

# Languages and the interrogative protune /ǝ/

Luciano Canepari (2024<sup>2</sup>)

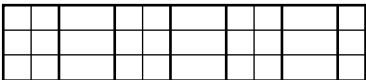
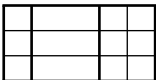
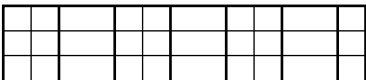
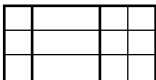
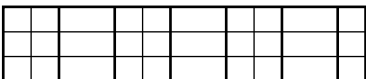
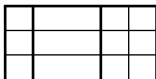
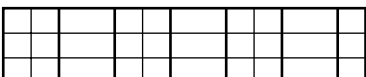
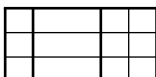
Very often, the intonation patterns of spoken languages are presented in ways that are too simple or too complicated. Neither is recommendable. When they are excessively simple, they miss their important and fundamental aim, culpably. When they are excessively elaborate, they complicate everything unnecessarily. In this case, it is counter-productive to bundle up paraphonotonic peculiarities, which may confuse rather than clarify and facilitate learning.

Actually, both the paraphonetic and paratonic characteristics may be used (safely enough) according to their customs in the mother tongue of (foreign and regional native) speakers. Any more different special usages will be noticed and learnt later on, sufficiently.

But, of course, it is much worse if the fundamental new typical intonation patterns to be learnt, are unduly influenced by the native ones of the learners. For this reason, it is very important to present what is necessary, using clear tonetic descriptions. It is also fundamental to use clear and intuitive marks and symbols. For instance,  $\bar{\downarrow}$  and  $\bar{\uparrow}$  are certainly excessive for indicating simply normal rising and falling movements for current speech (even worse if indicated with / and \).

Natural Tonetics uses tonograms for both protunes and tunes, ie the initial and final part of a 'sentence' – or, rather, of a semantically cohesive part of an utterance, not necessarily coinciding with a whole clause or sentence, which is better called a *tuning*. Depending on the semantic content and the pragmatic communicative aims, different kinds of tunes are employed in a tuning.

We start by showing the empty tonograms for the four protunes and tunes. Generally, in most books dealing with intonation, there is no distinction between

<i>Protunes</i>		<i>Tunes</i>	
	/ / [ ] <i>normal</i>		/./ [ ] <i>conclusive</i>
	/ǝ/ [ ] <i>interrogative</i>		/?/ [ ] <i>interrogative</i>
	/i/ [ ] <i>emphatic</i>		/;/ [ ] <i>suspensive</i>
	/ / [ ] <i>imperative</i>		/,/ [ ] <i>continuative</i>

protunes and often even tunes are not differentiated enough, as—for instance—the interrogative and the suspensive ones in the traditional British School of Phonetics (although presenting more or less numerous and rather unnecessary paraphonic cases).

However, for effective communication, four *tunes* must be identified and shown in tonograms: *conclusive* /./, *interrogative* /?/, *suspensive* /;/, *continuative* /,/ . Also four *protunes*: *normal* / / (with no symbol), *interrogative* /ɛ/, *imperative* /i/, *emphatic* /ʌ/.

In this paper, we will concentrate exclusively on the peculiarities of the interrogative protune and tune, /ɛ ?/, for *total* and *partial* questions. Total questions regard a whole sentence (or part of a sentence, independently from syntactical rules) with no interrogative words like *what*, *when*, *why*, *who*, &c. On the contrary, partial questions necessarily contain (at least) one of such words.

It is important to note that both kinds of questions use the interrogative protune, /ɛ/. The difference regards the tunes that will follow: /?/ for total questions, while partial questions commonly use the conclusive tune, /./ . It is true that polite partial questions use /,/ (or even /;/) instead of /./ in order not to sound rude or impolite, depending on subjects, situations, and interlocutors.

Let us add a general observation about the non-negligible fact that also the other two protunes (imperative and emphatic) differ partially from the normal one, but here we will mainly deal with the interrogative one, in comparison with the normal protune. The same is true of the suspensive and continuative tunes (all of them are discussed in other works of ours).

This paper will show how the interrogative tune interacts with the adequate protune, by anticipating its shape on it, although in a more compressed and flat way. However, it is fundamental not to confuse the various pitches placed on our tonograms with actual musical notes, which necessarily have to be more precise than the height of the syllables forming actual sentences.

Wrong notes are certainly worse than tiny differences in intonation. In addition, in music, the different types of voice belong to different separate scales, while in speaking the different voices may or may not overlap, assuming partially different pitches, but keeping their typical shapes. Human voices may generally be classified in three categories: *male*, *female*, and *infant*, but with very many nuances, including larger or smaller ‘overextension’. That depends on individual speakers.

Back to the specific subject of this paper, that is the influence of /?/ on /ɛ/, it must be clear that there are different ‘shapes’ of /?/, not necessarily and inevitably rising, as we will see. However, it is by now clear that /?/ is anticipated on /ɛ/, although limited in its extension and shape, as our tonograms will show, by comparing / / (the normal protune) and /ɛ/ followed by /?/ (including /./, for further useful comparisons).

Thus, let us start by considering English, with its main (neutral) national accent: *England*, *America*, *Canada*, *Australia*, and *New Zealand*.

There are languages with ‘simple’ intonation patterns, and languages with a more complicated prosodic situation. These have *tonemes* in addition to intonation.

Tonemes are based on peculiar *tones*, which can distinguish the meaning of otherwise ‘identical’ words (as far as their phonemic structures are concerned), but with the addition of ‘peculiar’ tonetic pitches at different heights and different pitch movements.

So, more or less frequent (even) monosyllabic words may be differentiated by means of the addition of two (or more, even to eight) different tones, which thus become (distinctive) tonemes.

Therefore, given this non-negligible fact, we will deal with tonemic languages separately from the others. Their structures are more complicated to learn and describe, although the fundamental principle is the same for both kinds of languages.

It is very important to know well that the particular tonemes said in isolation are realized by full tones, as far as their pitch structures are concerned. But, when those tonemes are used in actual sentences, their ‘shapes’ are more or less compressed. Otherwise, native speakers would seem to be singing (or even chanting). To tell the truth, people with non-tonemic languages are actually inclined to think that things are just like that.

So, let us start by considering non-tonal languages for their behavior regarding the actual differences between normal and interrogative protunes. Obviously, the tonograms that we will present are more precise than the tonetic marks seem to suggest. Any difference, however small, is relevant for reliable performances.

Let us begin with *English* (for 5 national accents), *German* (3 national accents), *Spanish* (5 national accents), *Portuguese* (2 national accents), *Italian*, *Catalan*, *Dutch*, *Greek*, *Russian*.

Next, we present some languages that have an additional peculiarity: their interrogative protune is more different because it does not simply anticipate its ‘shape’, as can be seen in their tonograms. Moreover, *French* (only in the neutral accent of France, not that of other nations) has an additional interrogative protune for *partial* questions |ɛ̃| (as in *Qu’avez-vous vu?*), different from that of *total* questions, |ɛ̃| (as in *Avez-vous vu?*).

*Romanian* and *Galician* simply present a difference in the height of some of the syllables of their interrogative protune.

After various languages with peculiar protunes (*Danish*, *Finnish*, *Icelandic*, *Lapp*, *Albanian*, *Welsh*, *Basque*, *Hungarian*, *Bulgarian*, *Macedonian*, *Ukrainian*, *Maltese*), we present European tonemic languages.

Next, we present European tonemic languages (in Scandinavia, and the Balkans). Although we have already described them in more detail elsewhere, we also present their tonemes, which interact with intonation through some modifications in their actual forms, which are somehow modified and compressed, including some combinations (not necessarily explained completely, here, but sufficiently clear for interested readers).

We necessarily show their pertinent tunes in special (more general) tonograms. Here, we show how the normal and interrogative protunes generally differ for all tonemic languages, including those from Asia and Africa, presented later on.

Here, in addition to the tonograms for the normal and interrogative protunes of tonemic languages in general, it is necessary to also show the other two protunes: imperative, /i/, and emphatic, /ĩ/, because it is important to show clearly (in tonograms) how they differ in the use of pitch.

Some Asian (and other) languages are added here: *Arabic, Hebrew, Turkish, Persian, Hindi, Urdu, Tamil, Khmer, Korean, Indonesian, Tahitian, and Hawaiian.*

We add six tonemic Asian languages: *(Mandarin) Chinese, Japanese, Vietnamese, Thai, Burmese, and Lao.*

Notice that in Burmese and Lao we find the most usual conclusive and interrogative tunes, the first one falling, and the second one rising. Both tunes modulate the realization of the tonemes, so that the 'basic' tonemes (ie those that would be uttered in isolation) get lowered/raised, and slightly compressed as is shown by the contour of the tonograms.

We will end with some African languages: first, some non-tonemic ones, namely: *Afrikaans* (actually an African variant of Dutch), *Wolof, Fula, Swahili, Amharic, and Malagasy.*

Lastly, some tonemic languages: *Twi, Ewe, Igbo, Yoruba, Hausa, Tupuri, Bamiléke, Nama, Tswana, Sotho, Pedi, Ganda, Somali, Xhosa, and Zulu.*

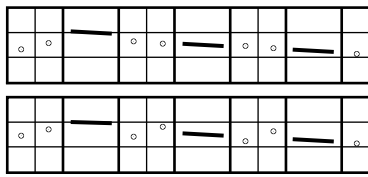
It is important to have clear in mind that the difference between tonemic and non-tonemic languages, in reality, may be only rather ostensible, at least in general. Indeed, the kind of interrogative protune shown for tonemic languages, practically, consists in the raising of the general pitch level. In non-tonemic languages, what is done is the anticipation of higher pitches (derived from interrogative tunes, but compressed).

Actually, this is not very different from a generalized pitch raising on the stressed sequences of /ɛ/. So, the use of such raising, even in non-tonemic languages, may produce a correct effect, which can certainly satisfy the expectations of native speakers. All this, provided the normal protune, / /, does not replace the interrogative one, /ɛ/.

		<i>England</i>		
	/ɪ/ [··-·'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ···-·'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>USA</i>		
	/ɪ/ [··'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ··'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>Canada</i>		
	/ɪ/ [··-·'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ···-·'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>Australia</i>		
	/ɪ/ [··'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ··'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>New Zealand</i>		
	/ɪ/ [··-·'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ···-·'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>Germany</i>		
	/ɪ/ [··'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ··'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>Austria</i>		
	/ɪ/ [··-·'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ···-·'·'·'·'·'·]		/ɛ̃/ [·'··]	
		<i>Switzerland</i>		
	/ɪ/ [··-·'·'·'·'·'·]		/e/ [·'··]	
	/ɛ/ [ɛ···-·'·'·'·'·'·]		/ɛ̃/ [·'··]	

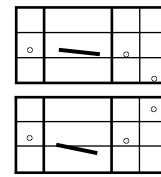
		<i>Spain</i>	
	/ / [··'·'·'·'·'·']		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·']		/ɛ?/ [·'··]
		<i>Latin America</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Mexico</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Cuba</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Argentina</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Portugal</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Brasil</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]
		<i>Italian</i>	
	/ / [··'·'·'·'·'·]		/./ [·'··]
	/ɛ/ [ɛ·'·'·'·'·'·]		/ɛ?/ [·'··]

*Dutch*



// [· · - · · · · · · · ·]

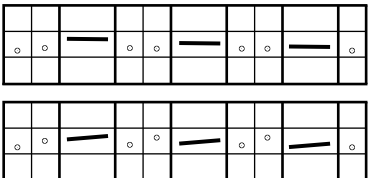
/ɛ/ [ɛ · · - · · · · · · · ·]



/./ [· · · ·]

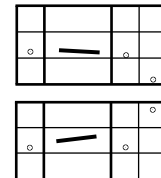
/ɛ/ [· · · ·]

*Catalan*



// [· · · · · · · · · ·]

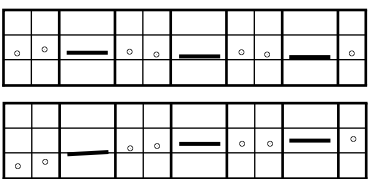
/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

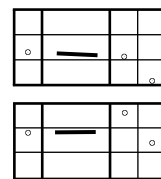
/ɛ/ [· · · ·]

*Greek*



// [· · · · · · · · · ·]

/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

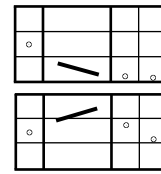
/ɛ/ [· · · ·]

*Russian*



// [· · · · · · · · · ·]

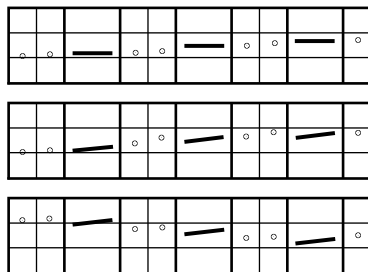
/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

/ɛ/ [· · · ·]

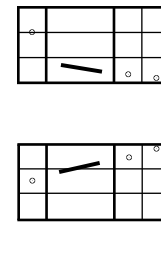
*France*



// [· · · · · · · · · ·]

/ɛ/ [ɛ · · · · · · · · · ·]

/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

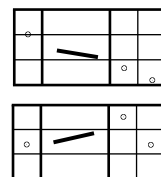
/ɛ/ [· · · ·]

*Switzerland*



// [· · · · · · · · · ·]

/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

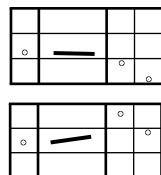
/ɛ/ [· · · ·]

*Wallonia*



// [· · · · · · · · · ·]

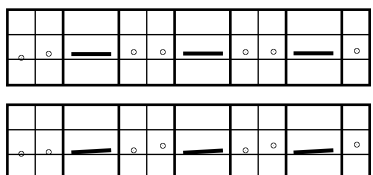
/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

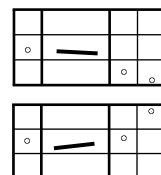
/ɛ/ [· · · ·]

*Canada*



// [· · · · · · · · · ·]

/ɛ/ [ɛ · · · · · · · · · ·]



/./ [· · · ·]

/ɛ/ [· · · ·]

*Romanian*

	/ / [· · - · - · - · - ·]		/ / [· · · ·]
	/ɛ/ [ɛ · · - · - · - · - ·]		/ɛ/ [· · - ·]

*Galician*

	/ / [· · · · · · · · · ·]		/ / [· - · ·]
	/ɛ/ [ɛ · · - · - · - · - ·]		/ɛ/ [· · · ·]

*Danish*

	/ / [· · · · - · - · - ·]		/ / [· - · ·]
	/ɛ/ [ɛ · · · · · · · · - ·]		/ɛ/ [· · · ·]

*Finnish*

	/ / [· · · · · · · · · ·]		/ / [· · · ·]
	/ɛ/ [ɛ · · · · · · · · · ·]		/ɛ/ [· - · ·]

*Icelandic*

	/ / [· · · · · · · · · ·]		/ / [· - · ·]
	/ɛ/ [ɛ · · · · · · · · · ·]		/ɛ/ [· - · ·]

*Lapp*

	/ / [· · · · · · · · · ·]		/ / [· · · ·]
	/ɛ/ [ɛ · · · · · · · · · ·]		/ɛ/ [· - · ·]

*Albanian*

	/ / [· · - · - · - · - ·]		/ / [· - · ·]
	/ɛ/ [ɛ · · · · · · · · · ·]		/ɛ/ [· · · ·]

*Welsh*

	/ / [· · - · - · - · - ·]		/ / [· - · ·]
	/ɛ/ [ɛ · · - · - · - · - ·]		/ɛ/ [· - · ·]



*Basque*

	// [·'·'·'·'·'·']		/./ [·'·.]
	/ɛ/ [ɛ·'·'·'·'·'·']		/ʔ/ [·'·.]

*Hungarian*

	// [··-·-·-·-·-·]		/./ [·'·.]
	/ɛ/ [ɛ··-·-·-·-·-·]		/ʔ/ [·'·.]

*Bulgarian*

	// [··-·-·-·-·-·]		/./ [·-·.]
	/ɛ/ [ɛ··-·-·-·-·-·]		/ʔ/ [·-·.]

*Macedonian*

	// [·'·'·'·'·'·']		/./ [·'·.]
	/ɛ/ [ɛ·'·'·'·'·'·']		/ʔ/ [·'·.]

*Ukrainian*

	// [·'·'·'·'·'·']		/./ [·'·.]
	/ɛ/ [ɛ·'·'·'·'·'·']		/ʔ/ [·'·.]

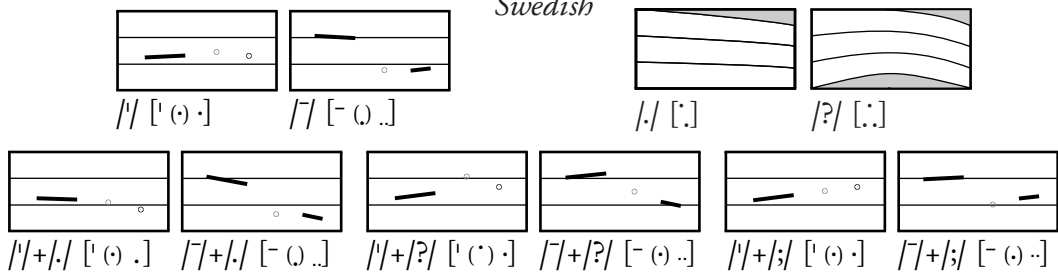
*Maltese*

	// [··-·-·-·-·-·]		/./ [·-·.]
	/ɛ/ [ɛ·'·'·'·'·'·']		/ʔ/ [·'·.]

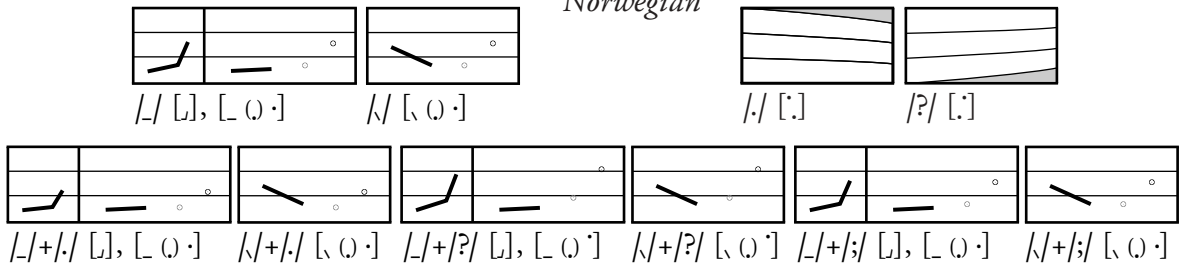
*Most typical (pro)tunes found in tonemic languages*

	// [ ] [·.]		/./ [·.]
	/ɛ/ [ɛ] [°]		/ʔ/ [·]
	/i/ [i] [°]		/:/ [·]
	/λ/ [λ] [°]		/:/ [·]

Swedish



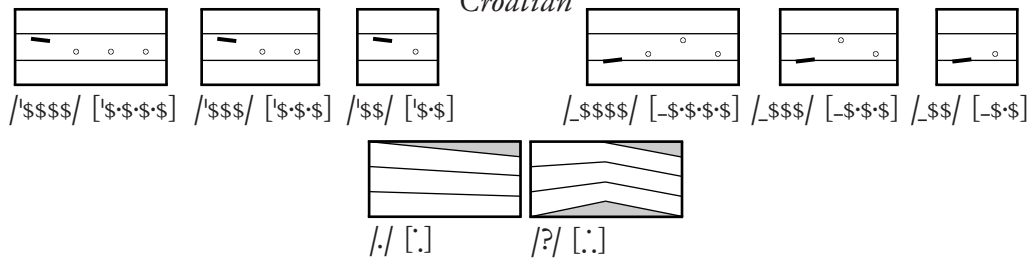
Norwegian



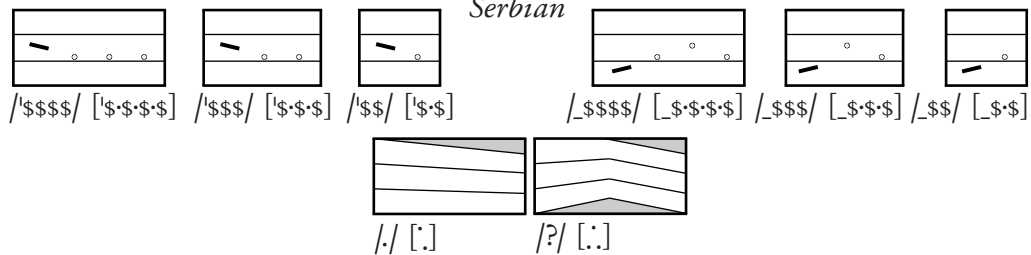
Slovenian



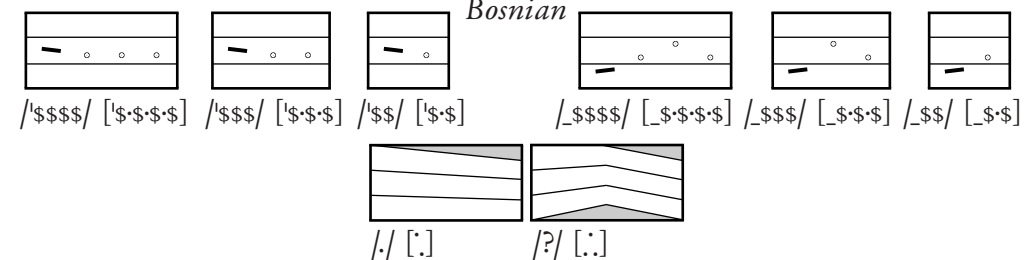
Croatian



Serbian



Bosnian



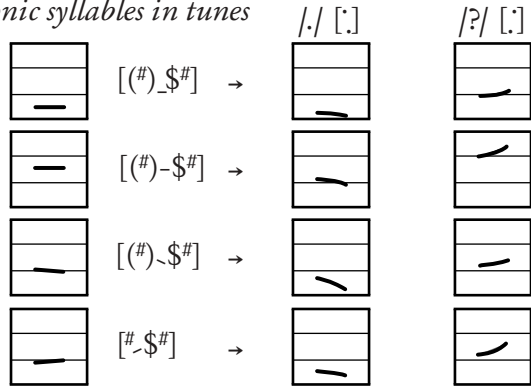




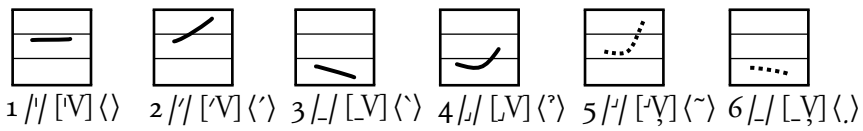
Japanese protunes and tunes



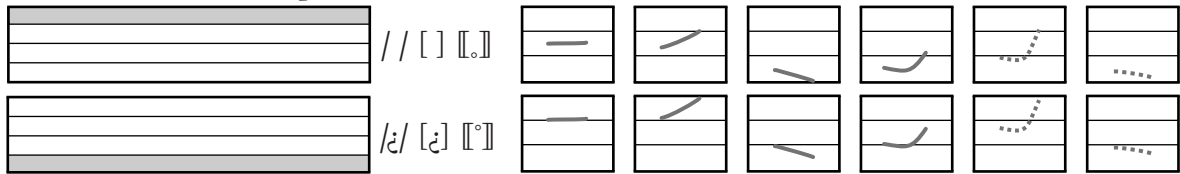
Japanese tonic syllables in tunes



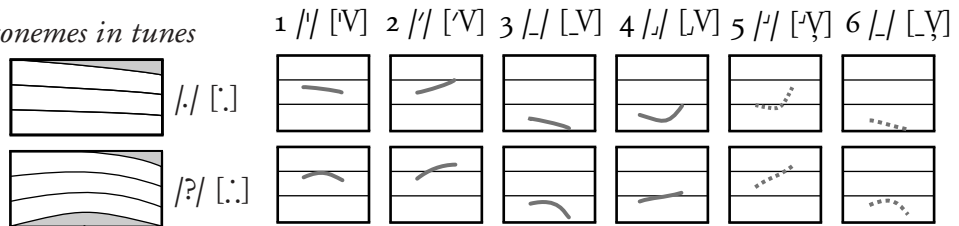
Vietnamese tonemes in isolation



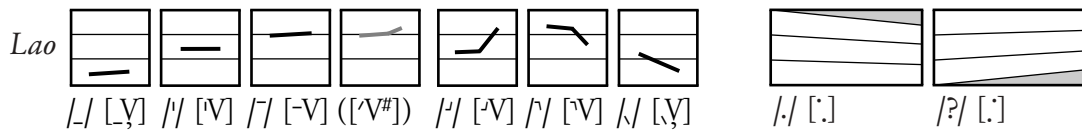
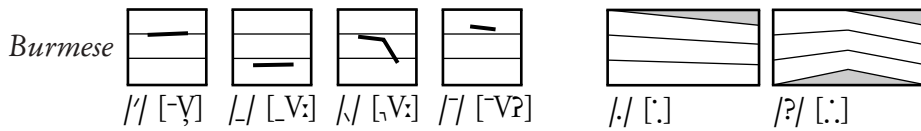
Vietnamese tonemes in protunes

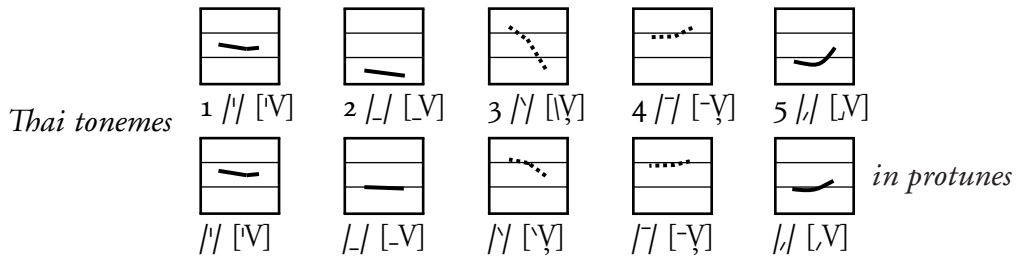


Vietnamese tonemes in tunes

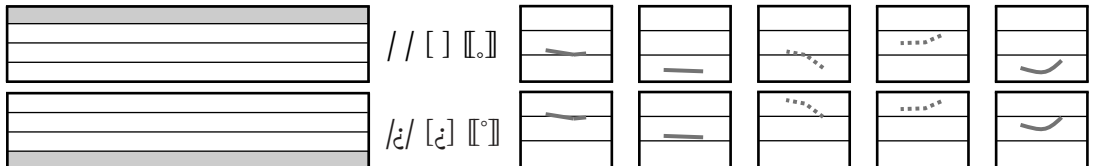


Burmese and Lao tonemes in isolation (and the two pertinent tunes)

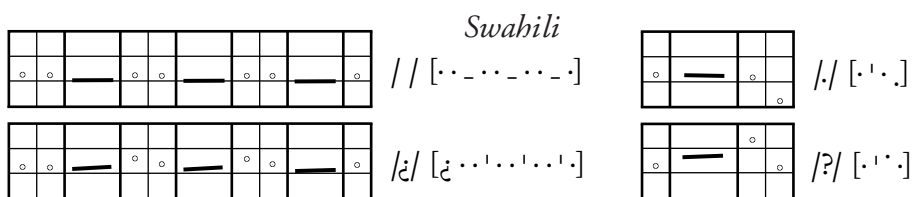
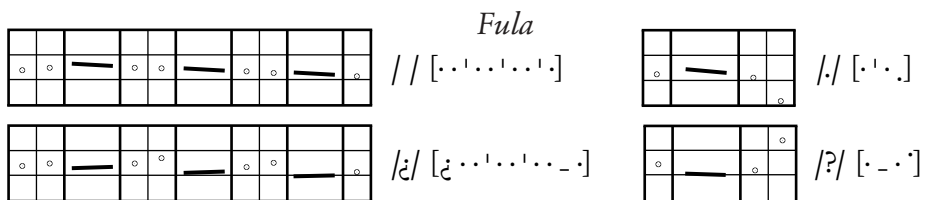
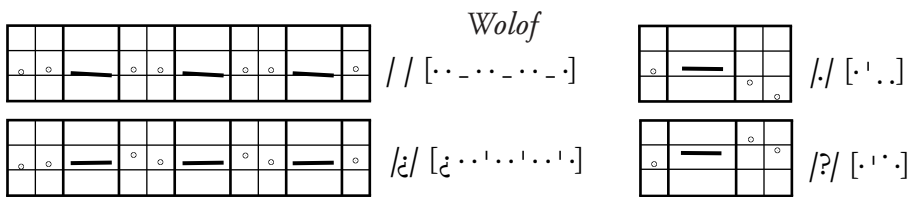
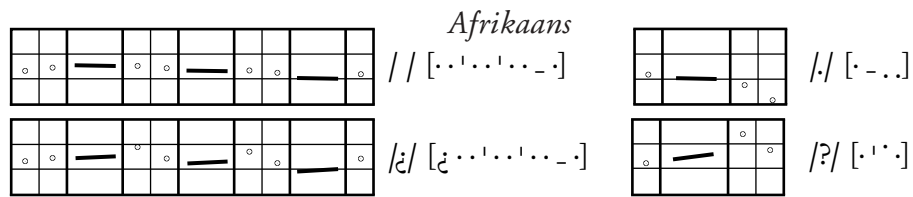
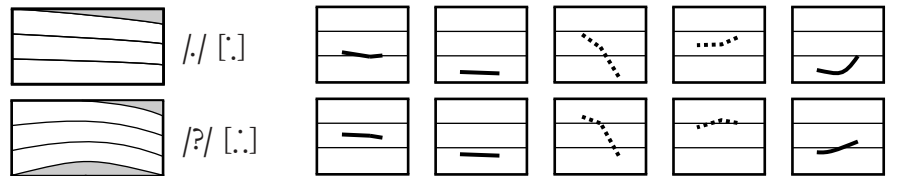


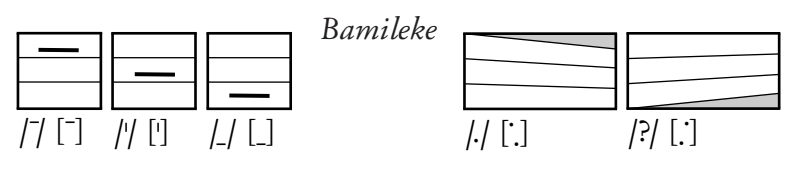
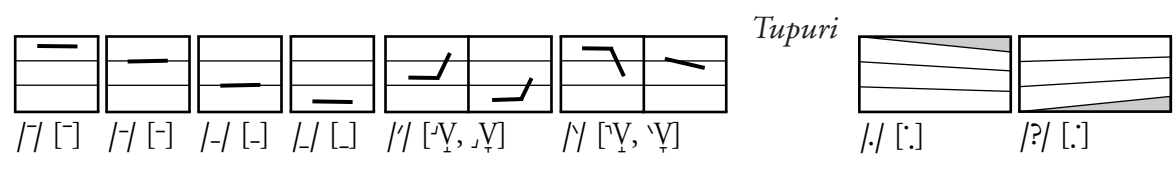
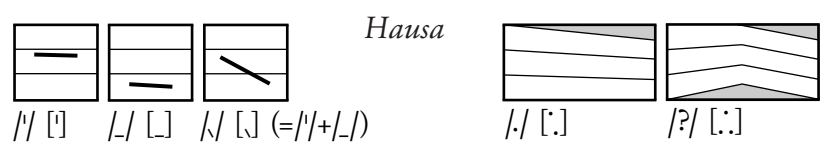
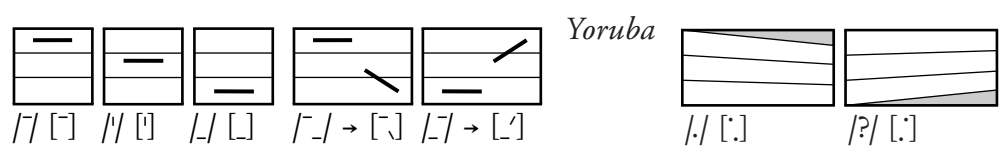
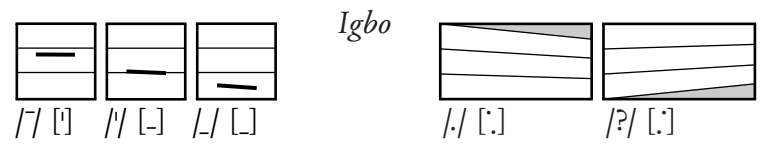
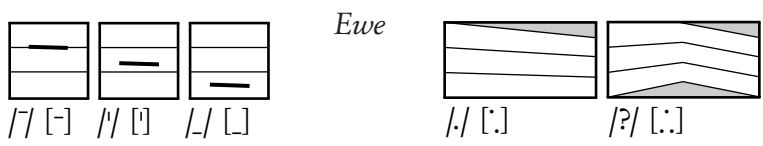
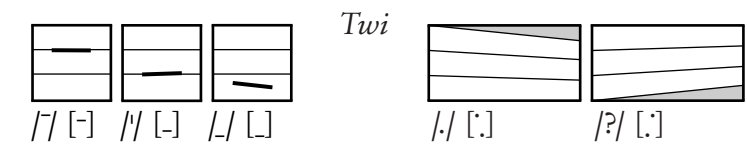
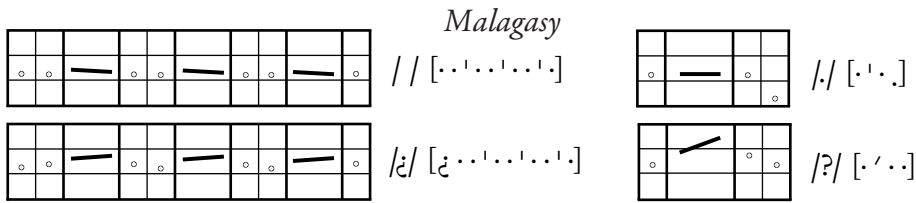
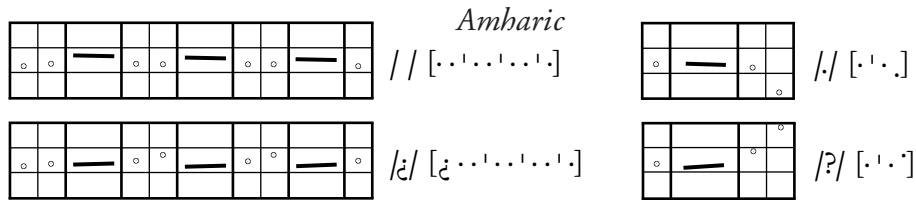


Thai tonemes in protunes



Thai tonemes in tunes





						<i>Nama</i>		
/ / [ ]	/ / [ ]	/ / [ ]	/ · 7 [ · ]	/ / [ · ]	/ / [ · ]		/ / [ · ]	/ ? / [ : ]

			<i>Tswana</i>		
/ / [ ]	/ / [ ]	/ / + / / [ ]		/ / [ · ]	/ ? / [ : ]

			<i>Sotho</i>		
/ / [ ]	/ / [ ]	/ / + / / [ ]		/ / [ · ]	/ ? / [ : ]

			<i>Pedi</i>		
/ / [ ]	/ / [ ]	/ / + / / [ ]		/ / [ · ]	/ ? / [ : ]

			<i>Ganda</i>		
/ / [ ]	/ / [ ]	/ / [ ]		/ / [ · ]	/ ? / [ : ]

				<i>Somali</i>		
/ / [ \$, \$·\$ ]	/ / [ \$, \$·\$ ]	/ / [ \$, \$·\$ ]			/ / [ · ]	/ ? / [ : ]

			<i>Xhosa</i>		
/ / [ V, V ]	/ / [ V, V ]	/ / + / / [ V, V ]		/ / [ · ]	/ ? / [ : ]

			<i>Zulu</i>		
/ / [ V, V ]	/ / [ V, V ]	/ / + / / [ V, V ]		/ / [ · ]	/ ? / [ : ]