32 (81) a. 'kerket̚ta (kerketta)  
 33 b. 'cerocagordi (on.all.four.sides)  
 34 c. 'soub-se (all-ABL)  
 35 d. 'umboŋig-mae (NEG.NPT.COP-3P)  
 36 e. 'col-ki-Ø (go-A.PT-S)  
 37 f. 'tar-ol-e-pe (kill-bring-B.IRR-2P)  
 38 g. 'tama 'iŋ (now 1S)  
 39 h. 'kag-kom-ki 'd<sup>h</sup>og-ke (bow-arrow-P grab-SEQ)  
 40

1 Her phonetic analyses also help to understand how previous descriptions  
 2 of Kharia accentuation, such as Pinnow's (1959), who diagnoses penulti-  
 3 mate and final accent in some words, are motivated. In Kharia, low pitch  
 4 is the main phonetic correlate of accent. Intensity may increase con-  
 5 comitant with the raising of pitch in unaccented syllables. Due to a bias  
 6 towards European accent systems, some researchers misinterpreted the  
 7 correlation of higher intensity and pitch in unaccented syllables as a real-  
 8 ization of stress-accent.

9 According to Donegan (1993: 5–6), default accent placement is word-  
 10 initial in Sora, another South Munda language. This pattern is most evi-  
 11 dent in the disyllabic words with balanced light or heavy syllables given  
 12 in (82). Note that expanding the word by suffixation does not alter accent  
 13 assignment.

- 14 (82) a. 'bāgu 'two'  
 15 b. 'yāgi 'three'  
 16 c. 'unji 'four'  
 17 d. 'mōnlōy 'five'  
 18 e. 'tūdru 'six'  
 19 f. 'gūlji 'seven'  
 20 g. 'tāmji 'eight'  
 21 h. 'tinji 'nine'  
 22 i. 'gəlji 'ten'  
 23 j. 'gəlmuj 'eleven'  
 24 k. 'mijgəl 'twelve'

28 However, in words with light initial syllables and heavy second syllables,  
 29 accent gets attracted to the second syllable of the word. This situation is  
 30 evidenced in monomorphemic words (83a) as well as morphologically  
 31 complex words (83b–d).

- 32 (83) a. ə'bōy 'one'  
 33 b. ə-'yəŋ-ən 'his/her mother'  
 34 c. ər-'ed-ən 'scratching instrument' (ed- 'scratch')  
 35 d. j-ə'r-om-ən 'eating instrument' (jom- 'eat')

### 38 *Generalizations*

39  
 40 Across the family, initial accent seems to be a recurring pattern in Munda  
 word prosody. In some languages, namely Mundari, Santali and Sora,

1 accent placement is also weight-sensitive such that a heavy second syllable  
 2 within a word attracts accent. Based on such observations, Donegan &  
 3 Stampe (1983) propose a holistic typology which aims at explaining basic  
 4 structural properties of the Munda languages with appeal to their rhyth-  
 5 mic organization. In their reasoning, trochaic word accent and falling  
 6 phrase accent can be held responsible for, e.g., agglutinative, suffixing  
 7 morphology and SOV word order. The Mon-Khmer languages, which  
 8 are presented as showing opposing typological features, for instance, iam-  
 9 bic word accent, rising phrase accent, prefixing morphology and SVO  
 10 word order, are said to preserve the Proto-Austroasiatic profile. In this  
 11 scenario, the diachronic development of Munda constitutes a major typo-  
 12 logical drift towards trochaic prosody.

#### 14 6.4. *Andamanese*

##### 15 ***Genetic information***

17 The Andaman Islands constitute of cluster of approximately 250 islands in  
 18 the Bay of Bengal, stretching from north to south and located southeast of  
 19 the Indian sub-continent. Administrationally, they are part of the union  
 20 territory of the Andaman and Nicobar Islands and belong to India. The  
 21 Andamanese languages consist of two groups:<sup>17</sup> the Great Andamanese,  
 22 comprising ten languages, and the South Andamanese languages Jarawa,  
 23 Onge and Sentinel. At present, the majority of these 13 languages are  
 24 highly endangered (see Abbi 2006 for details).

#### 26 ANDAMANESE

##### 27 GREAT ANDAMANESE:

28 CENTRAL: *Aka-Bea, Aka-Bale, Aka-Kede, Aka-Kol, Aka-Pucikwar,*  
 29 *Oko-Juwoi*

30 NORTHERN: *Aka-Cari, Aka-Kora, Aka-Jeru, Aka-Bo*

31 SOUTH ANDAMANESE: *Jarawa, Önge, Sentinel*

##### 33 ***Accent information***

34 Manoharan (1989: 30) notes that in Andamese, the syllable preceding the  
 35 final syllable is accented to differentiate the meaning of a statement type

38 17. Abbi (2006: 7) distinguishes between an Eastern (= Great Andamanese)  
 39 branch and a Western (= South Andamanese) branch. She assumes a flat  
 40 structure for the former, but further differentiates a Central Western and a  
 Southern Western subgroup for the latter.

1 from a question or doubtfulness. Accentuation is thus conceived of as  
 2 operating at the sentence level only.

- 3 (84) a. axola:liyo 'he was there'  
 4 b. axola:'liyo 'was he there?'

6 However, the available phonological descriptions are still too premature  
 7 to generalize the word prosodic systems of the languages in question.

### 9 6.5. *Burushaski*

#### 10 ***Genetic information***

12 Burushaski is a language isolate spoken in the Hunza-Nagar and Yasin  
 13 area of the Gilgit district in Northern Pakistan. Next to the Yasin  
 14 (Werchikwar) dialect, we have the standard Hunza dialect and the Nagar  
 15 (Nagir) dialect.

#### 17 ***StressTyp extracts***

#### 18 **Burushaski, Yasin (dialect of Burushaski) [LEX]**

- 19 • Stress is lexically determined, and plays a role in the grammar.

21 di'cilikini 'he hung' 'dicilikini 'he would hang'  
 22 ga'li 'he went' 'gali 'it broke'

#### 24 ***Additional information***

26 Anderson's (1997) description of word accent refers to the Hunza dialect.  
 27 He notes that long vowels may receive accent on the first or second mora,  
 28 giving rise to a falling or rising pitch: *íi* 'himself', *íi* 'his son', *óomaltaras*  
 29 'to envelop them', *óomaltaras* 'to not envelop'. In addition, accent on the  
 30 first mora may have a low pitch, a pattern that seems to occur with diminu-  
 31 tives: *ṭak* 'attached', *ṭàak* 'somewhat attached'. This moraic stress differ-  
 32 ence is said to be less pronounced in the Yasin dialect. Long vowels only  
 33 occur in accented syllables. In some prefixed forms, accent is root initial  
 34 (*a-súsun* 'my elbow'), but prefixes may attract the accent in other cases  
 35 (*á-lpur* 'my eyebrow'). Perhaps this means that *súsun* is lexically accented,  
 36 while *lpur* is not, with accent falling on the first syllable by default.

37 A bisyllabic sequence of a heavy syllable (CV:, CVC) followed by a  
 38 light syllable is generally initially accented (*húnze* 'arrows'). Words with  
 39 the reverse weight pattern, frequently have final accent (*haGúr* 'horse'),  
 40 but exception occur (*hámal* 'neighbour'). There are also minimal pairs:  
*ḍuḍúr* 'apricot species' – *ḍúḍur* 'small hole'.

1 Baart (1997: 40–41) refers to the language as tonal, possibly a pitch  
 2 accent language. For further discussion of accentuation in the various  
 3 Burushaski dialects the interested reader is referred to Berger (1974,  
 4 1998).

5  
6

## 7 **7. Mainland East and South East Asia**

8

9 Our delimitation of this area is based on Bradley's (2007) definition of  
 10 East and South East Asia. The region roughly stretches from the Hima-  
 11 layas in the West to the Pacific Ocean in the East, bordering Mongolia in  
 12 the North and Malaysia in the South. In this area the following languages  
 13 are spoken:

14

- 15 • Sino-Tibetan
- 16 • Austroasiatic: Mon-Khmer
- 17 • Austro-Thai: Tai-Kadai, Austronesian and Miao-Yao
- 18 • Japanese (see Section 5.5.)
- 19 • Korean (see Section 5.4.)
- 20 • Ainu (see Section 4.2.4.)
- 21 • Turkic (see Section 5.1.)
- 22 • Manchu-Tungus (see Section 5.3.)
- 23 • Mongolian (see Section 5.2.)

24

25 With most of these language families and language isolates already dis-  
 26 cussed in previous sections, this section will concentrate on the Sino-Tibetan  
 27 languages, encompassing Sinitic and Tibeto-Burman, the Austroasiatic  
 28 family Mon-Khmer, Tai-Kadai, and Miao-Yao.

29

30 The area discussed in this section is often thought of as mostly contain-  
 31 ing tonal languages, the intended implication being that we do not find  
 32 accentual patterns in these languages. However, as has been argued in  
 33 Chapter 1 the presence of lexical tone is not incompatible with stress or  
 34 accent.

34

35 The tonal aspects of the languages in this area are covered in many spe-  
 36 cialized books and articles. For an accessible recent discussion we refer to  
 37 Yip (2002), and the references therein, who discusses several examples of  
 38 tonal systems in Chinese languages (Cantonese, Mandarin, Wu and Min),  
 39 in Tibeto-Burman languages (Lhasa Tibetan, Jingpho, Burmese, Bai), in  
 40 Austro-Thai languages (Standard Thai, Wuming Zhuang) and in Mon-  
 Khmer languages (Vietnamese).

1 7.1. *Sino-Tibetan*2 **Genetic information**

3  
4 The Sino-Tibetan phylum consists of two major branches. First, the Sinitic  
5 (or Chinese) family includes all the dialects/languages of Chinese. The  
6 second family, Tibeto-Burman, is considerably larger than the first and  
7 shows a complex inner structure with various subbranches. Whereas there  
8 is agreement about the classification of Sino-Tibetan languages at this  
9 level of resolution, the details of the actual subgroupings are still being  
10 debated (see Thurgood 2003 for details).

11  
12 SINO-TIBETAN  
13 SINITIC (or CHINESE)  
14 TIBETO-BURMAN

## 15 7.1.1. Chinese

16 **Genetic information**

17  
18 R. Gordon (2005), as shown below, assumes a flat structure for the 14  
19 varieties of Chinese of the Chinese language family. Ruhlen (1991), on  
20 the other hand, distinguishes two subbranches within Sinitic: Bai and  
21 Chinese, with the latter consisting of a Min and a Mandarin-Yue group.  
22 Bai is considered a daughter of Tibeto-Burman in the Ethnologue classification  
23 adopted here.  
24

25 CHINESE: *Min Dong Chinese, Jinyu Chinese, Mandarin Chinese, Pu-Xian*  
26 *Chinese, Huizhou Chinese, Min Zhong Chinese, Dungan, Gan*  
27 *Chinese, Hakka Chinese, Xiang Chinese, Min Bei Chinese,*  
28 *Min Nan Chinese, Wu Chinese, Yue Chinese*  
29

30 **StressTyp extracts**31 **Chinese, Mandarin [LEX]**

- 32  
33 • Syllables with tone may also carry stress, but do not have to.  
34 • Bisyllabic words with two tones have either initial primary stress or  
35 initial secondary stress and final primary stress.  
36 • Longer forms might not be true words, and have diverse stress patterns.  
37 • Status of “stress” in Chinese highly debatable.

38  
39 'bōli 'glass' ,mǎ'dá 'motor'  
40 |hán,shú|'biǎo 'thermometer' 'wūzili 'in the room'

1 ***Additional information***

2 The Chinese languages are tonal languages. Standard Chinese (Peking  
3 dialect) has four tones (high level, high rising, low, high falling). The lan-  
4 guage also has accent and the full range of tonal contrasts only surfaces on  
5 accented syllables. Unaccented syllables show tonal reduction, lack of  
6 contrast and a pitch that is determined by surrounding tones and intona-  
7 tion (Ramsey 1987: 46–47).

8 The aforementioned interaction of tone and accent can be further illus-  
9 trated using data from Mandarin Chinese. Following Chao (1968: 25f.),  
10 the four tones of the language can be described on a scale of five pitch  
11 levels: the 1st tone is characterized by a high-level 55 pitch, the 2nd tone  
12 is realized by a high-rising 35 contour, the 3rd dipping/falling-rising tone  
13 comprises a 214 pitch contour, the 4th high-falling tone, finally, comes  
14 with a 51 pitch contour. The phonemic nature of these pitch differences  
15 is illustrated in the minimal pairs in (85) taken from Li & Thompson  
16 (1981: 8).

- 17 (85) a. yī (tone 1: high-level 55) ‘clothes’  
18 b. yí (tone 2: high-rising 35) ‘to suspect’  
19 c. yǐ (tone 3: dipping/falling-rising 214) ‘chair’  
20 d. yì (tone 4: high-falling 51) ‘meaning’  
21  
22

23 As soon as syllables are combined, a number of tonal sandhi rules apply.  
24 For instance, when a tone 3 syllable is followed by a syllable with any tone  
25 other than tone 3, it changes to a low tone with the pitch contour 21.  
26 More relevant for the issue of accentuation is the so-called fourth tonal  
27 sandhi rule of neutral tone. When not contrastive or weakly accented, all  
28 syllables surface with normal accent. If a syllable has weak accent or is  
29 unaccented, however, the tonal contrasts are reduced and the syllable will  
30 receive a tone according to the following pattern: after a tone 1 syllable,  
31 unaccented syllables will surface as a half-low tone, after a tone 2 syllable  
32 as a middle tone, after a tone 3 syllable as a half-high tone, and after a  
33 tone 4 syllable they will be realized as a low tone. Accordingly, the geni-  
34 tive suffix *de*, which is unaccented and appears in the neutral tone, will be  
35 realized with a half-low tone when it follows the tone 1 pronoun *ta* in the  
36 affixed word *ta-de* ‘he-Gen = his’ (cf. Chao 1968: 26ff., 35f.; Li & Thomp-  
37 son 1981: 8f.; and Lin 2001: 48ff. for discussion).

38 Duanmu (2000) discusses accent in Standard Chinese more extensively.  
39 He dismisses the views that SC either has no accent at all, or final accent.  
40 The latter idea is, he argues, due to a (cross-linguistically quite general)  
final lengthening effect when words are uttered in isolation. Duanmu pro-



1 poses that, at the word level, syllables are groups of trochaic syllabic feet,  
 2 from left to right with the leftmost foot being the strongest. Compounds  
 3 and phrases receive the strongest stress on the ‘non-head’. Foot formation  
 4 is sensitive to the difference between full and reduced syllables; the latter  
 5 do not have distinctive tone and are monomoraic. Full syllables have dis-  
 6 tinctive tone and are bimoraic.<sup>18</sup> Reduced syllables are always weak mem-  
 7 bers of a foot, or unfooted. Full syllables are strong or weak depending on  
 8 their position in the foot.

9 In polysyllabic words, then, accent placement is initial. In trisyllabic  
 10 words, a secondary accent occurs on the third syllable. In quadrisyllabic  
 11 words, this secondary accent occurs on the third or fourth syllable,  
 12 depending on the phrasal context. The difference in accent between full  
 13 and reduced syllables is easier to perceive than that between full syllables,  
 14 because the latter carry tone whether they are accented or not. Positions  
 15 that lack accent according to this analysis trigger processes of tone neu-  
 16 tralization. Duanmu presents several further arguments to support his  
 17 analysis.

18 This analysis of accent suggests that the Chinese lexicon is not domi-  
 19 nated by monosyllabic words. Duanmu does include compounds in his  
 20 analysis (which, he argues, are highly frequent in Chinese running text or  
 21 language usage, good for 80% of all words) as well as polysyllabic loan-  
 22 words (foreign names, etc.). With these words included, most words in  
 23 Chinese are disyllabic or longer. Monosyllabic words often have disyllabic  
 24 variants, where the choice of one or the other depends on the broader pro-  
 25 sodic context.

26 See also Yip (1980, 2002) for an analysis of the tonal system of various  
 27 Chinese languages.

### 28 7.1.2. Tibeto-Burman

#### 29 *Genetic information*

30 For the Tibeto-Burman branch of Sino-Tibetan, many different classifica-  
 31 tions for the languages of this family are available. Comrie et al. (2003)  
 32 group Karen tentatively under Tibeto-Burman. Within Tibeto-Burman,  
 33 Benedict (1972) has eight groups: Tibeto-Kanauri, Bahing-Vayu, Abor-Miri-  
 34  
 35  
 36  
 37

---

38 18. This distinction can be compared to the difference between full and reduced  
 39 vowels in English, a distinction that could be taken as lexical, as proposed  
 40 in Bolinger (1981), in which stress assignment would be sensitive to this dis-  
 distinction.

1 Dafla, Kachin, Burmese-Lolo, Bodo-Garo, Kuki-Naga, Karen. Thurgood  
 2 (2003) distinguishes Lolo-Burmese, Bodic, the ‘Sal’ languages, Kuki-Chin-  
 3 Naga, Rung and Karenic, leaving the issue of several other small sub-  
 4 groups and ungrouped languages unresolved. The Ethnologue classifi-  
 5 cation, which has been adopted in what follows, posits 14 subgroups (R.  
 6 Gordon 2005).

7  
 8 TIBETO-BURMAN

9 BAI: *Central Bai, Northern Bai, Southern Bai*

10 HIMALAYISH:

11 MAHAKIRANTI:

12 KHAM-MAGAR-CHEPANG-SUNWARI:

13 CHEPANG: *Bujhyal, **Chepang**, Kusunda, Wayu*

14 KHAM: *Gamale Kham, Eastern Parbate, Sheshi Kham, Western*  
 15 *Parbate*

16 MAGAR: *Eastern Magar, Western Magar, Raji*

17 SUNWARI: *Bahing, Sunwar*

18 KIRANTI: *Tomyang*

19 EASTERN: *Athpariya, Bantawa, Belhariya, Chhintange,*  
 20 *Chhulung, Chukwa, Eastern Meohang, Kulung,*  
 21 *Northern Lorung, Limbu, Lambichhong, Southern*  
 22 *Lorung, Lumba-Yakkha, Moinba, Nachering,*  
 23 *Pongyong, Phangduwali, Puma, Dungmali,*  
 24 *Camling, Western Meohang, Saam, Sampang,*  
 25 *Waling, Yakha, Yamphu, Yamphe*

26 WESTERN: *Dumi, Jerung, Koi, Khaling, Lingkhim, Raute,*  
 27 *Thulung, Tilung, Wambule*

28 NEWARI: *Newar*

29 TIBETO-KANAURI:

30 LEPCHA: *Lepcha*

31 TIBETIC:

32 BODISH:

33 TSHANGLA: *Tshangla*

34 DHIMAL: *Dhimal, Toto*

35 TAMANGIC: *Chantyal, Eastern Gurung, Southern Ghale,*  
 36 *Northern Ghale, Kutang Ghale, Western Gurung,*  
 37 *Manangba, Nar Phu, Seke, Eastern Tamang,*  
 38 *Western Tamang, Eastern Gorkha Tamang,*  
 39 *Thakali, Northwestern Tamang, Southwestern*  
 40 *Tamang*

- 1 TIBETAN: *Gongduk, Lhokpu*  
 2 CENTRAL: *Atuence, Central Tibetan, Dolpo, Humla, Jad,*  
 3 *Kyerung, Nubri, Lhomi, Lowa, Mugom,*  
 4 *Walungge, Panang, Stod Bhoti, Helambu Sherpa,*  
 5 *Spiti Bhoti, Kagate, Tichurong, Tseku, Tsum*  
 6 EASTERN: *Dakpakha, Bumthangkha, Nyenkha, Nupbikha,*  
 7 *Olekha, Chalikha, Khengkha, Kurtokha*  
 8 NORTHERN: *Amdo Tibetan, Choni, Khams Tibetan*  
 9 SOUTHERN: *Adap, Brokkat, Chocangacakha, Dzongkha,*  
 10 *Groma, Jirel, Lakha, Lunanakha, Layakha,*  
 11 *Brokpake, Sikkimese, Sherpa*  
 12 UNCLASSIFIED: *Naaba, Sherdukpen, Thudam*  
 13 WESTERN: *Balti, Purik, Zangskari*  
 14 LADAKHI: *Changthang, Ladakhi, Takpa*  
 15 UNCLASSIFIED: *Dzalakha*  
 16 WESTERN HIMALAYISH: *Rongpo*  
 17 ALMORA: *Byangsi, Chaudangsi, Darmiya, Rangkas*  
 18 EASTERN: *Baraamu, Thangmi*  
 19 JANGGALI: *Rawat*  
 20 KANAURI: *Gahri, Chitkuli Kinnauri, Jangshung, Kinnauri,*  
 21 *Kaike, Pattani, Tinani, Bhoti Kinnauri, Shumcho,*  
 22 *Sunam, Tukpa, Kanashi*  
 23 UNCLASSIFIED: *Baima*  
 24 JINGPHO-KONYAK-BODO:  
 25 JINGPHO-LUISH:  
 26 JINGPHO: *Jingpho, Singpho, Taman*  
 27 LUISH: *Kado*  
 28 KONYAK-BODO-GARO:  
 29 BODO-GARO:  
 30 BODO: *Bodo, Deori, Dimasa, Tiwa, Riang, Kok Borok, Kachari*  
 31 GARO: *Garó?, Megam*  
 32 KOCH: *A'tong, Koch, Rabha, Ruga*  
 33 KONYAK: *Chang Naga, Konyak Naga, Nocte Naga,*  
 34 *Khiamniungan Naga, Wancho Naga, Phom Naga, Tase*  
 35 *Naga, Tutsa Naga*  
 36 KAREN:  
 37 PA'O: *Pa'o Karen*  
 38 PWO: *Eastern Pwo Karen, Phrae Pwo Karen, Western Pwo Karen,*  
 39 *Northern Pwo Karen*  
 40 SGAW-BGHAI:  
 BGHAI:

- 1 EASTERN: *Lahta Karen, Kayan*  
2 UNCLASSIFIED: *Bwe Karen, Geko Karen*  
3 WESTERN: *Geba Karen*  
4 BREK: *Brek Karen*  
5 KAYAH: *Eastern Kayah, Yinbaw Karen, Yintale Karen,*  
6 *Manumanaw Karen, Western Kayah*  
7 SGAW: *Paku Karen, S'gaw Karen, Wewaw*  
8 UNCLASSIFIED: *Zayein Karen*  
9 KUKI-CHIN-NAGA:  
10 KUKI-CHIN:  
11 CENTRAL: ***Bawm Chin**, Haka Chin, Ngawn Chin, Zotung Chin,*  
12 *Darlong, Hmar, Mizo, Pankhu, Senthang Chin,*  
13 *Tawr Chin*  
14 NORTHERN: *Aimol, Anal, Biete, Chiru, Siyin Chin, Tedim Chin,*  
15 *Falam Chin, Gangte, Hrangkhoh, Kharam Naga,*  
16 *Kom, Lamkang, Chothe Naga, Monsang Naga,*  
17 *Moyon Naga, Paite Chin, Purum, Purum Naga,*  
18 *Ralte, Sakechep, Simte, Thado Chin, Tarao Naga,*  
19 *Vaiphei, Yos, Zome*  
20 SOUTHERN: *Mro Chin, Daai Chin, Nga La, Mara Chin, Mün*  
21 *Chin, Welaung, Zyphe*  
22 KHUMI: *Khumi Awa Chin, Khumi Chin*  
23 SHO: *Bualkhaw Chin, Chinbon Chin, Asho Chin, Shendu*  
24 NAGA:  
25 ANGAMI-POCHURI: *Mao Naga, Angami Naga, Khezha Naga,*  
26 *Northern Rengma Naga, Pochuri Naga,*  
27 *Southern Rengma Naga, Chokri Naga,*  
28 *Sumi Naga, Poumei Naga*  
29 AO: *Lotha Naga, Ao Naga, Sangtam Naga, Yimchungru Naga*  
30 TANGKHUL: *Khoibu Naga, Tangkhul Naga, Maring Naga*  
31 UNCLASSIFIED: *Puimei Naga*  
32 ZEME: *Rongmei Naga, Liangmai Naga, Koireng, Inpui Naga,*  
33 *Thangal Naga, Maram Naga, Mzieme Naga, Zeme Naga*  
34 LOLO-BURMESE:  
35 BURMISH:  
36 NORTHERN: *Achang, Zaiwa, Pela, Hpon, Lashi, Maru*  
37 SOUTHERN: *Chaungtha, Intha, Arakanese, Burmese, Taungyo,*  
38 *Tavoyan, Yangbye*  
39 UNCLASSIFIED: *Xiandao*  
40 LOLOISH: *Ache Yi, Poluo Yi, Limi Yi, Mili Yi, Muji Yi, Pula Yi,*  
*Puwa Yi*

- 1 NORTHERN: *Samei*  
 2 LISU: *Lisu, Lipo*  
 3 YI: *Sichuan Yi, Laghuu, Southern Yi, Mantsi, Guizhou Yi,*  
 4 *Southeastern Lolo Yi*  
 5 CENTRAL YI: *Central Yi, Dayao Yi, Miqie Yi, Southern*  
 6 *Lolopho Yi*  
 7 EASTERN YI: *Naluo Yi, Wumeng Yi, Wuding-Luquan Yi,*  
 8 *Wusa Yi*  
 9 SOUTHEASTERN YI: *Awu Yi, Axi Yi, Azhe Yi, Sani Yi*  
 10 SOUTHERN YI: *Eshan-Xinping Yi, Yuanjiang-Mojiang Yi*  
 11 WESTERN YI: *Xishan Lalo Yi, Eastern Lalo Yi, Western*  
 12 *Lalo Yi, Western Yi*  
 13 SOUTHERN: *Youle Jinou, Buyuan Jinou, Ugong*  
 14 AKHA: *Mahei, Phana'*  
 15 HANI: *Sansu, Sila*  
 16 BI-KA: *Biyo, Kaduo*  
 17 HAO-BAI: *Honi*  
 18 HA-YA: *Akha, Hani*  
 19 LAHU: *Lahu Shi, Lahu*  
 20 PHUNOI: *Bisu, Cōng, Mpi, Phunoi, Pyen*  
 21 UNCLASSIFIED: *Laopang, Lopi, Nusu, Zauzou*  
 22 NAXI: *Naxi*  
 23 UNCLASSIFIED: *Phula*  
 24 MEITEI: *Meitei*  
 25 MIKIR: *Amri, Karbi*  
 26 MRU: *Mru*  
 27 NORTH ASSAM:  
 28 DENG: *Darang Deng, Geman Deng*  
 29 TANI: *Adi, Galo Adi, Apatani, Bugun, Idu-Mishmi, Nisi, Digaro-*  
 30 *Mishmi, Miri, Miju-Mishmi, Na, Sulung*  
 31 NUNGISH: *Drung, Lama, Norra, Nung, Rawang*  
 32 TANGUT-QIANG:  
 33 QIANGIC: *Northern Qiang, Ersu, Guiqiong, Muya, Namuyi,*  
 34 *Northern Pumi, Southern Pumi, Queyu, Southern Qiang,*  
 35 *Shixing, Zhaba*  
 36 RGYARONG: *Horpa, Shangzhai, Guanyinqiao, Jiarong*  
 37 TUJIA: *Northern Tujia, Southern Tujia*  
 38 UNCLASSIFIED: *Anu, Ayi, Hruso, Khamba, Lui, Palu, Pao, Sajalong,*  
 39 *Zakhring*  
 40 WEST BODISH: *Dura*

1 *StressTyp extracts*

2 **Chebang [I]**

- 3 • Stress is initial.

4  
5 'chaŋ 'shelf' 'jiksa 'to be sick' 'sipru 'snake'

6  
7 **Tibetan; Lhasa [F/F]**

- 8 • Stress the leftmost syllable with a long vowel, else the leftmost.  
9 • Alternative pattern of two equal stresses in bisyllables with two long  
10 vowels reported.

11 qhap'teè 'rival' 'qöla 'charcoal'

12 'ŋaamo 'sweet' 'kəp 'behind'

13  
14 **Bawm [U]**

- 15 • Southern Bawm has tone. Northern Bawm has final stress.

16  
17 nu'pi 'wife' nu'fen 'skirt' fa'nu 'daughter'

18  
19 *Additional information*

20  
21 The Mahakiranti language Kham (Watters 2002) is a fully tonal language  
22 with no reference to stress or accent. It has a four tone system, divided  
23 over two registers that originate from phonation differences in consonants.  
24 The tonal distinction in each register predates the register distinction and  
25 may itself originate from an accent–no accent opposition.

26 Apart from a few lexical exceptions, word accent is initial in the East-  
27 ern Kiranti language Belhare (Bickel 2003: 547). Secondary accent is dis-  
28 tributed following a trochaic rhythm of bimoraic feet, with final open syl-  
29 lables always unaffected. Unaccented open syllables in non-final position  
30 are subject to phonetic reduction.

- 31  
32 (86) a. 'phagi<sub>i</sub>det<sub>i</sub>lem 'butterfly'  
33 b. u-'hop-chi (3sgPOSS-calebash-nsg)  
34 c. 'u-hop (3sgPOSS-calebash)

35  
36 In (86b), the phonological word, which provides the domain for accent  
37 placement, starts at the left stem edge, i.e. the prefix is excluded from the  
38 prosodic word. However, if stem-initial accent would result in word-final  
39 stress, as in (86c), the prefix is accented to ensure the trochaic rhythm of  
40 the language (see also Bickel 1998 for an OT analysis).

Chintang words, as recently analyzed by Bickel et al. (2007), contain

1 one primary accent which regularly falls on the last syllable of the lexical  
2 stem.

3 The data in (87), taken from Hildebrandt (2007) and Schiering et al.  
4 (2007), summarize the word accent system of Limbu (van Driem 1987).

- 5 (87) a. /ku-la:p/ [ˈkula:p] (3Poss-wing)  
6        ‘its wing’  
7        b. /pe:g-i/ [ˈpe:gi] (go-1pS)  
8        ‘We go.’  
9        c. /a-oŋ-e:/ [ʔaˈoŋ,ŋe:] (1Poss-brother.in.law-Voc)  
10       ‘My brother in law!’  
11       d. /ku-taŋ=me/ [kuˈtaŋme] (3Poss-horn=Ctr)  
12       ‘its horn, on the contrary’  
13       e. /me-thaŋ-e=aŋ/ [meˈthaŋ,jaŋ] (3ns-come.up-Pst=and)  
14       ‘they come up and . . .’  
15

16  
17 In bisyllabic prefix-stem combinations, such as (87a–b), the prefix attracts  
18 accent yielding of trochaic accent foot. The longer forms in (87c–e) show  
19 that, parallel to the Belhare pattern described above, the default locus  
20 of the word accent is the left edge of the stem, i.e. prefixes are usually  
21 excluded from the accent domain. Furthermore, secondary accent is  
22 assigned within the word following a trochaic, weight-sensitive rhythm in  
23 (87c) and (87e).

24 Turning to the Newari branch of Mahakiranti, the Dolakhā dialect of  
25 Newār has accent but no tone. Word accent is assigned to the first syllable  
26 of the root, with a secondary accent on the third syllable in longer words  
27 (Genetti 2003: 357).

28 Within Tamangic, Chantyal is the only language which is not tonal.  
29 With respect to word accent, native vocabulary is accented on the first  
30 syllable. Nepali borrowings retain accentuation governed by the Nepali  
31 accent rules (Noonan 2003a: 317).

32 In Nar-Phu, words are accented on the first syllable of the root. Com-  
33 pounds carry accent on their first member (Noonan 2003b: 339).

34 Although tone is the major suprasegmental feature of Lahu (Matisoff  
35 1973: 34–35), a number of word forms exhibit accent asymmetries, such  
36 that the initial syllable of a word appears to be unaccented. First, in a  
37 few recent loanwords from Burmese, Shan or Thai which have a prefix  
38 with unaccented schwa, the initial syllable is also unaccented in Lahu,  
39 e.g. *a'khwàn* ‘permission’, *ka'nán* ‘number’ and *ma'pāw* ‘coconut’. Sec-  
40 ondly, the native noun prefix /ð-/ typically has reduced accent, cf. *ð-'thî?*  
‘a packet’. Otherwise, all syllables receive the same degree of accent.

1 The Nungish language Dulong (Drung) exhibits a typical sesquisyllabic  
2 word structure, such that the first syllable of the word is unaccented, tone-  
3 less and of the shape CV, whereas the second syllable is accented, carries  
4 tone and allows more phonotactic structures, e.g. *də̌ži* ‘a kind of pheasant’  
5 (LaPolla 2003b: 674).

6 With respect to the Qiangic languages, Northern Qiang (LaPolla  
7 2003a: 574) has generally trochaic word accent. In bisyllabic words, the  
8 phonetic reduction of the final, unaccented syllable leads to the loss of  
9 the final vowels, e.g. /sə-t̪çhə/ [sət̪çh] ‘drink!’.

10 Niuwozi Prinmi (Southern Pumi) exhibits a prosodic system in which  
11 various aspects of suprasegmental structure interact. First, three tones  
12 are distinguished in monosyllables: *bjē<sup>H</sup>* ‘busy’ (high), *bjē<sup>F</sup>* ‘urine’ (falling),  
13 *bjē<sup>R</sup>* ‘to fly’ (rising). The contour tones can be conceived of as being com-  
14 posed of a sequence of high-low and low-high, respectively. In longer  
15 words, the surface realization of tone depends on the location of the high  
16 tone within the domain and on whether the high tone spreads or not. For  
17 example, in a quadrisyllabic word, the high tone may be located on the  
18 second syllable. If this tone spreads, we will find the surface tone sequence  
19 L-H-H-L; if not, we will find L-H-L-L. Ding (2003: 590–591) thus charac-  
20 terizes Prinmi as a pitch-accent language.

21 According to Sun (2003: 491), Caodeng rGyalrong can be characterized  
22 as a pitch-accent language in which a pitch drop (H-L) within the phono-  
23 logical word is distinctive at the lexical and morphosyntactic level. In the  
24 default, the pitch-accent is located at stem-final position. The minimal pair  
25 in (88) illustrates how differences in the accentuation of monosyllabic  
26 words become transparent in the course of morphological processes.

- 27 (88) a. (‘)χser<sup>H</sup> ‘gold’ vs. ‘<sup>H</sup>v-χser<sup>L</sup> ‘my gold’  
28 b. rŋul<sup>H</sup> ‘silver’ vs. v<sup>L</sup>-rŋul<sup>H</sup> ‘my silver’  
29

30 The monosyllabic word χser<sup>H</sup> ‘gold’ in (88a) is inherently specified for  
31 pitch-accent (marked by (‘) in the example given). The H-L pitch drop sur-  
32 faces only when another morphological element is prefixed to this form.  
33 Note that the unaccented form in (88b) never surfaces with the pitch  
34 drop, irrespective of whether it is prefixed or not.

### 35 **Generalizations**

36  
37 In Sino-Tibetan, we find a range of prosodic systems ranging from non-  
38 tonal accent languages to fully tonal, accentless languages, with mixed  
39 accent/tone languages somewhere in-between. Again, the presence of lexi-  
40 cal tone does not preclude an accentual structure. Unfortunately, since the



1 phonological study of these languages traditionally focuses on segmental  
 2 inventories, syllable phonology and tone, the complex interactions of  
 3 accent and tone are still to be investigated for most languages.

4  
 5 7.2. *Austroasiatic: Mon-Khmer*

6 **Genetic information**

7  
 8 With respect to the language families to be discussed in the next three  
 9 sections, a number of classifications and affiliations have been proposed.  
 10 Ruhlen (1991), for instance, includes Austroasiatic, Miao-Yao and Austro-  
 11 Thai in her ‘Austriac’ phylum. Both Benedict (1990) and Yip (2002) place  
 12 Miao-Yao within the Austro-Tai group. Benedict also proposes that  
 13 Japanese-Ryukyuan is a sister to Austronesian. In this line of thought, he  
 14 suggests that an accentual system might be attributed to Proto-Austro-  
 15 Tai from which the tonal systems of Miao-Yao and Kadai, as well as the  
 16 accentual system in Japanese-Ryukyuan might be derived.

17 Following the policy of this chapter, we adopt R. Gordon’s (2005)  
 18 more modest view on the groups involved and treat them as three indepen-  
 19 dent phyla. With respect to the Mon-Khmer branch of Austroasiatic,  
 20 Diffloth’s (2005) most recent classification distinguishes between the  
 21 Khasi-Khmuic and the Khmero-Vietic/Nico-Monic branch. R. Gordon’s  
 22 (2005) tree given below is compatible with the hypothesis that the family  
 23 consists of up to ten subgroups of comparable time depth, suggesting a  
 24 rapid spread over Southeast Asia (Sidwell 2006). Comrie et al. (2003)  
 25 also have Viet-Muong as a separate daughter of Mon-Khmer, and suggest  
 26 the same as a possibility for the Nicobar branch.

27  
 28 AUSTROASIATIC

29 MON-KHMER:

30 ASLIAN:

31 JAH HUT: *Jah Hut*

32 NORTH ASLIAN:

33 CHEWONG: *Chewong*

34 EASTERN: *Batek, Jehai, Minriq, Mintil*

35 TONGA: *Tonga*

36 WESTERN: *Kintaq, Kensiu*

37 SENOIC: *Lanoh, Sabüm, Semai, Semnam, Temiar*

38 SOUTH ASLIAN: *Besisi, Semelai, Semaq Beri, Temoq*

39 EASTERN MON-KHMER:

40 BAHNARIC:

- 1 CENTRAL BAHNARIC: *Alak, Bahnar, Lamam, Romam,*  
2 *Tampuan, Kaco'*  
3 NORTH BAHNARIC: *Katua*  
4 EAST:  
5 CUA-KAYONG: *Cua, Kayong*  
6 TAKUA: *Takua*  
7 WEST: *Trieng, Talieng*  
8 DUAN: *Halang Doan*  
9 JEH-HALANG: *Halang, Jeh*  
10 RENGAO: *Rengao*  
11 SEDANG-TODRAH:  
12 SEDANG: *Hre, Sedang*  
13 TODRAH-MONOM: *Monom, Todrah*  
14 SOUTH BAHNARIC: *Budeh Stieng*  
15 SRE-MNONG:  
16 MNONG:  
17 EASTERN: *Eastern Mnong*  
18 SOURHERN-CENTRAL: *Central Mnong, Southern*  
19 *Mnong, Kraol*  
20 SRE: *Maa, Koho*  
21 STIENG-CHRAU: *Chrau, Bulo Stieng*  
22 WEST BAHNARIC:  
23 BRAO-KRAVET: *Lave, Kru'ng, Kravet, Sou*  
24 LAVEN: *Laven*  
25 NYAHEUN: *Nyaheun*  
26 OI-THE: *Jeng, Oy, Sok, Sapuan, The*  
27 KATUIC:  
28 CENTRAL KATUIC:  
29 TA'OIH: *Ir, Kataang, Ong, Upper Ta'oih, Lower Ta'oih*  
30 EAST KATUIC:  
31 KASENG: *Kasseng*  
32 KATU-PACOH: *Eastern Katu, Western Katu, Pacoh,*  
33 *Phuong, Tareng*  
34 NGEQ-NKRIANG: *Khlor, Ngeq*  
35 WEST KATUIC:  
36 BROU-SO: *Eastern Bru, Western Bru, Sô, Khua*  
37 KUAY-NHEU: *Kuy*  
38 KUAY-YOE: *Nyeu*  
39 KHMER: *Central Khmer, Northern Khmer*  
40 PEARIC:

- 1 EASTERN: *Pear*  
 2 WESTERN:  
 3 CHONG: *Chong, Sa'och*  
 4 SAMRE: *Somray, Samre*  
 5 SUOY: *Suoy*  
 6 MONIC: *Nyahkur, Mon*  
 7 NICOBAR:  
 8 CAR: *Car Nicobarese*  
 9 CHOWRA-TERESSA: *Chaura, Teressa*  
 10 GREAT NICOBAR: *Southern Nicobarese*  
 11 NANCOWRY: *Central Nicobarese*  
 12 SHOM PENG: *Shom Peng*  
 13 NORTHERN MON-KHMER:  
 14 KHASIAN: *War, **Khasi**, Pnar*  
 15 KHMUIC:  
 16 KHAO: *Bit, Khao*  
 17 MAL-KHMU':  
 18 KHMU': *Khuen, **Khmu**, O'du*  
 19 MAL-PHRAI: *Mal, Lua', Phai, Pray*  
 20 MLABRI: *Mlabri*  
 21 XINH MUL: *Kháng, Phong-Kniang, Puoc*  
 22 MANG: *Mang*  
 23 PALAUNGIC:  
 24 EASTERN PALAUNGIC:  
 25 DANAU: *Danau*  
 26 PALAUNG: *Pale Palaung, Rumai Palaung, Shwe Palaung*  
 27 RIANG: *Riang, Yinchia*  
 28 WESTERN PALAUNGIC:  
 29 ANGKUIC: *Kon Keu, Hu, Man Met, Mok, Samtao, Tai Loi,*  
 30 *U, Kiorr*  
 31 LAMETIC: *Con, Lamet*  
 32 WAIC:  
 33 BULANG: *Blang*  
 34 LAWA: *Western Lawa, Eastern Lawa*  
 35 WA: *Parauk, Vo*  
 36 PALYU: *Bogan, Bolyu*  
 37 UNCLASSIFIED: *Bugan, Buxinhua, Kemiehua, Kuanhua*  
 38 VIET-MUONG:  
 39 CHUT: *Arem, Maleng, Chut*  
 40 CUOI: *Hung, Tho*

1 MUONG: *Bo, Muong, Nguôn*

2 THAVUNG: *Aheu*

3 VIETNAMESE: *Vietnamese*

4 MUNDA (see Section 6.3.)

5  
6 ***StressTyp extracts***

7 **Halang; Koyong [U]**

- 8 • Stress is located on the final syllable.

9  
10 **Sedang [U]**

- 11 • Phonological words are maximally bisyllabic.  
12 • Stress is located on the final, or the only, syllable.  
13 • Status of “stress” in Sedang unclear.

14 'a 'i ko'blin 'to be very full'

15  
16 **Khmer, Central; Cambodian [U]**

- 17 • Disyllabic words consist of an unstressed pre-syllable followed by a  
18 stressed full syllable.  
19 • Trisyllabic words exist; they contain two pre-syllables.  
20 • Words with more full syllables are polymorphemic and carry more  
21 stresses.  
22 • Status of “stress” in Cambodian might be debatable.

23  
24 kn'laeŋ 'place' krakh'wak 'dirty' ura'moh 'house'

25 **Khasi [U]**

- 26 • In isolation words have one stress which coincides with the falling pitch  
27 on the final syllable. In context these stresses and pitch contours are de-  
28 leted on all words but the final.  
29 • Status of “stress” in Khasi highly debatable.

30  
31 'khlaa 'tiger' paa'troy 'pull by the hair'

32 tara'jur 'scales'

33 **Khmu' [U]**

- 34 • Like in Cambodian one or two pre-syllables and a final full syllable  
35 make up a word.  
36 • Stress is located on the full syllable. Words with two full syllables are  
37 polymorphemic and carry two stresses.  
38 • Status of “stress” in Khmu' might be debatable.

39  
40 kə'tòŋ 'jar' səm'li:k 'fish scale' cər'là:'tá:p 'butterfly'

1 ***Additional information***

2 With respect to the Aslian languages, Jahai (Burenhult 2005: 38) has non-  
3 contrastive accent that invariably falls on the last syllable of the word. No  
4 further levels of accentuation, such as secondary accent, are evidenced.  
5 Word-final accent placement applies as much as to recent loans from  
6 Malay as to native words.

7 According to Kruspe (2004: 40), accent is a syllable-related phenome-  
8 non in Semelai. Within the phonological word, accent is on the final sylla-  
9 ble and there is no secondary accent. In the course of suffixation, the  
10 accent shifts from the root to the suffix, cf. (89).

- 11  
12 (89) a. p'dɔr 'to follow'  
13 b. pɔɔ'ri? 'to follow (s.th.)'

14  
15 In the Bahnaric language Chrau (Thomas 1971: 31), the phonological  
16 word can be defined with reference to accent, such that it constitutes a  
17 phonological stretch containing only one main, accented syllable. The  
18 main syllable may be complemented by one unaccented presyllable, e.g.  
19 *ca'mlāh* 'deny'.

20 For Mon,<sup>19</sup> Bauer (1982: 99ff.) distinguishes four degrees of accent:  
21 zero (unaccented), primary accent, secondary accent and tertiary accent.  
22 Accent placement is sensitive to four different domains: polysyllables in  
23 isolation, compounds, phrases, and the sentence, where compounds and  
24 phrases behave alike. The following examples illustrate the various  
25 attested accent patterns with words of varying degrees of morphological  
26 complexity and phonological length.

- 27 (90) a. /'tɛm/ 'to know' (stem, monosyllabic)  
28 b. /pə'tɛm/ 'to inform' (prefix + stem, disyllabic)  
29 c. /,ə'khɛ/ 'during' (prefix + stem, disyllabic)  
30 d. /,ɲi'ɲɛ/ 'a little (bit)' (stem + stem, disyllabic)  
31 e. /,cɔŋhə'kui/ 'to cause to burn' (stem + stem, trisyllabic)  
32 f. /hə,tom'cih/ 'to fall down' (stem + stem, trisyllabic)

33  
34  
35 On the basis of such evidence, the following accent placement rules can be  
36 formulated.

37  
38  
39 19. See also Schiering (2006) for a summary of word-related phonological patterns  
40 in Mon.

- 1 (91) a. Primary stress is placed on the final syllable of polysyllabic  
 2 words.  
 3 b. Secondary stress appears on the initial syllable of disyllabic and  
 4 trisyllabic words.  
 5 c. Tertiary stress is realized on the medial syllable of trisyllabic  
 6 words.  
 7 d. The initial syllable of native disyllabic words and trisyllables  
 8 remains unstressed; in some cases, trisyllables have secondary  
 9 stress on the initial syllable and unstressed medial syllables.  
 10 (Note that tri- and tetrasyllables are loans).

11 In one case, accent placement seems to make a lexical contrast, cf. (92).

- 12  
 13 (92) a. /<sub>1</sub>nèh'kòh/ 'who?'  
 14 b. /'nèh<sub>1</sub>kòh/ 'they, them, any'

15 However, the special prosodic status of the definiteness marker /kòh/  
 16 sheds doubt on this minimal pair. As shown in (93), if this element closes  
 17 a noun phrase, the preceding noun receives primary accent counter to the  
 18 more general phrase-final accent pattern.  
 19

- 20 (93) a. /<sub>1</sub>kwan 'mòa/ 'a village'  
 21 b. /'kwan **kòh**/ 'the village'  
 22 c. /<sub>1</sub>kwan 'nɔ? **kòh**/ 'this village (def.)'

24 Rabel's (1961: 30) observation that Khasi words, at least in isolation, have  
 25 word-final primary accent which coincides with a falling pitch is supported  
 26 by Khyriem's (2001) study. The data in (94) show that accent falls on the  
 27 final syllable in simple, complex and compound words.  
 28

- 29 (94) a. /kɪntú/ 'to persuade'  
 30 b. /bɪtár/ 'to be angry'  
 31 c. /jɪ́ŋ + pɪ́ŋ + ím/ → /jɪŋpɪŋím/ 'salvation'  
 32 d. /k<sup>h</sup>ɪndɛu + jɔ́ŋ/ → /dɛujɔ́ŋ/ 'coal'

34 According to Thompson (1965: 106–107), each syllable in Vietnamese<sup>20</sup>  
 35 carries one accent. Monomorphemic, disyllabic words are realized with  
 36 final accent if uttered in isolation, e.g. *va-li* 'suitcase'. At higher levels of  
 37 prosodic structure, three levels of accent are distinguished: weak, medium  
 38

39 20. See also Schiering (2007) for a summary of word-related phonological patterns  
 40 in Vietnamese.

1 and heavy. The general pattern is that of iambic phrasing, but ultimately  
 2 the degree of accent on the syllables within a pause group is determined by  
 3 the information load of the different elements. Accentuation of com-  
 4 pounds is illustrated in (95).

- 5 (95) a. người 'ta 'somebody'  
 6 b. một 'mình 'alone'  
 7 c. hoa 'hồng 'rose'  
 8 d. Liên-'hiệp quốc 'United nations'  
 9  
 10

11 In the default case, disyllabic compound words are realized with final  
 12 accent. In (95d), the pseudo-compound has its origin in structural borrow-  
 13 ing from Chinese. In such Sino-Vietnamese compounds, accent is assigned  
 14 to the left branch of the construction, in which stress is realized on  
 15 the final syllable. Disyllabic reduplications as in (96a) also exhibit final  
 16 accent. Longer polysyllabic reduplicative strings are parsed as two accent  
 17 domains with final accent, cf. (96b).

- 18 (96) a. nói 'nói 'keep talking and talking'  
 19 b. mơ 'mơ màng 'màng 'deep in the state of dreaming'  
 20  
 21

22 At the phrase level, default final accent placement prevails. Accordingly,  
 23 the phrases in (97) are realized with final accent.

- 24 (97) a. hoa 'hồng 'pink flower'  
 25 b. Tôi không 'biết. 'I don't know'  
 26  
 27

### 28 *Generalizations*

29 The most obvious recurring accent pattern in the Mon-Khmer languages  
 30 relates to the canonical sesquisyllabic word structure which implies the  
 31 iambic rhythm of an unaccented presyllable and an accented main sylla-  
 32 ble. In Donegan & Stampe's (1983) holistic typology, Mon-Khmer thus  
 33 constitutes the opposite extreme pole to Munda and is said to retain  
 34 Proto-Austroasiatic prosody.

### 35 7.3. *Hmong-Mien*

#### 36 *Genetic information*

37 There seems to be agreement on the division of Hmong Mien into three  
 38 daughters. Hmongic (Miao), Honte (with the language *She*) and Mienic  
 39  
 40

1 (Yao) (see Comrie et al. 2003). The following language classification is  
2 taken from R. Gordon (2005).

3 **HMONG-MIEN**

4 **HMONGIC:**

5 **BUNU:** *Younuo Bunu, Wunai Bunu, Bu-Nao Bunu, Jiongnai Bunu*

6 **CHUANQIANDIAN:** *Hmong Njua, Southern Mashan Hmong,*  
7 *Central Huishui Hmong, Northeastern Dian*  
8 *Hmong, Eastern Huishui Hmong, Hmong*  
9 *Don, Southwestern Guiyang Hmong, South-*  
10 *western Huishui Hmong, Northern Huishui*  
11 *Hmong, Chonganjiang Hmong, Luopohe*  
12 *Hmong, Central Mashan Hmong, Northern*  
13 *Mashan Hmong, Hmong Dô, Western*  
14 *Mashan Hmong, Southern Guiyang Hmong,*  
15 *Hmong Shua, Northern Guiyang Hmong,*  
16 *Hmong Daw*

17 **PA-HNG:** *Pa-Hng*

18 **QIANDONG:** *Northern Qiandong Hmong, Eastern Qiandong*  
19 *Hmong, Southern Qiandong Hmong*

20 **XIANGXI:** *Western Xiangxi Hmong, Eastern Xiangxi Hmong*

21 **HO NTE:** *She*

22 **MIENIC:**

23 **BIAO-JIAO:** *Biao-Jiao Mien*

24 **MIAN-JIN:** *Biao Mon, Iu Mien, Kim Mun*

25 **ZAOMIN:** *Dzao Min*

26  
27 ***Accent information***

28  
29 Hmong-Mien is usually described as being exclusively tonal, but that does  
30 not imply that the languages in this family couldn't be accentual as well,  
31 cf. Chinese. Unfortunately, we did not have access to sources that would  
32 allow us to elaborate on this point.

33  
34 **7.4. *Tai-Kadai***

35 ***Genetic information***

36  
37 For this family, most sources distinguish three main subgroups: the Tai-  
38 languages, the Kam-Sui group and the Kadai group. The first two are  
39 often taken together as the Kam-Tai group, for instance in Comrie et al.  
40 (2003). Crystal (1997) has a Tai family, which he does not link to Kadai



1 and Kam-Sui. Ruhlen (1991) has a more intricate family which he calls  
 2 Daic. The main difference is that the Kadai languages have been split  
 3 up in three inclusive groups. Finally, Tai-Kadai has Lati as a sister. We  
 4 follow R. Gordon's (2005) proposal for the purposes of this survey.

5  
 6  
 7 **TAI-KADAI**

8 **HLAI:** *Jiamao, Hlai*

9 **KADAI:**

10 **BU-RONG:** *Yerong*

11 **GE-CHI:** *Gelao, Green Gelao, Red Gelao, White Gelao, Lachi, White*  
 12 *Lachi*

13 **YANG-BIAO:** *Buyang, Cun, En, Qabiao, Laha*

14 **KAM-TAI:**

15 **BE-TAI:**

16 **BE:** *Lingao*

17 **TAI-SEK:**

18 **SEK:** *Saek*

19 **TAI:** *Rien, Tay Khang, Tai Pao, Tai Do*

20 **CENTRAL:** *Southern Zhuang, E, Cao Lan, Nung, Ts'ün-Lao,*  
 21 *Tày*

22 **EAST CENTRAL:**

23 **NORTHWEST:** *Turung*

24 **NORTHERN:** *Northern Zhuang, Bouyei, Tai Mène, Yoy*

25 **SOUTHWESTERN:** *Tai Ya, Pa Di, Pu Ko, Tai Long, Tai*  
 26 *Thanh, Tày Sa Pa*

27 **EAST CENTRAL:**

28 **CHIANG SAENG:** *Tai Dam, Northern Thai, Phuan,*  
 29 *Thai Song, Thai, Tai Hang Tong,*  
 30 *Tai Dón, Thu Lao, Tai Daeng,*  
 31 *Tày Tac*

32 **LAO-PHUTAI:** *Lao, Nyaw, Phu Thai, Northeastern Thai*

33 **NORTHWEST:** *Ahom, Aiton, Lü, Khamti, Khün,*  
 34 *Khamyang, Phake, Shan, Tai Nüa*

35 **SOUTHERN:** *Southern Thai*

36 **UNCLASSIFIED:** *Tai Hongjin, Yong*

37 **UNCLASSIFIED:** *Kuan*

38 **KAM-SUI:** *Ai-Cham, Biao, Cao Miao, Northern Dong, Southern*  
 39 *Dong, Kang, Mak, Mulam, Maonan, Sui, T'en*

40 **LAKKJA:** *Lakkia*

1 ***Accent information***

2 All languages in this family are tonal and morphemes are monosyllabic.  
 3 Abrahamson (p.c.) reports that in polysyllabic words, e.g. compounds,  
 4 Thai has final stress, by and large, with shortening of vowels in the first  
 5 syllable. Smyth (2002: 10) also describes disyllabic words as having accent  
 6 on the final syllable. The unaccented vowel /a/ in a word-initial syllable is  
 7 usually reduced to schwa and its tone is mid. When /aa/ occurs both in the  
 8 first and the second syllable, it is normally shortened in the first syllable.  
 9

- 10 (98) a. pra'tuu [prə'tuu] 'door'  
 11 b. sa'duak [sə'duak] 'convenient'  
 12 c. aa'hään [a'hään] 'food'  
 13 d. phaa'sää [pha'sää] 'language'  
 14

15 The phonotactic template for words in Lao is  $C_0V_0.C_1V_1V_2C_2$ , where only  
 16  $C_1$  and  $V_1$  are obligatory. The initial minor syllable ( $C_0V_0$ ) is unaccented  
 17 and does not show distinctive tone independent of the accented major  
 18 syllable. De-accented affixes or clitics, e.g. class terms, modifier classifiers  
 19 and some aspectual-modal markers, behave regularly like minor syllables  
 20 in this respect (Enfield 2007: 33).  
 21

22  
23  
24 **8. Generalizations and conclusions**

25  
26 Obviously, with such a large amount of languages spread over Asia, no  
 27 sweeping generalizations can be made with respect to the word prosodic  
 28 systems found in this area. Everything under the accentual 'sun' seems to  
 29 be represented in the survey. Furthermore, even within the more narrowly  
 30 delimited regions discussed in the various sections, no major areal patterns  
 31 emerge. Only the prominence of sesquisyllabic word structure and iambic  
 32 prosody in the languages of Southeast Asia could be taken as a candidate  
 33 for an areal pattern (cf. the noted prosodic diffusibility noted by Matisoff  
 34 2001).

35 However, the accentual data surveyed for different families within  
 36 a phylum often offer significant insights into the diachrony of word pro-  
 37 sody. For instance, the relative conformity of accentuation in the major  
 38 branches of Altaic is noteworthy, even more so if they can be attributed  
 39 to a single source in the proto-language. In Austroasiatic, on the other  
 40

1 hand, we find a radically different picture: the word prosodic system of the  
2 proto-language can arguably only be found in the Mon-Khmer branch,  
3 whereas the Munda branch has undergone a major typological drift.

4 Finally, the languages of Asia offer a high potential for the study of the  
5 incompatibility or interaction between accent and tone. In this context, it  
6 would be highly desirable if phonological descriptions would not focus on  
7 one of the two suprasegmental features to the exclusion of the other, as is  
8 often done in the context of ‘pure tone languages’.

9

10

11

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