Word Prosodic Systems
in the Languages of Europe
14 Basque accentuation

14.1. Introduction

Basque is, at present, an official language together with Spanish, in two Autonomous Communities of Spain, the Autonomous Community of the Basque Country and Navarre. In the Autonomous Community of the Basque Country, the Basque-speaking territory includes the province of Gipuzkoa, most of Biscay (Bizkaia) and the northern corner of Alava (Araba). In Navarre, (Nafarroa, Sp. Navarra), Basque is spoken in the northern part. Across the French border, Basque is also spoken in the western half of the Département des Pyrénées Atlantiques (including the regions of Labourd (Lapurdi), Basse Navarre and Soule (Zuberoa)), without having official recognition here.\(^1\) The Basque language is strongly fragmented into dialects and local varieties. Differences among dialects, however, are not great enough to make communication impossible (or to make the adoption of a common standard variety impractical).\(^2\) One of the points in which we find wide internal variation in Basque is accentuation. In accentuation, as in some other phonological aspects, one finds some degree of variation almost from village to village. It is therefore hardly possible to be exhaustive in the presentation of the facts regarding accentuation in Basque. The accentual systems found in Basque varieties range from some rather complex systems, including some of the pitch-accent type, to others with limited accentual oppositions, to yet others where words never contrast by their accentual pattern. One can establish, in any case, certain general types (admitting some variation within each of them).

Starting from the west, we can recognize a Western type, where a crucial distinction is made between accented and unaccented words. Unaccented words are subject only to phrase-final accentuation (on the final or penultimate syllable of the phrase, depending on the variety). Accented words, on the other hand, have fixed accent on a given syllable. Accented words may contain one or more accented morphemes, the position of the syllable with surface prominence being generally determined by the leftmost accented morpheme, although there are more complicated cases, which will be examined. Some of the varieties of this Western type (those of the northern Biscayan area) present pitch-
accent systems, where accentuation is invariably realized by a H*L melody with spreading of the tones to unaccented syllables (see chapter 1 for an overview of pitch-accent systems). These pitch-accent systems will be examined in some detail here, with reference to internal variation within the area. In addition, a Western variety that falls outside the territory with pitch-accentual prominence, that of Zeberio in southern Biscay will also be studied and compared.

There is a second type with a wide geographical distribution, which I will call the Central type, where the accent generally falls on the second syllable, except in some marked cases, where it falls on the initial syllable. The facts of the variety spoken in Oñati will be presented as an example of a system of this type. Other varieties with basic post-initial accentuation (i.e., with accent on the second syllable) will be briefly discussed. Some systems with post-initial accentuation appear to have derived historically from a reinterpretation of systems of the Western type, but in some other areas (the Bidasoa Valley) post-initial accent seems to have greater antiquity.

A different (but historically related) type is the Hondarribia/Old Labourdin system, in which accent is computed counting from the right edge of the stem. The accentual system used in Hondarribia will be examined here. A very similar system appears to have been used along the Labourdin coast in earlier centuries (cf. Michelena 1972).

In most of the territory of High Navarrese, Low Navarrese and Labourdin dialects, as well as in some small areas of Gipuzkoan and Biscayan speech, accentuation is not phonologically distinctive. That is, there are no lexical or morphological oppositions that rely on the place of the accented syllable. Among these systems without contrastive accentuation there is also considerable variation. Most Low Navarrese and Labourdin varieties appear to have only phrasal accent. In many High Navarrese areas, on the other hand, accentual prominence usually falls on the penultimate syllable of the word (Salaburu 1984: 307–316). Some other patterns are also found, such as noncontrastive prominence on the initial or second and on the final syllable.

Finally, in the easternmost Basque dialect, Souletin, the accent falls on the penultimate syllable of the word in the unmarked case, and on the final in exceptional cases. A related but somewhat more complex system was found in the now extinct Roncalese dialect, on the other side of the Pyrenees.

In this chapter, the main Basque accentual systems will be presented, with no attempt at exhaustiveness in the coverage of subtypes and minor variation within each of the major types. The presentation of this chapter is geographically organized, going from the west to the east of the Basque-speaking territory (Map 1).
Map 1. Basque speaking area of Spain and France
14.2. The Western type

14.2.1. The Northern Biscayan pitch-accent systems

14.2.1.1. Surface patterns

In this accentual system, which extends over a relatively large area of northern Biscay (Bizkaia), the westernmost Basque province, there is a fundamental surface distinction between unaccented and accented words. Unaccented words, which constitute the largest part of the lexicon, receive final prominence when they occur at the end of certain phrasal domains (including when they are pronounced in isolation); otherwise, they do not present accentual prominence on any syllable. Isolated phrases constituted entirely of unaccented words present a high pitch plateau starting from the second syllable and falling on the last syllable in declarative intonation. Depending on the local variety, the last syllable in the domain may present a somewhat higher tone or may be usually uttered at the same tonal level as other syllables to its left. In some varieties (such as that of Markina) unaccented phrases receive penultimate prominence, instead of final.

Accented words, on the other hand, bear accentual prominence on some nonfinal syllable in all contexts. In the figures, the words *lagúnena* ‘the one of the friends’ (Figure 2) and *lékuko* ‘of the place’ (Figure 4) are accented. All other words in Figure 1 are unaccented.

As can be observed from the figures, accented words present a rise in pitch culminating on the accented syllable, which is followed by a sharp drop on the following syllable (a H*L contour in Pierrehumbert’s 1980 notation, where the asterisk indicates that the first tone links to the accented syllable). Leftward spreading of the H tone from the accented syllable can result in a surface pattern where the syllables preceding the accented one are realized on the same

*Figure 1.*
pitch as the one bearing the accent. What invariably determines the position of the accent is the immediately following sharp drop in pitch. The surface tonal patterns found in the Northern Biscayan area are thus not unlike those of Tokyo Japanese: words may or may not contain a lexically determined pitch drop and there is only one such drop per word.

The surface contrast between accented and unaccented words reflects a lexical contrast between accented and unaccented morphemes. In accented polymorphemic words, the accent may be a lexical property of the root or of an
affix. An accented root may bear an accent on any nonfinal syllable. Thus, the root /leku/ ‘place’ bears an accent on its first syllable. Accent-bearing suffixes are, almost exclusively, preaccenting; that is, they have the property of placing an accent on the preceding syllable. In the word lagún-en-a ‘the one of the friends’ the accent is a lexical property of the preaccenting genitive plural suffix -en /-en/ (/a/ raises to [e] after a high vowel).

Only one lexically-determined accentual contour can occur per word, but in phrases containing more than one accented word, all accented words will receive a H*L contour, the accentual peaks being progressively scaled-down (unless there is contrastive focalization). Notice the contrast between Figure 5a

nire lagunen liburua ra

‘it is the book of my friend’, where only the word liburua ‘book’ bears a lexical accent, and Figure 5b

nire lagünen liburua ra

‘it is the book of my friends’, with two peaks, since the word lagünen ‘of my friends’ is also accented.7

14.2.1.2. Lexical accent (Gernika)8

In western Basque varieties, accentuation plays an important role in inflectional morphology. In Basque, case and number inflection are expressed by means of suffixes attached to the last word in the noun phrase.9
In a number of cases the accentual pattern constitutes the only difference between singular or indefinite on the one hand and plural on the other. In (2) a partial declension paradigm for /sagarr/ ‘apple’ is given. It can be seen that all plural suffixes are preaccenting. In addition, the comitative/instrumental suffix /-'gas/ and the ablative /-'tik/ are also preaccenting in this variety.10

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<thead>
<tr>
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<th>Plural</th>
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<td>GEN-LOC</td>
<td>sagarretakoko</td>
<td>sagarreko</td>
<td>sagárratakoko</td>
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</tbody>
</table>

The comitative/instrumental plural and the ablative plural carry two lexical accents. The comitative/instrumental is created by adding the preaccenting suffix /-'gas/ to the absolutive, which in the plural bears the also preaccenting suffix /-'ak/. The word sagárrakas, thus, has the structure /sagarr-'ak-'gas/ (cf. the corresponding singular form /sagarr-a-'gas/ sagárragas). In the ablative plural, the preaccenting suffix /-'tik/ is added to a form bearing the preaccenting locative pluralizer /-'ata/11: /sagarr-'ata-'tik/ sagárratatik. These examples show that when a word contains more than one lexical accent only the leftmost one is realized, a rule for which there is abundant and consistent evidence, as we will see.

The genitive can be followed by other suffixes giving rise to a sort of superdeclension. This allows us to observe the results of different combinations of preaccenting and unmarked morphemes in a very direct way. In the examples
the genitive marker (singular or plural) is followed by a dative (singular or plural):

(3) /gixon- an- ari/  gixonanari  ‘to the one of the man’
     SG  SG
/gixon- an- ’ari/  gixonánari  ‘to the ones of the man’
     SG  PL
/gixon- ’an- ari/  gixónanari  ‘to the one of the men’
     PL  SG
/gixon- ’an- ’ari/  gixónanari  ‘to the ones of the men’
     PL  PL

The examples in (3), and in particular the fourth example, show that the first accentually marked morpheme determines the placement of the lexical accent on the surface. As we saw, this rule also explains the accentuation in /sagarr-’ak-’gas/ sagarrakas ‘with the apples, COM PL’ and /sagarr-’ata-’tik/ sagarratatik ‘from the apples, ABL PL’ above in (2). A lexical accent thus eliminates the effects of other following accents within the word. This is a general rule. Consequently, if the root is lexically accented, it will determine the location of the prominent syllable, eliminating the effects of following accented suffixes. The distinctions in accentuation illustrated in (2) are thus lost with an accented stem such as /ántzarr/ ‘goose’:

(4) Indefinite         Singular           Plural
ABS    ántzar           ántzarra         ántzarrak
ERG    ántzarrek        ántzarrak        ántzarrak
DAT    ántzarreri       ántzarrari       ántzarrari
GEN    ántzarren        ántzarran        ántzarran
BEN    ántzarrentzat    ántzarrantzat    ántzarrantzat
COM/INST ántzarregas    ántzarragas      ántzarrakas

Accented monomorphemic stems are, for the most part, borrowings, both new and very old, but the group also includes a number of native morphemes. Derivational suffixes are also divided between preaccenting and unaccented. If the inflectional base carries an accented derivational suffix, its accent will also obliterate any lexical distinctions that following inflectional suffixes could introduce. The suffix /’-tarr/, which indicates origin, and the superlative /’-en/ are examples of preaccenting derivational suffixes, as shown in the following examples with the stems /mendi-’tarr/ ‘mountain dweller’ and /ederr-’en/ ‘most beautiful’:
Polysyllabic derivational suffixes may be accented, as opposed to preaccenting, in some varieties. Thus the ordinal suffix is preaccenting /'-garren/ in some varieties and accented /'-gárren/ in others; e.g., bigarren ‘second’, saspigarren ‘seventh’ or bigárren, saspigárren.

Some other derivational suffixes such as /'-tasun/ ‘quality’ or /'-garri/ ‘worthy of’ are unaccented: argitasun ‘clarity’, ikusgarri ‘worth seeing’.14

In words consisting of an accented root followed by an accented/preaccenting derivational suffix, followed by preaccenting inflection, the accent of the root will prevail. In the examples in (6), the accented roots /kánpo/ ‘outside’ and /áltu/ ‘tall’ are respectively followed by the preaccenting derivational suffixes /'-tarr/, and /'-en/, which, in their turn, are followed by a preaccenting plural suffix:

(6) /kánpo/-tarr/-ak/ kánpotarrak ‘the outsiders’
    /áltu/-en/-ak/ áltuenak ‘the tallest ones’

For words containing accented morphemes, surface accentuation thus follows the rule in (7):

(7) Lexical Accent Rule: the leftmost lexical accent within the word determines the location of the prosodically prominent syllable.

A technical question that arises is how to represent preaccenting morphemes in the metrical grid. In Hualde & Bilbao (1993) (following Halle 1990, Halle & Kenstowicz 1991) it is proposed that preaccenting suffixes introduce a boundary for the construction of metrical structure. The accentual unit extends from the beginning of the word to the first lexically-induced accentual boundary. Preaccenting morphemes remain outside the accentual unit; that is, they introduce a boundary to their left:15

(8) gixon)ari gixon)an)ari gixon-an)ari
Surface prominence is assigned to the rightmost syllable in the domain comprised between the beginning of the word and the first lexically-induced boundary:

\[
\begin{array}{cccc}
  \ast & \ast & \ast & \ast \\
  (gixón)ari & (gixón)an)ari & (gixon-án)ari \\
  'to the men' & 'to the ones of the men' & 'to the ones of the men'
\end{array}
\]

Rather than being introduced by particular morphemes, accents may also be the product of general morphological operations. In particular, compounds are generally accented on the last syllable of the first member as a productive rule in many varieties of this type:

\[
\begin{array}{l}
  \text{(10) Compounds} \\
  \text{buru-aundi} & \text{‘big-headed’ (buru ‘head’ + aundi ‘big’)} \\
  \text{sagu-sar} & \text{‘bat’ (sagu ‘mouse’ + sar ‘old’)} \\
  \text{semé-alabak} & \text{‘children’ (seme ‘son’ + alaba ‘daughter’ + PL)} \\
  \text{mutil-sar} & \text{‘old bachelor’ (mutil ‘boy’ + sar ‘old’)}
\end{array}
\]

\[
\begin{array}{l}
  \text{(11) Compound Rule: The syllable immediately preceding the compound boundary receives an accent.}
\end{array}
\]

The accentual marking introduced by the Compound Rule is of the same type as other accents. If the first member of the compound is an accented root, the accent of the root will surface, rather than that assigned by the Compound Rule. Thus, for instance, from belarri ‘ear’ and ondo ‘near’ we obtain the compound belarriondo ‘area surrounding the ear’, with the lexical accent of the first member prevailing over the one introduced by the Compound Rule.

So far, we have been concerned only with nominals (including adjectives). Other word classes present the same accentual properties. Verbal expressions in Basque consist, for the most part, of a participle and an auxiliary. In these expressions, the participle may take one of three forms, perfective, imperfective and future. The imperfective and future participles are built upon the perfective by means of the suffixes /-t(z)en/ and /-ko/ respectively. Both suffixes are preaccenting. Perfective participles are, for the most part, unaccented; but a few are accented (mostly borrowings, such as bota ‘to throw’, and causatives, such as éroan ‘to carry’, causative of joan ‘to go’):
Other word categories (conjugated verbs, adverbs, postpositions, etc.) fall into the same two accentual classes, bearing lexical accents or being unaccented.

14.2.1.3. Deaccentuation

In derivational morphology, a greater degree of complexity is introduced, since, besides accented/preaccenting and unaccented suffixes, which we have already considered, we also find derivational suffixes which have the property of eliminating an accent from the root. An example is provided by the suffix /-(l)ari/, which indicates profession or occupation:

(13) pelôta ‘ball’ pelotari ‘ball player’
    txistu ‘flute’ txistulari ‘flautist’
    aiskóra ‘ax’ aiskolari ‘lumberjack’
    aurre ‘front’ aurrelari ‘front player (in ball game)’

As shown in the examples, when the suffix /-(l)ari/ is added to an accented root to form a derived stem, the resulting form is unaccented. In Hualde & Bilbao (1993), facts of this type are analyzed by invoking the phonological cycle. Alternatively, a lexically-conditioned rule of accent deletion can be postulated. As a reviewer points out, however, perhaps the best way to characterize these facts is in terms of a distinction between dominant and recessive suffixes. A deaccenting suffix such as /-(l)ari/ would be unaccented and dominant. There are also suffixes such as /-‘ti/ ‘characterized by’ and /-’sko/ ‘characterized by, derogatory’, which, when following an unaccented root, appear to be simply preaccenting, (14a). When they are attached to an accented root, however, we see that they are both accented (preaccenting) and deaccenting, (14b); that is, their accent prevails over the lexical accent of the root (examples from Hualde & Bilbao 1992: 74–75):
These two suffixes would belong to the category of dominant accented (preaccenting) suffixes. All suffixes studied in previous subsections would be recessive. The first-accent rule in (7) must thus be restricted to exclude dominant suffixes from its scope. If the word contains a dominant suffix, its accentual property will prevail over that of the root. There are very few deaccenting (dominant) suffixes and there are no examples of words containing more than one of them.

14.2.1.4. Prepreaccentuation

In some varieties within this area, a historical process of accent shift has retracted the accent one syllable to the left in some specific contexts. This historical shift is apparent in the treatment of borrowings, Sp. *tomâte* $>$ *tómate* ‘tomato’. A result of this shift is that some praccenting suffixes have become prepreaccenting; that is, they assign an accent two syllables to their left. In a number of varieties, plural suffixes are prepreaccenting and accentual patterns such as those in (15) are found:

\[
\begin{array}{llll}
\text{Indefinite} & \text{Singular} & \text{Plural} \\
\text{ABS} & \text{sagar} & \text{sagarra} & \text{ságarrak} \\
\text{DAT} & \text{sagarreri} & \text{sagarrari} & \text{ságarrari} \\
\end{array}
\]

An interesting theoretical question is how prepreaccentuation ought to be represented. In the dialects in question, there are reasons for conceiving prepreaccentuation not as a single property of morphemes, but rather as the combination of two types of lexical marking. That is, prepreaccenting morphemes are preaccenting morphemes which, in addition, trigger a rule of retraction. The justification for this position is that prepreaccentuation only takes place in some specific environments. The same suffix that appears as prepreaccenting
in some contexts may behave as simply preaccenting in other contexts. Consider the following examples (from the variety of Gautegiz-Arteaga):

(16)  gı´xon-ak
      man-ABS PL
      ‘the men’

  gı´xon-an-ak
  man-GEN PL-ABS PL
  ‘the ones of the men’

  gixon-án-ak
  man-GEN SG-ABS PL
  ‘the ones of the man’

As shown in the examples, in this variety plural suffixes act as prepreaccenting when directly following the stem, but only as preaccenting when following another inflectional suffix. The basic property of plural suffixes would be to place an accent one syllable to their left, as in other varieties. The occurrence of the accent two syllables to the left of the suffix that triggers it must be due to a morphologically conditioned rule retracting the accent in certain specific cases.

There are also varieties in which the behavior of the particular suffix (as preaccenting or prepreaccenting) depends on the number of syllables in the stem. Consider the following examples (from the variety of Markina-Etxebarria; cf. Hualde 1991 a: 154 – 157):17

(17)  Uninflected ABS plural

    a. gixon  gixonak  ‘man’
        lagun  lágunek  ‘friend’
    b. alaba  alábak  ‘daughter’
        elixa  elixak  ‘church’

In this variety, prepreaccentuation is the result of a retraction rule limited to words with bisyllabic stems. As can be seen in the examples in (17b), the rule fails to apply when the stem is trisyllabic (even with -a final stems, whose final vowel is deleted in the relevant inflected forms). For this reason, prepreaccentuation is better decomposed as lexical preaccentuation accompanied by a retraction rule.18
Historical accent shifts have also taken place in the opposite direction. A particularly radical process of accent shift has taken place in the variety spoken in the town of Lekeitio and some neighboring areas. In this variety, all lexical accents have shifted to the penultimate syllable of the word, causing a complete restructuring of the system. The Lekeitio variety is considered in the next section.

14.2.1.5. Lexical accent in Lekeitio

The dialect of Lekeitio presents essentially the same distribution of accentually marked and unmarked morphemes as the Gernika type. Words and phrases containing only unmarked morphemes also present the same surface pattern as in Gernika (i.e., phrase-final prominence). However, there is a very important difference in the behavior of accentually marked morphemes. In Lekeitio, all accented morphemes, be they roots, derivational suffixes, or inflectional suffixes, assign accentual prominence to the penultimate syllable of the word. All accented words appear with penultimate accent, regardless of the position of the accented morpheme within the word and of the number of accented morphemes the word contains. An accent which lexically belongs to a given morpheme may thus appear many syllables away from it.¹⁹

The examples in (18) of selected inflected forms of the unaccented stem /sagarr/ ‘apple’ can be compared with those given above in (2)–(3) for the Gernika subtype:

(18) Lekeitio: Unaccented stems

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<tr>
<td>GEN + DAT SG</td>
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As shown, all accents introduced by lexically accented suffixes (the ablative, the comitative and all plural suffixes) are realized on the penultimate syllable of the word.
Words with accented stems show penultimate prominence on all forms of their inflectional paradigms. The accent thus shifts to the penultimate syllable as suffixes are added. The examples in (19) of inflected forms of the stems /mendi-tarr*/ and /ederr-en*/, which contain accentually marked derivational suffixes, and the marked monomorphemic stem /leku*/ can be compared with those in (5) and (6) above (accented morphemes are indicated with an asterisk to their right in lexical representation, since in this dialect there is no evidence for associating lexical accents with individual syllables in underlying representation):20

(19) Lekeitio: accented stems

/mendi-tarr*/ ‘mountain dweller’

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/kampo*-tarr*/ ‘outsider’

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</table>

/ederr-en*/ ‘most beautiful’

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/leku*/ ‘place’

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<tr>
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<td>lekuári</td>
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Finally, compounds also trigger penultimate accent:

(20) /buru-aundi/ ‘big headed’

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<th>Indefinite</th>
<th>Singular</th>
<th>Plural</th>
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</thead>
<tbody>
<tr>
<td>ABS</td>
<td>buru-áundi</td>
<td>buru-aundiža</td>
<td>buru-aundižak</td>
</tr>
<tr>
<td>DAT</td>
<td>buru-aundižeri</td>
<td>buru-aundižári</td>
<td>buru-aundižári</td>
</tr>
</tbody>
</table>

/sagu-sarr*/ ‘bat’

<table>
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<th></th>
<th>Indefinite</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>sagú-sar</td>
<td>sagu-sárra</td>
<td>sagu-sárrak</td>
</tr>
<tr>
<td>DAT</td>
<td>sagu-sarréri</td>
<td>sagu-sarrári</td>
<td>sagu-sarrári</td>
</tr>
</tbody>
</table>
In this prosodic system, there is thus only a two-way surface contrast: words are either unaccented or accented on the penultimate syllable. Accentually marked morphemes have the effect of placing an accent on the penultimate syllable of the word containing them. The morphological operation of compounding also involves introducing an accent, which is realized on the penultimate of the word as well.

This phenomenon, to my knowledge, does not have any parallel in the prosodic systems found in the languages of Europe. On the other hand, this process of accent displacement presents obvious similarities with certain processes found in some Bantu languages whereby a high tone which lexically belongs to a given morpheme may be attracted to a certain position which does not necessarily coincide with the lexically tone-bearing morpheme. A good example is found in Digo (Kisseberth 1984). The high tone which surfaces on the penultimate in a Digo form such as a-na-onjeréza ‘he is adding to’ lexically belongs to the third person singular subject prefix /a-/; compare ni-na-onjereza ‘I am adding to’.

In Hualde (1991a), the facts of the Lekeitio Basque dialect (and those of the other northern Biscayan varieties) are given a tonal account. Accentual prominence in Lekeitio, as in other northern Biscayan varieties, is realized by tonal means (a rise followed by a sharp drop, or a H*L sequence). The distinction between accented and unaccented morphemes and the potentially long-distance displacement of accents are properties which recall those found in tonal systems such as those of Bantu languages with a distinction between high-toned and toneless morphemes and processes such as the Digo rule mentioned above. Nevertheless, the prosodic system of Lekeitio Basque, like that of the other northern Biscayan Basque dialects discussed in the previous subsections, appears to have an accentual foundation. A word may contain several accented morphemes, but only one accent may surface in a word domain. This culminating function is the hallmark of accentual systems.

The basic rule of accentuation in Lekeitio Basque can be stated as follows:

(21) Lekeitio lexical accent rule: Assign prosodic prominence to the penultimate syllable of the word (where prosodic prominence is interpreted as a H*L contour).

This rule is triggered by lexically marked or accented morphemes. As we have seen, the rule is also triggered in compounding, even if the members of the compound are otherwise unmarked morphemes. The rule of penultimate accent also applies to unaccented words in some specific syntactic constructions. Imperatives and certain vocatives also present marked accentuation, e.g.: etórri!
‘come!’, *bai, gixóna!* ‘yes, man!’. The partitive suffix /-(r)ik/ is accented in the superlative construction, e.g., *gixónik ederreá* ‘the most beautiful man’, but otherwise it behaves like unaccented *gixonik estoit ikusi* ‘I haven’t seen any men’.

14.2.1.6. Sentence prominence and focus

As was mentioned, in the Basque varieties under consideration, most words do not bear lexical accent. This being the case, we need to consider the prosodic structure of sentences formed exclusively by lexically unaccented words. What we find is that usually the word immediately preceding the verb receives surface accentual prominence (a H*L contour) on its final syllable. That is, the final syllable of the preverbal phrase is associated with a pitch-accent. Every sentence will thus bear at least one pitch-accent. I will use the term “sentence prominence” or “sentence accent” to refer to this accent (indicated here by means of a circumflex accent mark). Sentence prominence is intimately linked with focalization. To focalize a constituent, it must be placed in preverbal position, receiving sentence prominence. But sentence prominence also occurs on the preverbal constituent in sentences where no element bears pragmatic focus. This can be illustrated with an example. In a pragmatically neutral sentence, the subject precedes the object, as in (22a). To focalize the subject, it must be moved to the position immediately preceding the verb, where it will receive sentence prominence, as in (22b). The sentence in (22a), with neutral order, on the other hand, is ambiguous between an interpretation where the direct object is focalized and another interpretation where there is no particular emphasis on any constituent:

(22) a. *gure lagunek txakurrês ekarri dau*
   our friend.erg sg dog.abs sg bring aux
   ‘our friend brought the dog’ / ‘our friend brought THE DOG’

   b. *txakurre gure lagunêk ekarri dau*
   ‘OUR FRIEND brought the dog’

If the constituent in preverbal position contains an accented word, its accent will be heightened with respect to other accents in the sentence. The accent of a lexically unaccented word with sentence prominence is also perceived as more prominent than any other accents in the sentence. There is thus a sentence prominence rule which promotes one of the accents in the sentence (lexical or
phrase final), giving it a higher level of prominence. H*L pitch accents are assigned to all lexically accented syllables and also to the final syllable of a lexically unaccented word bearing sentence prominence. The pitch accent associated with the element which receives sentence prominence presents a more pronounced rise and drop than other accents, regardless of whether it coincides with a lexically assigned accent or with the final syllable of an unaccented word.24

In the first example in (23) the pitch rises from the second syllable, reaching its highest level on the syllable marked with a circumflex and immediately falling from this point. In the second example there is also a second, much less prominent, peak on the lexically accented auxiliary:

(23) a. gure lagunêk esan dau
    our friend.ERG SG say AUX
    ‘our friend said it’ (sentence accent on unaccented word)

b. gure lagûnek esan dabe
    our friend.ERG PL say AUX
    ‘our friends said it’ (sentence accent on accented word)

The focalized element may also be the verb itself, instead of on the preverbal constituent. In this case, the verb will receive sentence prominence:25

(24) a. gure lagunek esân dau ‘our friend did say it’

b. gure lagûnek esân dabe ‘our friends did say it’

When both the word in preverbal position and the participle bear lexical accents, contrasts in interpretation such as that in the following examples depend on the relative prominence of the two accents (similar contrasts obtain when the phrase in preverbal position contains a lexically accented word in non-final position or several lexically accented words):

(25) a. gure lagûnek esâten dabe ‘OUR FRIENDS say it’

b. gure lagûnek esâten dabe ‘our friends DO say it’

In Lekeitio, the Gernika example in (25 a) would be gure lagûnak esaten-dâbe, cf. fn. 23.

Sentence prominence must be assigned in every sentence. The sentences in (23) and (24) must be pronounced with one of the two patterns given; either the preverbal constituent or the verb must bear sentence prominence. There is
no other possibility. The same is true for the sentences in (25). Sentence prominence on the verb implies pragmatic focalization of this element, but sentence prominence on the preverbal constituent may represent a neutral context if the word order is the neutral one.

There are a number of complicating factors regarding focalization, whose detailed discussion falls outside of the scope of this chapter (cf. Hualde, Elordieta & Elordieta 1993, 1994). I will briefly mention only one such complication, which arises in sentences with synthetic verbs. All examples given so far in this subsection have been of sentences with analytic verbal expressions, consisting of a main verb and an auxiliary. In many varieties of this area, in sentences with synthetic verbs, we find the unexpected situation that, if the constituent in preverbal position contains only unaccented words and the verb is also lexically unaccented, sentence prominence falls on the verb when the preverbal constituent is focalized. That is, the synthetic verb is included in the prosodic phrase of the preceding constituent. Compare (26a) with an analytic verb and (26b), which contains a synthetic verb. Crucially, sentence (26c) is ungrammatical in the varieties in question. Focalization of the verb would involve the insertion of the affirmative particle $ba(i)$ (and normally a change in word order), as in (26d):

(26)    a. gixonâ etorri da  ‘THE MAN has come’
        b. gixona datôr    ‘THE MAN is coming’
        c. *gixonâ dator
        d. badatôr gixona  ‘the man IS coming’

Such prosodic incorporation of the synthetic verb into the phrase to its left does not take place, on the other hand, if either the preverbal constituent or the verb carries a lexical accent. In (27a) the word aittitita ‘grandfather’ is lexically accented and its accent surfaces as sentence accent. In (27b), the verb dôya ‘is going’ is lexically accented, which also prevents its incorporation to the preverbal phrase. Sentence accent thus falls on the last syllable of gixona. This creates an accent clash which may be resolved by the deletion of the second of the two adjacent accents in fast speech, as shown in (27c):

(27)    a. aittitita dator              ‘grandfather is coming’
        b. gixonâ doya                 ‘the man is going’
        c. /gixona doya^a/  
            Lexical accent         gixona dôya
            Sentence accent        gixonâ dôya
            Accent clash resolution gixonâ doya
966 José Ignacio Hualde

Word-level, phrase-level and sentence-level prosodic phenomena thus appear to be tightly linked in these northern Biscayan pitch-accent varieties.

14.2.2. Zeberio (Southwestern Biscayan)

This accentual subtype of western Basque differs at the surface level from those seen in the previous sections in the phonetic correlates of accentual prominence. In this area, we do not find the long stretches of high tone syllables that are characteristic of Northern Biscayan. Accented syllables are prosodically individualized with respect to both preceding and following syllables. In addition, both duration and pitch appear to be important phonetic cues for prosodic prominence (see Etxebarria Ayesta 1991b). Leaving aside these phonetic facts, however, this system has many points in common with the Gernika system. In particular, it shares the rule which states that in words with several accented morphemes only the first lexical accent is given surface prominence. The main difference between both systems has to do with the behaviour of inflectional suffixes.26

As in the Gernika system, uninflected words can be accented (because they contain an accented root or preaccenting inflectional or derivational suffix or because they are compounds) or unaccented. Unlike in the Gernika system, all inflected words are accented, i.e., all inflectional suffixes singular and plural bear a lexical accent (but singular and plural forms differ on the position of the accent):

(28) basérritar gaste-ári ‘to the young farmer’
    farmer young.DAT SG

bertzolari edérr-ari ‘to the beautiful verse-singers’
verse-singer beautiful.DAT PL

In (28) the uninflected word basérritar ‘farmer’ bears a lexically introduced accent on the second syllable, whereas bertzolari ‘verse singer’ does not carry accentual prominence on any syllable. Both gaste-á-ri and edérr-a-ri bear accents which are induced by the inflectional suffixes they carry; respectively, the dative singular and dative plural suffix. Both singular and plural inflectional suffixes thus induce accentual prominence, albeit on different syllables. The position of the accent introduced by an inflectional suffix depends on the number of syllables in the stem as well.
Consider the following partial paradigms of the words /mamarro/ ‘bug’ and /bertzolari/ ‘verse singer’:27

(29) /mamarro/ ‘bug’

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<th>Singular</th>
<th>Plural</th>
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<tbody>
<tr>
<td>ABS</td>
<td>mamarróa</td>
<td>mamárrroak</td>
</tr>
<tr>
<td>ERG</td>
<td>mamarróak</td>
<td>mamárrroak</td>
</tr>
<tr>
<td>DAT</td>
<td>mamarróari</td>
<td>mamárrroari</td>
</tr>
<tr>
<td>GEN + ABS SG</td>
<td>mamarróana</td>
<td>mamárrroana</td>
</tr>
<tr>
<td>GEN + DAT SG</td>
<td>mamarróanari</td>
<td>mamárrroanari</td>
</tr>
</tbody>
</table>

(30) /bertzolari/ ‘verse-singer’

<table>
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<th>Singular</th>
<th>Plural</th>
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</thead>
<tbody>
<tr>
<td>ABS</td>
<td>bertzolarie</td>
<td>bertzoláriek</td>
</tr>
<tr>
<td>ERG</td>
<td>bertzolariek</td>
<td>bertzoláriek</td>
</tr>
<tr>
<td>DAT</td>
<td>bertzolarieri</td>
<td>bertzolárieri</td>
</tr>
<tr>
<td>GEN + ABS SG</td>
<td>bertzolariena</td>
<td>bertzoláriena</td>
</tr>
<tr>
<td>GEN + DAT SG</td>
<td>bertzolarienari</td>
<td>bertzolárienari</td>
</tr>
<tr>
<td>BEN</td>
<td>bertzolarientzat</td>
<td>bertzolárientzat</td>
</tr>
<tr>
<td>COM</td>
<td>bertzolariegas</td>
<td>bertzoláriegas</td>
</tr>
</tbody>
</table>

The generalization that emerges from these data is that, in the singular, surface accentual prominence falls on the last syllable of the stem; whereas, in the plural, it falls on the penultimate of the stem.

The facts are different when words with monosyllabic or bisyllabic stems are considered. In these words, the accent falls one syllable further to the right than in (29) – (30). In the singular, the accent falls on the syllable containing the number marker /-a/ (realized as [e] when preceded by a high vowel). In the plural, instead, it falls on the last syllable of the stem:28

(31) /gixon/ ‘man’

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<th>Plural</th>
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<tbody>
<tr>
<td>ABS</td>
<td>gixoná</td>
<td>gixónak</td>
</tr>
<tr>
<td>ERG</td>
<td>gixonák</td>
<td>gixónak</td>
</tr>
<tr>
<td>DAT</td>
<td>gixonári</td>
<td>gixónari</td>
</tr>
<tr>
<td>GEN + ABS SG</td>
<td>gixonána</td>
<td>gixónana</td>
</tr>
<tr>
<td>GEN + DAT SG</td>
<td>gixonánari</td>
<td>gixónanari</td>
</tr>
<tr>
<td>BEN</td>
<td>gixonántzat</td>
<td>gixónantzat</td>
</tr>
<tr>
<td>COM</td>
<td>gixonágas</td>
<td>gixónakas</td>
</tr>
</tbody>
</table>
The simplest way to account for all these data seems to be to take as basic the pattern found in the singular of stems of three or more syllables. We will assume that the boundary introduced by inflectional suffixes marks the end of the accentual domain. Then, in the most basic case, the accent would fall on the last syllable of the accentual unit:

(34) (mamarró)-a-ri ‘to the bug, DAT SG’

If the stem is shorter, on the other hand, the accentual unit includes the singular marker /-a/. This can be understood as a sort of minimal domain effect:

(35) (gixon)-a-ri → (gixon-á)-ri ‘to the man, DAT SG’

(lurr)-e-ri → (lurr-é)-ri ‘to the land, DAT SG’

If the root contains one or two syllables, the singular morpheme is included in the accentual domain.

In the plural, there is a rule of retraction that places the accent one syllable to the left with respect to the singular. A way to capture this is to assume that the effect of the plural marker (represented with capitals) is to make the last syllable in the accentual unit extrametrical, or invisible for the accent rule\(^{29}\) (or, equivalently, that the boundary of the accentual domain is retracted one syllable). Extrametricality is represented by angled brackets in the following examples:\(^{30}\)
(36) (mamá〈rro〉)-ri ‘to the bugs, DAT PL’
(gixó〈n-A〉)-ri ‘to the men, DAT PL’

For interdialectal comparison, it is interesting to note that the number of con-
trasts in words containing more than one inflectional suffix is more reduced in
Zeberio than in the Gernika system, and that the pairing of meanings and
forms is different from the way it takes place in Lekeitio:

(37) Gernika Lekeitio Zeberio
  gixonanari gixonenari gixonânari ‘to the one of the man’
gixonánari gixonenári gixonánari ‘to the ones of the man’
gixónanari gixonenári gixónanari ‘to the one of the men’
gixónanari gixonenári gixónanari ‘to the ones of the men’

The reduction in the number of surface contrasts in Zeberio, when compared
with Gernika, is due to the fact that the first inflectional morpheme determines
the boundary of the accentual unit, both in the singular and in the plural,
whereas in Gernika (and Lekeitio), only the plural suffixes in the examples are
accented and singular morphemes do not carry lexical accents. Both in Gernika
and in Zeberio the location of the surface accent is determined by the position
of the first lexically marked morpheme. In Lekeitio, on the other hand, the
presence of lexically accented morphemes is signaled by penultimate promi-
nence.

14.3. The Central type

14.3.1. Oñati

In a large area, extending over parts of the provinces of Biscay, Gipuzkoa
and Navarre, one finds accentual systems whose main characteristic is that
prominence is regularly assigned to the second syllable; although in some
marked cases the accent falls on the initial syllable. Here we will examine
the accentual patterns of the variety of Oñati in southwestern Gipuzkoa (but
considered to belong to the Biscayan dialect)\(^\text{31}\) to illustrate this type of system.

In Oñati, the regular accentual pattern in words whose stem contains three
or more syllables is accent on the second syllable. Unlike in the systems consid-
ered in § 14.2, in Oñati inflectional suffixation does not have any effects on
accentuation. A given word is accented on the same syllable in all forms of its
inflectional paradigm. Examples are given of nominals in their uninflected form and their absolutive singular form.\textsuperscript{32}

(38) Uninflected ABS SG
abáre  abária  ‘priest’
aláka  alákia  ‘sawdust’
abráilla abráillia ‘sling’
aábixa  aábixia  ‘nest’
burdiña  burdiña  ‘iron’
errósién  errósién  ‘a childhood illness’

With bisyllabic stems, on the other hand, the regular pattern is for the accent to fall on the initial syllable of the uninflected form and the second of longer, inflected forms:

(39) Uninflected ABS SG
bába  babía  ‘bean’
gizón  gizóna  ‘man’
ágiñ  agíña  ‘tooth’
álzxo  altzúa  ‘lap’
ágo  agúa  ‘mouth’
árgal  argála  ‘thin’
gérri  gerrixa  ‘waist’

Besides the patterns illustrated in (38) and (39) there is a smaller group of bisyllabic and longer stems with initial accent in all forms:

(40) Uninflected ABS SG
áje  ájia  ‘illness’
ánka  ánokia  ‘leg’
séme  sêmia  ‘son’
diru  dirua  ‘money’
izar  izarra  ‘star’
ántzar  ántzarra  ‘goose’
éguen  éguena  ‘Thursday’
idola  idolia  ‘bad weather’
ángixo  ángixua  ‘hedge’
arbola  árbelia  ‘tree’
dénpora  dénporia  ‘time’
Stress is also initial in words whose stem is monosyllabic, regardless of the number of syllables that the entire word with inflectional suffixes may have:

(41) lur ‘land, uninfl.’
lurra ‘the land, ABS SG’
lurra ‘the lands, ABS PL’
lurra ‘to the land, ALL SG’
lurrera ‘to the lands, ALL PL’

Many derived words with a monosyllabic root also present initial accent:

(42) bi ‘two’
bigarrena ‘the second one, ABS SG’
baltz ‘black’
baltzagua ‘blacker, ABS SG’

We must conclude that the basic rule of accent assignment assigns accent to the second syllable. Now, the fact that words with monosyllabic roots have initial accent indicates that the stem (from which many derivational suffixes are also excluded), and not the whole word, is the domain of accent assignment.

One possible analytical means for obtaining regular post-initial accent is to make the first syllable extrametrical and to assign the accent to the first metrical syllable, (43a). The extrametricality condition fails to apply when its application would make the whole domain extrametrical (in monosyllabic domains), (43b).

(43) a. * * b. *
<*> * * * *
[erresien] a [baltzagua]

A second case where the extrametricality clause fails to apply is when the accent would otherwise fall on the last syllable of the word. A principle of avoidance of word-final accent is thus more important in the system than the application of initial extrametricality. This results in the shifting pattern observed with regular bisyllabic stems:

(44) * * *
* * <*> *
[baba] [ba bi]a
Finally, exceptional items such as those in (40) are lexically marked exceptions to the extrametricality clause.

The analysis can thus be summarized as follows:33

(45) Oñati accentual algorithm

a. The accentual domain is the stem.

b. Word-final accent is avoided.

c. The initial syllable is extrametrical, unless
   - this would make the whole domain extrametrical, or
   - it would cause a violation of (b), or
   - the item is lexically marked as an exception.

d. Assign an accent to the first metrical syllable.

The dialect of Oñati has preserved certain sequences of identical vowels that are reduced in nearly all other Basque varieties: /neska-ak/ neskåak ‘the girls’, /alaba-ak/ alåbaak ‘the daughters’. Geminate vowels count as two moras for the assignment of accent, as shown by examples such as aåbixa ‘the nest’, with regular accent on the second syllable. Younger speakers of this dialect present an interesting interaction between accent and length. In the speech of the younger generations, these long or geminate vowels are preserved only if one or the other of the adjacent identical vowels bears the accent. Otherwise, they are reduced to a single vowel. These speakers thus have /neska-ak/ neskåak, but /alaba-ak/ alåbak. That is, vowel length depends on accent.

14.3.2. Other Gipuzkoan varieties with post-initial accentuation

Some other varieties with essentiality post-initial accent differ from Oñati in that words with monosyllabic stems are not treated differently from other words; that is, accent may fall beyond the stem (e.g.: lürr-a ‘the land, ABS SG’, lurr-éra ‘to the land, ALL SG’). In these varieties, thus, the accentual unit is not restricted to the stem. In addition, in some Gipuzkoan varieties, the accent falls on the initial syllable in the plural of words with monosyllabic and bisyllabic stems, as in (46 a), but not with longer stems, as shown in (46 b). The phrase-final syllable is also frequently given prominence (cf. Hualde 1991a: 172–173). For clarity the stem is separated from the inflexional suffix by a hyphen:
These facts are reminiscent of the singular/plural distinction in systems of the Western type and, without a doubt, there is a historical connection. The synchronic treatment of the facts cannot be the same, however, since the basic accentuation principle is rather different. Since accentual prominence is assigned from the left edge in these dialects, this retraction in the plural can be treated as morphophonologically-induced exceptionality to the extrametricality clause in the analysis given above for Oñati.

In some other varieties of Gipuzkoa and Biscay, especially along the boundary of the Basque-speaking area, the accent normally falls on the second syllable of the word or phrase and the final (or penultimate) syllable of the prosodic phrase is also given prominence (e.g.: emakumea ‘the woman’, emakumea da ‘it is the woman’, etxe noa ‘I am going home’, lagun onak dira ‘they are good friends’); but the position of the accent is not phonologically contrastive. That is, in these varieties, there are no lexical or morphological exceptions to the general rule, all words being accented in exactly the same manner. Many younger (urban) speakers also employ systems of this type in areas where older speakers have more complex systems of the Central or even the Western type.

14.3.3. Bidasoa Valley

Traditionally, the varieties of the Bidasoa Valley, between Gipuzkoa and Navarre, have been thought to display a quite distinctive accentuation (Larramendi 1729; Azkue 1931–1932; Michelena 1972). The varieties of this area are indeed characterized by some striking stress-related “epiphenomena” (Michelena 1972), involving the reduction and deletion of unstressed vowels. The accent of each word within the phrase is also more clearly perceptible than in varieties more to the west (where, as mentioned, some accent rules apply at the phrase level). Nevertheless, the basic accentual patterns are essentially the same as in Oñati and other Central varieties. Stress-accent normally falls on the second syllable of the stem: mendı́-a ‘the mountain, ABS’, impörtantzi ‘importance’, armóni-rik ‘harmony, PART’, madārikatu ‘damned’. The accent is initial when the stem is monosyllabic: lurr-etik ‘from the land’, cf. mendi-tik
‘from the mountain’. Some exceptional stems also present initial accent: *buela*-ka ‘turning around’, *besta* ‘holiday’, *txistu*-a ‘the flute’ (cf. *listu*-a ‘the saliva’). A difference with respect to the Oñati system described above is that there is no ban against word-final accent: *laú mendi* ‘four mountains’, *laú zakúr* ‘four dogs’ (cf. Hualde 1991a: 173–174; Holmer 1964): The accentual algorithm is thus the same as that given above in (45), minus the clause in (b).

14.4. The Hondarribia type

In Hondarribia, as in the varieties of the Bidasoa Valley just reviewed, the accentual unit is the inflectional stem. Inflectional suffixes do not have any influence on the assignment of accent. A given word bears the accent on the same syllable in the singular and the plural throughout the declensional paradigm. A difference between the Bidasoa and the Hondarribia systems is that, whereas in the Bidasoa type (and other varieties of the Central accentual type) the accent always falls on one of the first two syllables, in Hondarribia accent assignment must be computed from the right edge of the stem. The following generalizations obtain in the Hondarribia type:36

(47) Hondarribia

a. If the stem is monosyllabic, the accent falls on its only syllable, i.e., on the initial syllable of the word. (The stem is separated from the inflection by a hyphen.) E.g., *árr*-a ‘the worm, ABS’, *árr*-akentzat ‘for the worms, BEN’, *án*-dikan ‘from there, ABL’, *ón*-erako ‘for the good’, *luúr*-era ‘to the land, ALL’, *luúr*-etikan ‘from the lands, ABL’.

b. If the stem is bisyllabic, the accent falls on the second syllable. E.g., *kató* ‘cat’, *katú*-a ‘the cat, ABS’, *katú*-akentzat ‘for the cats, BEN’, *lagúin*-ari ‘to the friend, DAT’, *lagúin*-akeri ‘to the friends, DAT’, *mendi*-ra ‘to the mountain, ALL’, *mendi*-yan ‘in the mountain, INESS’. There is nevertheless a relatively large group of exceptions with initial accent. E.g., *beste* ‘other’, *bести*-a ‘the other, ABS’, *báso*-ra ‘to the glass, ALL’, *básu*-an ‘in the glass, INESS’, *tóki*-ra ‘to the place, ALL’, *tóki*-yan ‘in the place, INESS’.

c. If the stem has three or more syllables and ends with a vowel, the accent falls on the penultimate of the stem. E.g., *txistulári*-ya ‘the flautist, ABS’, *txistulári*-akentzat ‘for the flautists, BEN’, *atara*-méndu-a ‘the result, ABS’, *itxúsi*-ya ‘the ugly one, ABS’, *konparaziyo
'comparison'. There are some exceptions: děnbora ‘time’, múskillu-a ‘the mussel, ABS’, karnizeri ‘butcher’s’.
d. If the stem has three or more syllables and ends with a consonant, the accent falls on the last syllable of the stem. E.g., euskaldún-a ‘the Basque person, ABS’, irabaztún ‘winner’, aberáts-a ‘the wealthy one, ABS’, kazkalabárr-a ‘the hail, ABS’.
e. In compounds, each member carries an accent. E.g., egá-luxí-a ‘the tuna fish, ABS’, lit. ‘long fin’. This also applies to some derivational formations.

From these generalizations, two properties of the system are apparent; (a) the accentual domain is the stem and (b) accent is assigned counting from the right end of this domain. That the domain of accentuation is the stem is clear from the fact that words with monosyllabic stems unexceptionally have initial accent. That, for accent assignment, syllables are computed counting from the right end, follows from the patterns found in words whose stem has three or more syllables. Furthermore, if the accentual domain contains three or more syllables, it matters whether the final syllable ends in a vowel or in a consonant, but not in shorter units.37 Given the patterns found in trisyllabic and longer units, the rule must be quantity-sensitive. The lack of quantity-sensitivity effects with bisyllabic stems can be obtained by restricting the domain to non-initial syllables; that is, by making the initial syllable extrametrical (except when the whole domain would become extrametrical, i.e., with monosyllabic stems):

\[
\begin{align*}
(48) \quad & \text{Hondarribia accentual algorithm} \\
& \text{a. The accentual domain is the stem.} \\
& \text{b. The initial syllable is extrametrical.} \\
& \text{c. Build a quantitative sensitive left-headed foot (a moraic trochee) at the right end of the word.}
\end{align*}
\]

This is essentially the analysis that Hayes (1980) proposes for Hopi, but with opposite directionality.38 The following examples illustrate the analysis:

\[
\begin{align*}
(49) & \quad * & * & * \\
& \langle VC \rangle & \langle VC \rangle & (V) & \langle VC \rangle s & V & (V V) \\
& \text{[lurr]a} & \text{[men di]ya} & \text{[txis tu la ri]yakentzat} & * \\
& \langle VC \rangle & V & V & (VC) \\
& \text{[kaz ka la barr]a}
\end{align*}
\]
Words like *bás,o* ‘glass’, with initial accent, are exceptions to the extrametricality rule.

### 14.5. The Northern High Navarrese type

In most of the Basque-speaking area of Navarre, accentuation is non-contrastive. The accent normally falls on the penultimate syllable of the word (Michelena 1972), as in the following examples, from the variety of the Baztan Valley (Salaburu 1984: 307–317, cf. also Hualde 1991a: 176): *étx[e]la* ‘the house’, *gizó,na* ‘the man’, *gizó,nak* ‘the men’, *gizonaré,kin* ‘with the man’, *gizonare,ndáko* ‘for the man’, *hemezortzigarré,na* ‘the eighteenth’. Uninflected consonant-final words may optionally receive final accent: *lau gizon* ~ *lau gizón* ‘four men’. For pragmatic or sentence-level reasons, the accent may sometimes fall on a syllable other than the penultimate.

A similar system is found in the Ultzama Valley (Izagirre 1966; Ibarra 1994). In this dialect too, words are generally accented on the penultimate syllable: *goró,sti* ‘holly bush’, *gorostí,e* ‘the holly bush’; but uninflected words ending in a consonant or glide always receive final accent (not only optionally as in Baztan): *e,gún* ‘day’, *o,karán* ‘plum’, *amorrái* ‘trout’. Inflected words have penultimate accent regardless of their ending: *gorostiek* ‘the holly bushes’, *okaráná* ‘the plum’, *okarának* ‘the plums’. We may conclude that this is a quantity-sensitive system, where, nevertheless, the final consonants of suffixes do not add weight. Another interesting property of this dialect is that stem-final mid vowels become glides when followed by a vowel-initial suffix; but stem-final high vowels do not glide. This results in a contrast in accentuations: *séme* ‘son’, *sém[e]la* ‘the son’, *ást,o* ‘donkey’, *ást[w]a* ‘the donkey’ vs. *ógi* ‘bread’, *ogí,e* ‘the bread’, *lárru* ‘skin’, *lárrue* ‘the skin’. Accent assignment thus operates on the output of the glide-formation rule affecting mid vowels.

Other descriptions of varieties with penultimate accent spoken Navarre include Michelena (1967, 1976), for the variety of Salazar.

### 14.6. The Southern High Navarrese type

In an area of western Navarre close to the present-day southern boundary of the Basque language (Sakana Valley), we find varieties where primary accent generally falls (noncontrastively) on the initial syllable and a secondary accent falls on the last syllable of the phrase; e.g., *kárriká* ‘street’, *kárrikè,k* ‘streets’. 
In words of four or more syllables, the primary accent may fall on either the first or the second syllable; e.g., \textit{arbizuarra} or \textit{arbizuarrà} ‘person from Arbizu’ (cf. Hualde 1991: 173). There are no accentual oppositions. It is not clear whether the alternation between initial and post-initial accent serves pragmatic or rhythmic functions in these varieties.

In the neighbouring dialects of Basaburua and Imoz, the unmarked pattern is as just described for Sakana; but words inflected in the plural present a different accentual pattern. According to Ibarra (1994), who presents extensive instrumental evidence, in the singular the primary accent falls on the first or second syllable and a secondary accent on the last syllable. In the plural, on the other hand, primary accent falls on the syllable that contains the plural suffix, which may be the last or the penultimate syllable of the word:

(50) Singular Plural
\begin{tabular}{lll}
\text{gizonàk} & ‘the man, ERG’ & gizonák & ‘the men, ABS/ERG’ \\
\text{emákumèk} & ‘the woman, ERG’ & emakumèk & ‘the women, ABS/ERG’ \\
\text{emákumiri} & ‘to the woman, DAT’ & emakumiri & ‘to the women, DAT’ \\
\text{emákumeekin} & ‘with the woman’ & emakumeénzat & ‘with the women’ \\
\text{emákumeentzàt} & ‘for the woman’ & emakuméntzat & ‘for the women’ \\
\end{tabular}

Notice that, unlike in the Biscayan and Gipuzkoan varieties of the Western and Central types, in these Navarrese varieties the primary accent is located further to the right in the plural than in the singular.

We may conclude that, whereas in the unmarked case primary accent is assigned with respect to the left boundary of the word, the plural morpheme bears a lexical accent, which takes precedence over the regular rule of accent assignment.

14.7. The Labourdin/Low Navarrese type

Not much is known about the accentual systems employed in the Labourdin and Low Navarrese area. Accent is noncontrastive in these dialects and appears to be assigned at the phrasal level (as in French), rather than at the word level (Gavel 1920: 108). Nevertheless, this situation seems to be relatively recent, at least in part of the area. From Michelena’s (1972) study of the system of orthographic accentuation in the writings of the 17th century Labourdin author
Pierre D’Urte, it can be concluded that a system very close to that nowadays used in Hondarribia (cf. § 14.3) was employed along the Labourdin coast not too long ago. On the other hand, the 16th century writer Johannes Leiçarrague (or Leizarraga), born in Briscous (Beraskotze) in the Labourdin/Low Navarrese interior, used a system related to that of present-day Souletin (LaFon 1935).

14.8. The Souletin/Roncalese or Eastern type

14.8.1. Souletin

In Souletin the accent falls normally on the penultimate syllable; but there is a marked pattern with final accent. The unmarked and marked patterns are exemplified in (51) with uninflected words:


Words ending in a falling diphthong, such as ax[új] ‘lamb’, er[ój] ‘raven’, are also accented on the final syllable. However, they do not constitute true examples of the marked oxytonic pattern, since such diphthongs are not underlying (glides and high vocoids do not contrast). Such words belong to the regular paroxytonic pattern, assuming that accent assignment precedes glide formation /eroi/ → eroi → [erój].

Some derivational suffixes such as the diminutives/affectives -nî and -xkot trigger final accent, (52a). Others such as the diminutive -tto or -dün ‘having’ do not, (52b):

(52) a. aitañî ‘grandfather’ (cf. áita ‘father’), aphalñî ‘very low’ (cf. áphal ‘low’), alborxkòi ‘little field’ (cf. álor ‘field’).

b. berdétto ‘a little green’ (cf. bérdë ‘green’), gosètto ‘a little hungry’ (cf. göse ‘hungry’), frûtadün ‘bearing fruits’ (cf. frûta ‘fruit’), sargadün ‘having poles’ (cf. sarga ‘pole’).
In inflected words the accent moves to the penultimate syllable of the word, as in the following examples for /gizun/ ‘man’:

(53) Uninfl. gı´zun
    ABS SG gizúna
    DAT SG gizunái

All plural suffixes, with the exception of the absolutive plural, trigger final accent, as can be observed in the following partial paradigm for the word /mithil/ ‘servant’:

(54)         Singular       Plural
         ABS mithíla       mithílak
         ERG mithílak       mithilék
         INST mithílaz       mithiléz
         DAT mithiláí       mithilér
         GEN mithiláen    mithilén

Historically, final accent in plural forms other than the absolutive appears to have resulted from the contraction of a sequence of two vowels. Synchronically, however, the relevant plural suffixes must simply be treated as lexically marked.

To summarize the data so far, the regular pattern in Souletin is penultimate accent; but there are lexically marked morphemes, including roots, derivational suffixes and inflectional suffixes, that trigger final accent when placed in word-final position.

A possible analysis would be to make the final syllable extrametrical and to assign an accent to the last metrical syllable:

(55) Souletin accentual algorithm
    a. The accentual domain is the word (stem + inflection).
    b. The final syllable is extrametrical.
    c. Assign an accent to the last metrical syllable.

Marked morphemes would constitute exceptions to the extrametricality condition, as in the following derivations, where lexically marked morphemes are capitalized in underlying representation:

---

40
(56) Underlying Extrametricality Final accent
kabale kaba(le) kabá(le) ‘livestock’
BUHADE _______ buhadé ‘bellows’
aita-ÑI _______ aitañí ‘grandfather’
berde-tto berde(tto) berdé(tto) ‘a little green’
gizun-a gizu(ña) gizú(ña) ‘man, ABS SG’
gizun-E-k _______ gizunék ‘men, ERG PL’

Besides falling diphthongs, other cases of syllable contraction also result in surface final accentuation. In particular, certain inflected forms of stems ending in the vowel /a/ show final accentuation, as shown in the following examples for /arolla/ ‘ditch’:

(57) Indefinite Singular Plural
ABS arólla aroller arollák
ERG aróllak aroller arollok
INST aróllaz arollerzá arolloz

The accentual contrast between the indefinite forms, on the one hand, and the singular and absolutive plural, on the other, is due to the presence of an underlying sequence of two low vowels in the second case. This is shown in (58) where the absolutive indefinite and singular forms of /mendi/ ‘mountain’ and /arolla/ ‘ditch’ are compared:

(58) ABS INDEF ABS SG
/mendi/ /arolla/ /mendi-a/ /arolla-a/
Stress méndi arólla mendía arolloá
Contraction _______ _______ _______ _______
In contrast, for the variety of Eskiula (Esquiule), Gaminde (1995b) gives the forms *gizúnaintako* ‘for the man’ and *gizunentako* ‘for the men’, which show that in this variety the suffix */-tako/* is an accentless clitic (i.e., outside the domain of accentuation and not undergoing accent assignment).

Finally, compounds constitute two separate accentual domains. Generally, each member of the compound receives its own accent and the first accent is subordinated to the second, as in *álbor-lán* ‘fieldword’, *égür-bide* ‘timber-trail, trail for transporting timber’.

It should be noted that for Souletin we can easily reconstruct a historical stage when the accent was consistently penultimate, since, leaving aside borrowings and a few native stems, all oxytonic exceptions to this pattern either involve morphologically complex stems with a monosyllabic last member (e.g., *aita-ni* ‘grandfather’) or arose by contraction of adjacent vowels, e.g., *alhabaa > alhabá* ‘the daughter’, *gizona*(g)ek > *gizonék* ‘the men, erg’ (Michelena 1977: 408).

### 14.8.2. Roncalese

The Roncalese accentual system is historically related to that of Souletin, but it presents further complications. In Roncalese, uninflected forms can be accented on any of the last three syllables. The unmarked pattern is penultimate accent:

\[
\begin{align*}
\text{méndi} & \quad \text{mountain},
\text{gizon} & \quad \text{man},
\text{mitil} & \quad \text{boy, servant},
\text{ésku} & \quad \text{hand},
\text{bélar} & \quad \text{grass},
\text{óxal} & \quad \text{cloth},
\text{marzúza} & \quad \text{strawberry},
\text{katréra} & \quad \text{chair},
\text{argizági} & \quad \text{moon},
\text{baratxúri} & \quad \text{garlic}.
\end{align*}
\]


Inflectional suffixes, with the exceptions that will be mentioned, do not affect
the accent of the stem (and may receive a second accent). In general, thus, the
accidental pattern of the stem remains unchanged when it is followed by inflec-
tional suffixes (unlike in Souletin):

‘DAT SG’.
bézino ‘neighbour’, bézinua ‘ABS SG’.
‘ALL SG’.
lúr ‘land’, lúriara ‘ALL SG’.
mayorál ‘head shepherd’, mayorál’a ‘ABS SG’, mayorálentako ‘BEN
SG’.

Inflectional suffixes thus appear to be outside of the accidental domain of the
stem. However there are two cases where inflectional suffixes modify the posi-
tion of the accent. First of all, as in Souletin, plural suffixes other than the
absolutive (that is, those containing the vowel /e/, which may be considered a
number marker) attract the accent to themselves:

(62)  gizón ‘man’
gizónák ‘ERG PL’
gizónentako ‘BEN PL’
artzái ‘shepherd’
tagayéki ‘COM PL’
zámari ‘horse’
zamariék ‘ERG PL’

Secondly, and also similarly to what happens in Souletin, with stems ending in
a low vowel the accent shifts to the syllable resulting from the contraction of
the stem-final vowel and the initial vowel of a singular morpheme or the abso-
lutive plural:

(63)  /alaba-a/ alabá ‘daughter, ABS SG’
/arropa-ak/ arropák ‘clothes, ERG PL’
/karrika-a-n/ karrikán ‘street, INESS SG’
/azienda-a-ra/ aziendára ‘livestock, ALL SG’
/azienda-a-reki/ aziendáreki ‘livestock, COM SG’
Whereas the exceptional patterns triggered by plural suffixes with /e/ and with inflected stems ending in /a/ can be accounted for in a relatively simple manner in the Souletin system, in Roncalese, the parallel facts that obtain in these contexts are harder to capture.

The examples in (61) show that inflectional suffixes are normally outside of the accentual domain of the stem. In this domain, accent is assigned to the penultimate syllable, unless a different syllable is lexically marked as accented. The plural suffix /é/ must be underlyingly accented and must also be exceptionally included in the accentual domain. If the root is accentually marked, a rule would determine that the accent that gets realized is the one introduced by the plural suffix (i.e., the rightmost accent):

\[
\begin{align*}
/gizon-a/ & \quad (gizon)a \\
/gizon-é-k/ & \quad (gizonék) \\
/zámari-é-k/ & \quad (zamariék)
\end{align*}
\]

As for the accentual behaviour of stems ending in a low vowel it does not seem that these facts can follow from the general properties of this accentual system. An exceptional operation must be postulated for this case. One possible interpretation is that the suffix /-a/ is exceptionally included in the accentual domain when a sequence of identical vowels obtains. Regular penultimate accent in this domain followed by contraction produces the attested patterns:

\[
\begin{align*}
/\text{alaba-a/} & \quad (\text{alaba}á) \rightarrow \text{alabá} \\
/\text{azienda-a-reki/} & \quad (\text{aziendá}a)\text{reki} \rightarrow \text{aziendáreki}
\end{align*}
\]

14.9. Summary and conclusions

It should be evident from the data that have been presented that it is not possible to speak of a Basque accentual system, or even of general accentual characteristics that may be valid for all Basque dialects. Rather, accentual systems with very different properties are found in different Basque varieties. In fact, accentuation appears to be one of the phonological aspects in which the greatest differences are found among Basque varieties. In this chapter we have discussed the following accentual systems:

1) Western type: distinction between accented and unaccented words. Most words are unaccented and are only subject to phrase-final accentuation. In accented words (those containing accented morphemes) one of the two
following rules applies: (a) General subtype (Gernika): The first underlying accent determines the position of the syllable with surface prominence. Accentuated suffixes are generally preaccenting. (b) Lekeitio subtype: If the word contains one or more accented morphemes, the penultimate syllable receives accentual prominence.

2) Central type: Unmarked accent on the second syllable. Exceptional accent on the initial syllable.

3) Hondarribia type: If the stem has three or more syllables, in the unmarked case, the accent falls on the final syllable of consonant-final stems and on the penultimate of vowel-final stems. If the stem is bisyllabic, the accent falls on the second syllable regardless of syllable-structure.

4) Northern High Navarrese type: Accent on the penultimate syllable of the word; noncontrastive.

5) Southern High Navarrese type: Accent on the first or second syllable. In some varieties, there is also a marked pattern with accent on the syllable containing the plural suffix (the final or penultimate syllable) in plural words.

6) Labourdin/Low Navarrese type: Only phrase-level prominence.

7) Souletin/Roncalese or Eastern type: Regular penultimate accent. Exceptional accent on the final syllable. In Roncalese there is also antepenultimate accent.

A question that naturally arises is whether the present diversity of accentual systems is reducible to a greater uniformity in the past. Although many details remain to be elucidated, there are indeed strong bases for certain speculations in this direction. In Hualde (1993a), I tried to demonstrate that the Western type may have derived from an earlier system either without word-level accentuation (as in French) or with unexceptional word-final accentuation. Word-level accentuation would have become contrastive in such a system as a consequence of a compound-accent rule and the adoption of a great number of borrowings from Latin and Romance with preservation of their accentual patterns.

It has been mentioned already that post-initial accentuation (which we have taken as definitory of the Central type) has been a rather recent development from systems of the Western type in a number of localities. In the Bidasoia area, on the other hand, post-initial accentuation appears to continue an old situation. In any case, all these systems together with the one found in Hondarribia and, formerly, in coastal Labourdin give the strong impression of being histori-
cally related. The main reason for this is that there is a high degree of agreement among the varieties of this whole area regarding which specific items present an anomalous or marked accentual pattern, as Michelena (1977: 391, 587) points out (cf. also Hualde 1994). For instance, words such as béste ‘other’ or auurre ‘front’ present a marked accentual pattern in this whole area. Regarding Souletin, it was noted above that its accentual system can easily be reconstructed to a stage where the accent fell unexceptionally on the penultimate syllable.

In this chapter, I have tried to summarize our state of knowledge regarding the main accentual types found in the Basque-speaking territory.

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Notes

1. The Basque-speaking territory has been reduced considerably in the last centuries, especially along its southern boundary. However, the process of language loss appears to have stopped and shows some signs of being reversed in the Autonomous Community of the Basque Country and perhaps also in Navarre.

2. Although perfect mutual understanding among speakers of different dialectal backgrounds may require some accommodation period. When speakers of distant dialects have been brought together for an extended time, as has happened in the western United States, this has sometimes resulted in mixed varieties (cf. Amorrortu 1994). Traditional communication practices among speakers of different dialects are, however, in the process of being radically altered thanks to the recent development and spread of a common standard language. What kind of effect the standard language may have on the local varieties is something that remains yet to be seen.

3. References on Basque accentuation in general or containing more or less extensive overviews include Michelena (1958, 1977), Txillardegi (1985) and Hualde (1991a: ch. 6).

Larramendi argues that, unlike in Latin, stress in Spanish is not sensitive to syllable quantity, noting the existence of paroxytonic words with a light penultimate, such as caballéro, on the one hand, and of proparoxytones with a heavy penultimate, such as limiste and Frómist, on the other. This is the same view defended by Roca (chapter 10, this volume).

5. These fundamental frequency tracings, which correspond to a speaker from the town of Getxo, are from Hualde & Bilbao (1992) and were obtained by Grzegorz Dogil. The final rise that appears on the last syllable of the utterance in all the figures (the copula da in every case) is an intonational feature of the variety of Getxo and is not found in other Northern Biscayan varieties.

6. It is not known whether, in addition to fundamental frequency, there are also other correlates of accent in these Basque varieties. In any case, accented syllables bear an invariant tonal configuration.

7. These tracings are from a Lekeitio speaker and were obtained using the CECIL speech analysis system (adapted from Hualde, Elordieta & Elordieta 1994).

8. The data in this and following subsections are from the varieties spoken in the area around the town of Gernika, unless otherwise indicated.

9. Spelling: s = voiceless apico-alveolar fricative; z = voiceless predorso-alveolar (laminal) fricative; x = voiceless prepalatal fricative [ʃ]; ts, tz, tx are the corresponding affricates; ź = voiced prepalatal fricative; j = voiceless velar fricative (Spanish j); rr = rhotic trill; l = palatal lateral; n = palatal nasal; tt = voiceless palatal stop.

10. The following abbreviations are used: ABL(ative), ALL(ative), ABS(olutive), BEN(e-factive), COM(itative), DAT(ive), ERG(ative), GEN(itive), GEN(itive)-LOC(ative), INDEF(inite), INESS(ive), INST(rumental), PART(itive), PL(ural), uninfl(ected), SG (singular).

11. Lists of derivational suffixes with indication of their accentual properties can be found in Hualde & Bilbao (1992) for the variety of Getxo, and Hualde, Elordieta & Elordieta (1994) for the variety of Lekeitio. As pointed out in Hualde & Bilbao (1993), analyzed in this manner, this system presents important similarities with the Turkish accentual system, as described in Halle & Kenstowicz (1991) (cf. also the analysis of Turkish in chapter 1).
17. In this variety phrase-final accent falls on the penultimate, rather than the final syllable. Historically, there might be a connection between this phenomenon and the leftward shift of lexical accents (the functional motivation being the avoidance of homonymy).

18. In addition to this type of case, there are also apparent cases of preaccentuation triggered by vowel deletion (cf. Hualde & Bilbao 1993).

19. Lekeitio is situated on the Biscayan coast. The main properties of the Lekeitio accentual system were first described by Azkue (1923, 1931–1932), although this author attributes a greater geographical extension to this system than it really has. In fact, Azkue, a native of Lekeitio, thought that he was providing a description of the “general Basque accentual system” when in reality his description follows closely the particularities of the Lekeitio variety. This oversight, incidentally, has caused some serious misunderstandings among Basque linguists. A detailed description of this dialect, including its accentual system, can be found in Hualde, Elordieta & Elordieta (1994); cf. also Hualde (1991a: 159–166). The neighbouring variety of Ondarroa is studied in Rotaetxe (1978a, 1978b) and in Hualde (1995a).

20. Bracket notation was introduced above for the specific problem of representing preaccentuation, a phenomenon which does not occur in Lekeitio.


22. As mentioned above in fn. 6, in addition to tone, other physical properties may also play a role as accentual correlates. A HL melody is, nevertheless, both a necessary and a sufficient condition for marking a syllable as accented.

23. The circumflex accent mark indicates sentence accent, see next subsection. The shifting of lexical accents to the penultimate syllable of the word in the Lekeitio system has the consequence that we can easily determine what constitutes a prosodic word (see chapter 2). Interestingly morphological and prosodic words do not always coincide. One such mismatch occurs in verbal expressions. Participle and auxiliary are separate morphological words, as shown, for instance, by the fact that they are inverted in negative sentences; however, they behave as a single prosodic word for the lexical accent rule. In a sentence such as $\text{gixo}^\circ\text{na} \text{ko} \text{d}^\circ\text{r}^\circ\text{a}$ ‘THE MEN will come’ the accent introduced by the future suffix /-ko*/ surfaces on the penultimate of the expression formed by participle and auxiliary. However, if the verb is focalized, it constitutes an independent prosodic word: $\text{gixo}^\circ\text{na} \text{ko} \text{d}^\circ\text{r}^\circ\text{a}$ ‘the men WILL come’. The lexical accent rule, which places an accent on the penultimate of the prosodic word, is thus sensitive to focus assignment, a sentence-level phenomenon.

24. Sentence accent and focus are studied in detail in Hualde, Elordieta & Elordieta (1994) for the dialect of Lekeitio. The examples in the text correspond to the more general Gernika type.

25. The auxiliary form $\text{da}^\circ\text{be}$ carries a lexical accent, but this accent is eliminated in the example in (23b) by a rule of accent clash resolution.

26. This section is based on Hualde (1992). See also Etxebarria Ayesta (1991a, 1991b). A very similar accentual system to that of Zeberio is found in the area around Azpeitia, in Gipuzkoa (cf. Hualde 1993c).

27. Indefinite forms, which are not illustrated, follow the same accentual pattern as the singular (cf. Hualde 1992).

28. This variety has a rule of prepausal retraction which causes oxytonic words to appear with penultimate accent before pause; e.g., $\text{gixo}^\circ\text{na} \text{d}^\circ\text{a}$ ‘it is the man’, but
gixóna ‘the man’ (cf. the corresponding plural gixónak dire ‘(they) are the men’, gixónak ‘the men’, with penultimate system in both cases). The contrast between oxytonic and paraxytonic words is thus lost in prepausal position. The forms that are given in the examples are non-prepausal.

29. As Jennifer Cole has suggested to me.

30. A reviewer suggests an alternative analysis involving extrametricality on the left. In this analysis, singular suffixes would be preaccenting provided there is a syllable to their left and, otherwise, would bear the accent on themselves. In words whose stem contains two or more syllables, the first two syllables (first foot) would be made extrametrical: <mama>rró-ari, <gixo>n-ári (accent on suffix). With monosyllabic stems only the first syllable would be extrametrical: <lu>rréri. In the plural, a retraction rule would apply in every case, overriding extrametricality. I see no reason to prefer this analysis.

31. The generally accepted classification of Basque dialects is fundamentally due to Bonaparte (1863, 1869, among other works).

32. The examples are all from the vocabulary in Izagirre (1970). I want to thank Amaia Erostárbe for confirming the data and providing additional information. A less complete description of this accentual system than the one given in the text is found in Hualde (1991a: 170–172). Some observations on this system are also found in Michelena (1976) (which primarily deals with a different dialect). The variety of Elorrio, described by Jansen (1992), appears to have the same rules of accentuation. As for the phonetic manifestation of accentual prominence, Jansen claims that prosodic prominence is invariably associated with a high tone. Across intonational contexts, in items regularly accented on the second syllable, this syllable always presents a higher pitch than the first syllable of the word. Unlike in the northern Biscayan varieties, on the other hand, the high tone on the accented syllable is not necessarily followed by a low on the posttonic syllable. Rather, the tone of following syllables is determined by the intonational context.

33. An alternative analysis would be to build an iamb at the left edge of the accentual domain, except that a trochee is built instead (a) to avoid violating the nonfinality principle (the accent cannot fall on the last syllable of the word) and (b) with lexically marked exceptional stems.

34. The shift from systems of the Western type to Central-type systems (with post-initial accentuation) appears to be an on-going process in parts of Gipuzkoa. Some transitional varieties are studied in Laspiur (1979) and Hualde (1994).

35. As stated by Altube (1934: 187), a native speaker of a variety of this type, that of Arrasate-Mondragón. Following the example of Azkue (cf. fn. 20), Altube also assumed the universality in Basque of his own native accentual system.

36. Hondarribia (Sp. Fuenterrabía, Fr. Fontarabie) is located on the estuary of the Bidasoa river. This accentual system is described in Hualde & Sagarzazu (1991). An identical or very similar system appears to have been used along the French Basque coast in earlier centuries (cf. Michelena 1972).

37. This dialect does not have long vowels. Long or geminate vowels are rare in Basque, see § 14.3.1 above for Oñati and also Hualde (1990b) for the variety of Arbizu.

38. I want to thank Larry Hyman for bringing the Hopi facts and the analysis of this language in Hayes (1980) to my attention.

39. Souletin is the easternmost dialect of Basque north of the Pyrenees, and it is spoken in the region known as Pays de Soule in French and as Zuberoa or Xiberoa in
Basque accentuation

Basque. This section is based, for the most part, on § 3 of Hualde (1993b), where a more detailed presentation can be found, although there are some differences in the analysis. The primary sources of all the Souletin examples are Larrañaguet (1934, 1939). Other works on Souletin accentuation are Larrañaguet (1928, 1931), Lafon (1935), Gavel (1960), Michelena (1958, 1985), Txillardegi (1985: 387–405), Hualde (1991a: 174–176) and Gaminde (1995b). Accentual prominence in Souletin has both pitch and duration as phonetic correlates (Larrañaguet 1928; Gaminde 1995b).

40. Alternatively, a syllabic trochee is built at the right edge of the word and lexically marked morphemes trigger the construction of an iamb, instead.

41. Roncalese is an extinct dialect spoken until recently in the Roncal Valley in the northeastern corner of Navarre. The primary sources on Roncalese accentuation are Michelena (1953) and Beloqui et al. (1954), from which I take most of the examples. A few examples are from the Roncalese text in Leizaola et al. (1990). It appears that the phonetic realization of stress-accent in Ron calorie was very much as in Spanish.

42. I will not consider the issue of the nature of lexical marking in this system, which must be as in other languages with regular penultimate accent and a three-syllable window.

43. Michelena (1958, 1985) proposes an ancient system with regular post-initial accent, as a means to account for the distribution of aspiration. Michelena suggests that such a system might have been general in Basque at some point, having been preserved substantially unaltered in the Bidassoa area. This hypothesis is, however, incompatible with the fact that in Western varieties Latin borrowings with accent on the second syllable such as aizkóra ‘ax’ < asceola, kipúla ‘onion’ < caepulla, makilla ‘stick’ < baccilla, etc., present a marked accentual pattern (i.e., are lexically accented). If at the time these words were borrowed regular accent fell on the second syllable we would not expect these words to behave in a special way. For an evaluation of Michelena’s proposal, cf. Hualde (1995b).

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