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Hebrew Pronunciation & Accents

Geo-social Applications of the Natural Phonetics & Tonetics Method

6.
Hebrew vowels: international, neutral, mediatic, traditional

6.1. We mainly present *three* kinds of Hebrew pronunciation, which correspond to actual usages by most native speakers, even if they know other languages: *(modern) neutral*, *mediatic*, and *traditional*.

It must be stated at once that not rarely native speakers deviate from 'their own' usage and overlap with 'somebody else's' usage, for some phonemes or words, including intonation patterns.

We must keep well in mind that the mediatic accent is not a regional one, although it is not either (completely) neutral, or traditional.

But it is a fact that it is very often heard on the radio and on television, alternating with more neutral or more traditional ones. Even if with oscillations, it can also be used by speakers who are not typically regional.

To simplify somehow our presentation, we will also use an *international* accent of Hebrew, which really exists, as a *refined compromise* by speakers who moved to Israel from other nations of the world.

It is the result of the process of elimination of any 'foreign' peculiarities, although it does not include the nuances and characteristics of the other three accents.

6.2. *fig* 6.1 shows the orograms (with miniature vocograms) and labiograms of the five vowel elements, which are necessary for a satisfying pronunciation of Hebrew. In addition, *fig* 6.2 provides their real vocograms, which show much better the nature of the vocoids, especially if *fig* 6.1 is adequately examined.

Our transcription is, in fact, more 'natural', because it clearly shows –on the vocograms– the real positions and timbres, instead of not much clear definitions and approximate figures.

fig 6.1. Vocograms of the five vowels of *international* Hebrew.

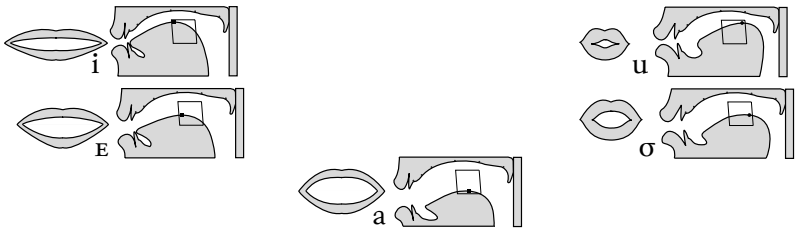
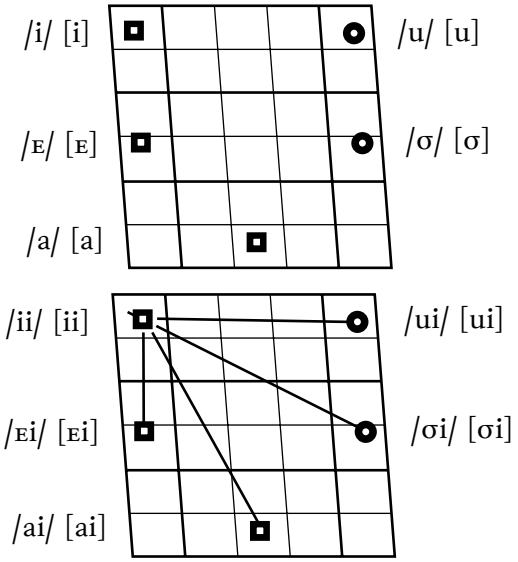


fig 6.2. Vocograms of the *international* monophthongs and diphthongs.



6.3. It is very important not to rely only on imitation, since, after two or three years of age, we inevitably started to lose the huge analysis and synthesis capacity which allowed us to play with all the linguistic sounds that we heard (inventing some, as well).

Therefore, the phonotonetics method is a great help for us, both to (still) perceive well, and to reproduce and then, finally, to produce the sounds that we hear and want.

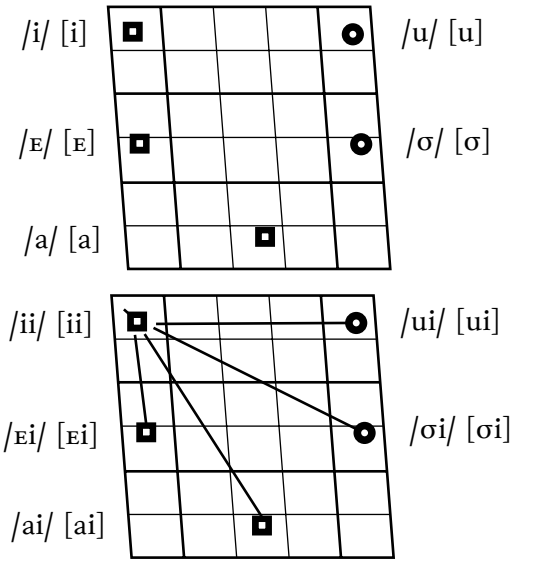
6.4. The use of *transcriptions* is fundamental in our *natural phonetics method*. When we overcome our initial perplexities (and, perhaps, distrust), it is obvious that we are not talking about an extra useless toil.

On the contrary, we will free ourselves from the harmful reliance on *spelling*. So we become able to distinguish well between the two levels. The fundamental (and truly linguistic) one is the phonic level, although many people still seem to think that the real language is the one ambiguously represented by spelling (which is a terribly misleading impression).

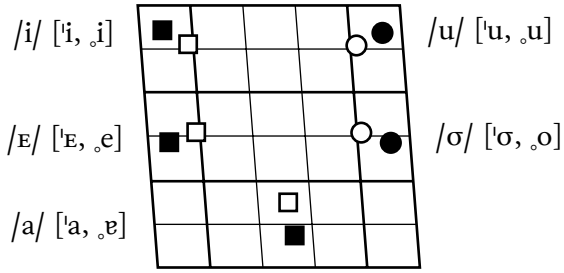
6.5. Let us consider, now, some examples for all the five simple vowel phonemes, and the five 'normal' diphthongs, for the moment, only in international pronunciation: *li* [ˈli], *šišim* [ʃiˈʃim], *ciyru* [tsiiˈru], *ben* [ˈbɛn], *beged* [bɛˈgɛd], *šney* [ʃˈnɛi], *gam* [ˈgam], *natan* [naˈtan], *day* [ˈdai], *zot* [ˈzɔt], *kolbo* [ˈkɔlbɔ], *goy* [ˈgɔi], *sus* [ˈsus], *šuruḳ* [ʃuˈruk], *panuy* [paˈnui].

The diphthong just seen are those we consider to be 'official'. However, there are further diphthongs, which are derived from vowel sequences. Such sequences may be true ones, or they may be the result some consonant droppings (mainly /ʔ, ʔ, h/). School tradition strill clings to the belief that they are bisyllabic, rather than veritable phonic diphthongs (provided stress is not on their second element). We will see some examples.

fig 6.3. Vocograms of the *neutral* monophthongs and diphthongs.



Possible differences depending on stress



6.6. We are ready, now, to also see the typical vowels and diphthongs of the other three additional kinds of pronunciation, which are not regional or foreign. *fig* 6.3-5 show, respectively, their neutral, mediatic, and traditional realizations, in stressed syllable or not, also with some possible unstressed variants.

6.7. All these figures have to be carefully compared with those of the international pronunciation (*fig* 6.2). Their differences (although small) must be carefully compared – in fact, they will certainly help to identify their accent differences.

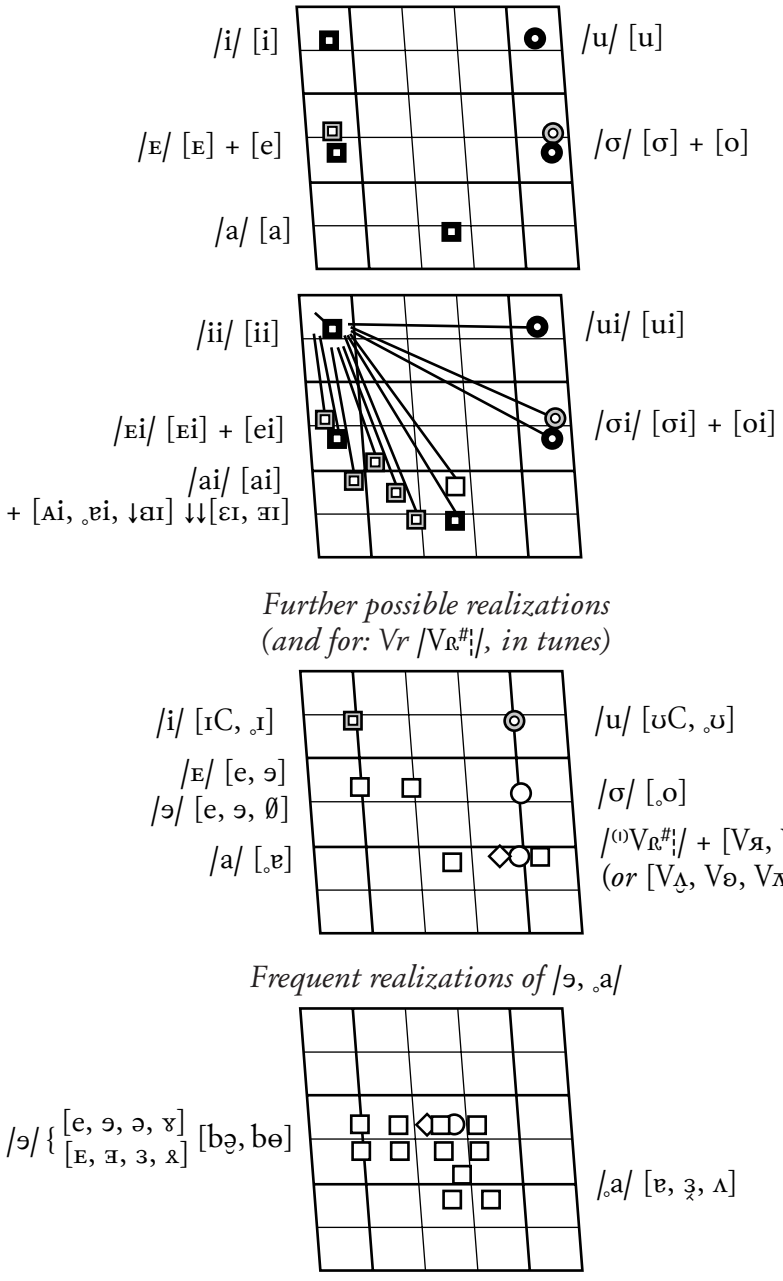
6.8. Using again the examples shown in § 6.5, we complete them by adding the transcriptions of the three 'new' accents:

li [ˈli], *šišim* [ʃiˈʃim], *ciyru* [tsiiˈru], *ben* [ˈbɛn], *beged* [bɛˈgɛd], *šney* [ʃˈnɛi], *gam* [ˈgam], *natan* [naˈtan], *day* [ˈdai], *zot* [ˈzɔt], *kolbo* [ˈkɔlbɔ], *goy* [ˈgɔi], *sus* [ˈsus], *šuruḳ* [ʃuˈruk], *panuy* [paˈnui].

neutral: li [ˈli], *šišim* [ʃiˈʃim], *ciyru* [tsiiˈʀu], *ben* [ˈbɛn], *beged* [bɛˈgɛd], *šney* [ʃˈnɛi], *gam* [ˈgam], *natan* [naˈtan], *day* [ˈdai], *zot* [ˈzɔt], *kolbo* [ˈkɔlbɔ], *goy* [ˈgɔi], *sus* [ˈsus], *šuruḳ* [ʃuˈʀuk], *panuy* [paˈnui];

mediatic: li [ˈli], *šišim* [ʃiˈʃim], *ciyru* [tsiiˈʁu], *ben* [ˈbɛn], *beged* [bɛˈgɛd], *šney* [ʃˈnɛi], *gam* [ˈgam], *natan* [naˈtan], *day* [ˈdai], *zot* [ˈzɔt], *kolbo* [ˈkɔlbɔ], *goy* [ˈgɔi],

fig 6.4. Vocograms of the *mediatic* monophthongs and diphthongs.



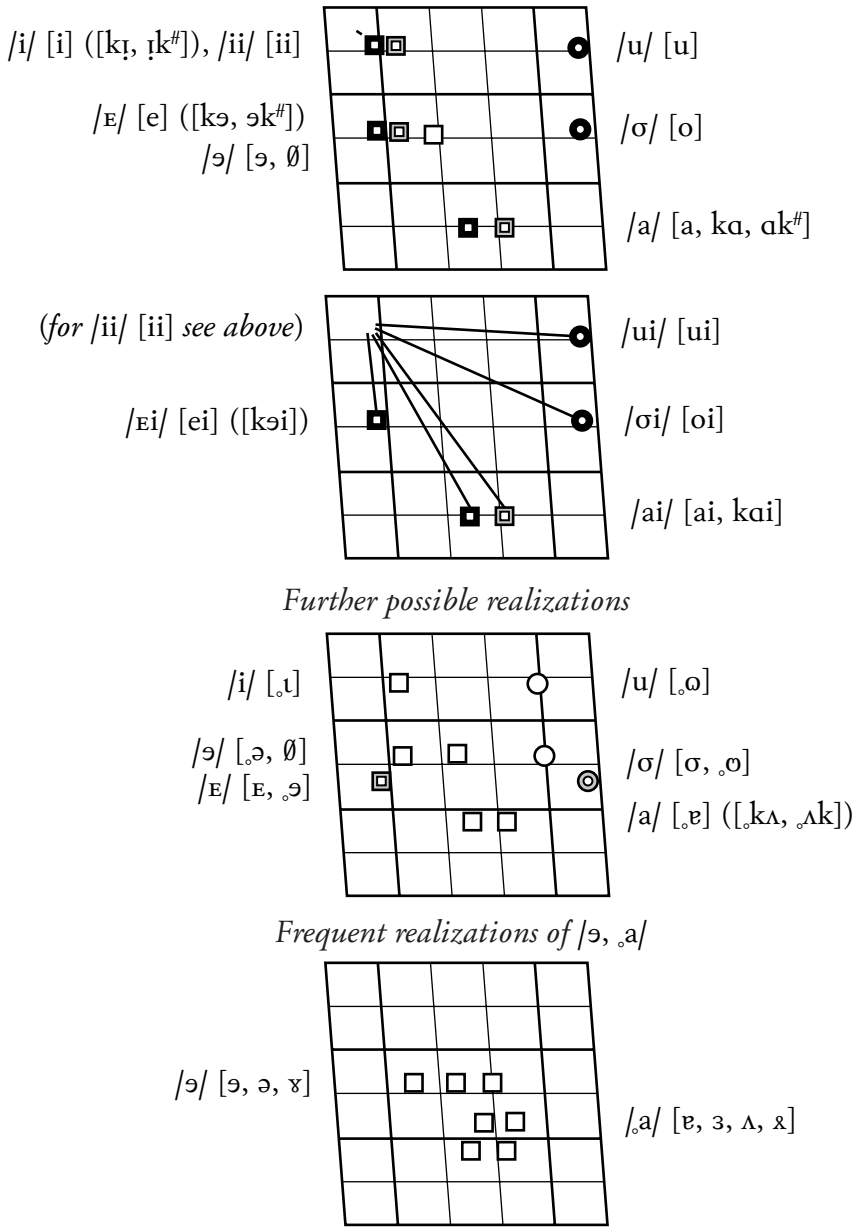
sus [ˈsus], *šuruḳ* [ʃuˈʁuk], *panuy* [paˈnui];

traditional: li [ˈli], *šišim* [ʃiˈʃim], *ciyru* [tsiiˈru], *ben* [ˈben], *beged* [beˈged], *šney* [ʃˈnei], *gam* [ˈgam], *natan* [naˈtan], *day* [ˈdai], *zot* [ˈzot], *kolbo* [ˈkolbo], *goy* [ˈgoi], *sus* [ˈsus], *šuruḳ* [ʃuˈruk̟], *panuy* [paˈnui].

6.9. These few examples, of isolated words, show traditional [e, o], but especially the differences for *r*. However, we did non introduce yet the different behavior of *ʔ*, *x*, *h* /ʔ, χ, h/, and of *ʕ*, *ḥ*, *q* /ʕ, ħ, q/. The latter elements will be more conveniently rendered by means of our graphems and diagraphems *ʔ̇*, *x̣*, *ḳ*, and phonemes, /ʔ̇, χ̣, k̟/, too.

In sentences, the unstressed vowels (in the examples seen, as well) may be more

fig 6.5. Vocograms of the *traditional* monophthongs and diphthongs.



weak, also adding *ë* /ə/ [ə] (or simply *e*, provided it is unstressed). Certain vocograms in *fig* 6.3-5 show this fact.

What we have already seen introduces us to real differences, not only possible ones – as, instead, grammars, and even treatises on pronunciation, can make us believe. It will be apparent that, in comparison with the other three accents, for the traditional one, the collocations on the vocogram are at least a little backer than on the others.

Their normalized positions (derived from the average results of listening to various examples from different speakers) have to be carefully observed, also for /i, ɛ/ [i, e], even if transcribed as [ɬki, ɬke; iɬkʰ, eɬkʰ] (and /kj/ [ɬkj]), also if tautosyllabic with *ḳ* /ḳ/.

Furthermore, in the *traditional pronunciation* of less young speakers we can also find the back taxophone of /a/ [ɑ], in contact with tautosyllabic *ḳ* (and the pos-

sible reduction to [ʌ] in unstressed syllables). This is shown on the first and third vocograms: *ḳa*, *aḳ* /ka, ak$^{\#}$/ [kɑ, ɑk$^{\#}$] (and [ˌkʌ, ˌʌk$^{\#}$]).

Let us tell in advance that *ḳ*, in tautosyllabic sequences, /ḳu, uḳ; ḳʊ, ʊḳ/, becomes [ḳ̫], with an obvious labial rounding.

Also for /ḳ/ with tautosyllabic /j, i, ɛ/, we can sometimes hear [k] with [j̣, ɪ̣, ə] (postpalatal): [kj̣, kɪ̣, kə, ɪ̣k$^{\#}$, ək$^{\#}$], indicated in the first vocogram, including /ḳɛi/ [kəi] (second vocogram).

6.10. Let us conclude by also observing well the first, third and fourth vocograms of the traditional accent (normalized), which shows possible realizations of *six* vocalic elements, in unstressed syllables, including possible *e*/*ë* /ə/ [ə], which can alternate with a zero element, [∅], depending on syllable structures, with possible differences also depending on speed, style, words, and speakers.

Actually, we might not use /ə/, as an additional sixth phoneme, but simply /ɛ/, realized as [ə], like other real /ɛ/-phoneme occurrences (see in particular the third vocogram in *fig* 6.5). Furthermore, the fourth vocogram explicitly shows three different possible realizations of this /ə/ phoneme.

In fact, even in word-initial position, Hebrew may often have /$^{\#}$CC/ for consonants of different places of articulation (provided none of them is *h* /h/ or ʔ /ʔ/), as several examples show, in Ch 10, where the mediatic accent is used expressly. Just look, for instance, especially under § 10.3.5 (and many others). Also look, carefully and patiently, at § 9.16-17, where different cases are presented.

On the contrary, between /CC/ sequences of identical, or similar, places of articulation, either in initial or internal word position, either /ɛ/ or /ə/ is necessarily added. As useful examples for all these cases can be found in the sections of Ch 9 indicated above and, again, in Ch 10, here we will simply draw attention to the third and fourth vocograms of *fig* 6.4.

In fact, they show /ə/ with several partially different possible realizations: /ə/ [e, ɘ, ə, ɤ, ɛ, ɜ, ɜ, ɤ], including [ə̹, ɵ] often occurring after bilabial consonants (or even labiodental ones, for brevity, not explicitly shown there).

8.
Hebrew consonants: international, neutral, mediatic, traditional

8.0. The example that we provide in this chapter show first the transcription in neutral pronunciation, which is followed by the mediatic and traditional ones (*m* and *t*), but indicating only their differences, which will appear obvious, without hav-

fig 8.1. *International* Hebrew consonants.

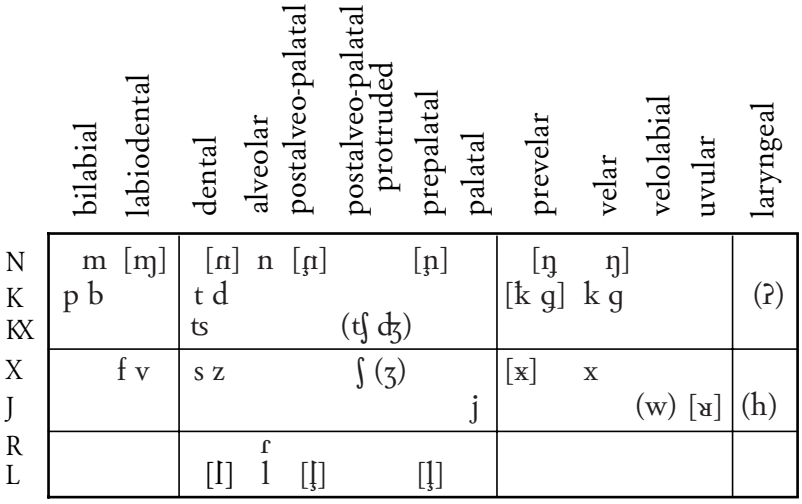


fig 8.2. *Neutral* Hebrew consonants.

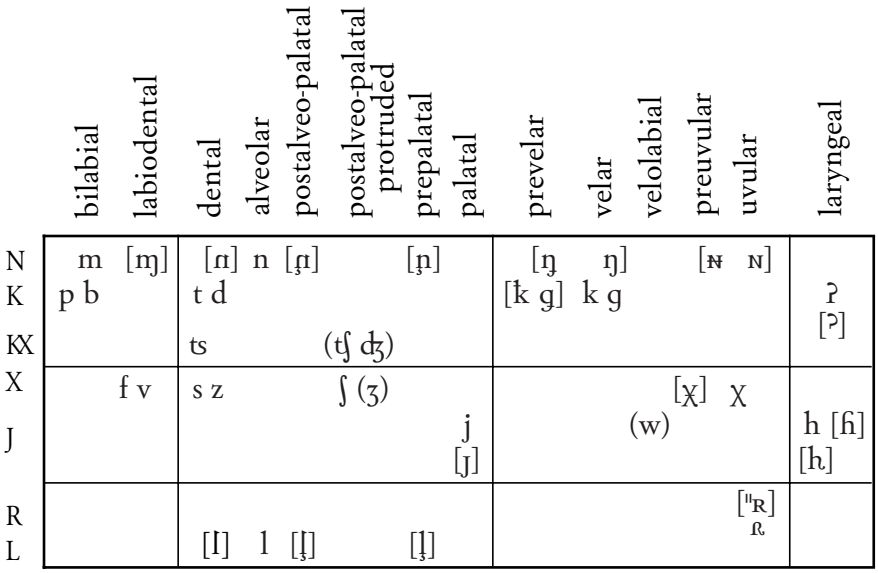


fig 8.3. *Mediatic* Hebrew consonants.

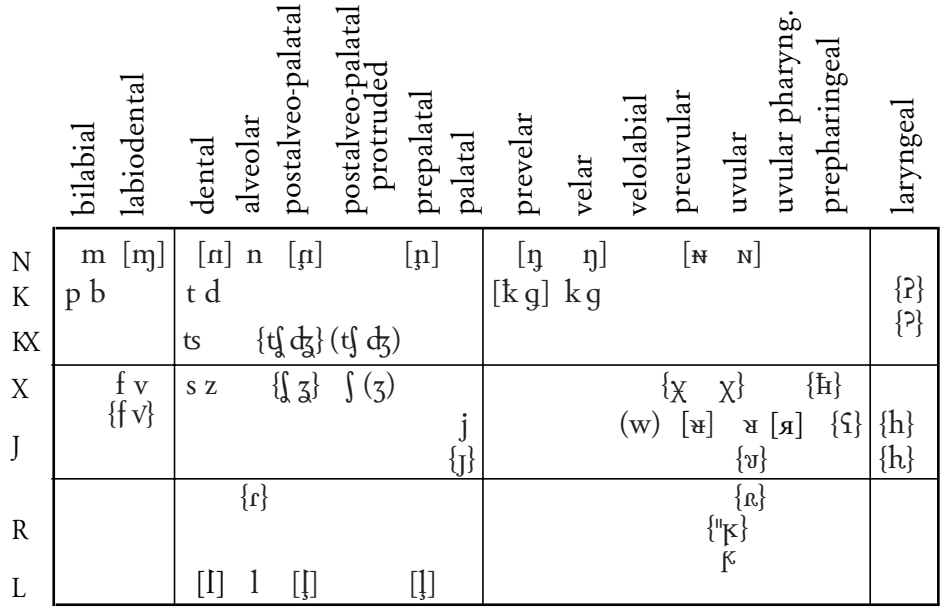
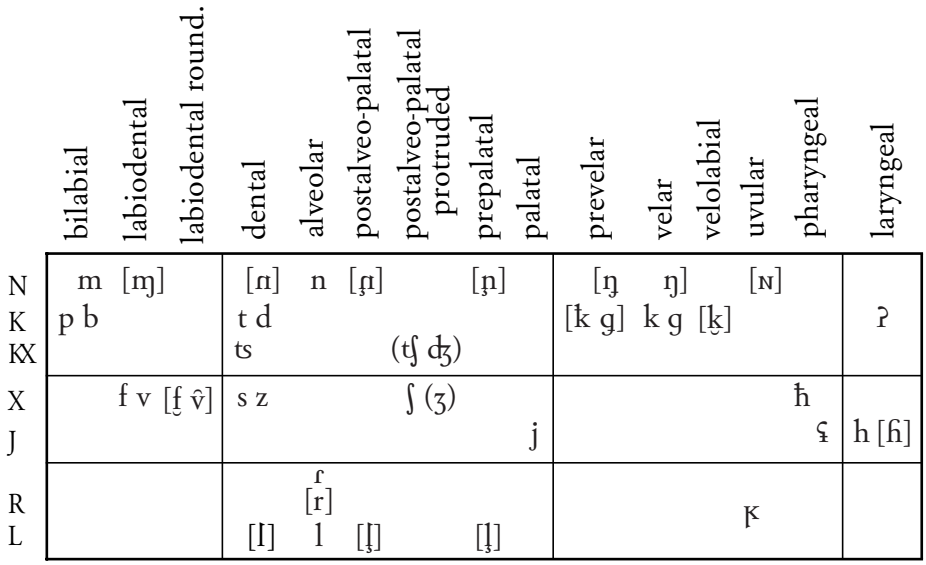


fig 8.4. *Traditional* Hebrew consonants.



ing to compare each single segment. Compare the figures of this chapter (*fig* 8.1-4, which present the table of consonants of international, neutral, mediatic, and traditional consonants, and *fig* 8.5-11, which show many contoids, for useful and necessary comparisons) with those of ℭ 6.

8.1. Hebrew has only two nasal phonems, *m* /m/ [m] and *n* /n/ [n]: *mayim* [ˈmaːjim] ^{m}[ˈmaim] ^{t}[ˈmaːjim], *samim* [saˈmim], *kam* [ˈkam]; *natan* [naˈtan], *nagar* [naˈgaʁ] ^{m}[-ʁ] ^{t}[-r].

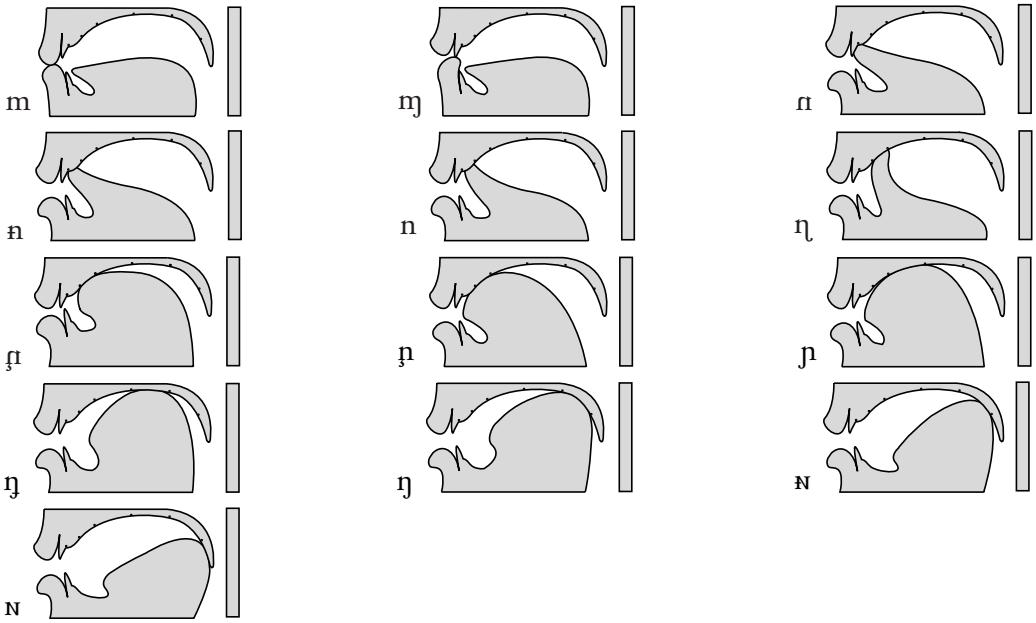
For /nC/, inside words, or between words, somebody thinks it is more 'correct' not to apply assimilations, mostly due to an unreasonable influence by spelling. However, in spontaneous and more normal speech, assimilation is regular, even

if not extreme, and with oscillations, depending on speed of utterance. Obviously, the less slowly and without too much attention one talks, the more natural and normal the result is.

Examples: *zikaron pašut* [ˌzikaˈʁɔm paˈʃut] ^{m}[-ˈʁɔm] ^{t}[-ˈʀom], *naxon meʔod* [naˈχɔm mɛˈʔɔd] ^{m}[-ˈʁɔm mɛˈɔd, -ˈʁɔ] ^{t}[-ˈʁɔm meˈʔod], *ʔeyn vilon* [ˌʔɛiŋviˈlɔn] ^{m}[ˌɛiŋ-] ^{t}[ˌʔeiŋ-, -ˈlon], *ʔeyn delet* [ʔɛiˈnˈdɛˑlɛt] ^{m}[ɛiˈn-] ^{t}[ʔeiˈnˈdeˑlet], *ʔeyn corex* [ʔɛiˈnˈtsɔˑʁɛχ] ^{m}[ɛiˈn-, -ʁɛʁ] ^{t}[ʔeiˈn-, -ʀeʁ], *yitaron šlili* [ˌjitaˈʁɔˌʁ ʃliˈli] ^{m}[ˌi-, -ˈʁɔˌʁ] ^{t}[ˌji-, -ˈʀoˌʀ].

Also: *binyan* [biˈnjan, biˌnˈjan], *ʔeyn yoter* [ˌʔɛiˌn-jɔˈtɛʁ] ^{m}[ˌɛiˌn-, -ˈtɛʁ, -ˈtɛʌ] ^{t}[ˌʔeiˌn-joˈter], *yitaron gadol* [-ˈʁɔŋ gaˈdɔl] ^{m}[-ˈʁɔŋ] ^{t}[-ˈʀoŋ gaˈdol], *ḳanḳan* [kaŋˈkan] ^{t}[kɑŋ-ˈkɑn], *zikaron xazaḳ* [ˌzikaˈʁɔn χaˈzak] ^{m}[-ˈʁɔn ʁa-] ^{t}[-ˈʀon ʁa-], *zikaron χašuv* [-ˈʁɔn χa-] ^{m}[-ˈʁɔn ʁa-] ^{t}[-ˈʀon ħa-], *beyn Wošington* [bɛiŋˈwɔˑʃiŋg-tɔn, bɛin-] ^{t}[beiŋˈwoˑʃiŋg-ton, bein-].

fig 8.5. Nasal consonants.



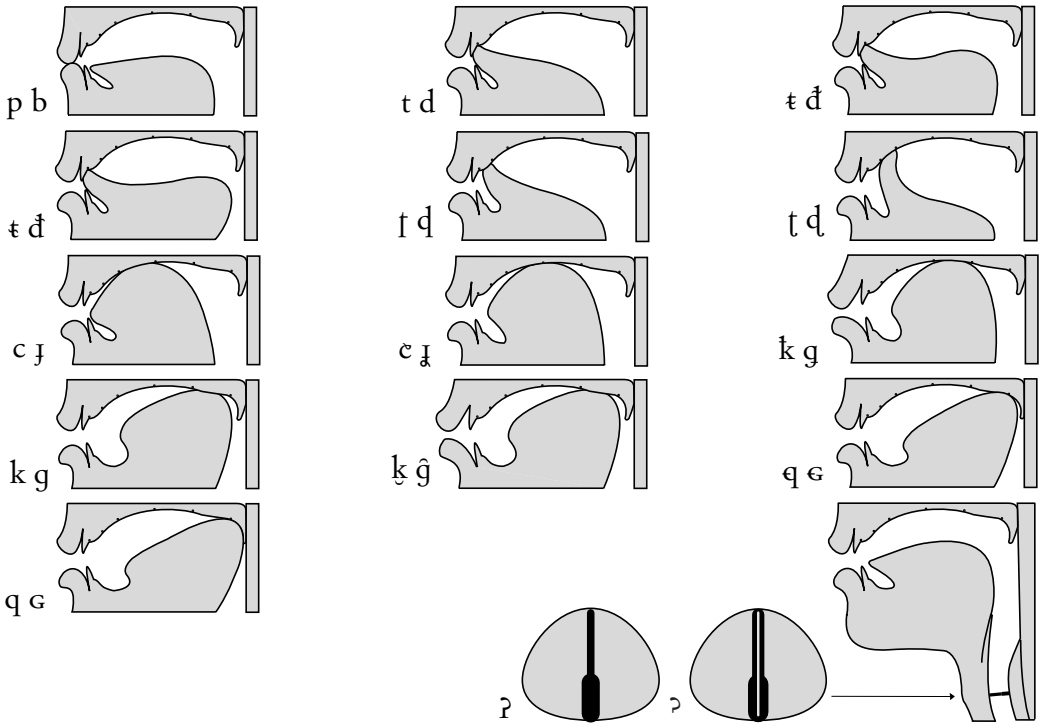
8.5. Hebrew has *three* (diphonic) pairs of stops: /p, b; t, d; k, g/ [p, b; t, d; k, g, ƙ, g]. It also has two diaphonemes: the first one is a particular velar consonant, in the typical traditional accent, *ḳ* /ḳ/ (with three different taxophones, [ƙ, k, ḳ]), which in earlier times used to be uvular, /q/, also with a preuvular taxophone, [q, ɋ]).

The other one is laryngeal, ʔ /ʔ/ [ʔ], which can always be realized as 'zero', [ø], in *international* pronunciation, while, in neutral and mediatic pronunciation, it is less important. In fact, in the *neutral* accent, it is certainly pronounced in stressed syllables, while it is pronounced, [ʔ] (o not, realized as 'zero', [ø]), in unstressed or half-stressed syllables. We show this oscillation using the 'intermediate' symbol [ˀ].

In *mediatic* pronunciation, it is more often [ø], but it can also be [ʔ], or [ˀ], being in this case, realized as a 'weak' [ʔ], *ie* with an incomplete occlusion (*cf fig* 8.6). But it can also be [h], or [ɦ] (voiced) – or [h̩], realized as a semi-approximant, instead than as a true approximant, thus, 'weaker'.

As already said, we also have the diaphoneme *ḳ* /ḳ/ [k, ƙ] ^{m}[k, ƙ] ^{t}[k, ƙ, ḳ] (in

fig 8.6. Stop consonants.



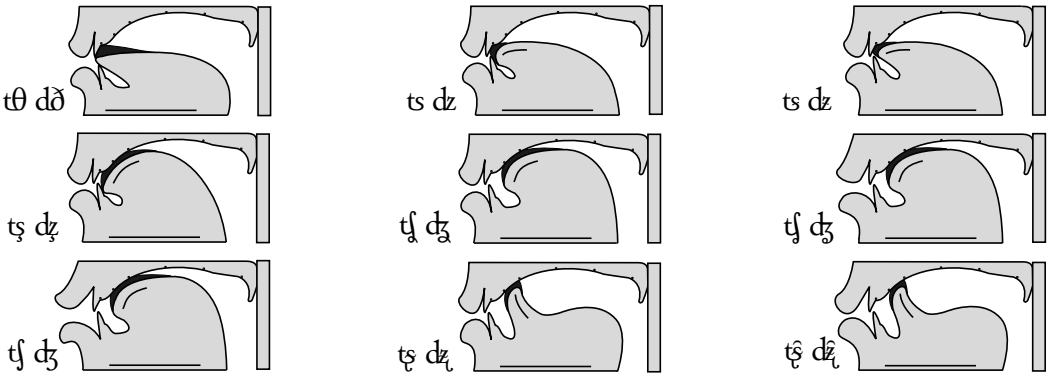
case *q*), realized only in traditional pronunciation as prevelar, in contact with tautosyllabic /j, i, ɛ/; as velar with /a/ [ɑ], [kɑ, ɑkʰ] (or possible [ˌkʌ, ˌʌkʰ], in unstressed syllables); or as velolabial, [k̟], with /ɔ, u/, producing [k̟o, k̟u] and [ɔk̟ʰ, uk̟ʰ].

It is true, however, that nowadays, these realizations are less systematic (even if we always use *ḳ*, when it occurs in its spelling). In fact, very often, it is the same as /k/ [k] + /a, ɔ, u/ [ka, ko, ku; akʰ, okʰ, ukʰ], especially for younger speakers.

Examples: *peh* [ˈpɛ], *baʔ* [ˈba], *beged* [bɛˈgɛd] *t*[beˈged], *David* [daˈvid, ˈdaˌvid], *tipaḥ* [tiˈpa], *kipod* [ḳiˈpɔd] *t*[-od], *dag* [ˈdag], *gal* [ˈgal], *roked* [ʁɔˈkɛd] *m*[ʁɔ-] *t*[ʁoˈked], *kol* [ˈkɔl] *t*[ˈkol], *ḳol* [ˈkɔl] *t*[ˈk̟ol], *kavaḥ* [kaˈva], *ḳavaḥ* [kaˈva] *t*[kɑ-], *ʔaz* [ʔaz] *m*[ˈaz], *gaʔal* [gaˈʔal] *m*[gaˈal].

8.6. Typical modern Hebrew has only one stopstrictive: *c* /ʦ/, however, in loanwords and newer words, it also has *č* /ʧ/ [ʧ] and *ǧ* /ʤ/ [ʤ]. Examples: *cilcul* [ʦilˈʦul], *ʔecaḥ* [ʔɛˈʦa] *m*[ɛ-] *t*[ʕe-], *micvaḥ* [miʦˈva], *ʔec* [ˈʔɛʦ] *m*[ˈɛʦ] *t*[ˈʕeʦ]. And: *čips*

fig 8.7. Stop-strictive consonants.

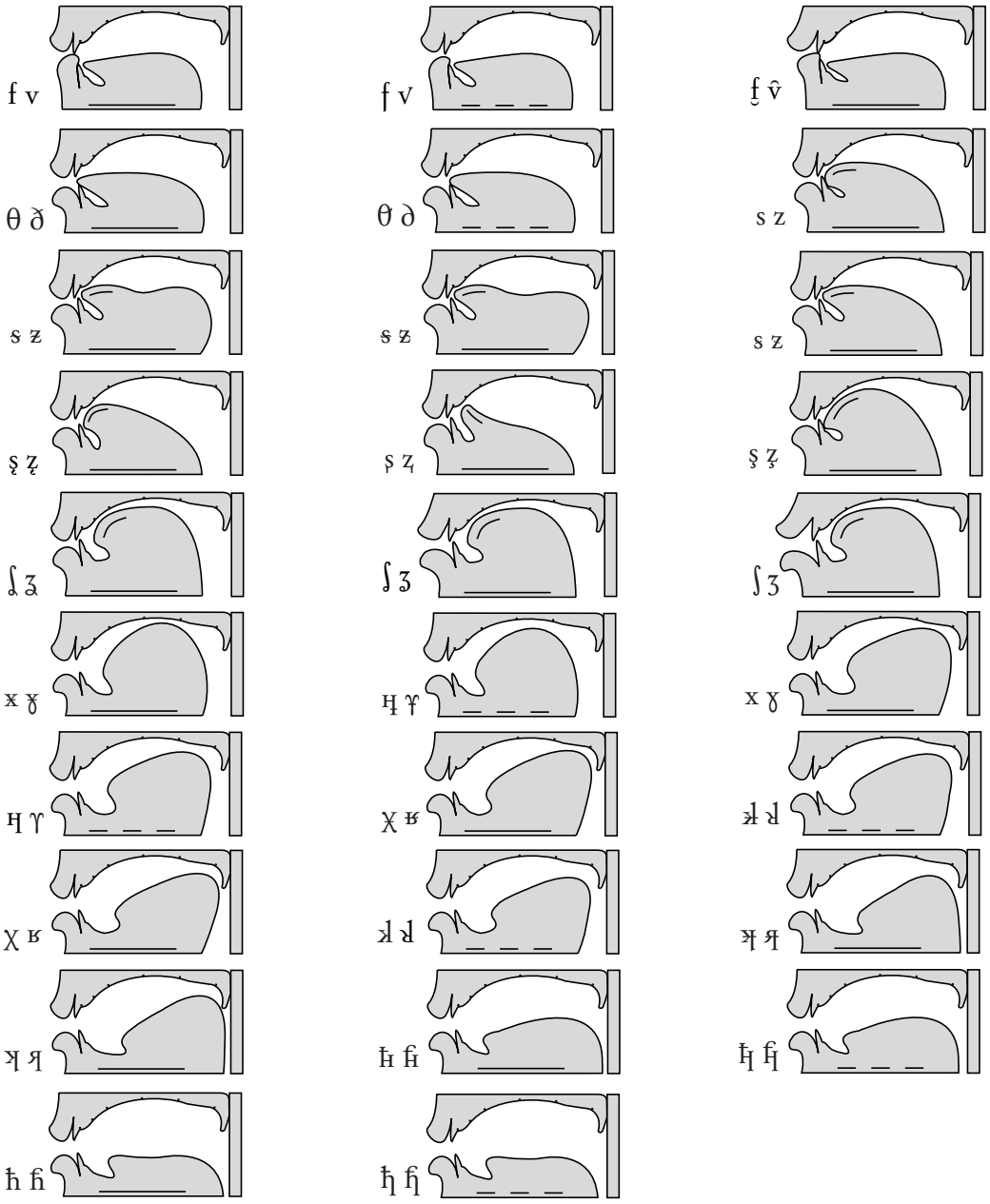


[ˈʧips], *Čerčil* (Churchill) [ˈʧɛʁʧil] ^{m}[ˈʧɛʁ-] ^{t}[ˈʧer-], *ǧukim* [ˈʤuːkim], *ǧip* [ˈʤip], *ǧungel* [ˈʤuŋgɛl, -gəl, -gl̩], *ǧirafah* [ʤiˈʁaːfa] ^{m}[-ˈʁaː-] ^{t}[-ˈraː-].

8.7. Hebrew has three diphonic pairs of *constrictives*: *f, v, s, z, š, ž* /f, v; s, z; ʃ, ʒ/ [f, v; s, z; ʃ, ʒ] (even if /ʒ/ is only a xenophoneme used in loans) and an isolated voiceless constrictive, /χ/, for the grapheme *xaf*. It is realized as (pre)velar, [x, ɤ], in international pronunciation; as (pre)uvular, [χ, ʧ], in neutral pronunciation (often also as a trill, [ʁ], for emphasis).

In mediatic pronunciation it is more typically a uvular constrictive tap, [ʁ̆] (with no preuvular variant), although [χ, ʧ] or [ʁ] can also be found (with preuvular taxophones, before /j, i, ɛ/).

fig 8.8. Constrictive consonants.



In traditional pronunciation, we have [ʁ], phonemically oppose to *x̣* /χ̇/ [χ, χ̣] ^{m}[ʁ] ^{t}[ħ], pharyngeal, represented by the grapheme *x̣et* (*ħet*, in case /ħ/ [ħ], in descriptions dealing only with traditional pronunciation, as for *q*). In the other accents, a single phoneme corresponds to two different graphemes, with the realizations seen above.

Examples: *daf* [ˈdaf], *ʔofek* [ʔσˈfɛk] ^{m}[σ-] ^{t}[ʔoˈfek], *falafel* [faˈlaˑfɛl] ^{t}[-el], *vav* [ˈvav], *sovev* [sσˈvɛv] ^{t}[soˈvev], *sus* [ˈsus], *sason* [saˈsσn] ^{t}[-on], *ʔoseh* [ʔσˈsɛ] ^{m}[σ-] ^{t}[ʔoˈse], *šišah* [ʃiˈʃa], *šemeš* [ʃɛˈmɛʃ] ^{t}[ʃeˈmeʃ], *žaket* [ʒaˈkɛt] ^{t}[-et], *ruž* [ˈʁuʒ] ^{m}[ˈʁ-] ^{t}[ˈr-], *žurnal* [ʒuʁˈnal] ^{m}[-ʁ-] ^{t}[-ɾ-], *garaž* [gaˈʁaʒ] ^{m}[-ˈʁ-] ^{t}[-ˈr-].

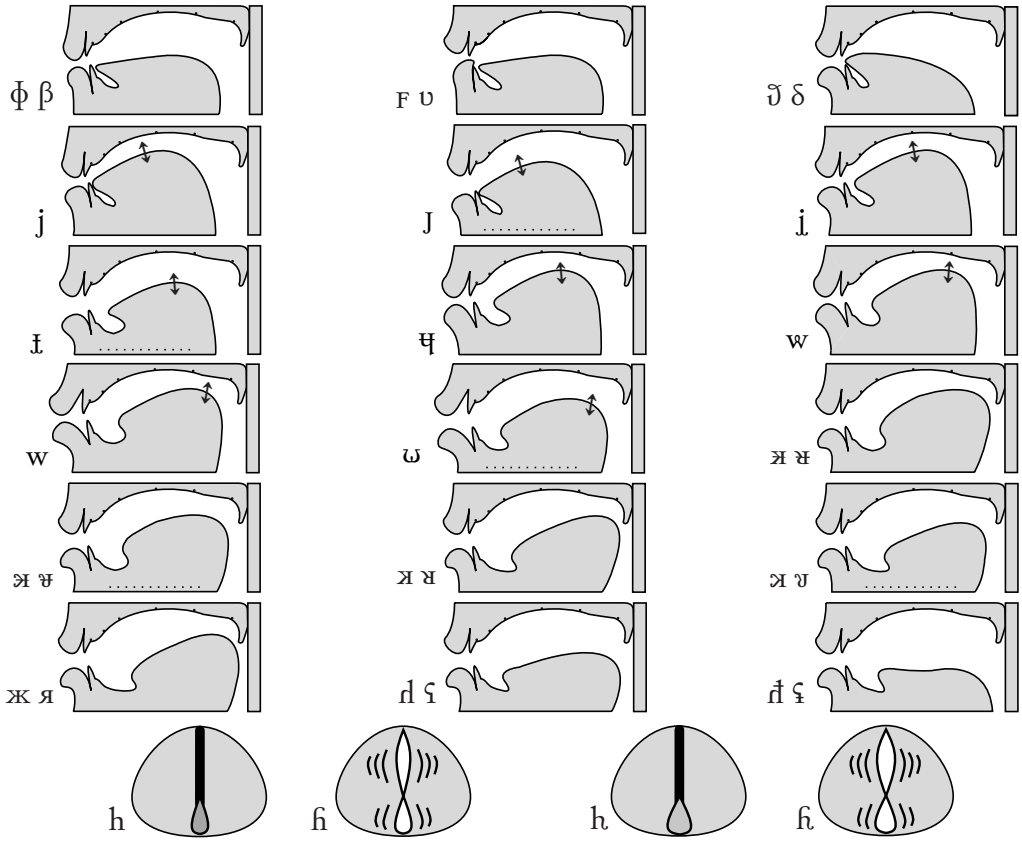
And: *xad* [ˈχad] ^{m}[ˈʁ-] ^{t}[ˈʁ-], *zoxeh* [zσˈχɛ] ^{m}[-ˈʁɛ] ^{t}[zoˈʁe], *x̣axeh* [χaˈχ̣ɛ] ^{m}[ʁaˈʁɛ] ^{t}[ħaˈʁe], *x̣ad* [ˈχ̣ad] ^{m}[ˈʁ-] ^{t}[ˈħ-], *ʔax̣* [ʔaχ̣] ^{m}[ˈaʁ] ^{t}[ʔaʁ].

8.8. Hebrew has the approximant *y* /j/ [j] (including /w/ [w], in loans) and also /h/ [h]. The latter is ^{i}[ø] (or [ʱh], in more careful pronunciation), ^{n}[h] in stressed syllables, or [ø] or [h], in unstressed or half-stressed syllables. We will show this oscillation by means of the 'intermediate' symbol [ɦ] (semiapproximant, equally usable). In addition, ^{m}[h, ɦ] (but also [ʔ, ʔ]) and ^{t}[ɦ] (even [ɦ], between vowels, especially in traditional pronunciation, or, less systematically, in neutral or mediatic pronunciations).

Examples: *yad* [ˈjad], *dayag* [daˈjag], *x̣ayyal* [χaiˈjal, χaˈjal] ^{m}[ʁ-] (also ^{m}[-aˈjal]), ^{t}[ʁ-] (also ^{t}[-ajˈjal]), *walaḥ?* [ˈwaˑla] (also ^{t}[ˈwalla]), *waw* [ˈwau], *wḥisky* [ˈwiśki] (also ^{m}[ˈvis-]).

And: *ḥed* [ˈhɛd] ^{m}[ˈɛd, ˈɦ-, ˈʔ-] ^{t}[ˈɦed], *ḥaliti* [ɦaˈliˑti] ^{m}[a-] ^{t}[ɦa-], *yiḥiyeh* [ˌjiɦiˈjɛ] ([ˌj] is a palatal semi-approximant) ^{m}[iiˈɛ, ˌiɦiˈɛ] ^{t}[ˌjiɦiˈje, -ɦi-], *ḥayaḥ* [ɦaˈja] ^{m}[aˈja] ^{t}[ɦaˈja],

fig 8.9. Approximant consonants.



haʔaχ [haˈʔaχ] ^{m}[aˈaɣ, aˈʔaɣ, aˈhaɣ] ^{t}[haˈʔaħ].

The sequence *yi* /ji/ is realized ^{n}[ji], ^{m}[i] (also ^{i}[i]), and ^{t}[ji]: *Yisraʔel* [ˌjisʁaˈʔɛl] ^{m}[ˌisʁaˈɛl] ^{t}[ˌjisʁaˈʔel], *ʔayin* [ˈʔaˑjin] ^{m}[ˈain] ^{t}[ˈʕaˑjin], *raglayim* [ʁaˈglaˑjim] ^{m}[ʁaˈglaim] ^{t}[ʁaˈglaˑjim], *hayiti* [haˈjiˑti] ^{m}[aˈiˑti] ^{t}[haˈjiˑti].

The sequence *iy*+vowel, /ijV/, is ^{n}[ijV], ^{m}[iV, ijV], and ^{t}[ijV] (or ^{i}[iV]): *siyum* [siˈjum] ^{m}[siˈum] ^{t}[siˈjum], *niyar* [niˈjaʁ] ^{m}[niˈaʁ, niˈjaʁ] ^{t}[niˈjar], *ʔiyey* [ʔiˈjɛi] ^{m}[iˈɛi, iˈjɛi] ^{t}[ʔiˈjei].

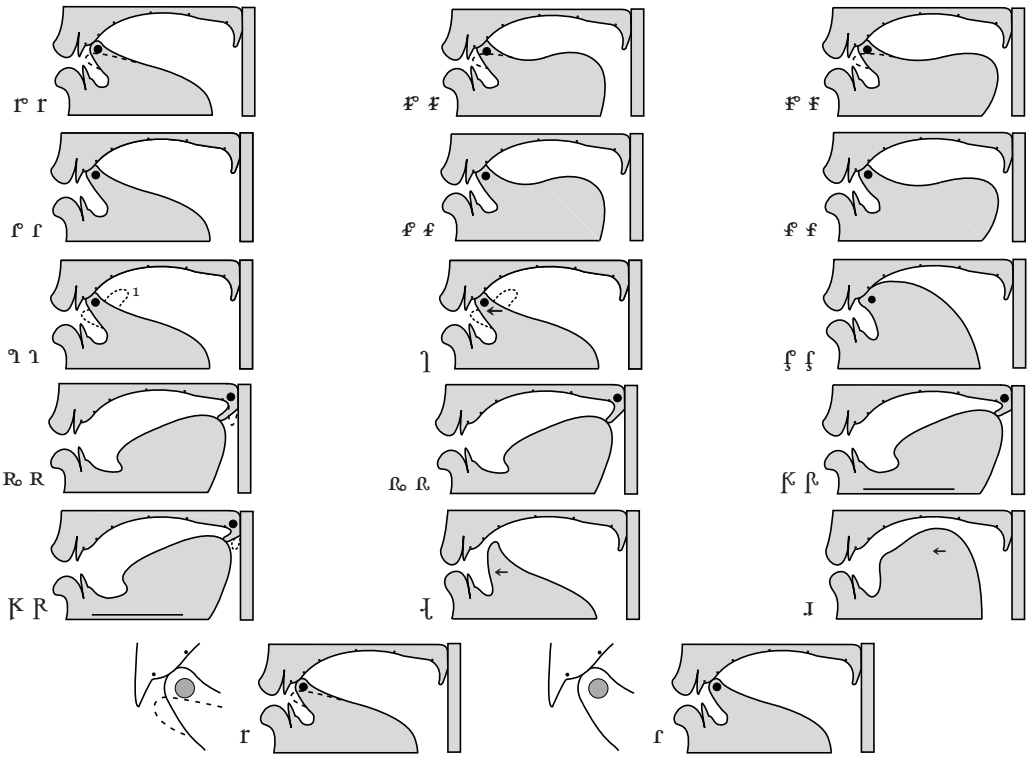
In addition, traditional Hebrew also has a pharyngeal voiced approximant phoneme, /ʕ/ [ʕ]. However, we transcribe it using the diaphoneme /ʔ/, since in the international accent it corresponds to [ø]. While in neutral or mediatic pronunciation it corresponds exactly to /ʔ/, with ^{n}[ʔ] (in stressed syllable, and [ˀ], also realizable as [ʔ] or [ø], in unstressed syllables), and ^{m}[ø] (but also [ˀ, ʔ], or even [h, h], as for /h/).

Examples: *ʔivrit* [ʔiˈvʁit] ^{m}[iˈvʁit] ^{t}[ʕiˈvrit], *meʔil* [mɛˈʔil] ^{m}[mɛˈil] ^{t}[meˈʕil], *ʔeʔeseh* [ʔɛˈʔɛˑsɛ] ^{m}[ɛˈɛˑsɛ] ^{t}[ʔeˈʕeˑse], *nataʔati* [naˈtaˑʔati] ^{m}[naˈtaati] ^{t}[naˈtaˑʕati], *Noʔomi* [nɔˈʔɔˑmi] ^{m}[nɔˈɔˑ-] ^{t}[noˈʕoˑ-], *ʔoynim* [ʔɔiˈnim] ^{m}[ɔi-] ^{t}[ʕoi-], *ʔoyen* [ʔɔˈjɛn] ^{m}[ɔˈjɛn] ^{t}[ʕoˈjen], *ʔomed* [ʔɔˈmɛd] ^{m}[ɔ-] ^{t}[ʕoˈmed], *baʔal* [baˈʔal] ^{m}[baˈal] ^{t}[baˈʕal], *ʔecaḥ* [ʔɛˈtsa] ^{m}[ɛ-] ^{t}[ʕe-], *ʔitonaʔi* [ˌʔitɔˈnaˑʔi], ^{m}[ˌitɔˈnai] ^{t}[ˌʕitoˈnaˑʕi], *šivʔaḥ* [ʃivˈʔa] ^{m}[ʃiˈva] ^{t}[ʃivˈʕa].

Notice that, in word- or syllable-final position, for *ʔ* there is no /ʔ/ ([ʕ], nor [ʔ]), not even in traditional pronunciation: *lešabeaʔ* [ˌlɛʃaˈbɛa] ^{t}[ˌleʃaˈbea, lɘ-], *švaʔ* [ʃˈva, ʒˈva], *maʔyan* [maˈjan], *švaʔ ʔesreḥ* [ʃˈvaʔɛsˌʁɛ] ^{m}[ʃˈvaɛsˌʁɛ] ^{t}[ʃˈvaʕesˌɾe].

8.9. For the grapheme *r*, international Hebrew has an alveolar tap [ɾ], or a voiced uvular approximant, [ʁ], under the influence of the mediatic accent of Hebrew).

fig 8.10. Rhotic consonants.



Furthermore, we have the uvular tap, ^{n}[ʀ] (often also a trill, [ʀ], for emphasis); but generally ^{m}[ʁ, ʁ̞] ([pre]uvular approximants), or also [ʀ, ʀ] (uvular tap or trill), but even [ɾ] (alveolar tap).

As some examples have already shown, the *mediatic* accent also has frequent peculiar realizations for prepausal /ʀ/: [ʁ] (pharyngealized uvular approximant), or [ɐ̟] (prevelar higher-low vocoid, partially rounded), also [ɤ] (velar higher-low vocoid), or [ɞ] (prevelar higher-low vocoid rounded).

We indicate only here these possibilities, while in our transcriptions we will only use [ʁ] (prepausal, or anyway in tunes, even with no real pause). However, also in this position, as in all the others, it is also possible to hear ^{m}[ʁ, ʁ̞, ʊ̯, ʊ̯̞, ʀ, ʀ]. Lastly, in traditional pronunciation, we generally have ^{t}[ɾ] (with [r] in stressed syllables: ^{t}[ˈr-, ˌr]).

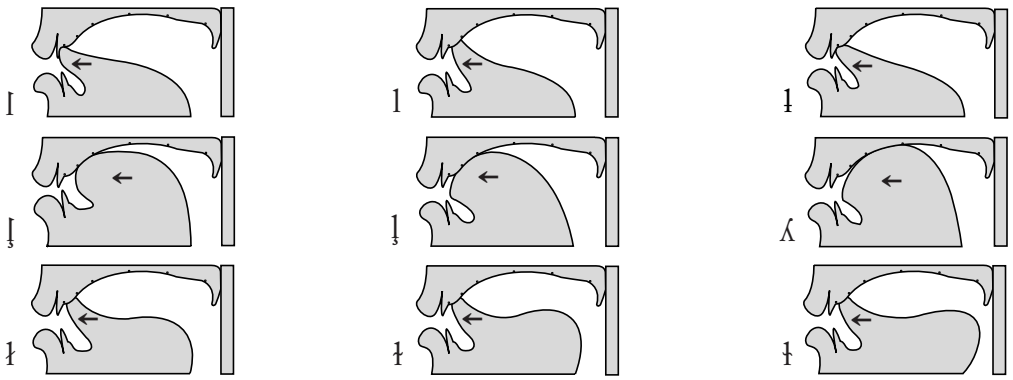
Examples: *ramzor* [ʀamˈzɔʀ] ^{m}[ʁamˈzɔʁ] ^{t}[ɾamˈzor], *ruaχ* [ˈʀuaχ] ^{m}[ˈʁuaχ] ^{t}[ˈruaħ], *gamru* [gamˈʀu] ^{m}[-ˈʁu] ^{t}[-ˈru], *maher* [maˈhɛʀ] ^{m}[maˈɛʁ] ^{t}[maˈher], *ʔerec* [ˈʔɛˑʀɛʦ] ^{m}[ˈɛˑʁɛʦ] ^{t}[ˈʔeˑɾeʦ], *sefer* [ˈsɛˑfɛʀ] ^{m}[-ɛʁ] ^{t}[ˈseˑfeɾ], *šamarti* [ʃaˈmaʀti] ^{m}[-ʁti] ^{t}[-rti], *šamru* [ʃamˈʀu] ^{m}[-ˈʁu] ^{t}[-ˈru], *ʔor* [ˈʔɔʀ] ^{m}[ˈɔʁ] ^{t}[ˈʔor].

Also: *meharher* [ˌmɛhaʀˈhɛʀ] ^{m}[ˌmɛaˈʁɛʁ, -ɛʁ, -ɛɐ̟] ^{t}[ˌmehaɾˈher], *har* [ˈhaʀ] ^{m}[ˈaʁ] ^{t}[ˈhar], *razeh* [ʀaˈzɛ] ^{m}[ʁa-] ^{t}[ɾaˈze], *dibarnu* [diˈbaʀnu] ^{m}[-aʁ-] ^{t}[-ar-], *trumah* [tʀuˈma] ^{m}[tʁ-] ^{t}[tɾ-], *drom* [ˈdʀɔm] ^{m}[ˈdʁ-] ^{t}[ˈdr-], *gafrur* [gaˈfʀuʀ] ^{m}[-ʁuʁ] ^{t}[-rur], *ʔezrah* [ʔɛzˈʀa] ^{m}[ɛzˈʁa] ^{t}[ʕezˈra].

8.10. Hebrew has only one lateral phoneme, /l/ [l] (with few taxophones, dental, postalveo-palatal, prepalatal: [l, l̪, l̠], by assimilation to following contoids). *fig* 8.11 shows a number of different articulations for useful comparisons.

Examples: *li* [ˈli], *laylah* [ˈlaila], *šaloš* [ʃaˈlɔʃ] ^{t}[-ɔʃ], *leʔexol* [ˌlɛʔɛˈχɔl] ^{m}[lɛɛˈʁɔl] ^{t}[ˌleʔeˈʁol], *gal* [ˈgal], *šel Šaʔul* [ˌʃɛl̪ʃaˈʔul] ^{m}[-ˈul] ^{t}[ˌʃel̪-], *ʔal yad* [ʔalˈjad, ʔal̪-] ^{m}[al̪-] ^{t}[ʕal̪-].

fig 8.11. Lateral consonants.



8.11. Modern Hebrew has lost both vowel and consonant length, which were typical of Ancient Hebrew. However, we can certainly find possible cases of vocalic sequences which derive from /h, ʔ, ʔ̣/ droppings, especially in international and mediatic pronunciations.

In traditional pronunciation, we can find examples like the following ones

(with [ˈ(C)Vˑ#], in stressed free syllables, mainly in isolated words or in tunes): *mimeno* [mimˌmenno], *zaḳannu* [zaˈkɑnnu], *leʾanoto* [leˌʕannoˈto], *ħanicaχon* [hanˌnitsaˈħon], *hideḳ* [hidˈdeɬ], *haḳor* [hɑkˈk̟or], *berakut* [ˌberakˈkut], *ħacafon* [ˌhatstsaˈfon], *mišehosif* [miʃʃeɦoˈsif], *hašemeš* [haʃʃeˑmeʃ], *χayyal* [ħajˈjal], *teχilaħ* [ˌteħilˈla], *šeloʔ* [ʃelˈlo].

Also phrases like *walaħ?* o *yalaħ!* (from Arabic) usually have [-ll-], often even when used by neutral or mediatic speakers.

8.12. Occasionally, at least in certain words, older or less educated *traditional* speakers may use further consonants (to be seen in *fig* 8.6-8).

Stop, or (grooved) stopstrictive, with velarization or uvularization, for *tet* /t/ [ŧ, ŧ] and for *cadiḳ* /ts/ [s, s]; also slit dental stopstrictive or constrictive for *tav* /t/ [tθ, θ]; and labiodental constrictive rounded for *vav* or *vet* /v/ [v̂]. Here they are: *tet* [ˈŧeŧ, ˈŧeŧ], *cav* [ˈsav̂, ˈsav̂], *tav* [ˈtθav̂, ˈθav̂], *caf* [ˈsaf, ˈsaf].

14.
Jerusalem & the five main 'ethnic' Israeli accents

14.0. In addition to the four accent provided in previous chapters (*ie* international, neutral, mediatic, and traditional), in this chapter we will concisely describe (using essential figures and symbols, typical of the *canIPA Natural Phonotonetic Method*). Thus, we will present the accent of *Jerusalem*, and those of the five main so to say 'ethnic' accents, when people speak 'official' Hebrew (without actual *dialectal* variants, rather than 'regional' ones), which include 'aberrant' vocalic %or consonantal changes, in comparison with 'proper' Hebrew (to say nothing about inevitable grammatical and lexical 'deviations').

These consist in the five more or less typical accents belonging to previous immigrations to Israel, by peoples from different parts of the world. The more numerous one forms the *Ashkenazi* koiné, typical of East- and North-European Jews, mostly from Germany, Poland, Lithuania, and Russia (subsequently also moved to further areas away from the first ones).

The second one is the *Sephardi* koiné, typical of West-European Jews, mostly from Iberia (*ie* Spain and Portugal, subsequently also moved to other areas of western Europe, including the Mediterranean and the Americas).

The third one is the *Mizrahi* koiné, typical of Jews from Muslim countries, mainly Middle-Eastern ones, but also from north-eastern Africa, western Asia, including the Caucasus, and some central Asian areas).

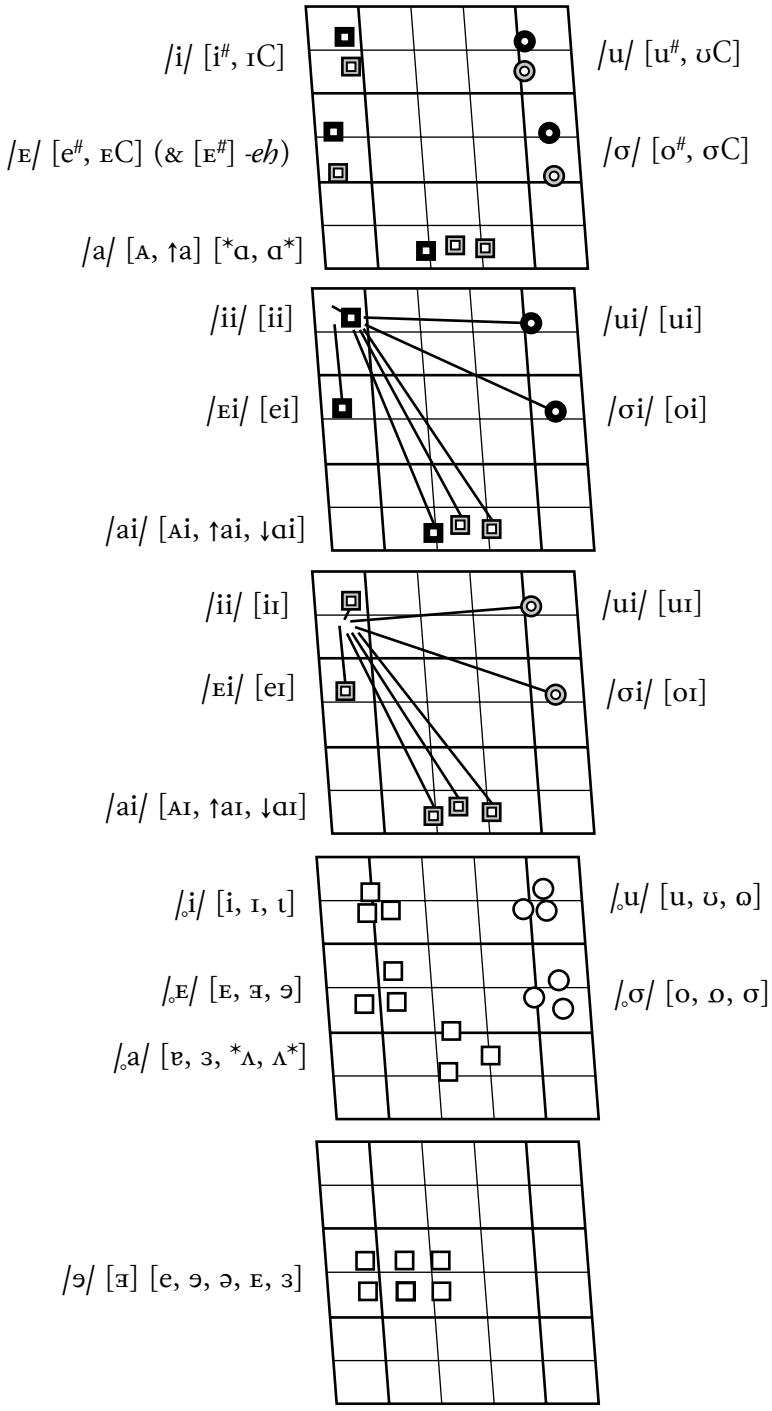
The fourth one is the *Yemeni* koiné, essentially formed by Yemen Jews. The fifth one is the *Maghreb* koiné, typical of North-African peoples, often simply called 'Moroccan Jews'.

14.1. The *Jerusalem* accent is shown in *fig* 14.1-2, respectively for its vowels, consonants and intonation patterns. The first vocogram, among its different taxophones, also shows the typical use of /a/ [ɑ] (indicated by *), which is possible for some speakers when /a/ is in contact with /ʡ, χ̇, ķ/. This may occur even if they are realized simply as [ʔ, χ, k], instead of the pharyngeal and prepharyngeal contoids placed in the table of *fig* 14.2 – between ( ), including other possible phonemes and xenophonemes (and variants).

In the table, in addition to a number of taxophones, further possible variants are shown, placed between { }.

The second and third vocograms show the diphthongs and frequent variants;

fig 14.1. *Jerusalem* Hebrew: vowels.



while the fourth and fifth ones give a number of possible unstressed variants, including those of /ə/. Notice that *fig* 14.2 also provides the fundamental intonation patterns. Let us add that consonant gemination may also occur, although less frequently than in traditional pronunciation.

fig 14.2. *Jerusalem* Hebrew: consonants & fundamental intonation patterns.

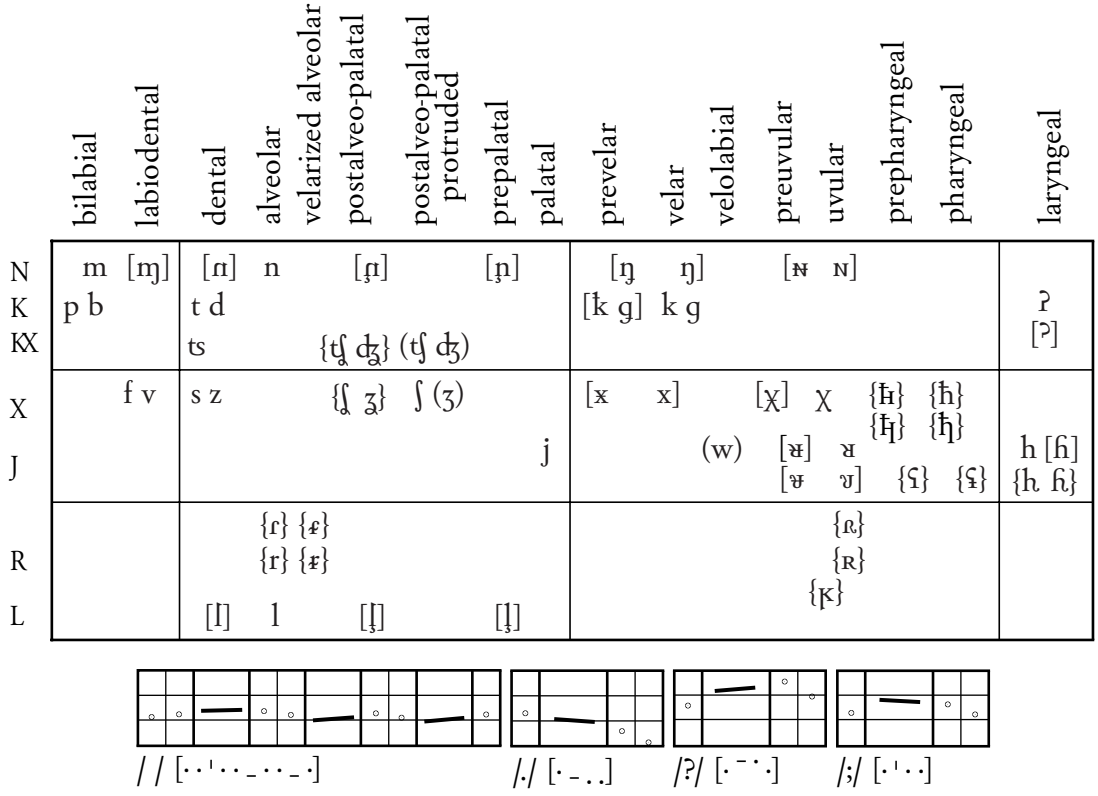
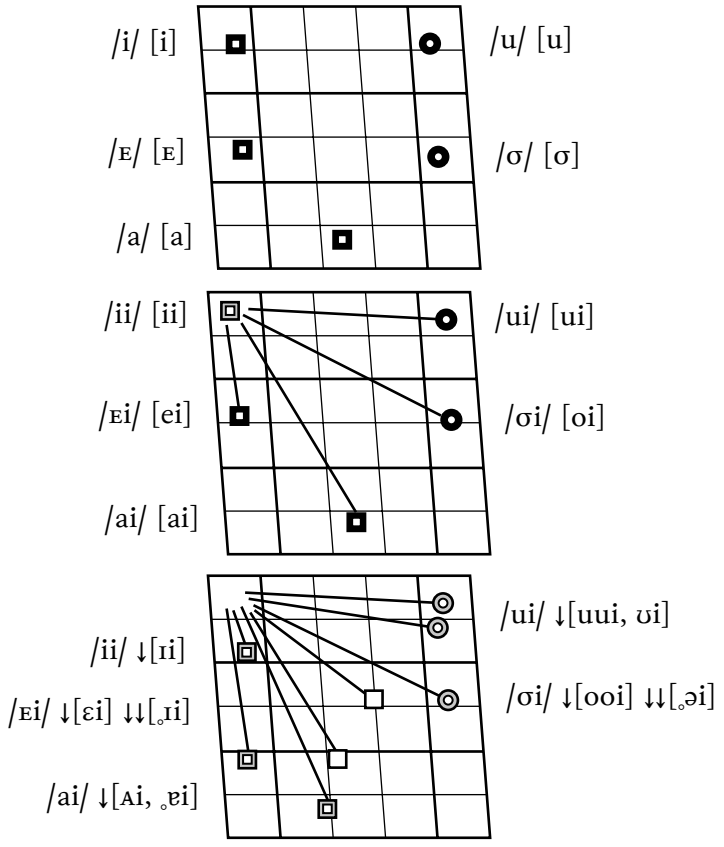


fig 14.3. *Ashkenazi* Hebrew: vowels.



14.2. *fig* 14.3-4 show the vowels of the *Ashkenazi* koiné, with several frequent possible variants (more or less broad: ↓, ↓↓, ↓↓↓). *fig* 14.5 gives the typical consonants of this koiné and its intonation patterns.

fig 14.4. *Ashkenazi* Hebrew: broader vowels.

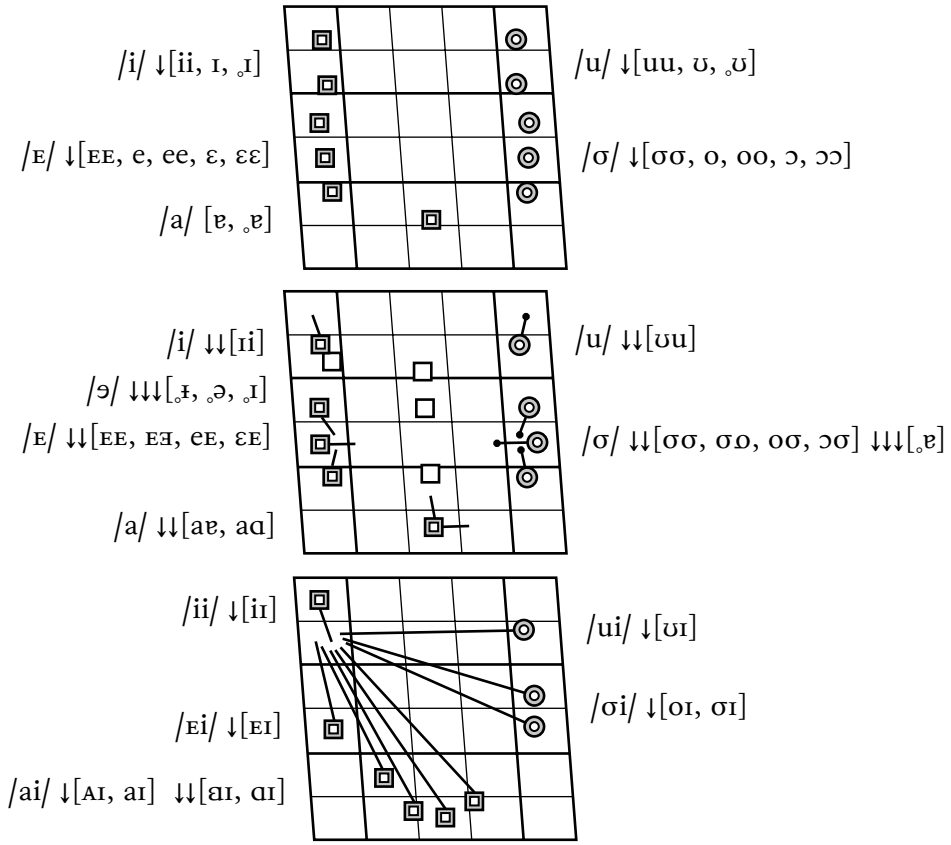
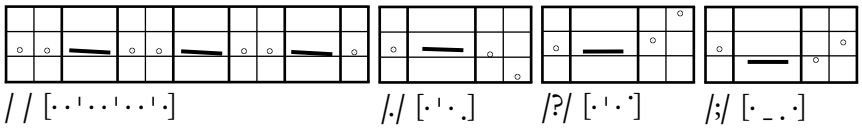


fig 14.5. *Ashkenazi* Hebrew: consonants & fundamental intonation patterns.

	bilabial	labiodental	dental	alveolar	postalveo-palatal	prepalatal	palatal	prevelar	velar	velolabial	laryngael
N	m	[ɱ]	[ɑ]	n	[ɻ]	[ɲ]		[ŋ̟	ŋ]		
K	p b		t d					[k̟ g̟]	k g		[ʔ]
KX			ʦ		(ʧ ʤ)						
X		f v	s z		ʃ (ʒ)				x		
J							j		[ɧ]	w	[h ɦ]
R				ɾ							
L			[l]	l		[ɻ]	[ʝ]				



14.3. *fig* 14.6 shows the vowels of the *Sephardi* koiné, with possible frequent variants (more or less broad). *fig* 14.7 gives most possible broad consonantal variants, such as [β, ð, ɣ], including broad English ones (placed between { }), with very

fig 14.6. *Sephardi* Hebrew: vowels.

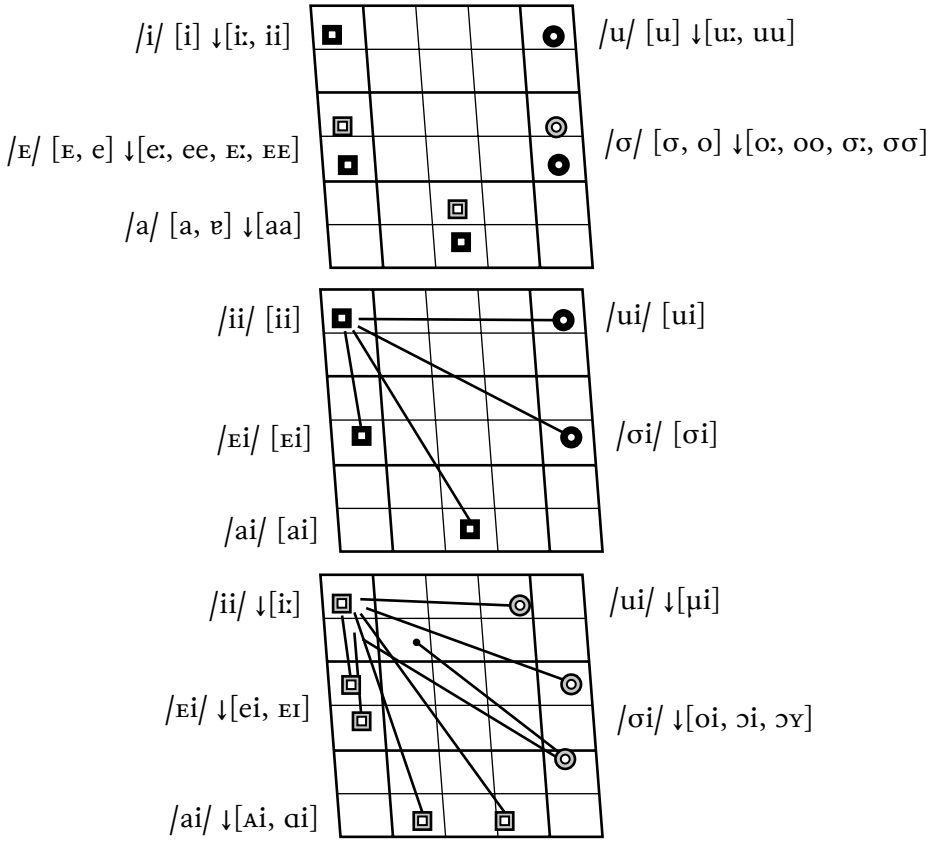
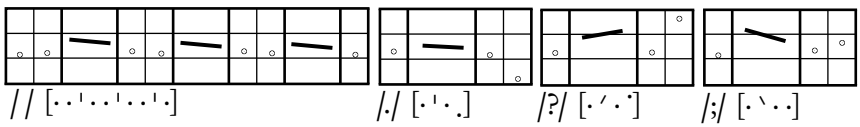


fig 14.7. *Sephardi* Hebrew: consonants & fundamental intonation patterns.

	bilabial	labiodental	dental	alveolar	velarized alveolar	postalveolar	postalveo-palatal protruded	postalveo-palatal prepalatal	palatal	[postalveolariz.] prevelar round.	prevelar	velar	velolabial	uvular	laryngeal
N	m	[ɱ]		[ɾ]	n		{ɳ}	[ɻ]		[ɲ]	[ŋ̟]	ŋ]			
K	p b		t d		{ɭ ɖ}	{t̠ d̠}					[k̟ g̟]	k g			[ʔ]
KX			ʦ [ʦ]					[ʧ ʤ]	(ʃ ʒ)						
X		f v	[θ s ð z]		[ʂ ʐ]			[ʃ̻ ʒ̻]	ʃ (ʒ)		[x̟ ɣ̟	x ɣ]	[χ ʁ]		
J		[β]		[ð]		{ɻ̟}			j		{ɾ}	[ɦ]	w [ʁ]		[h ɦ]
R				{ɹ ɻ} ɾ [r]										[ʀ]	
L			[l]		l {ɬ ɮ}		[ʃ̻]		[ʃ̻]						



broad *r* [ɹ, ɻ], or *t* [ʃ, ʈ, ɻ, ɽ]. It also gives the normalized general intonation patterns of this koiné, while some of those of the English accents appear in *fig* 15.1.2.

fig 14.8. *Mizrahi* Hebrew: vowels.

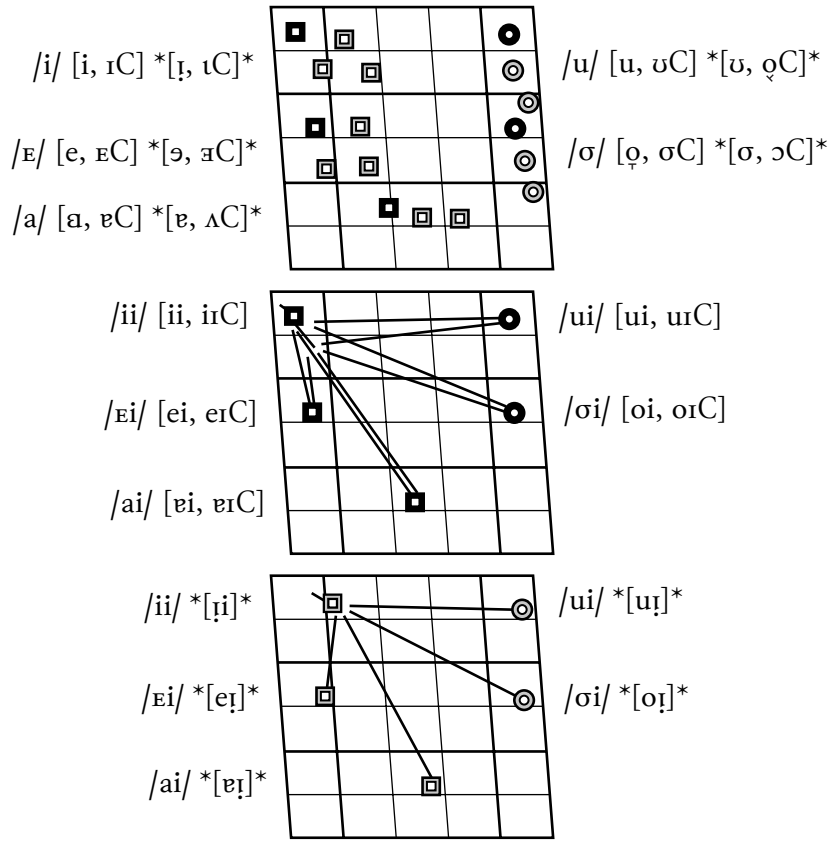
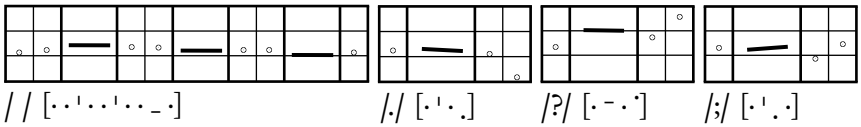


fig 14.9. *Mizrahi* Hebrew: consonants & fundamental intonation patterns.

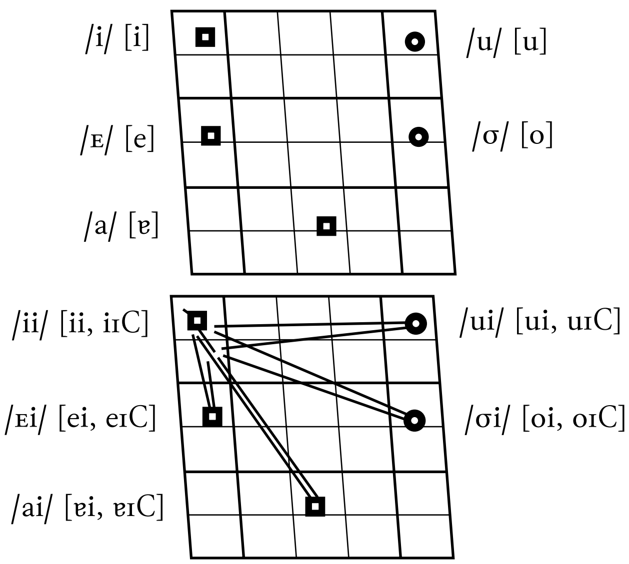
	bilabial	labiodental	dental	alveolar	postalveo-palatal	postalveo-palatal protruded	prepalatal	palatal	prevelar	velar	velolabial	preuvular	uvular	pharyngeal	laryngeal
N	m	[ɱ]		[ɳ]	n	[ɻ]		[ɲ]		[ŋ̟	ŋ]		[ɴ	ɴ]	
K	p b		t d						[k̟ g̟]	k g					ʔ
KX			ʦ				(ʧ ʤ)								
X		f v	s z				ʃ (ʒ)							ħ	
J								j			(w)			ʕ	[h] ɦ
R				ɾ [ɾ]											
L			[l]	l	[ɭ̟]			[ʎ̟]					ʟ		



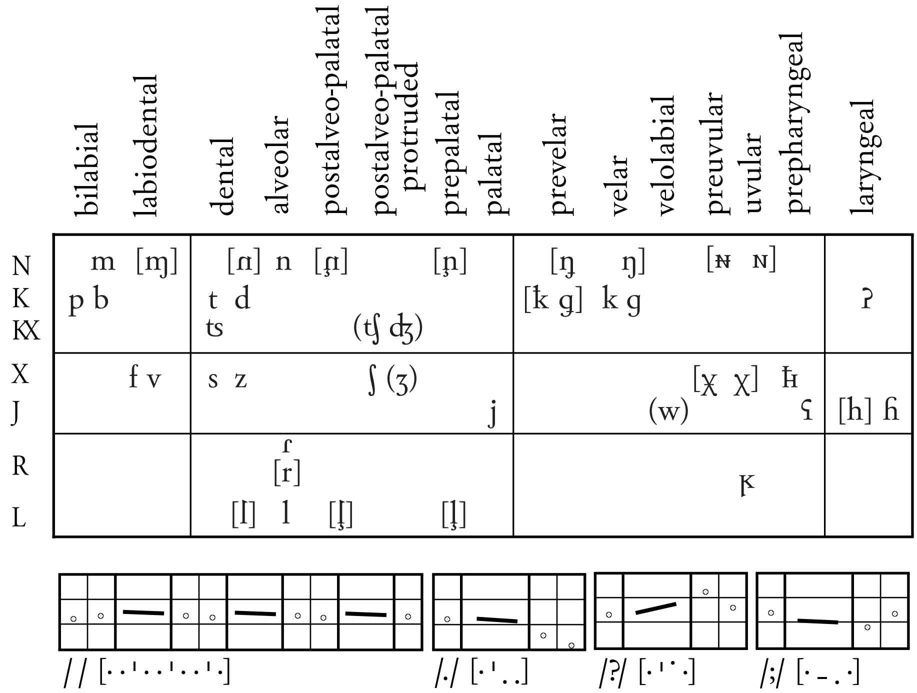
14.4. ﬁg 14.8 shows the vowels of the *Mizrahi* koiné, with possible frequent variants, including the taxophones occurring in contact with /ʔ̣, χ̣, ḳ/, generally realized as in traditional Hebrew, [ʕ, ħ], [k, ƙ, k̰]. Also consonant gemination occurs frequently, again, almost as in traditional Hebrew. ﬁg 14.9 also shows /χ, ʀ/ [ʁ̞; ɾ, r], and the intonation patterns.

14.5. ﬁg 14.10 shows the vowels of the *Yemeni* koiné, with taxophonic variants in checked syllables. Without particular taxophones occurring in contact with /ʔ̣, χ̣/, realized somewhat 'weaker' than in traditional Hebrew, [ʕ, ħ] (also /ḳ/ [k, ƙ]),

ﬁg 14.10. *Yemeni* Hebrew: vowels.



ﬁg 14.11. *Yemeni* Hebrew: consonants & fundamental intonation patterns.



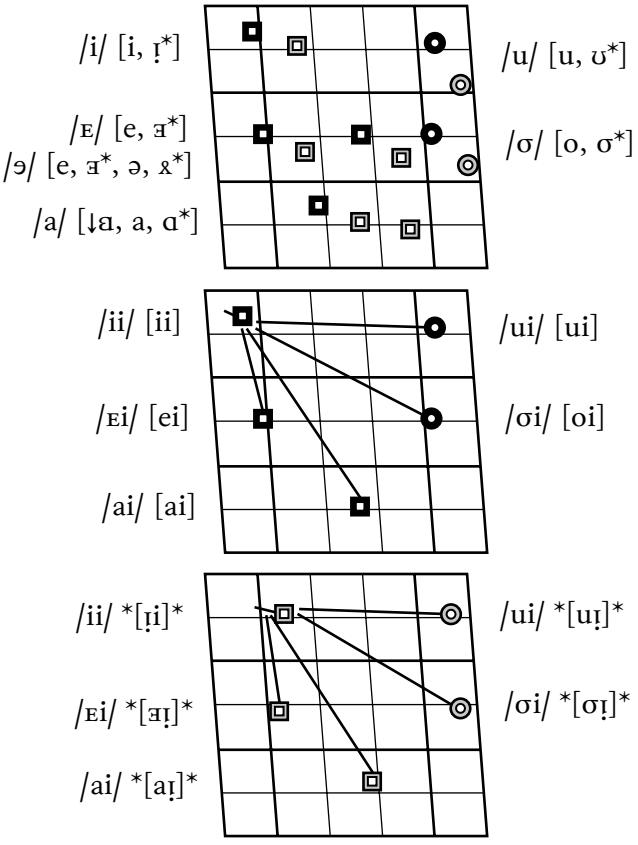
and /χ/ [ʁ; χ, χ̟], /ʀ/ [ɾ, r]. In addition, it has possible consonant gemination, and typical nasalization for /VN#, VN#/ [ṼN] (but /V#N, V#N/ [VN]). *fig* 14.11 gives all these consonants, and the intonation patterns, too.

Rightly or wrongly, it is generally considered to be the best accent for a kind of traditional Hebrew, because it uses *x̣*, *ʔ̣*, *k̟* [ħ, ʕ, q] (& [ɋ], before front vowels), including *x* /χ/ [ʁ] (also before front vowels), *r* [ɾ], and some geminate consonants, [CC], within or between words, although they are not usually indicated in writing.

In less recommendable variants, it can also present other different *consonants*, such as: *v* /v/ (*vet*) [v] & [b], *v* /v/ (*vav*) [v] & [ʊ, ɯ, w], *t* /t/ (*tet*) [t] & [ŧ, ʦ], *t* /t/ (*tav*) [t] & [θ, ʦ], *d* /d/ [d] & [ð], *g* /g/ [g] & [ɣ, gj̨, ʤ], *c* /ʦ/ [ʦ] & [s], including possible [ɢ, g] (& [ɢ, g], before front vowels) fσʁ *k̟* /k̟/, also [r, ɾ, ɾ] for *r* /ʀ/. However, all of them oscillate a lot, between speakers and words, including the actual realizations of *x̣*, *ʔ̣*, *k̟*.

As for the *vowels*, the Yemenite accent of good speakers (and broadcasters) generally has satisfactory vocoids (practically as in neutral Hebrew): *i* /i/ [i], *e* /ɛ/ [ɛ], *a* /a/ [a], *o* /σ/ [σ], *u* /u/ [u] (with possible oscillations, in free or checked syllables, including unstressed positions). However, less accurate speakers may often present, although with oscillations, retracted vocoids, due to the presence of [ħ, ʕ, q, ɋ], before or after them, in tautosyllabic sequences. On the other hand, nobody can deny that, in Hebrew (and Semitic languages, in general), vowels *are* second-class entities…

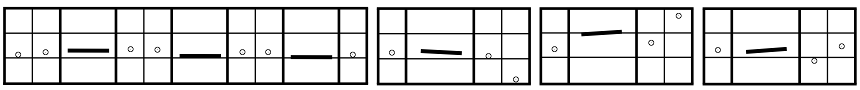
fig 14.12. *Maghreb* Hebrew: vowels.



14.6. fig 14.12 shows the vowels of the *Maghreb* koiné (often: 'Moroccan'), with taxophonic variants occurring in contact with /ʔ̣, χ̇, χ, ḳ/ [ʕ̞; ħ; ʁ; q, q̟]. Generally, /ʔ, h/ are realized as 'zero', [∅]. In addition, in broader accents, it is possible to find [ᵯ, ɱ̴, ᵰ̪, ᵰ; ꝑ, ƀ, ŧ, đ, k̰̂ ĝ, q̂; ꞙ, v̶, ꞩ, ƶ, ʁ̂; ɍ; ɫ], in contact with /ʔ̣, χ̇, χ, ḳ/ [ʕ̞; ħ; ʁ; q, q̟], or with /ɵ, u/ [o, ɵ; u, ʊ], which produces a general darker impression. All these contoids are placed on the table in fig 14.13, which also contains the intonation patterns. Some geminate consonants are also possible.

fig 14.13. *Maghreb* Hebrew: consonants & fundamental intonation patterns.

	bilabial	bilabial velarized	labiodental	labiodental velar.	dental	dental velarized	alveolar	alveolar velariz.	postalveo-palatal	prepalatal	palatal	prevelar	velar	velar rounded	preuvular	uvular	uvular rounded	pharyngeal	laryngeal
N	m	{ᵯ}	[ɱ]	{ɱ̴}	[n̪]	{ᵰ̪}	n	{ᵰ}	[ɲ̟]	[ɲ]		[ŋ̟	ŋ]	{ŋ̂}	[ɴ̟	ɴ]	{ɴ̂}		
K	p b	{ꝑ ƀ}			t d	{ŧ đ]						[k̟ g̟]	k g	{k̰̂ ĝ}	[q̟]	q	{q̂}		{ʔ}
KX									(ʧ ʤ)										{ˀ}
X			f v	{ꞙ v̶}	s z	{ꞩ ƶ}			ʃ (ʒ)							ʁ	{ʁ̂}	ħ	
J											j			w				ʕ̞	{h ɦ}
R							r	{ɍ}											
L					[l̪]	{ɫ̪}	l	{ɫ}											



/ / [· · ˈ · · ˍ · · ˍ ·]   /./ [· ˈ · .]   /?/ [· ¯ · ˙]   /;/ [· ˈ . ·]

15.
Phonopses of 40 'return-regional' accents

15.0. This chapter provides (although in a somewhat simplified version, and without indicating easily predictable and shared taxophones, but still usefully reliable) the phonopses of 40 'return-regional' Hebrew accents, showing their main typical peculiarities about vowels, consonants, and intonation patterns.

In fact, native speakers can easily identify (by instinct and practice, rather than by any more scientific approach) even minute segmental nuances and mostly prosodic ones, such as particular length gradations and intonation peculiarities.

Also for non-native people, it can be an interesting and amusing game to detect such peculiarities (*C'mon, everybody, let's detect as many features as we can!*), even if we do not provide actual examples, preferring to show what can actually be listened to from real speakers.

Of course, Jewish people living abroad generally speak another native language, while Hebrew can be just an additional language, generally for religious reasons, or for *Zionism – Ciyonut* ^{n}[ˌtsijɔˈnut] ^{m}[tsiɔ-] ^{t}[ˌtsijo-]. Usually their accents are more or less marked by more or less clear foreign features.

But, let us think over the actual situation about the so-called *law of return –ẋok hašvut* ^{n}[ˈχɔk haʃˈvut, -ʒ-] ^{m}[ˈʁɔ ka-] ^{t}[ˈħoḵ ha-]– which gives Jews the right to go and live in Israel and to gain Israeli citizenship.

But the 'return' is something more mythical than historical, or completely real. We are talking about that sort of *counter-exodus*, which does not actually concern real people, who want 'to go back' to their homeland: Israel. In fact, usually, none of them was born in Israel. None of them had to leave Israel, previously. It concerns the different diasporas which happened during prior centuries and millennia.

So, there is no real 'return', but a sort of 'ascent' (*ʔaliyaħ* ^{n}[ˌʔaliˈja,] ^{m}[ˌaliˈa] ^{t}[ˌʕaliˈja]), or 'achievement'. Really, it is nothing but actual *immigration to Israel*, which might be defined as 'immIsraelization', or simply *Israelization*.

15.1. The English-Hebrew accent is shown in *fig* 15.1.1-2 (including *fig* 15.1.3 for a very broad version of it).

fig 15.1.1. *English*-Hebrew accent.

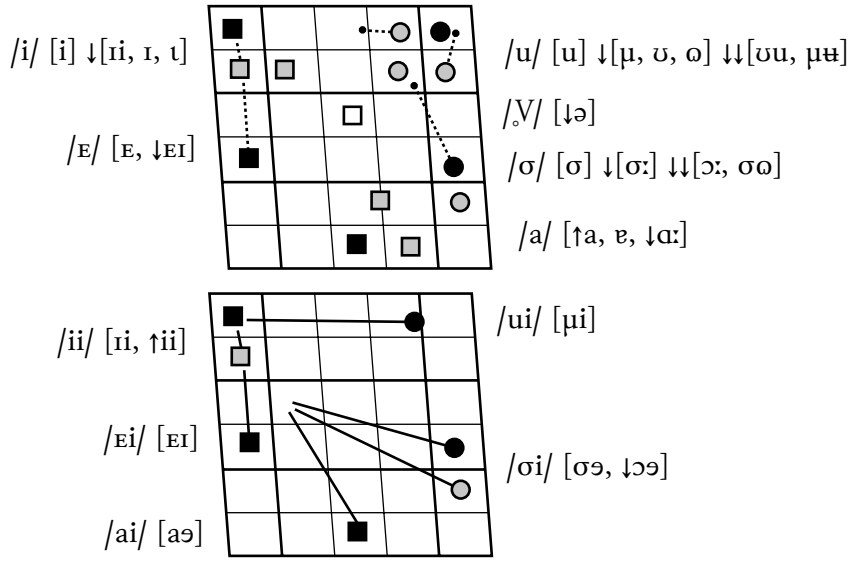
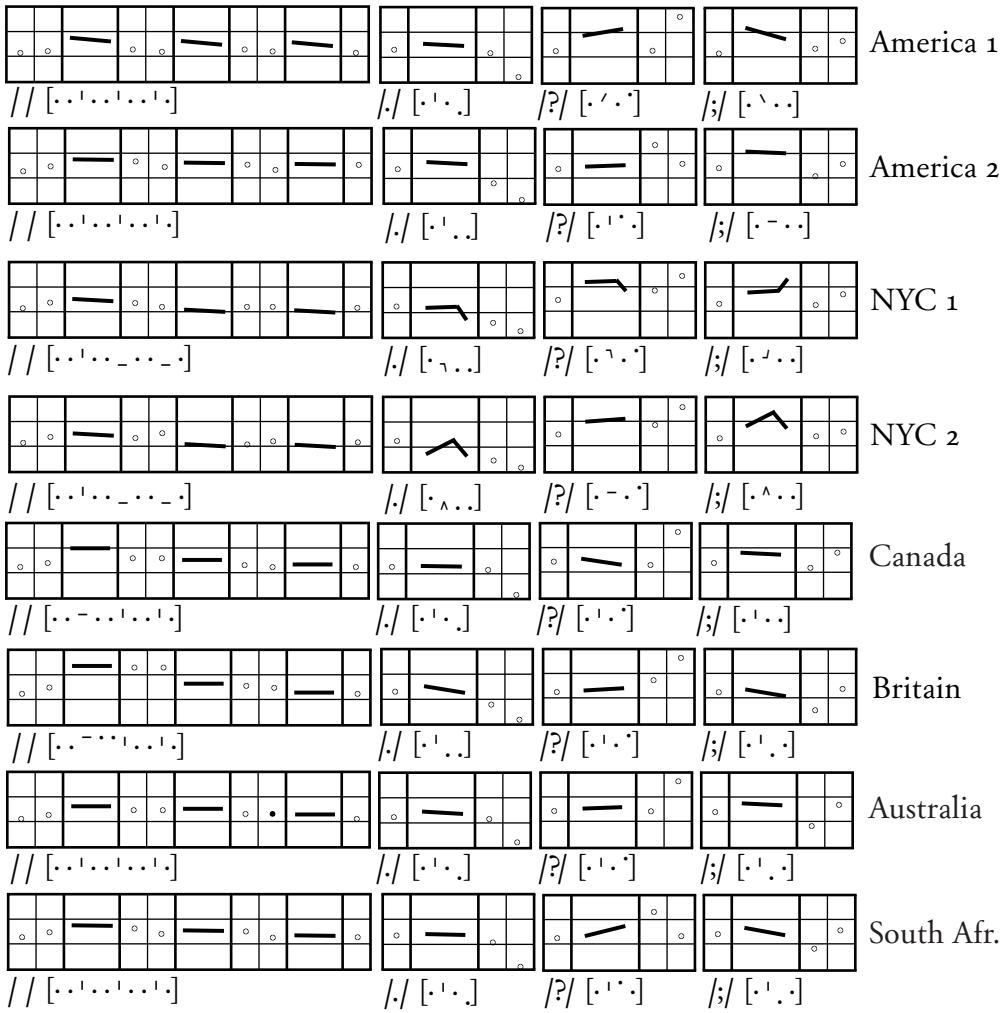
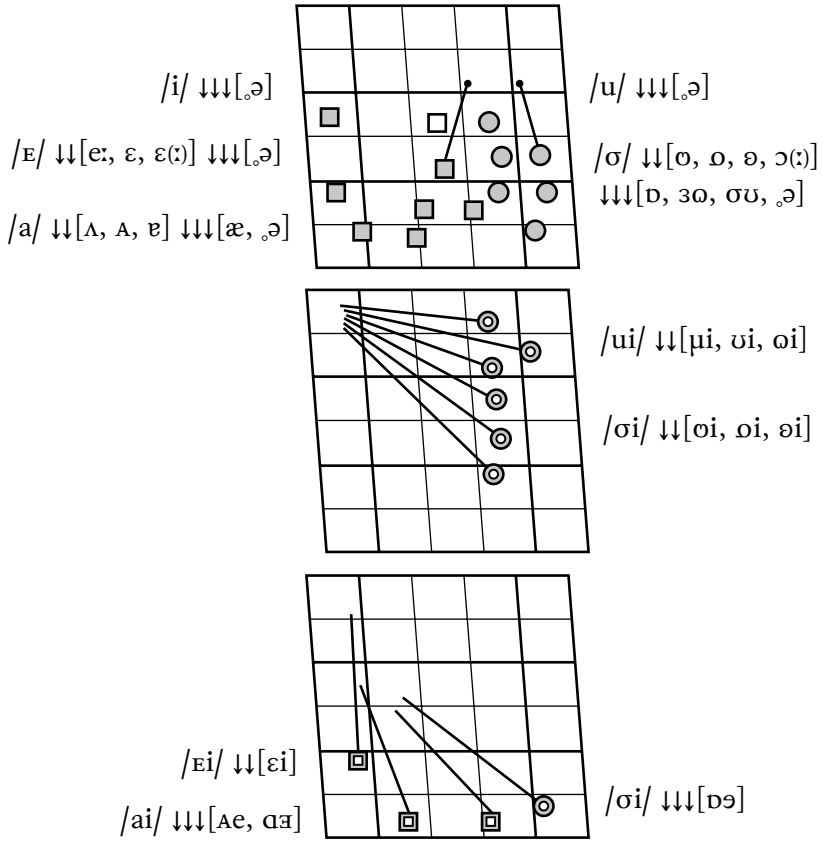


fig 15.1.2. *English*-Hebrew accent.



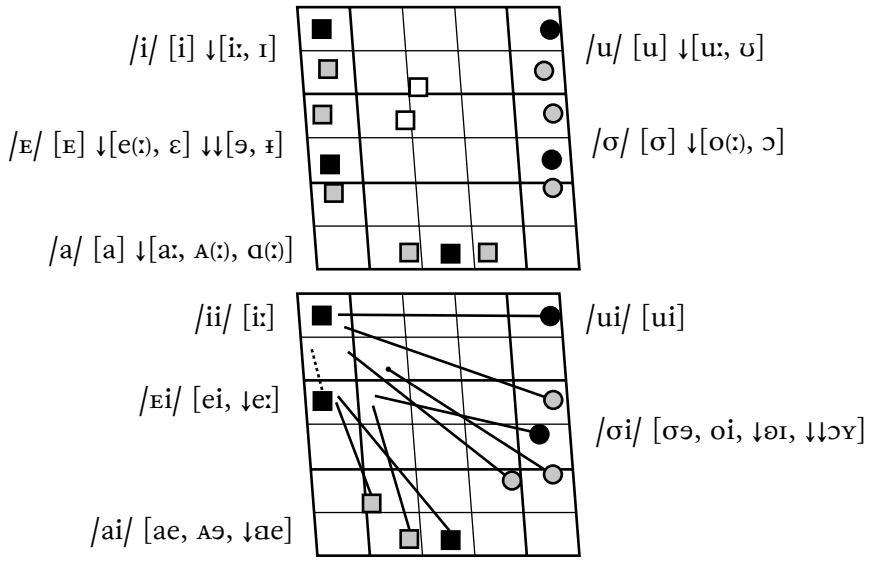
As for its consonants, we can certainly list the problematic use of /t/ [ʈ, ɻ, ɭ], /d/ [ɖ], /ʁ/ [ɹ, ɻ], /tʁ, dʁ/ [ʈ(h)ɻ, ɖɻ], /l/ [ɬ], and [ˈC̥h] for /p, t, k/; in addition, certain occurrences of [h, ɦ]. Problems for /χ, χ̇, ʔ, ʔ̣/.

fig 15.1.3. *English*-Hebrew accent: broader occurrences.



15.2. The German-Hebrew accent is shown in *fig* 15.2.1-2. As for the consonants, we can signal possible /t, d/ [ŧ, đ], /j/ [ɟ], /χ, χ̇/ [χ] (or [x]), /ʁ/ [ʁ, ʀ, ʁ, ɾ, r],

fig 15.2.1. *German*-Hebrew accent.



[ˈC̱h] for /p, t, k, ʦ/, [C̱] for /d#, g#, v#, z#/, and some occurrences of [h, ḥ, ʔ].

fig 15.2.2. *German*-Hebrew accent.

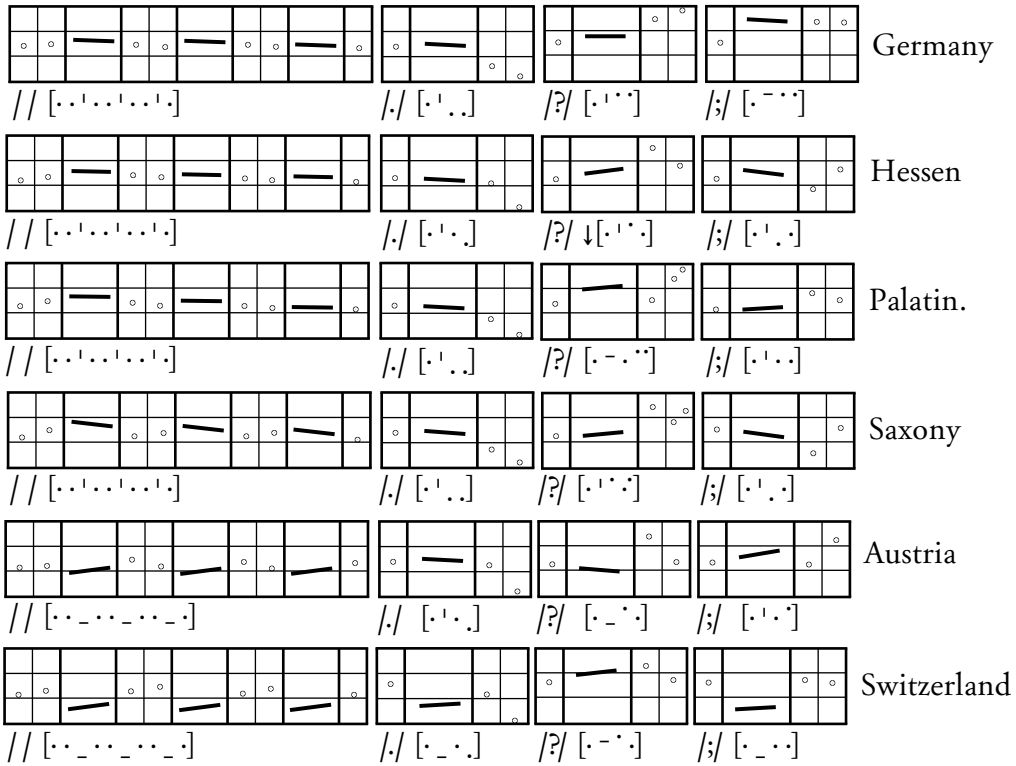
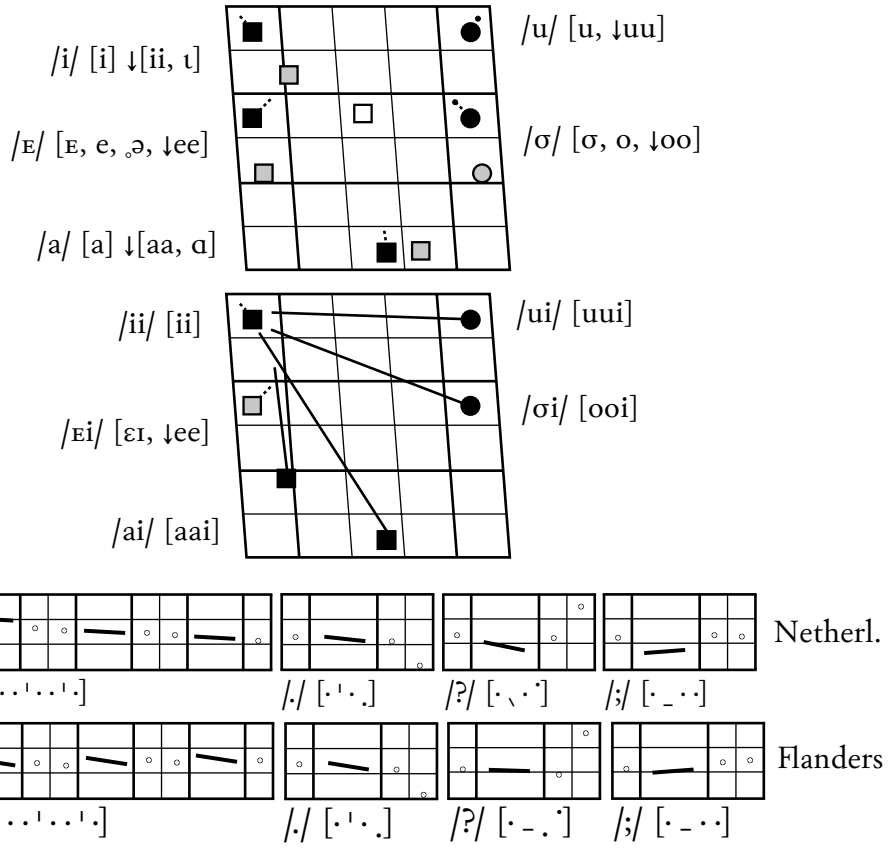
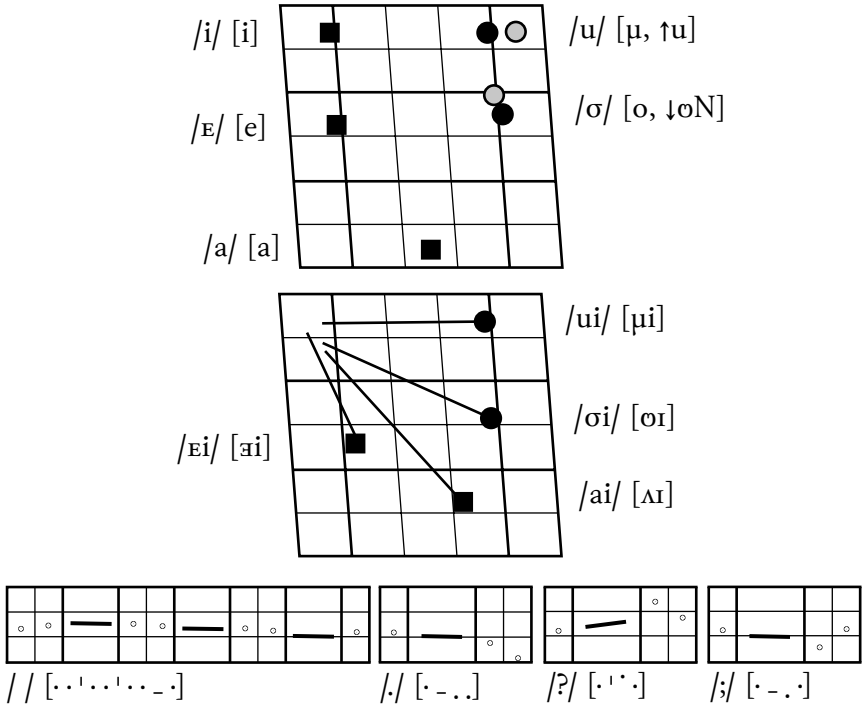


fig 15.3.1. *Dutch*-Hebrew accent.



15.3. The Dutch-Hebrew accent is shown in *fig* 15.3.1, while Afrikaans-Hebrew is given in *fig* 15.3.2. As for their consonants, let us signal at least possible /s, z, ʃ, j/ [ʂ, ʐ, ʃ̠, j̠], /χ, χ̇/ [χ] or [ʁ], /ʀ/ [ʁ, ɾ, ɾ̞, ↓ɾ̞], /l/ [ɬ], /ki/ [ci], /h/ [h, ɦ], and some occurrences of [ʔ].

fig 15.3.2. *Afrikaans*-Hebrew accent.



15.4. The French-Hebrew accent is shown in *fig* 15.4.1-2. As for the consonants, let us signal the possible occurrences of /ʃ/ [ʃ̠], /t, d, k, g/ [ʈ, ɖ, c, ɟ]+/i/, /j/ [j̠], /ʀ/ [ʁ, ʁ, ɾ]. Several problems for /χ, χ̇, ʔ, ʔ̣, h/.

fig 15.4.1. *French*-Hebrew accent.

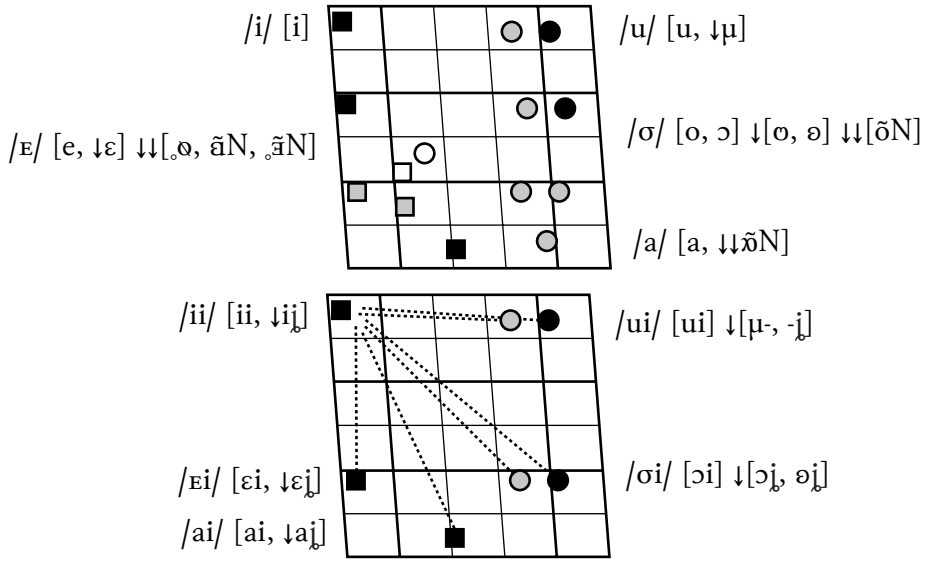
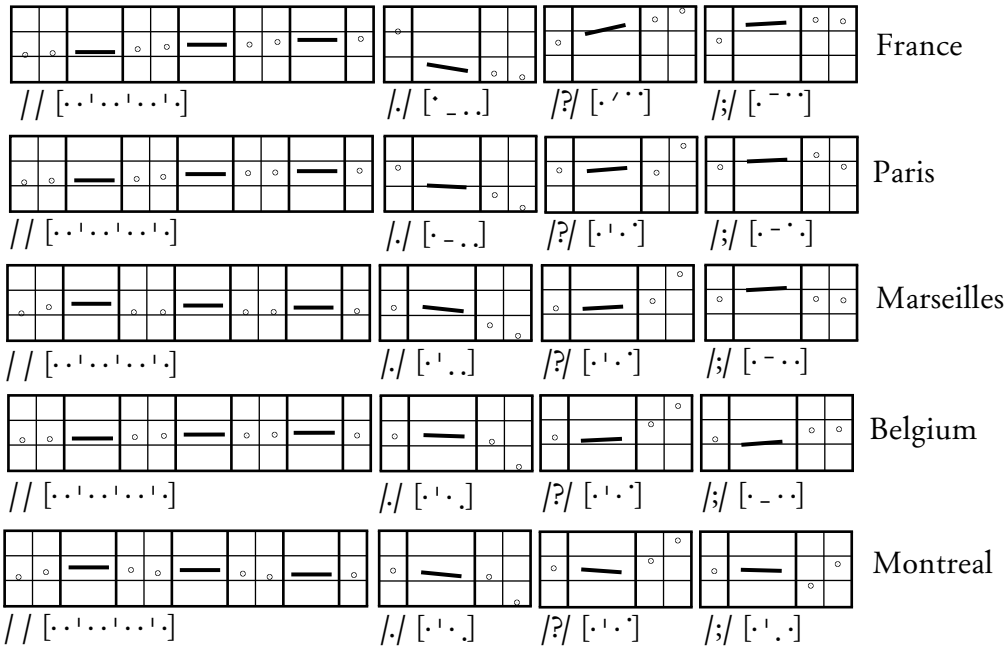


fig 15.4.2. *French*-Hebrew accent.



15.5. The Spanish-Hebrew accent is shown in *fig* 15.5-1-2. As for the consonants, we can find /b, d, g/ [β, ð, ɣ] in internal syllable-initial position, /s, z, ʃ/ [ʂ, ʐ, ʃ], /j/ [j̟, gj̟], /χ, χ̇/ [χ] or [x], /ʁ/ [ɾ, #rː], problems for /ʔ, ʔ̣, h/.

fig 15.5.1. *Spanish*-Hebrew accent.

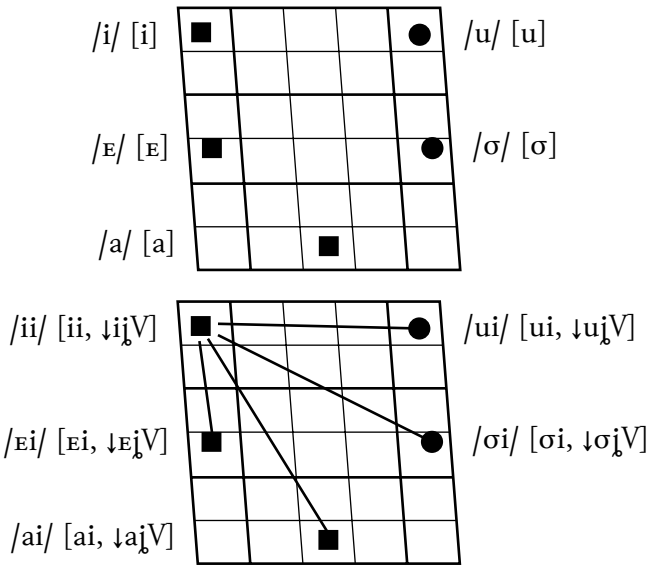
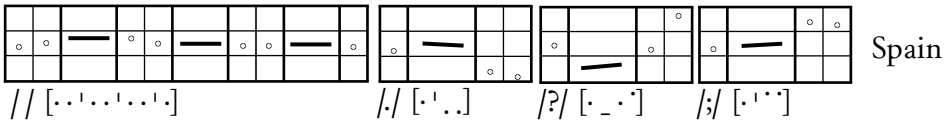
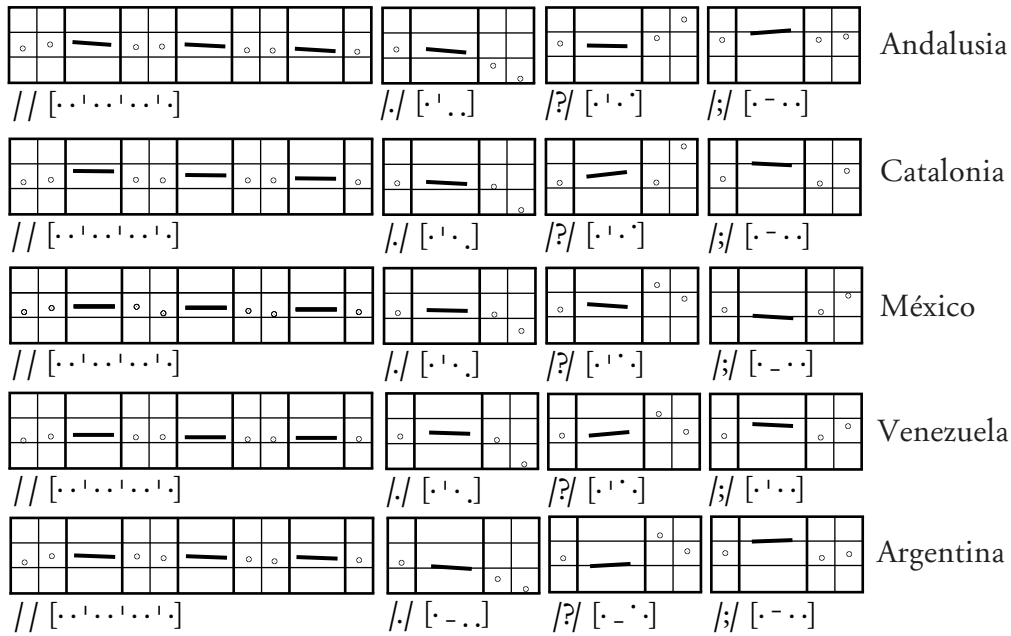


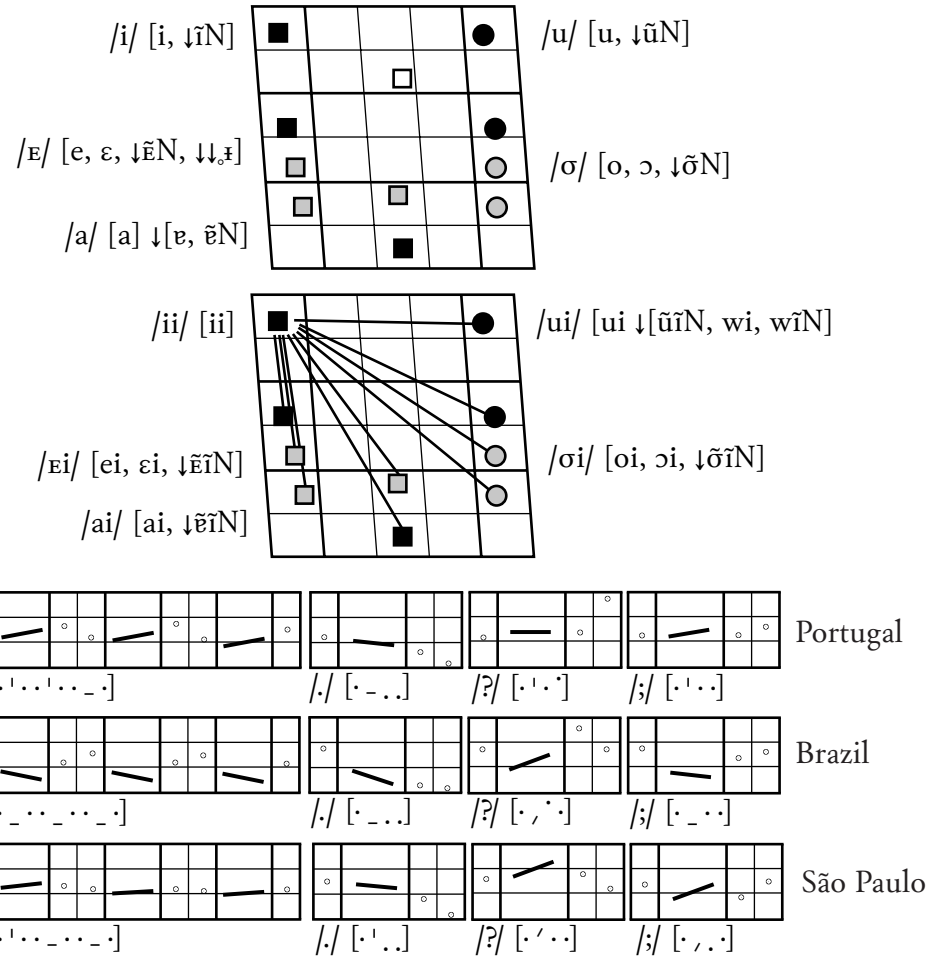
fig 15.5.2. *Spanish*-Hebrew accent.





15.6. The Portuguese-Hebrew accent is shown in *fig* 15.6 with vowel nasalization, as shown, and Lusitanian possible /ˌʁ/ [↓ɤ], and /b, d, g/ [β, ð, ɣ] in internal

fig 15.6. *Portuguese*-Hebrew accent.



syllable-initial position, Brazilian /ʃ/ [ʃ], /t, d, k, g/ [tʃ, dʒ, c, ɟ]+/i/, /ʁ/ [#r, #ʁ, ↓#ʁ] (postvocalic [ɾ]), /l/ [l, ɬ, ɬ], problems for /χ, χ̇, ʔ, ʔ̣, h/.

15.7. The Italian-Hebrew accent is shown in fig 15.7.1-2. Several vocalic oscillations for /ɛ, a, ɔ/, and diphthongs, as shown. Possible different realizations mostly for /ʦ, s, z, ʃ, ʁ, NC/ [ʦ, ʦ; s, ʂ, ʂ; z, ʐ, ʐ; ʃ, ʃ; r, ɾ; ŋC, ŋC], problems for /χ, χ̇, ʔ, ʔ̣, h/.

fig 15.7.1. *Italian*-Hebrew accent.

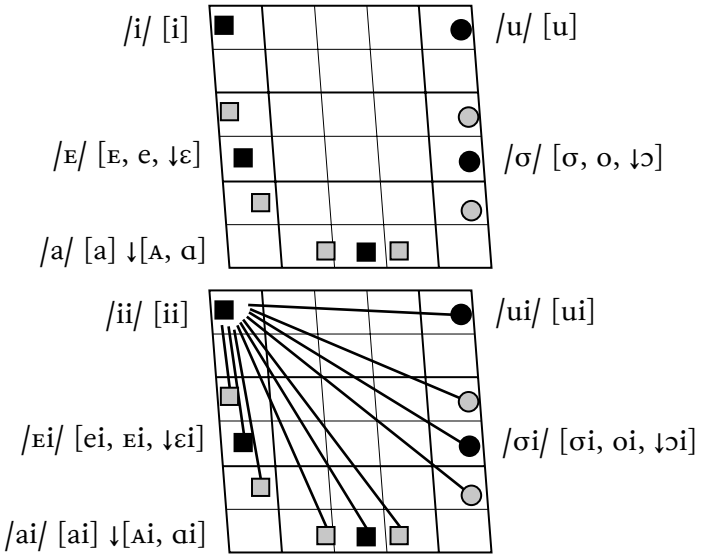
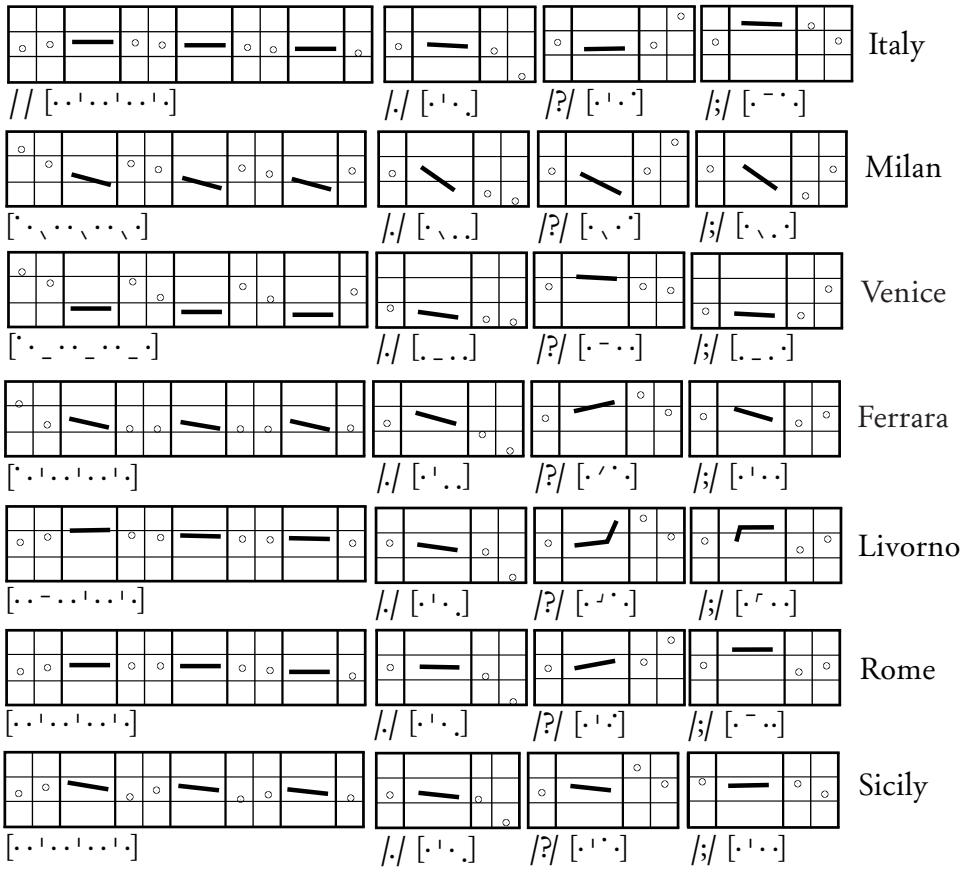
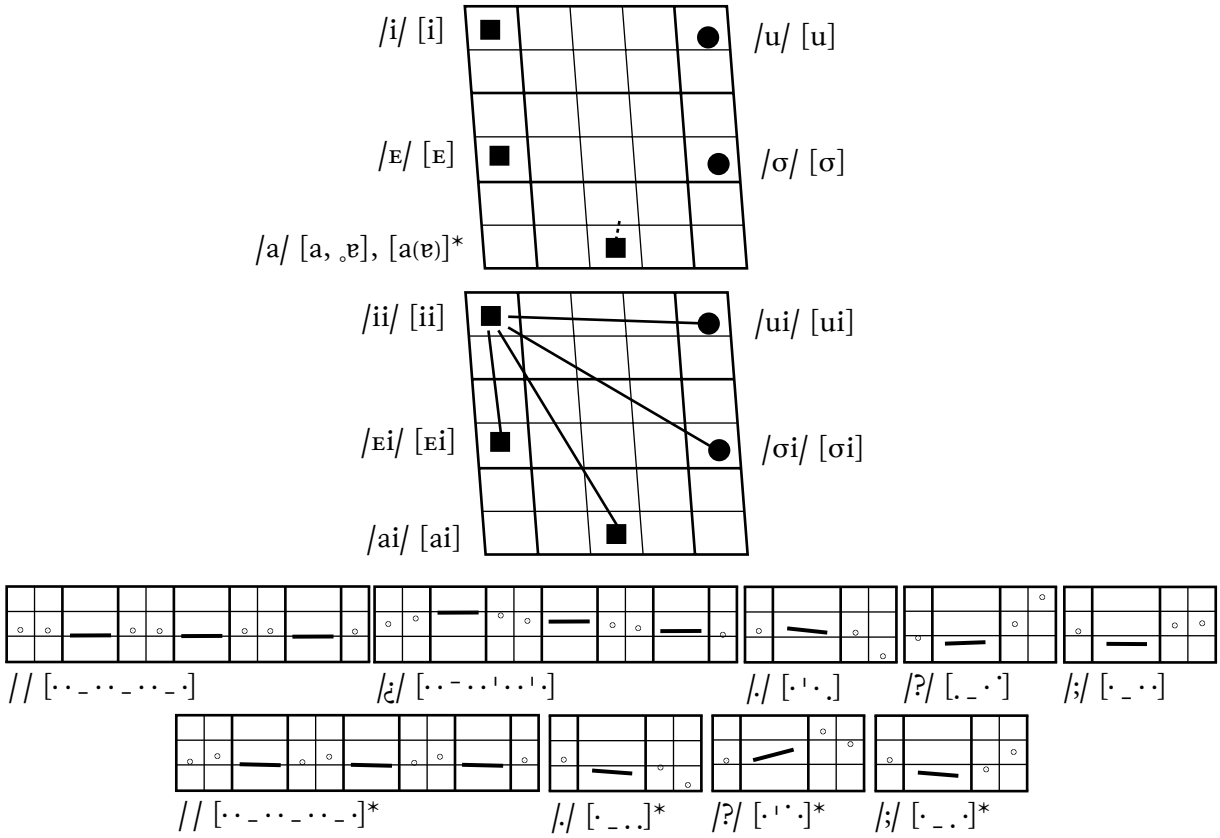


fig 15.7.2. *Italian*-Hebrew accent.



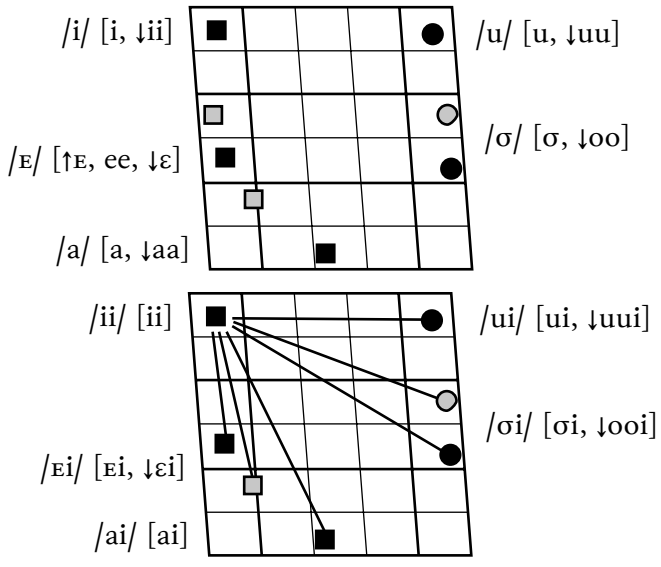
15.8. The Roumanian-Moldavian-Hebrew accent is shown in ƒig 15.8. The Moldavian peculiarities are identified by *, mainly [Ç] (palatalized contoids due to Slavic influence): [ɻm, ɲ; ɡ, ɓ; c, ɟ; ʈʂ, ɖʐ; ʃ, ɣ; ʂ; ʃ; ɻ] (and [ɬ]); in addition, /χ, χ̇/ [ɧ], /ʁ/ [ɾ]; problems for /ʔ, ʔ̣, h/.

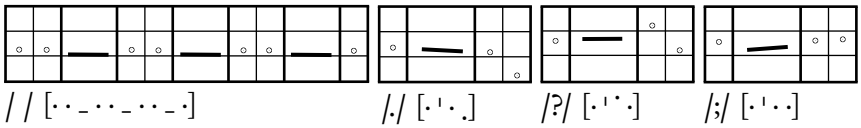
ƒig 15.8. *Roumanian-Moldavian*-Hebrew accent.



15.9. The Hungarian-Hebrew accent is shown in ƒig 15.9. It has /χ, χ̇/ [ɧ], /ʁ/ [ɾ]; problems for /ʔ, ʔ̣/.

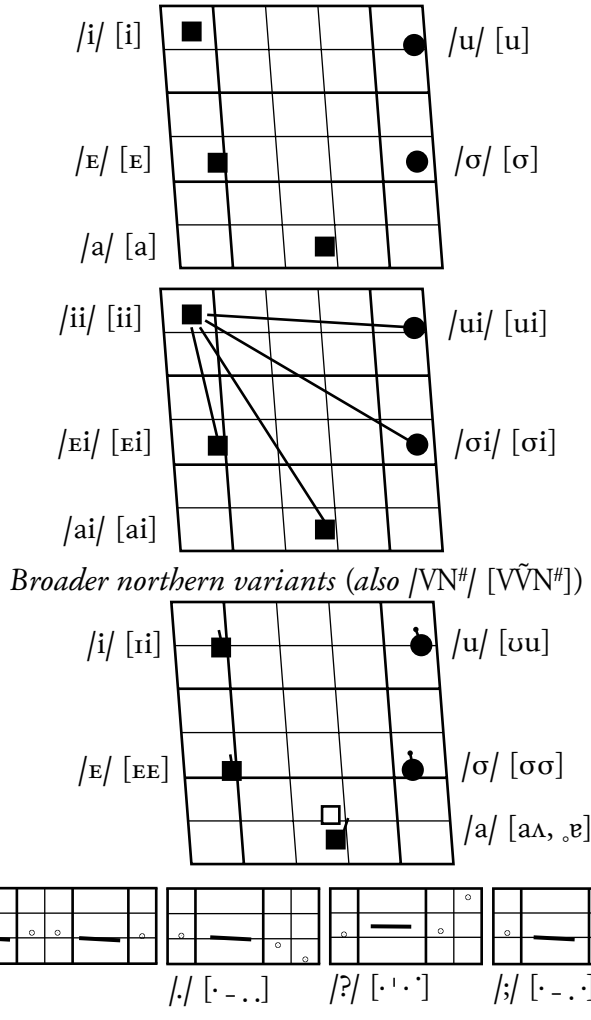
ƒig 15.9. *Hungarian*-Hebrew accent.





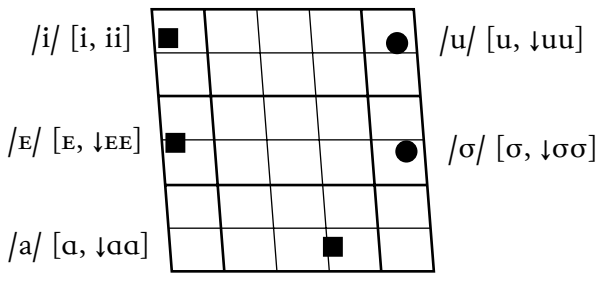
15.10. The Albanian-Hebrew accent is shown in *fig* 15.10. As for the consonants, we find /ʁ/ [ɾ, z, ɪ, ɤ], /l/ [ʟ, ɬ], and problems with /ʔ, ʔ̣, χ, χ̇/.

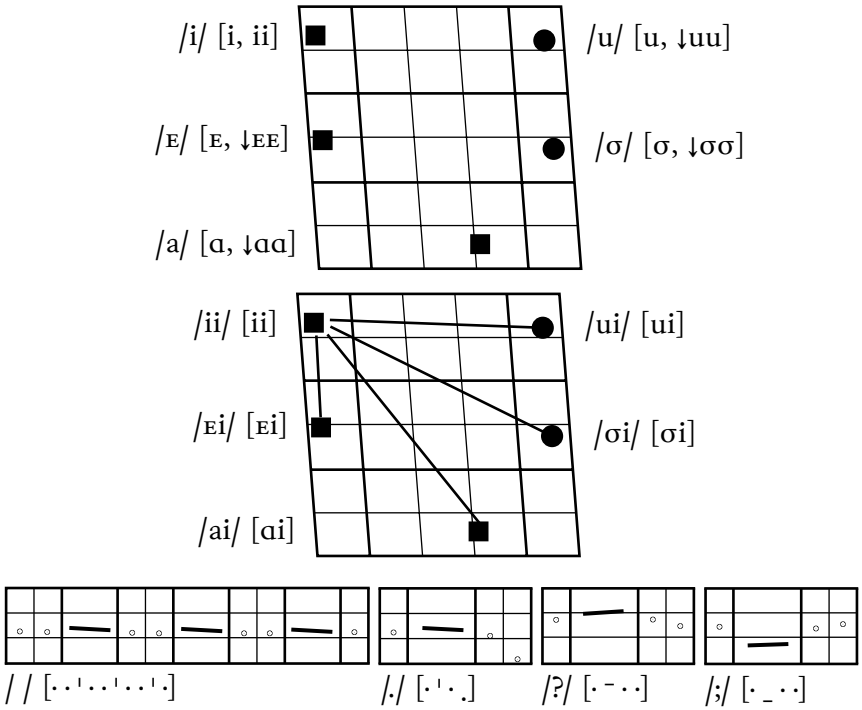
fig 15.10. *Albanian*-Hebrew accent.



15.11. The Finnish-Hebrew accent is shown in *fig* 15.11. Consonants: /ʦ, s, z/ [tʂ, ʂ, ʐ], /ʁ/ [ɾ, r, ɤ], /l/ [ɬ]; possible /h, χ, χ̇, ʔ/ [h, ħ, ʔ]; problems for /ʔ̣/.

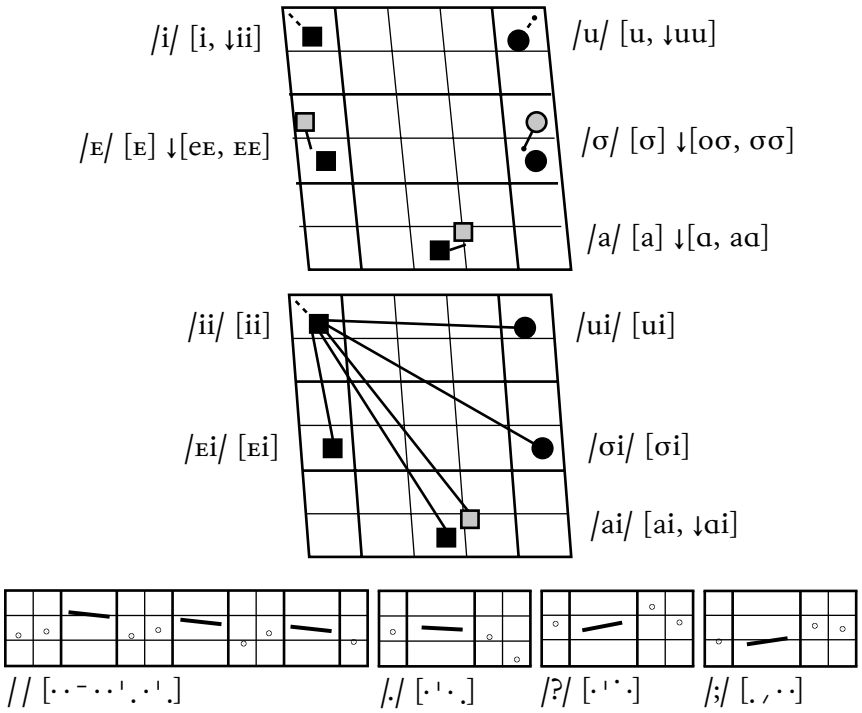
fig 15.11. *Finnish*-Hebrew accent.





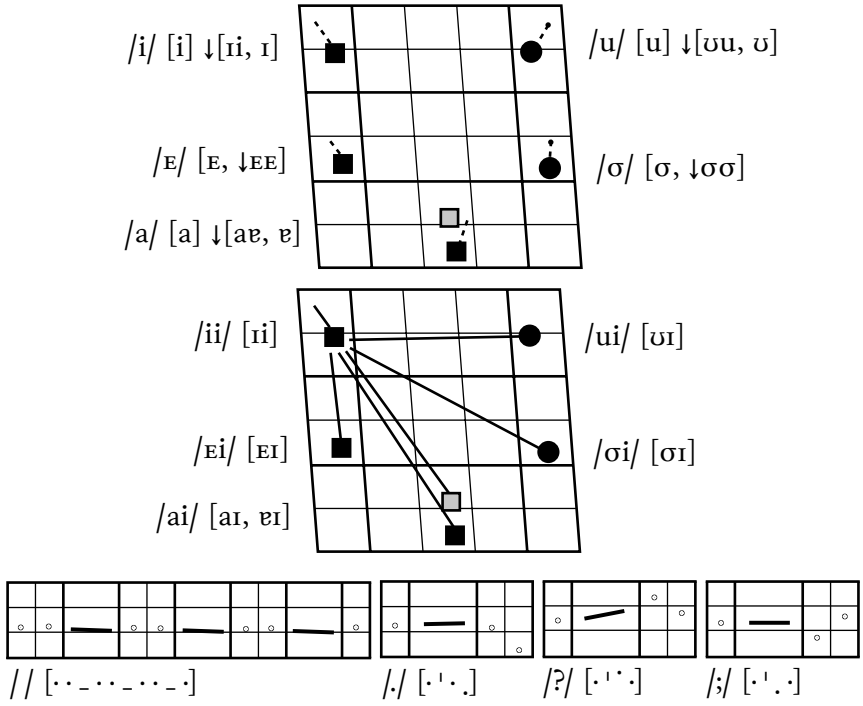
15.12. The Estonian-Hebrew accent is shown in *fig* 15.12. Consonants: /f, v/ [f, φ; v, ß], /b, d, g; z/ often [p; t; k, ƙ; s] instead of [b; d; g, ɠ; z]. /ʁ/ [r, ɾ], /l/ [l, ɬ]. Possible /h/ [h], /χ, χ̇/ [ɧ]; problems with /ʔ, ʔ̣/.

fig 15.12. *Estonian*-Hebrew accent.



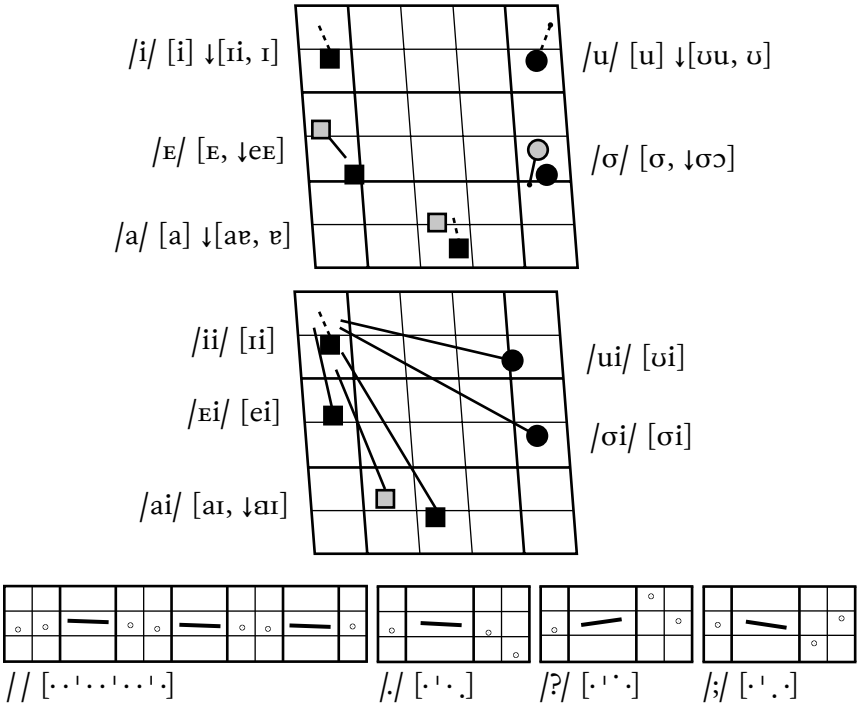
15.13. The Lettish-Hebrew accent is shown in *fig* 15.13. Consonants: /ʃ/ [ʃ̡], possible /ki, gi/ [c̛i, ɟ̡i] and /f/ [v, f], or /h, χ, χ̇/ [ɧ], or /ʔ/ [ʔ, ʔ], /ʁ/ [ɾ], /l/ [λ, ɬ]; problems with /ʔ̣/.

ƒig 15.13. *Lettish*-Hebrew accent.



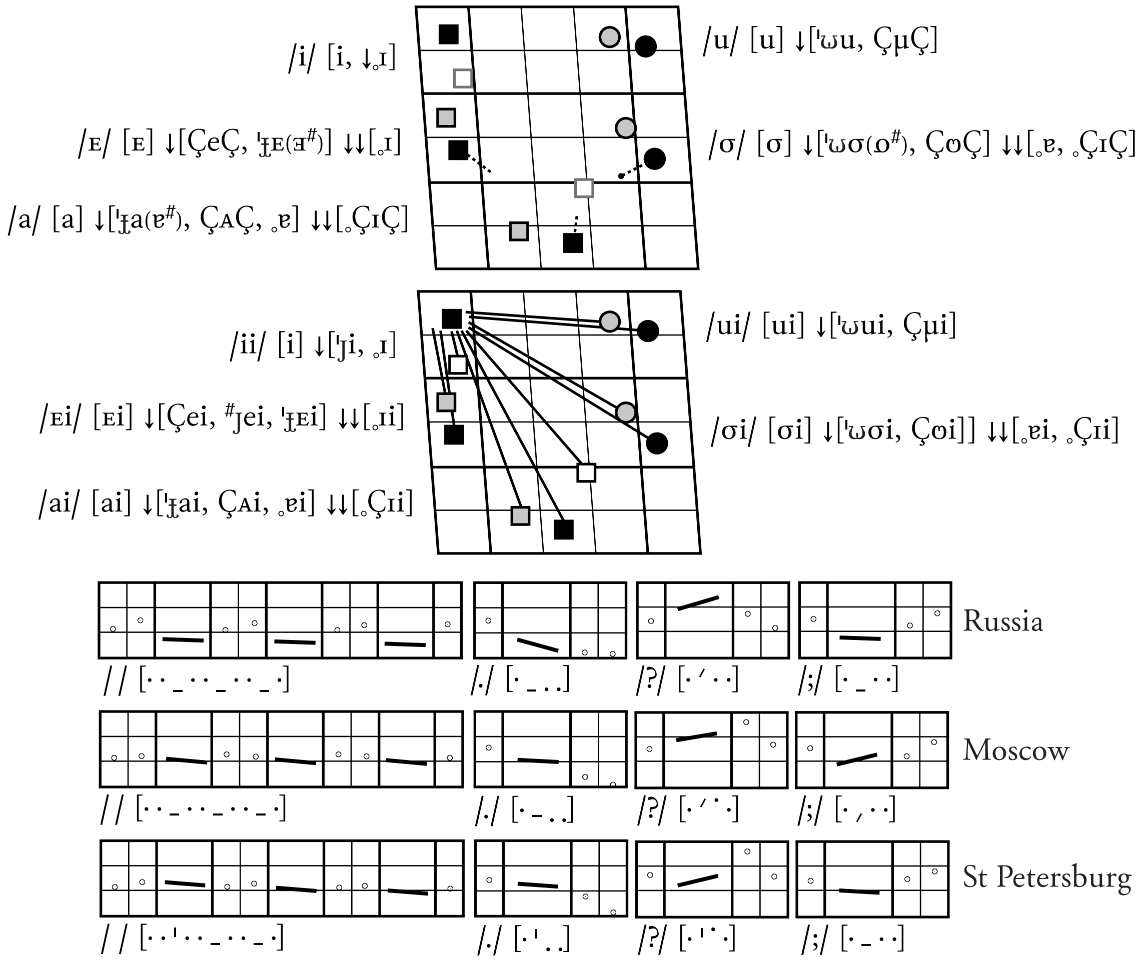
15.14. The Lithuanian-Hebrew accent is shown in ƒig 15.14. Consonants: /ʃ/ [ʃ, ↓ʃ], possible /ki, gi/ [ɕi, ʑi] and /χ, χ̇/ [ɧ], or /h/ [h, ɦ], /ʁ/ [ʁ], /l/ [l, ɬ]; problems with /ʔ, ʔ̣/.

ƒig 15.14. *Lithuanian*-Hebrew accent.



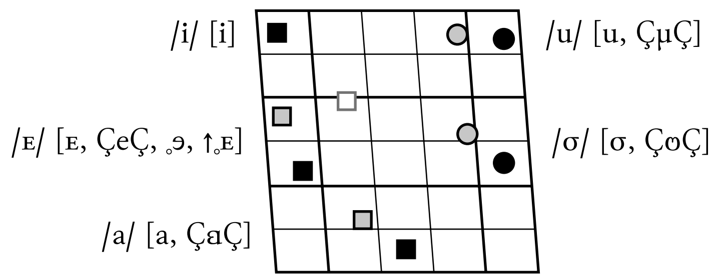
15.15. The Russian-Hebrew accent is shown in fig 15.15. Its broad version has [Ç] (palatalized contoids before /j, i, ᴇ/): [m̡, n̡; p̡, b̡; c, ɟ; ţ, ţş; ḑ, ḑẓ; ƒ, ṿ; ş, ẓ; ɾ̡; l̡]; also [ʆ] (or [↓ʂ]), /j/ [j, j̥, j̤], /ʀ/ [ɾ], /l/ [ɫ, ɫ]; in addition, /χ, χ̇/ [ḫ]; problems with /h, ʔ, ʔ̣/. Also notice, in the vocograms, the particular treatment of the vowels both in unstressed syllables and in contact with [Ç], and even /ˈᴇ, ˈa, ˈɞ/ ↓↓↓[ˈᴊᴇ, ˈɟa, ˈɷɞ].

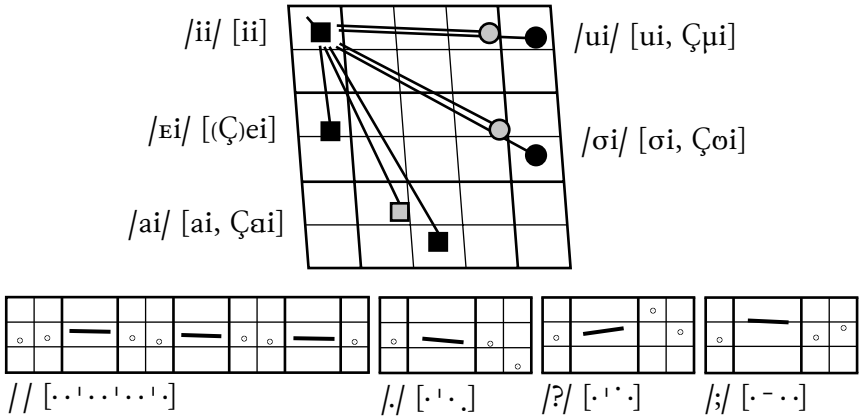
fig 15.15. *Russian*-Hebrew accent.



15.16. The Ukranian-Hebrew accent is shown in fig 15.16. Its broad version has [Ç] (palatalized contoids before /j, i, ᴇ/): [m̡, n̡; p̡, b̡; c, ɟ; ţ, ţş; ḑ, ḑẓ; ƒ, ṿ; ş, ẓ; ɾ̡; l̡]; also [ʆ] (or [↓ʃ]), /j/ [j, ɟ], /ʀ/ [ɾ], /l/ [ɫ, ɫ]; possible /f, v/ [φ, ß]; problems with /h,

fig 15.16. *Ukranian*-Hebrew accent.

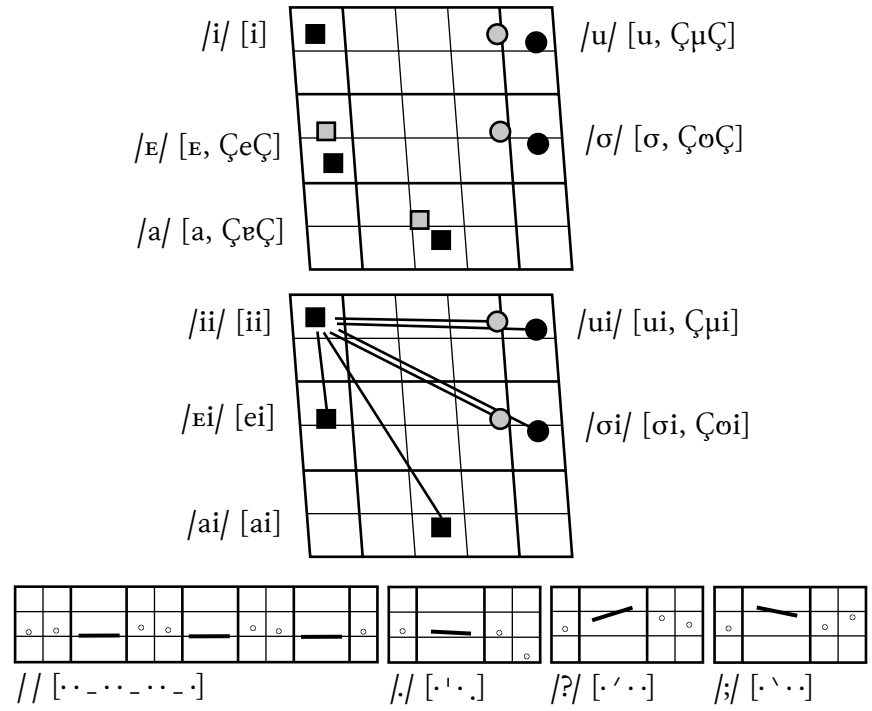




ʔ, ʔ̣, χ, χ̇/. Also notice, in the vocograms (although in a weaker way than in Russian), the particular treatment of the vowels both in unstressed syllables and in contact with [Ç], and even /ˈɛ, ˈa, ˈσ/ ↓↓↓[ˈjɛ, ˈɟa, ˈɯσ].

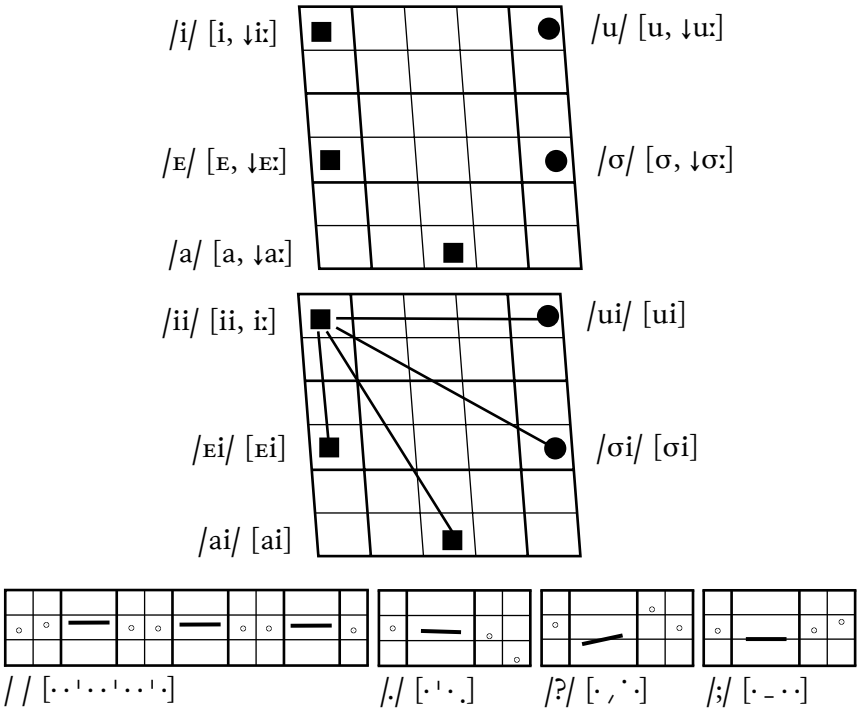
15.17. The Belorussian -Hebrew accent is shown in *fig* 15.17. Its broad version has [Ç] (palatalized contoids before /j, i, ɛ/): [m̨, n̨; p̨, b̨; c, ɟ; t̨, t̨s̨; d̨, d̨ʒ̨; f̨, ɣ; s̨, z̨; ʂ; l̨]; also [ʃ̨] (or [ɬʃ̨]), /j/ [j, ɟ], /ʀ/ [ɾ], /l/ [ɬ, ɬ]; possible /f, v/ [ɸ, ß]; problems with /h, ʔ, ʔ̣, χ, χ̇/. Also notice, in the vocograms (although in a weaker way than in Ukranian), the particular treatment of the vowels both in unstressed syllables and in contact with [Ç], and even /ˈɛ, ˈa, ˈσ/ ↓↓↓[ˈjɛ, ˈɟa, ˈɯσ].

fig 15.17. *Belorussian*-Hebrew accent.



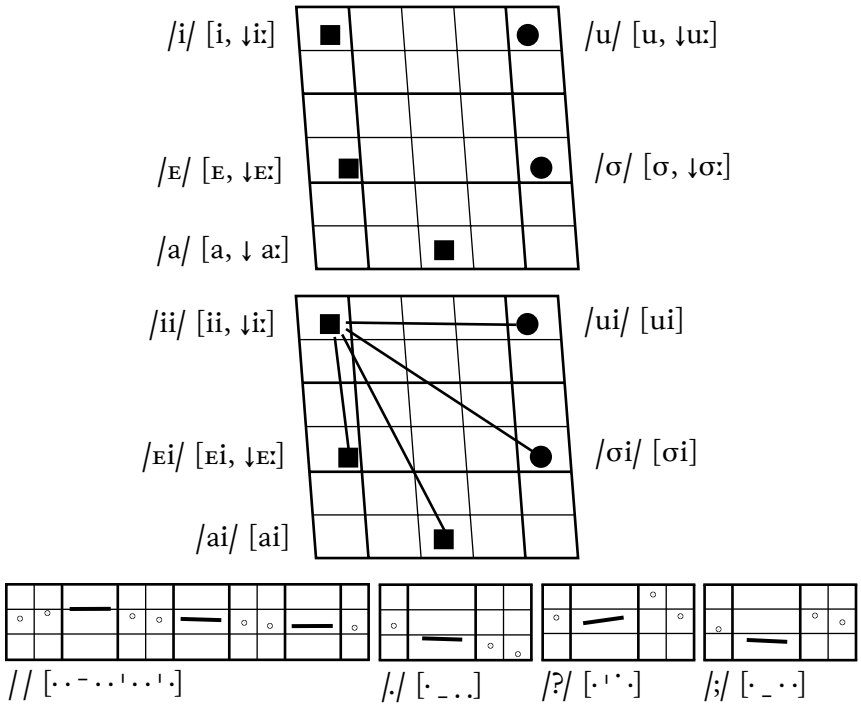
15.18. The Czech-Hebrew accent is shown in *fig* 15.18. Consonants: /ʀ/ [ɾ], /l/ [l, ɬ, ɬ]; possible /ki, gi/ [ci, ɟi], /h/ [h, ɦ], /χ, χ̇/ [x], /ʔ/ [ʔ]; problems with /ʔ̣/.

fig 15.18. *Czech*-Hebrew accent.



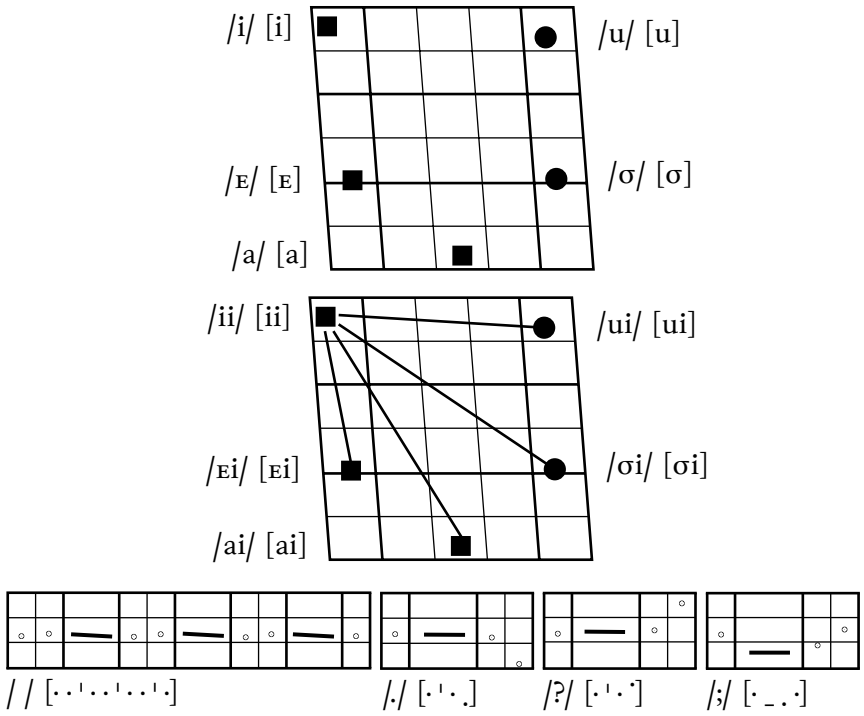
15.19. The Slovak-Hebrew accent is shown in *fig* 15.19. Consonants: /ʁ/ [ɾ, r], /l/ [ʎ, l, ɬ, ɬ]; possible /ki, gi/ [ci, ɟi], /h/ [h, ɦ], /χ, χ̇/ [ḥ]; problems with /ʔ̣, ʔ/.

fig 15.19. *Slovak*-Hebrew accent.



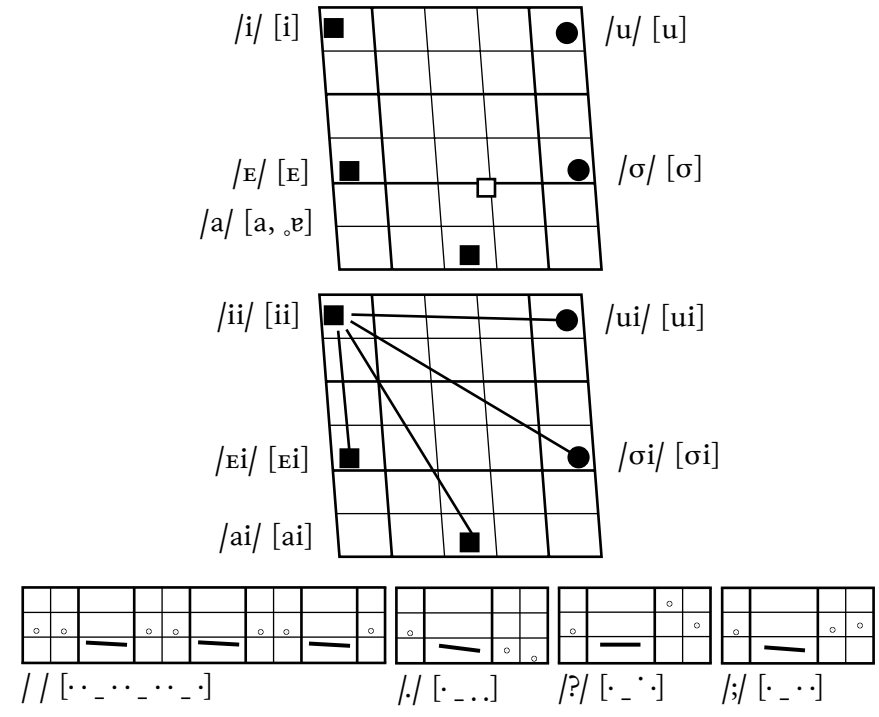
15.20. The Polish-Hebrew accent is shown in *fig* 15.20. Consonants: /ʁ/ [ɾ], /ʃ/ [ʃ̨]; possible /ki, gi/ [ci, ɟi], /χ, χ̇/ [ḥ]; problems with /ʔ̣, ʔ, h/.

fig 15.20. *Polish*-Hebrew accent.



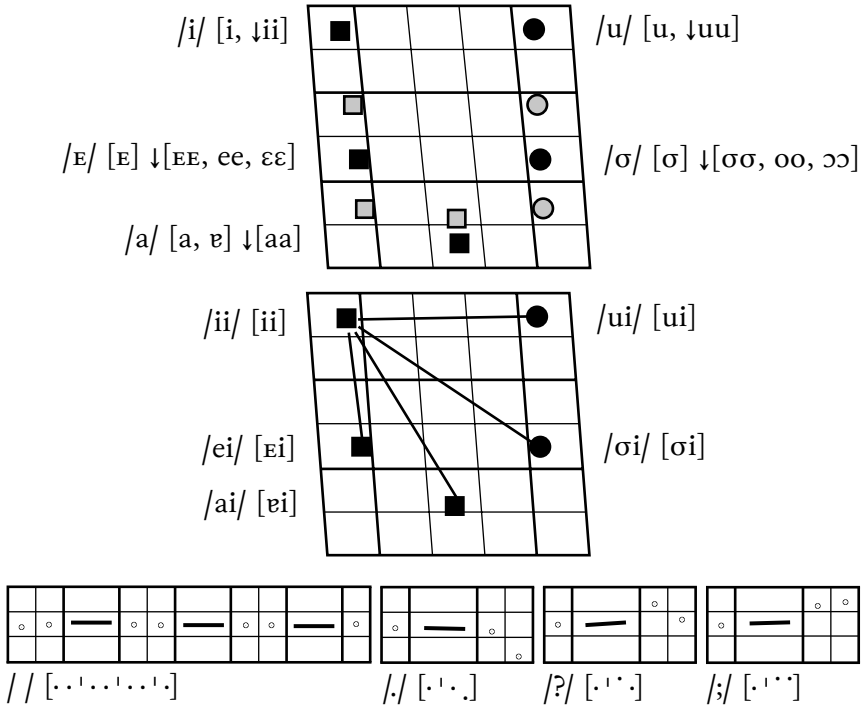
15.21. The Bulgarian-Hebrew accent is shown in *fig* 15.21. Consonants: /ʁ/ [ɾ], /l/ [ɬ] (uvularized), /ʃ/ [ʃ̪]; possible /ki, gi/ [ci, ɟi], /χ, χ̇/ [ɧ], /ʔ/ [ʔ]; problems with /ʔ̣, h/.

fig 15.21. *Bulgarian*-Hebrew accent.



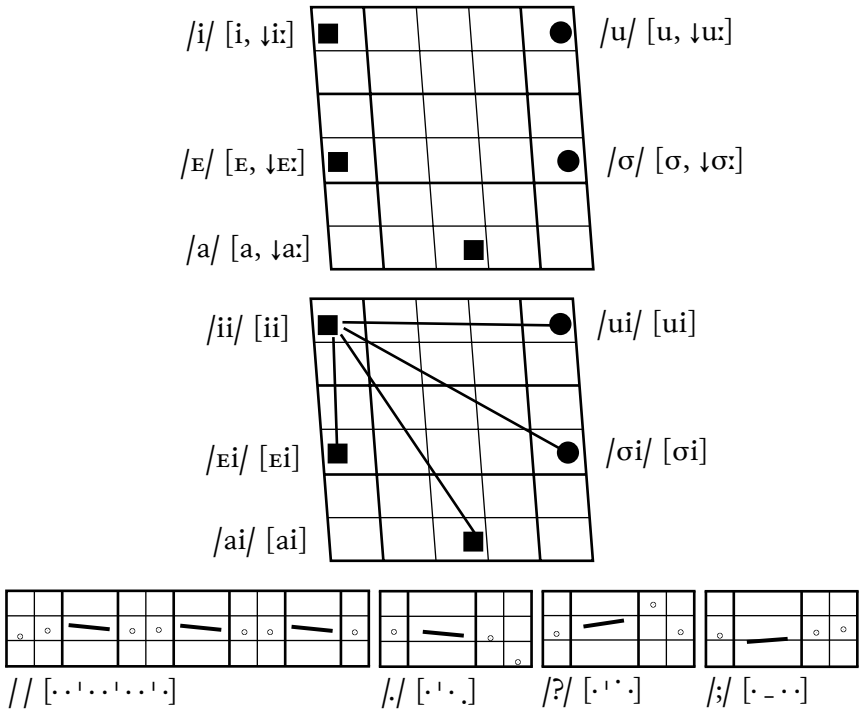
15.22. The Slovene-Hebrew accent is shown in *fig* 15.22. Consonants: /ʁ/ [ɾ], /ʃ/ [ʃ̪]; possible /χ, χ̇/ [ɧ]; problems with /ʔ̣, ʔ, h/.

fig 15.22. *Slovene*-Hebrew accent.



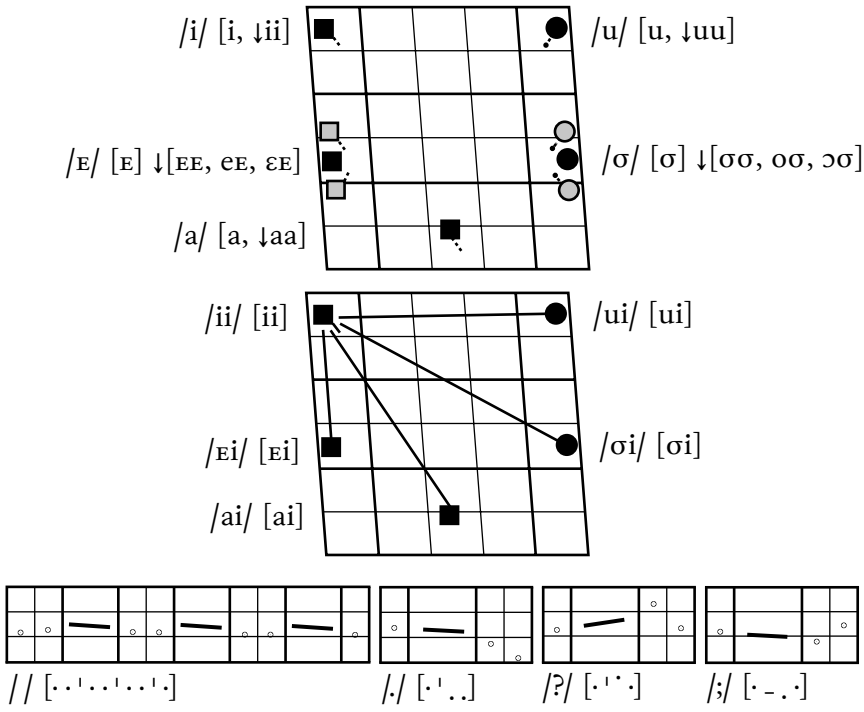
15.23. The Croatian-Hebrew accent is shown in *fig* 15.23. Consonants: /ʁ/ [ɾ, r], /l/ [ɬ], /ʃ/ [ʂ, ʃ], /j/ [ɻ] (prepalatal); possible /χ, χ̇/ [ɧ]; problems with /ʔ̣, ʔ, h/.

fig 15.23. *Croatian*-Hebrew accent.



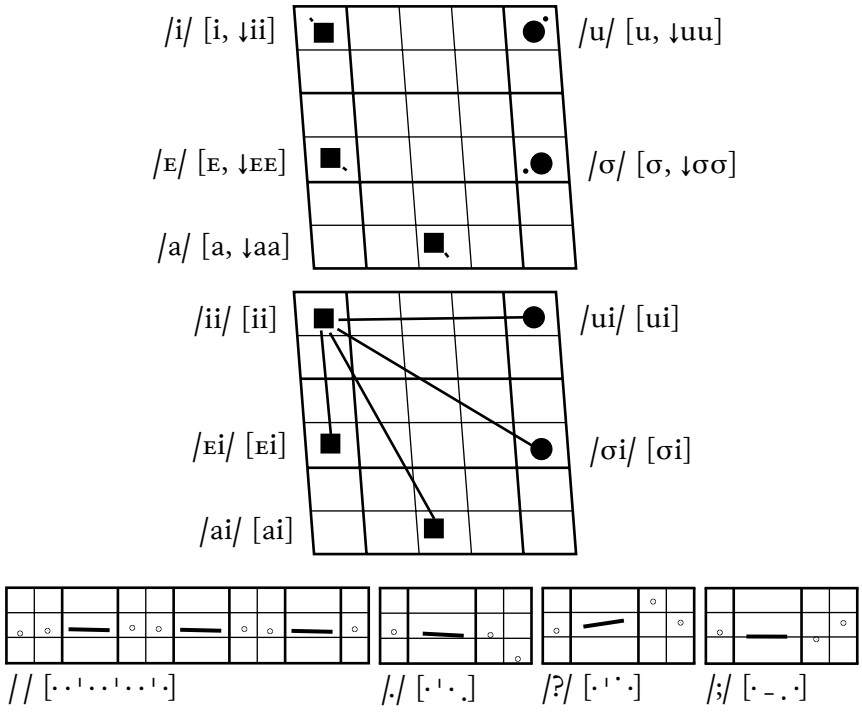
15.24. The Serbian-Hebrew accent is shown in *fig* 15.24. Consonants: /ʁ/ [ɾ, r], /l/ [l, ɬ, ɬ], /ʃ/ [ʂ, ʃ, ʃ]; possible /χ, χ̇/ [ɧ], /ki, gi/ [ci, ɟi] and /j/ [ɻ, j]; problems with /χ, χ̇, ʔ̣, ʔ, h/.

ƒig 15.24. *Serbian*-Hebrew accent.



15.25. The Bosnian-Hebrew accent is shown in ƒig 15.25. Consonants: /ʁ/ [ɾ, r], /l/ [ɬ], /ʃ/ [ʂ, ʃ], /j/ [j, ɟ]; possible /χ, χ̇/ [ɧ]; problems with /ʔ, ʔ, h/.

ƒig 15.25. *Bornian*-Hebrew accent.



15.26. The Macedonian-Hebrew accent is shown in ƒig 15.26. Consonants: /ʁ/ [ɾ], /l/ [ɬ]; possible /χ, χ̇/ [ɧ]; problems with /ʔ, ʔ, h/.

fig 15.26. *Macedonian*-Hebrew accent.

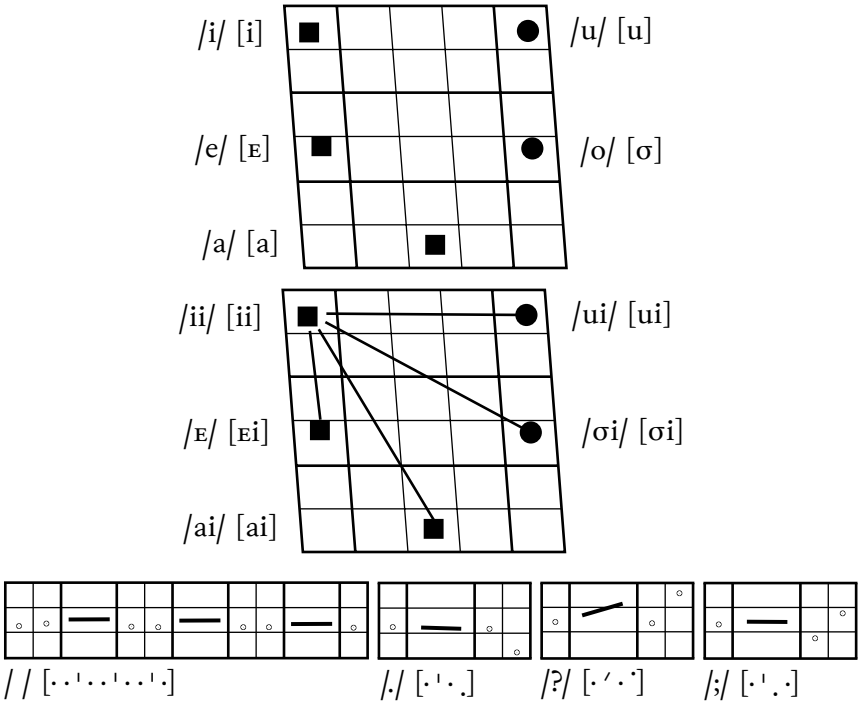
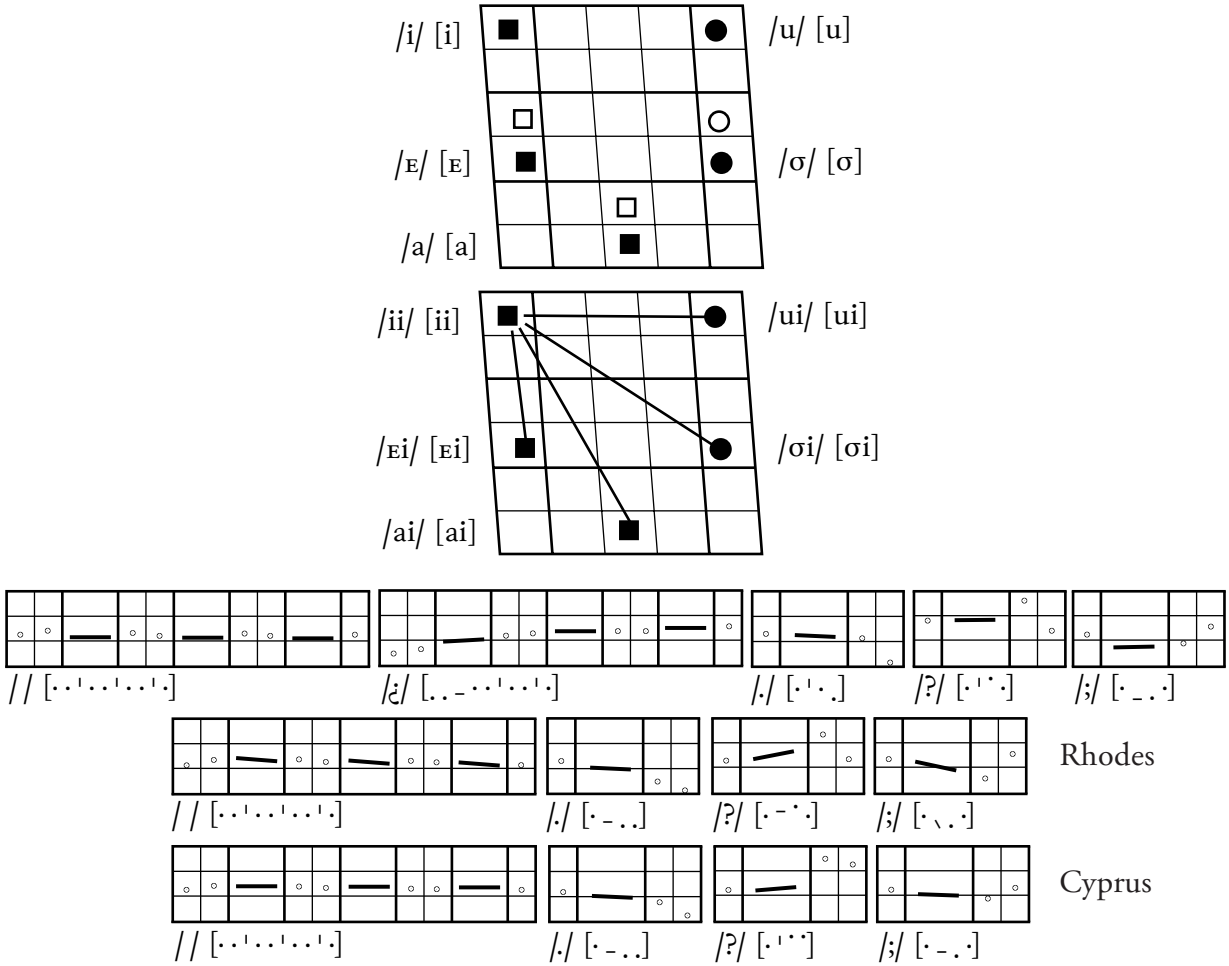


fig 15.27. *Greek*-Hebrew accent (& Cypriot).



15.27. The Greek- & Cypriot-Hebrew accent is shown in fig 15.27. Often, unstressed /i, u/ between /Ç/ or /Ç-#/ (final before a pause) are [i̯, u̯]. Consonants: /ʁ/ [ɾ, r], /l/ [l, ɬ], /s, z; ʦ/ [s, z; ʦ] ↓[ʂ, ʐ; ʧ], /ʃ/ [ʃ, ʃ̬, ↓ʂ]; possible /ki, gi/ [ci, ɟi] and /j/ [j, j̬]; /p, t, k/ after /N/ → [b; d; g, g̬], while /b, d, g/ after /V/ → [~b; ~d; ~g, ~g̬] (prenasalized). In Cyprus, /p, t, k/ can become [Ch, Ch], while both /p, t, k/ and /b, d, g/ can become [Ç]; /χ, χ̇/ [x]; problems with /ʔ, ʕ, h/.

15.28. The Armenian-Hebrew accent is shown in fig 15.28. Consonants: /ʃ/[ʃ̬], /ʁ/ [ɾ, ʐ]; possible /ʔ/ [ʔ], /h/ [h], /χ, χ̇/ [χ]; problems with /ʔ/.

fig 15.28. *Armenian*-Hebrew accent.

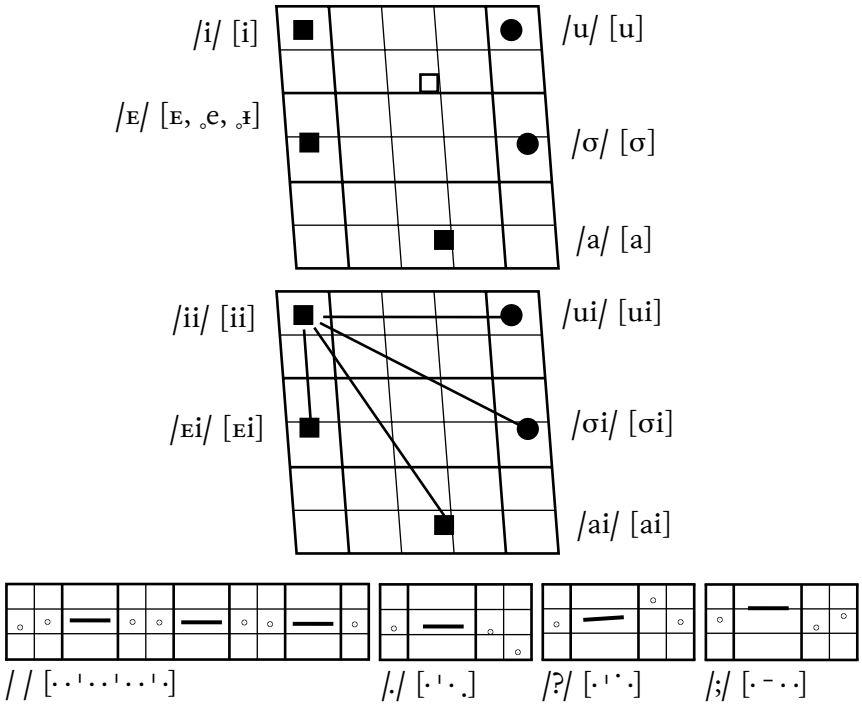
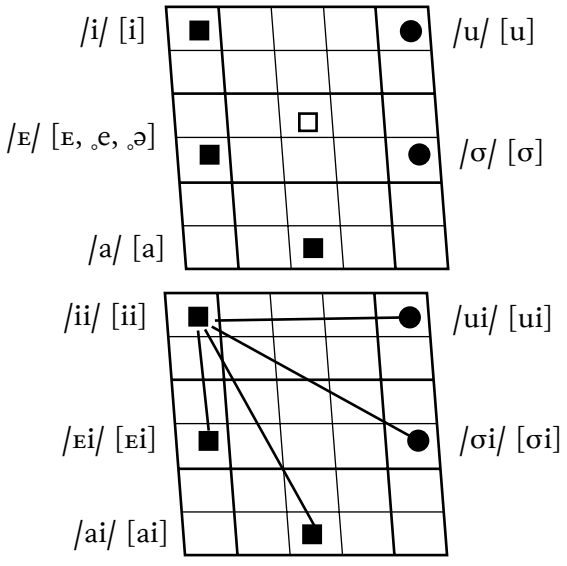
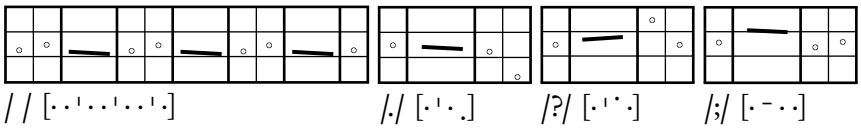


fig 15.29. *Georgian*-Hebrew accent (see below).

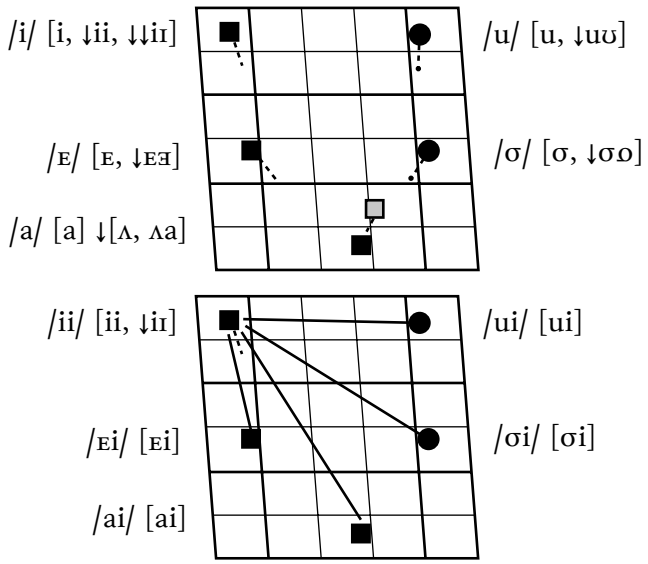


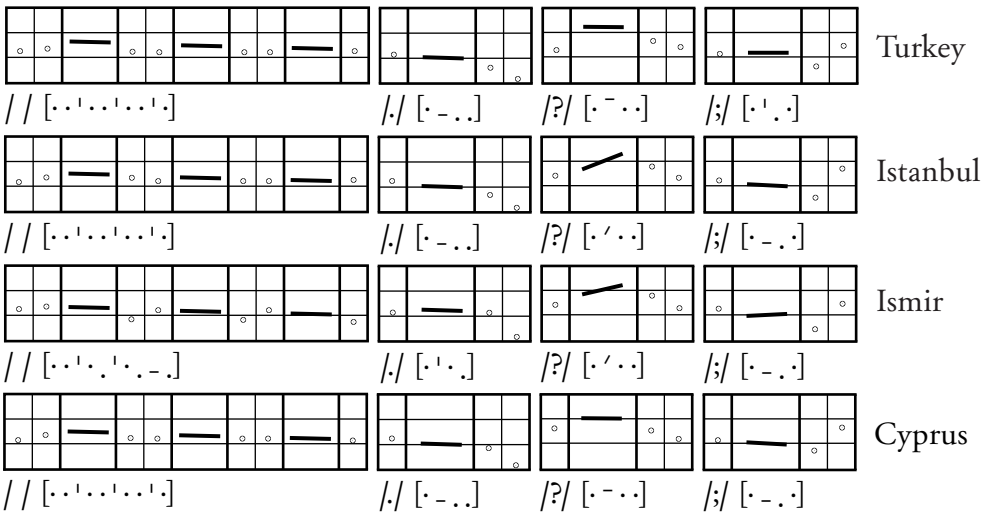


15.29. The Georgian-Hebrew accent is shown in *fig* 15.29. Consonants: /ʁ/ [ɾ, z], /l/ [l, ɬ]; possible /ḳ/ [q], /h/ [h], /χ, χ̇/ [ʁ]; problems with /ʔ/.

15.30. The Turkish-Hebrew accent is shown in *fig* 15.30. Consonants: /ʁ/ [ɾ, z], /l/ [λ, l]; possible /ki, gi/ [kç i, gʝi], /ʔ/ [ʔ], /h/ [h], /χ, χ̇/ [ɧ]; problems with /ʔ/.

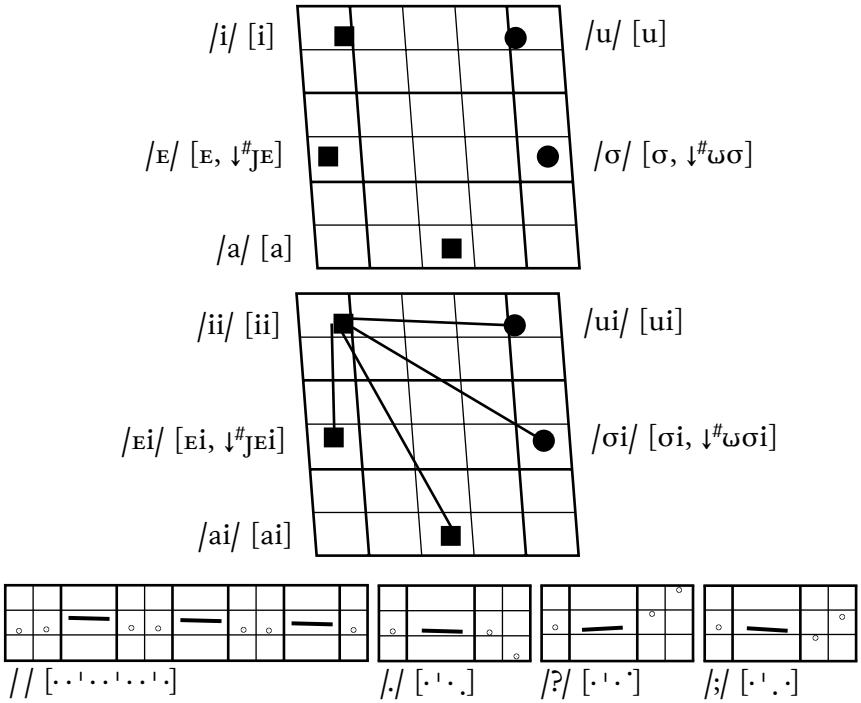
fig 15.30. *Turkish*-Hebrew accent.





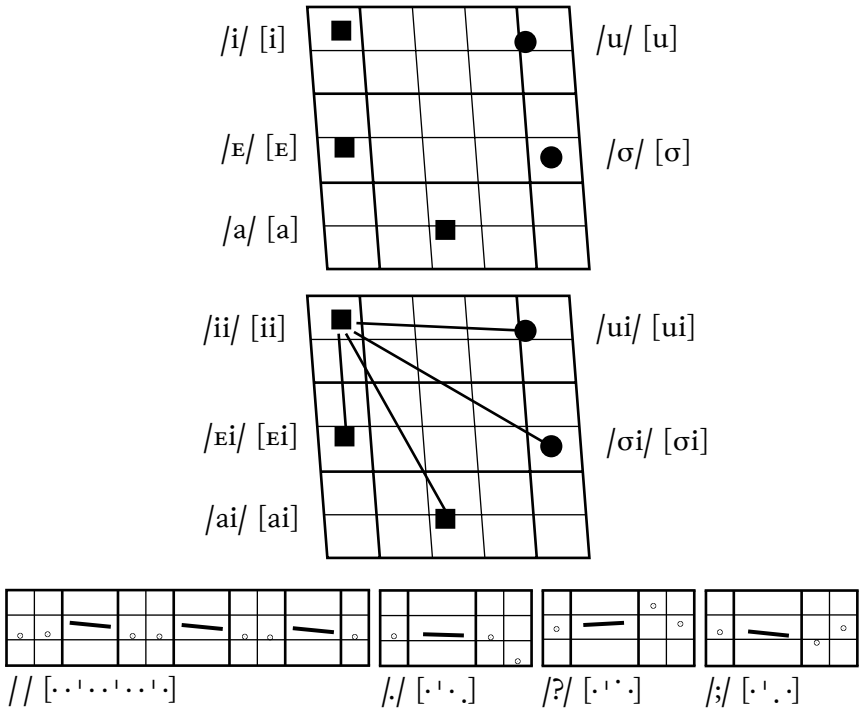
15.31. The Ethiopian-Hebrew accent (or Amharic) is shown in *fig* 15.31. Consonants: /ʁ/ [ɾ, r]; possible /ʔ, h/ [ʔ, h], /VbV/ [VβV]; /j/ [j, ɟ], /w/ [w, ɯ], and /#ɛ, #σ/ [ɟɛ, ɯσ]; problems with /χ, χ̇, ʔ/.

ﬁg 15.31. *Ethiopian*-Hebrew accent (*Amharic*).



15.32. The Somali-Hebrew accent is shown in ﬁg 15.32. Consonants: /ɻ/ [ɾ, r], /l/ [l, ɭ], /ʃ/ [ʂ]; possible /h/ [h, ɦ], /ʔ/ [ʔ], /χ/ [ʁ], /χ̇/ [ħ], /ʡ/ [ʕ, ʢ]; possible problems with /b/ [#p, -β-, b̥#], /d/ [#t, -ð-, d̥#], /g/ [#k, -ɣ-, g̊#], /ɻ̊/ [#q, -ʁ-, ɢ̊#]; /j/ [ɹ], /w/ [ɷ].

ﬁg 15.32. *Somali*-Hebrew accent.



15.33. The Arabic-Hebrew accent is shown in fig 15.33. For the vowels, we also indicate the taxophones occurring in contact with /ʔ̣, χ̇, χ/ [ʕ, ħ, ʁ]. In addition, we find /ɾ/ [ɾ, ɾ̞], /h/ [ɦ, h], /ʔ/ [ʔ]; there may be problems for the correct voice settings for /p, g/.

fig 15.33.1. *Arabic*-Hebrew accent.

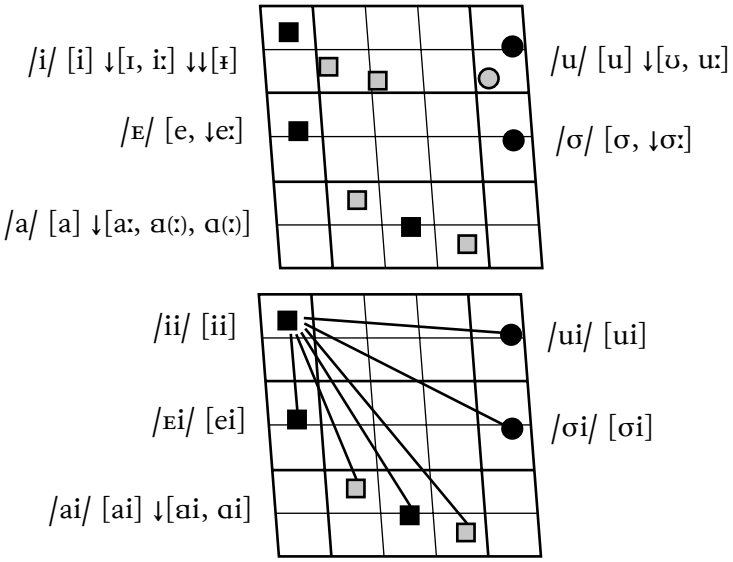
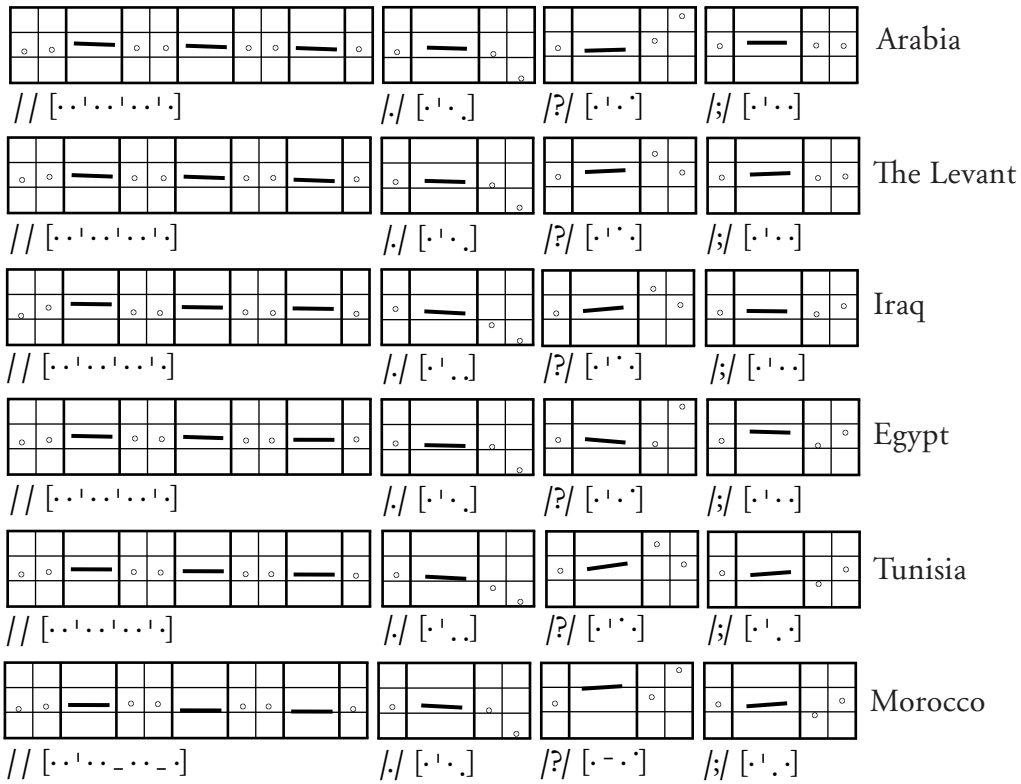
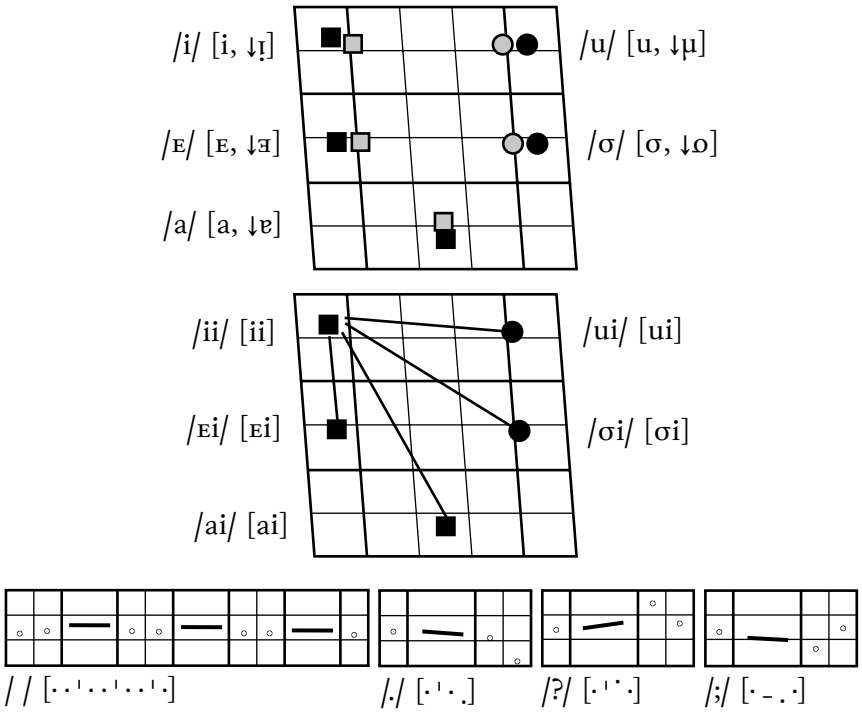


fig 15.33.2. *Arabic*-Hebrew accent.



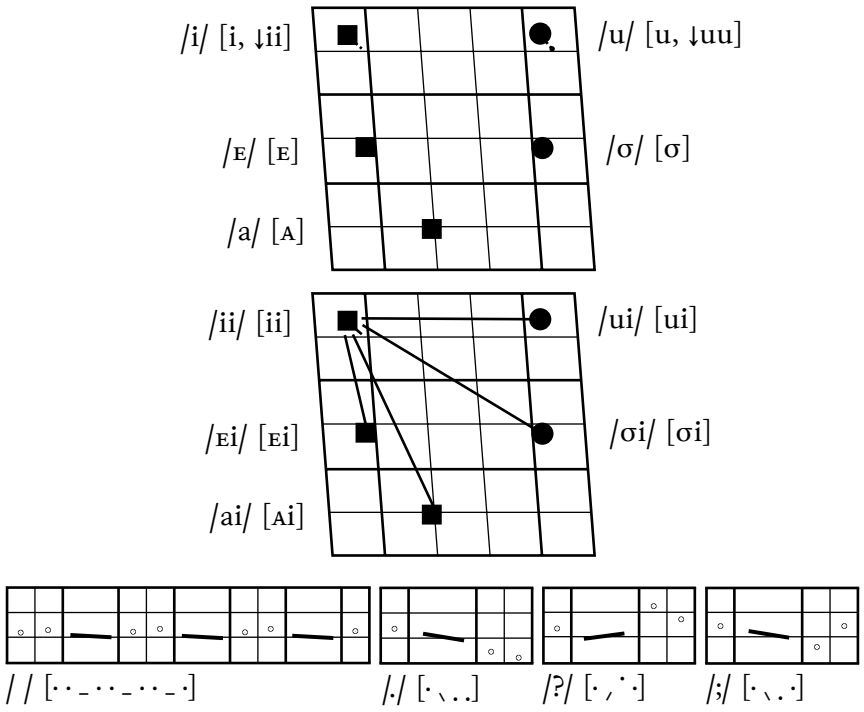
15.34. The Berber-Hebrew accent is shown in fig 15.34. Consonants: /v/ [β, v], /ɾ/ [r, ɾ̞], /ʔ/ [ø, ɦ]; there may be no real problems for /h/ [ɦ, h], /ʔ̣/ [ʕ],/χ̇/ [ħ], /χ/ [ʁ].

ƒig 15.34. *Berber*-Hebrew accent.



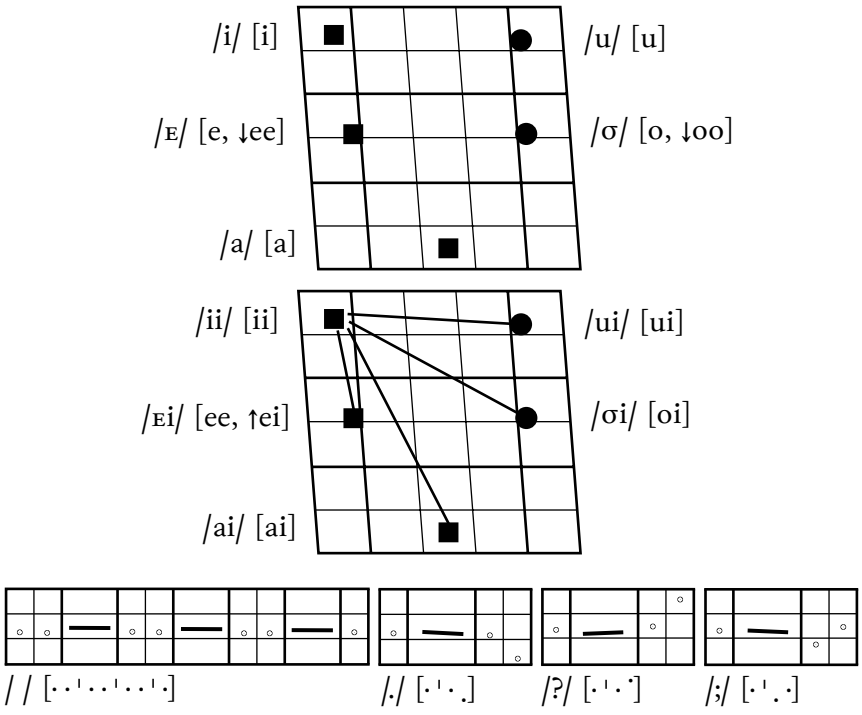
15.35. The Dari-Hebrew accent is shown in ƒig 15.35. Consonants: /ʁ/ [ɾ], /h/ [h], /ḳ/ [q], /χ, χ̇/ [ʁ/, possible /ki, gi/ [ƈi, ɟi].

ƒig 15.35. *Dari*-Hebrew accent.



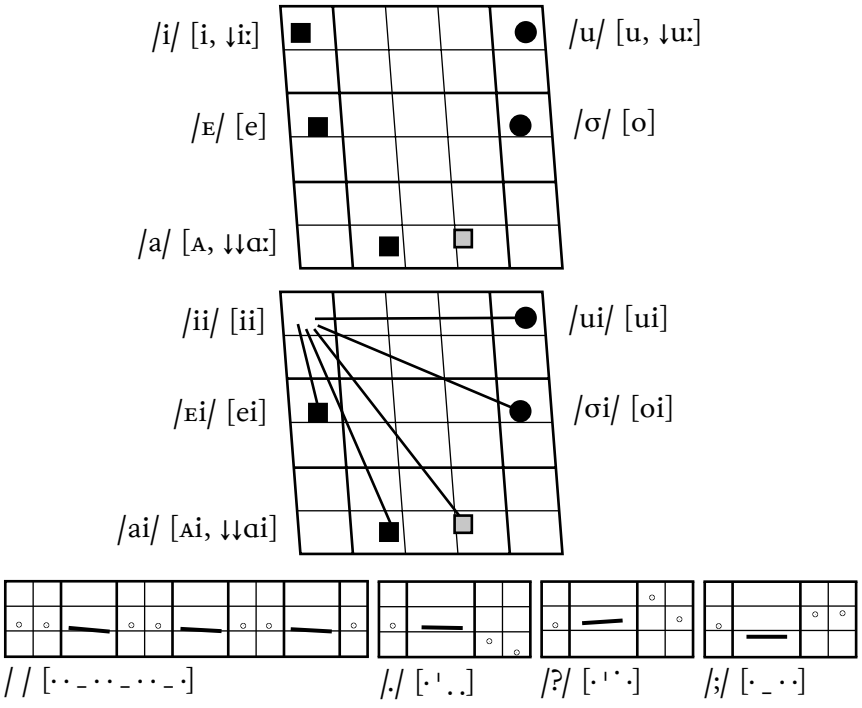
15.36. The Pashtu-Hebrew accent is shown in ƒig 15.36. Consonants: /ʁ/ [ɾ], /h/ [h], /χ/ [ʁ/; possible /ʔ/ [ʔ], /ḳ/ [q], /χ̇/ [ħ]; some possible problems for /f, v/.

fig 15.36. *Pashtu*-Hebrew accent.



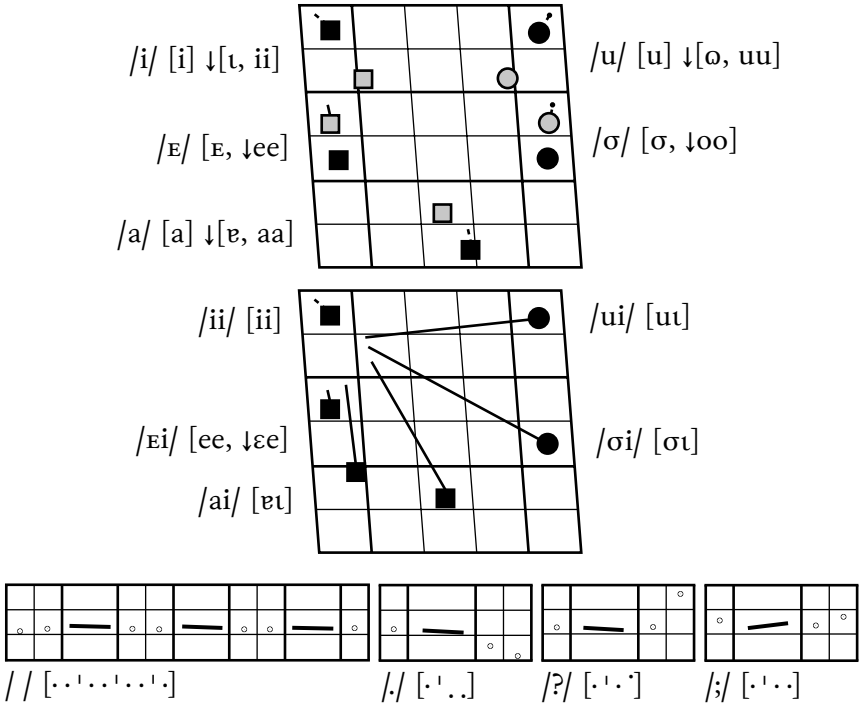
15.37. The Persian-Hebrew accent is shown in *fig* 15.37. Consonants: /ʁ/ [ɾ, ƶ]; possible /ki, gi/ [c̈i, ɟ̈i], /ʔ/ [ʔ], /h/ [h, ɦ], /ḳ/ [q, ɢ], /χ/ [ʞ, ʁ] (also possible for /χ̇/).

fig 15.37. *Persian*-Hebrew accent (*Farsi*).



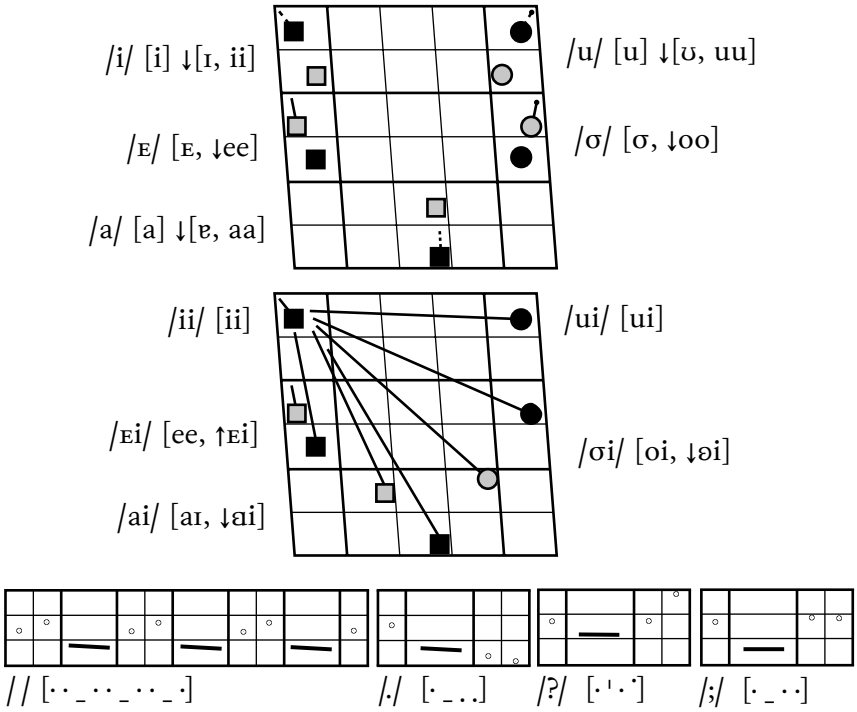
15.38. The Urdu-Hebrew accent is shown in *fig* 15.38. Consonants: /ʃ/ [ʃ̰], /ʁ/ [ɾ]; /ʔ/ [ʔ], /h/ [h, ɦ], /ḳ/ [q], /χ/ [ʁ] (also possible for /χ̇/), /v/ [v, β].

ƒig 15.38. *Urdu*-Hebrew accent.



15.39. The Hindi-Hebrew accent is shown in ƒig 15.39. Consonants: /ʃ/ [ʃ̰], /ɾ/ [ɾ], /h/ [h, ɦ]; /f/ [f, ɸ], /v/ [v, β]; in theory possible /ʔ/ [ʔ], /k̇/ [q], /χ/ [ʁ] (also for /χ̇/).

ƒig 15.39. *Hindi*-Hebrew accent.



15.40. The Malayalam-Hebrew accent is shown in ƒig 15.40. Consonants: /ɻ/ [r], /h/ [h, ɦ]; possible problems for /f, v; s, z; ʃ/; real problems for /ʔ, ʡ, χ, χ̇/.

ƒig 15.40. *Malayalam*-Hebrew accent (*Kerala*).