Performance rules in traditional singing: local vs universal

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Abstract

The so-called "performance rules" in music are systematic deviations (with a statistical scatter) of an actual live performance from a mechanically precise one. For example, pairs of eighth notes are performed by lengthening the first eighth and shortening the second, or vice versa, or the intonation of a certain scale degree depends on its musical context, deviating from the theoretical or averaged scale. These rules, although applied subconsciously, are markers of music performance style, idiosyncrasies. By ignoring them, the performance is perceived as inappropriate, not belonging to a certain style.

Which of these performance rules are local, and which can be considered universal? Clearly, it would be difficult to judge their universality, as this would require many different examples of musical cultures. Nevertheless, it is possible to assess certain claims to (quasi)universality by ascertaining analogous manifestations of performance rules in several musical dialects or, more broadly, within several musical cultures.

Five performance rules of time domain—*Inégales* (nominal ratio of rhythmic values 1:1), *Double duration* (2:1), *Duration contrast* (the case of 3:1), *Phrase arch*, *Final ritardando*—and two versions of the *Melodic intonation* rule—*Leading tone* and *Ascending/descending sequences*—were chosen for the current study. Examples of Lithuanian, Belarusian and Ukrainian singing traditions were examined. The durations of 828 tone pairs and the pitches of 274 tone pairs in audio recordings were measured, as well as additional measurements were made to construct tempo curves and pitch tracks. Based on the acoustic measurements, timing and pitch performance rules were ascertained. Their manifestation in the musical dialects and Western academic music was compared.

It is found that the expression of *Inégales* is very diverse, in this respect the Dzūkai musical dialect (SE Lithuania) merges with the Belarusian and Ukrainian tradition. The performance trends of *Double duration* are close, and *Duration contrast* is the opposite of those observed in Western academic music. Rules *Phrase arch* and *Final ritardando* are not obser-

ved in the considered dialects. *Melodic intonation* rules show similar trends to those found in Western academic music, although not equally strong for different dialects.

1. Introduction: Basics of performance rules

Live music performance differs from its image in score with various inaccuracies. In other words, just inaccuracies, irregularities, make music alive, real. For example, even if you try to perform the rhythm precisely mechanically, the result will still be with 'errors' – primarily due to the JND (just noticeable difference) of duration (i.e., because small differences in duration are not perceived). Also, when trying to accurately intone all pitches or singing all syllables equally loudly, the result can differ significantly from the desired goal.

These are chaotic irregularities, so-called performance noise. But much more interesting are the systematic irregularities caused by the musical context and emotions; they are even desirable, without them the music would sound unnatural. There are domains of time, pitch, loudness, and timbre; they are all more or less characterized by those systematic irregularities. Such irregularities are expressed in so-called performance rules. These rules objectify the regular deviations from the exact (mechanical, monotonous, ideally intoned) prototype characteristic of live music performance with specific tendencies, formulas, and algorithms.

The rules can be disclosed in two ways. First, an "exact" version of the musical material is provided and listeners are asked to adjust it to sound natural (this is possible with modern computer tools). Or: many versions of the musical material are provided and listeners are asked to choose the one that sounds most natural. Second, existing performance recordings are analyzed, measured, and characteristic systematic deviations are determined from them. Computational models of music performance and performance rule sets are designed by various authors (cf. Todd 1992; Widmer 1995; Arcos/de Mantaras/Serra 1998; Mazzola 2002; Widmer/Goebl 2004). Probably the most comprehensive set of the rules was provided by a group of Swedish scientists (Friberg/Bresin/Sundberg 2006, 148). They group the 21 rules into eight groups: phrasing, micro-level timing, metrical patterns and grooves, articulation, tonal tension, intonation, ensemble timing, and performance noise.

Perhaps the most suitable object for study of the rules[1] (and therefore the most common) is piano music, especially Romanticism piano music and especially in terms of rhythm. This is due to the sound of this instrument, measurement techniques, and style features. Piano sound attacks are short, so it is not difficult to measure sound durations from sound recordings accurately enough. In addition, such measurements can be automated by connecting a sensor system to the keyboard or (even simpler) by using a synthesizer keyboard. The expressiveness inherent in the Romanticism piano performance presupposes sufficiently large deviation values (not only for timing, but also for dynamics), and the performance rules are clearly articulated.

The study of performance rules in written and oral cultures differs fundamentally in one aspect. In written culture, the nominal values of sound durations and pitches are known; they are fixed in the score. The notation is prescriptive. However, when transcribing examples of oral culture, those nominal values are, strictly speaking, only guessed. The notation is descriptive; emic/etic issues can appear. Therefore, we have to rely on those examples for which we do not doubt our "guesses" presented in the scores.

In the context of the phenomena we are considering, it is important that performance rules act as markers of style. If their style-specific expression changes, the music may sound unnatural, strange, or even unacceptable. A good example is the metrorhythm of the Vienna Waltz. 3/4-meter quarters are systematically of unequal duration, the first is systematically shortened, the second is lengthened, and the third is average, i.e. the schematic expression of the performance rule is SLI (Short-Long-Intermediate; Bengtsson/Gabrielsson/Thorsen 1969). This is due to the dance motorics – interpreting the three-part meter differently would simply make it uncomfortable to dance. However, 3/4 meter in the case of another style can be interpreted differently, to match the feel of that style.

Thus, in short. The performance rules objectify the regular deviations from the exact (mechanical, monotonous, ideally intoned) prototype characteristic of live music performance with specific tendencies, formulas, and algorithms. For instance, for time performance rules (related to duration ratios), these formulas can be presented in a refined and precise way or in simpler way to indicate a prolongation or shortening of durations; then symbols L (long), S (short), and I (intermediate) are used. In the current study, we will refer to the mentioned set

[1] This refers in particular to the second method mentioned above, i.e. analysis of performance recordings.

of the rules provided by a group of Swedish scientists (Friberg/Bresin/Sundberg 2006). Rules "Inégales", "Double duration", "Duration contrast", "Phrase arch", "Final ritardando", and "Melodic intonation" will be examined.

2. Performance rules studied in this paper

2.1. Description of the performance rules

Inégales. "Another common pattern is the alternating long-short pattern commonly found in a variety of musical styles including Baroque (Hefling 1993), folk, as well as jazz music. The *Inégales* rule was our first implementation of this pattern (Friberg 1991)." (Friberg/Bresin/Sundberg 2006, 150). The brief description of the rule follows: "Introduce long-short patterns for equal note values (swing)" (ibid, 148). Briefly: tendency to perform 1:1 as >1:1 (LS, Figure 1).

Figure 1. Schematic representation of inégales rule.

Double duration. "…the rule *Double duration*, which performs any 2 to 1 duration ratio with reduced duration contrast, keeping the total duration of the two tones the same (Friberg 1991)." (Friberg/Bresin/Sundberg 2006, 150). The brief description of the rule follows: "Decrease duration ratio for two notes with a nominal value of 2:1" (ibid, 148). Briefly: tendency to perform 2:1 as <2:1 (Figure 2).

Figure 2. Schematic representation of double duration rule.

Duration contrast. "The *Duration contrast* rule increases the difference in IOI between different note values such that long notes are lengthened and short notes are shortened (Sundberg et al. 1982; Friberg, 1991)." (Friberg/Bresin/Sundberg 2006, 149). The brief de-

scription of the rule follows: “Shorten relatively short notes and lengthen relatively long notes” (ibid, 148). Briefly: tendency to perform, for instance, 3:1 as >3:1 (Figure 3).

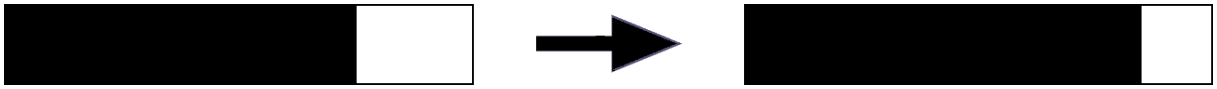


Figure 3. Schematic representation of duration contrast rule.

Phrase arch and final ritardando. “A musical phrase is often performed with an arch-like shape applied to tempo and dynamics (Gabrielsson 1987; Repp 1992). The phrase is typically slow/soft in the beginning, fast/loud in the middle and ends slow/soft, modeling a *crescendo/accelerando decrescendo/rallentando* pattern.” (Friberg/Bresin/Sundberg 2006, 149). The brief description of the rule follows: “Create arch-like tempo and sound level changes over phrases” (ibid, 148). In this case, we are interested in the tempo changes. They can be represented by the following diagram (Figure 4).

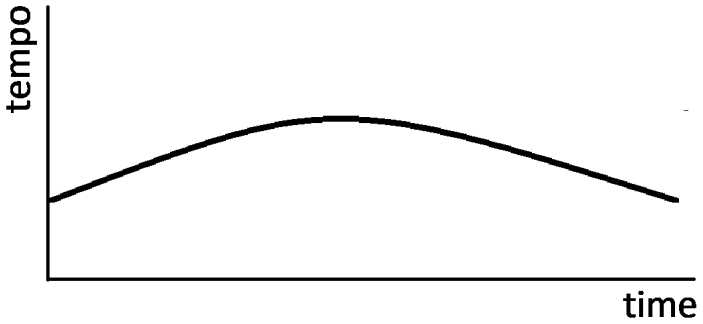


Figure 4. Schematic representation of *phrase arch* rule.

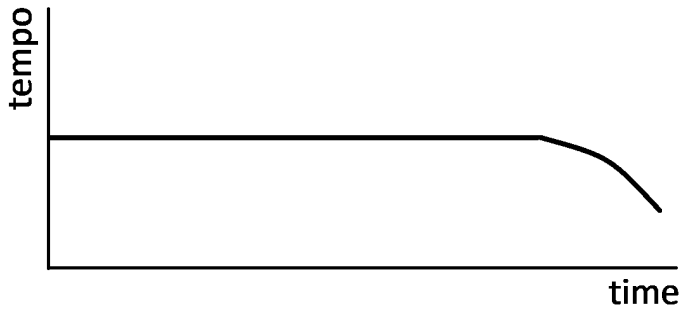


Figure 5. Schematic representation of *final ritardando* rule.

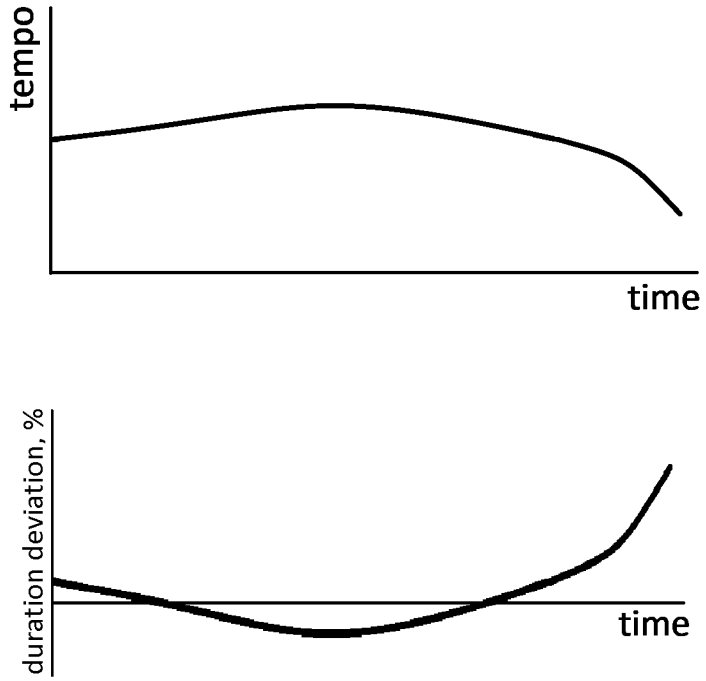


Figure 6. Schematic representations of *phrase arch* plus *final ritardando* rules.

"The *Final ritardando* rule provides an alternative phrasing for the end of the piece (Friberg/Sundberg, 1999)." (Friberg/Bresin/Sundberg 2006, 149). The brief description of the rule follows: "Apply a ritardando in the end of the piece" (ibid, 148). This is analogous to physical deceleration, such as the frictional deceleration of a spinning wheel when it comes to rest. This is shown schematically in Figure 5.

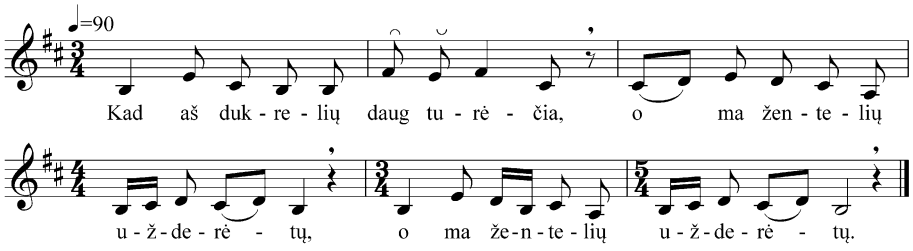
Figure 6 (top) shows the cumulative result of the rules "phrase arch" and "final ritardando". So-called "tempo curves" are more often used in this type of research. They show how much specific durations differ from durations performed at a steady tempo. So, such a graph is like the inverse of the tempo variation graph (Figure 6, bottom).

Melodic intonation. "The *Melodic intonation* rule determines the intonation of each note depending on the melodic context and its relation to the root of the current chord (Frydén et al. 1988; Friberg 1991)… For example, in a leading tone to tonic progression, the leading tone is often played sharper in pitch than is indicated in equal temperament tuning, resulting in a melodic interval that is smaller than a semitone (i.e., less than 100 cents)." (Friberg/Bresin/Sundberg 2006, 151).

2.2. Examples of the performance rule manifestations

The rules in question have been discerned based on the analysis of samples of mostly common practice period and jazz music. It can be assumed that they are more or less valid in the sphere of traditional music as well. We will provide a more detailed test of such assumptions later in the paper, and in the meantime, here are some examples.

Figures 8 and 10 show typical tempo curves composed from the IOI measurements[2] of two Lithuanian traditional vocal *tempo giusto* performances[3] (Figures 7 and 9). The structural notes were considered; durations of embellishments (appoggiaturas, etc.) were incorporated into the corresponding structural notes. Only three notes in the transcriptions are supplemented with microfermata marks (see the syllables "daug" and "tu-" in Figure 7, and the first "-no" in Figure 9). Consequently, only for three notes is the prolonging or shortening of the rhythm values clearly perceived. Yet a significant fluctuation of the durations is observed in the tempo curves; the performances present two opposite cases of *inégales*. Figure 8 shows a clear LS tendency (long-short division of crotchet into two quavers) whereas Figure 10 shows a reverse SL tendency; the performance is characterized by a somewhat "limping" rhythm (thus, this case is the reverse of the one defined in the "classical" nomenclature of performance rules). The median of *T*1/*T*2 ratios (ratios of quaver durations forming one crotchet) for the song "Kad aš dukrelių daug turėčia" equals 1.23 and the interquartile encompass the range 1.17–1.34. For the song "Jojau pro dvarą", the median is 0.72 and the interquartile is 0.62–0.78.



[2] It should be noted that it is not the real durations (time intervals from the beginning to the end of the sounds) that are measured, but the rhythmic durations that determine the perception of the rhythm – the time intervals between the perceived attacks of sounds (IOIs – Inter-Onset-Intervals). See, for instance, Clarke/Cook 2004, 80–82.

[3] Only (at least approximate) *tempo giusto* performances (i.e. which are characterized by identified rhythm values) can be employed for the composition of tempo curves. If listening to a performance results in ambiguous or alternative, different interpretations of rhythm and meter, the composition of tempo curves seems useless. Nevertheless, collation of the alternative tempo curves may facilitate recognition of more adequate interpretations.

Figure 7. Transcription of the first verse of the song “Kad aš dukrelių daug turėčia”.[4]

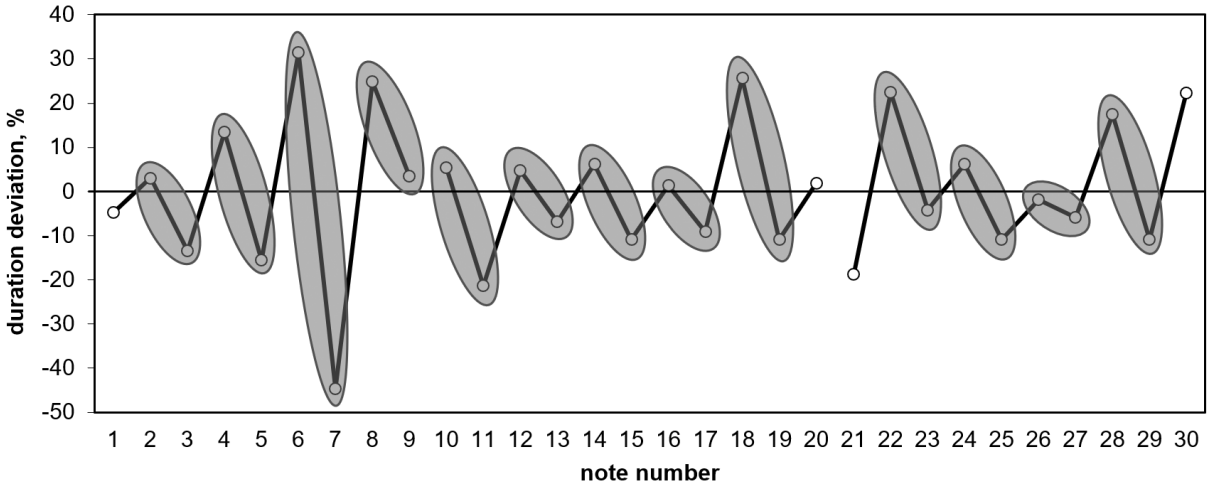


Figure 8. Tempo curve of “Kad aš dukrelių daug turėčia” (see the transcription in Figure 7). Phrases separated by gaps. Pairs of quavers and one pair of crotchets (notes 8-9) are circled.

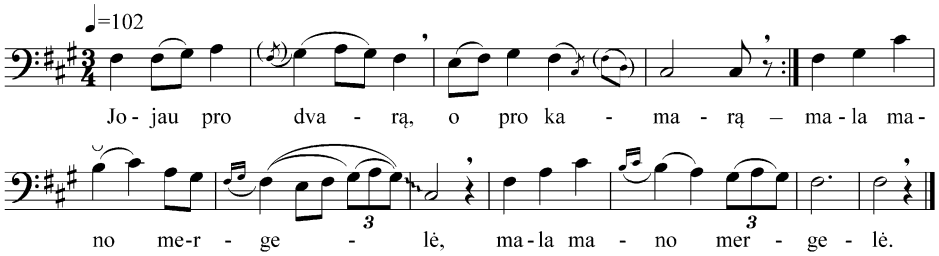
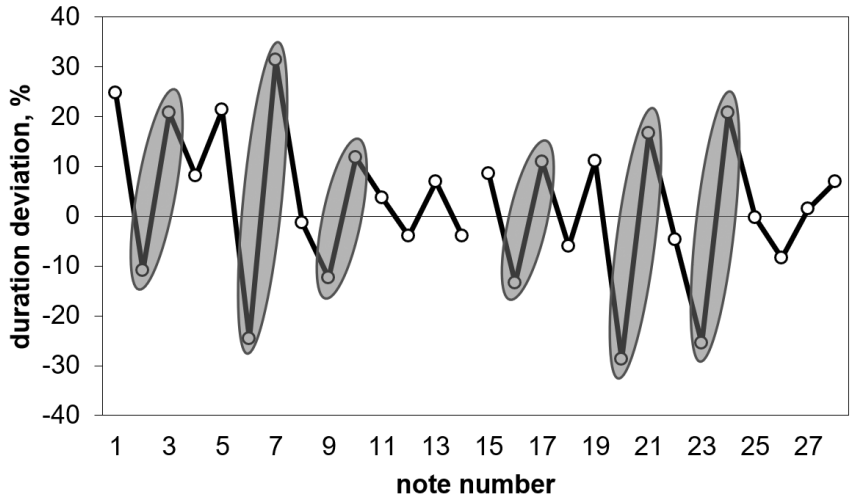


Figure 9. Transcription of the first verse of the song “Jojau pro dvarą”.



[4] The metrics of sound recordings are presented in the Appendix.

Figure 10. Tempo curve of "Jojau pro dvarą" (see the transcription in Figure 9; first four measures with repetition). Phrases separated by gap. Pairs of quavers are circled.

Alf Gabrielsson (1987) presents nice examples of *phrase arch* and *final ritardando* rules manifesting in the performances of the theme from Mozart's Piano Sonata A Major (K. 331). These rules are not observed in the performances of the two Lithuanian traditional songs discussed here.

Now consider example "Oi giria giria, girele žalioji" (Figures 11 and 12). From the pitch tracks, it can be seen that scale degrees are intoned differently, depending on their position in the melodic contour. This, certainly, can result from the zonal origin of intonation, errors of measurement, and from the insufficient number of statistical samples. However, if the changes are large enough and systematic, then, most probably, they reflect certain features of the horizontal (temporal) component in the modal thinking or in the physiology of vocal technique.

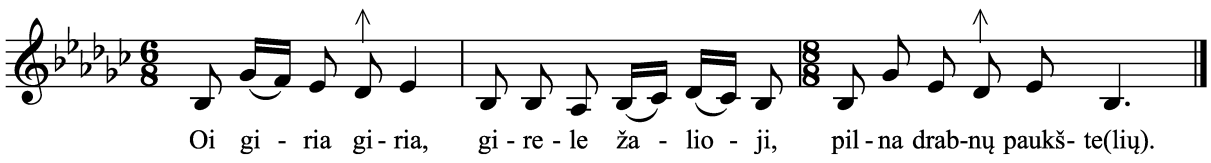


Figure 11. Generalized transcription of the song "Oi giria giria, girele žalioji".

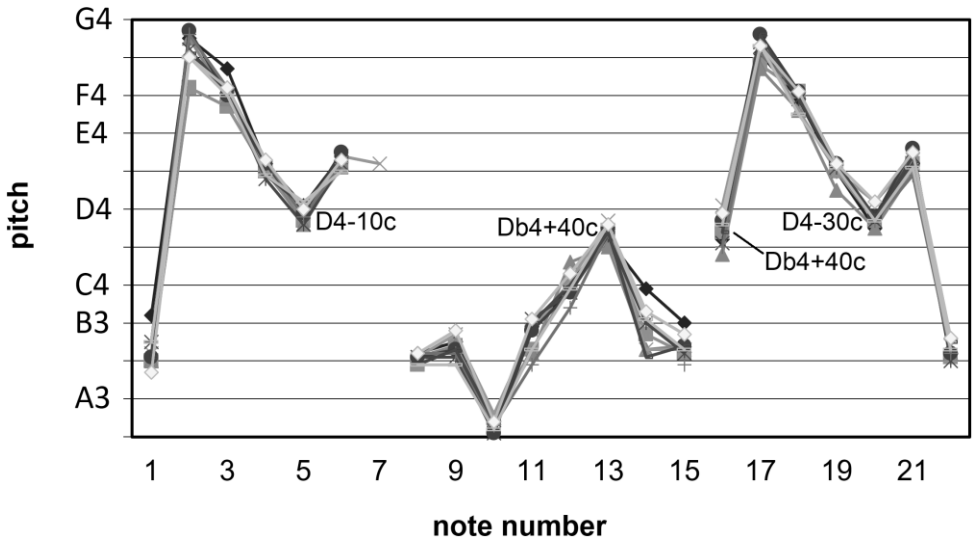


Figure 12. Measured pitch tracks of all melostrophes of the song "Oi giria giria, girele žalioji" (see the transcription in Figure 11); data from Ambrazevičius/Wiśniewska 2008, 25 is used. Phrases separated by gaps. The pitch medians of the third scale degree are indicated.

For example, consider the patterns consisting of the anchor tone and its closest lower neighbour in the musical scale, i.e. a kind of leading tone. In the cases when no strong interaction between the third and the fourth degrees is observed (i.e. when the intermediate tones appear between the two tones in the melodic contour or, e.g., when the two tones are separated by a division in the time structure), the second interval occurring between the third and the fourth degrees tends to be relatively wide. Thus, the third is relatively low in this case. On the contrary, when strong interaction between the two scale degrees is characteristic (e.g., when the third appears as an intermediate tone between two anchor fourths in the melodic contour), the second interval tends to be narrowed, i.e., the third is raised. The discussed difference between the thirds equals 36–50 cents, on average. Here the high third works as something similar (or the prototype) to the leading tone in diatonic thinking and thus, strengthens the anchor quality of the fourth. In other words, we are dealing here with *rule of leading tone* (case of *melodic intonation*).

Consider example “Vai jokit, jokit, jauni broleliai” (Figures 13 and 14). From the pitch tracks, again, it can be seen that scale degrees are intoned differently, depending on their position in the melodic contour.

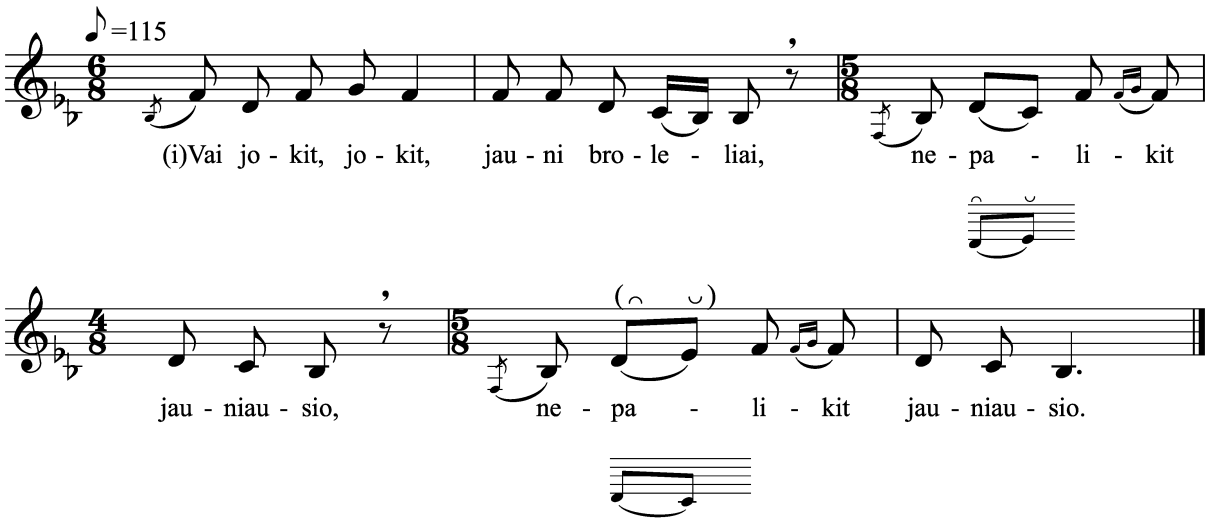


Figure 13. Generalized transcription of the song “Vai jokit, jokit, jauni broleliai”.

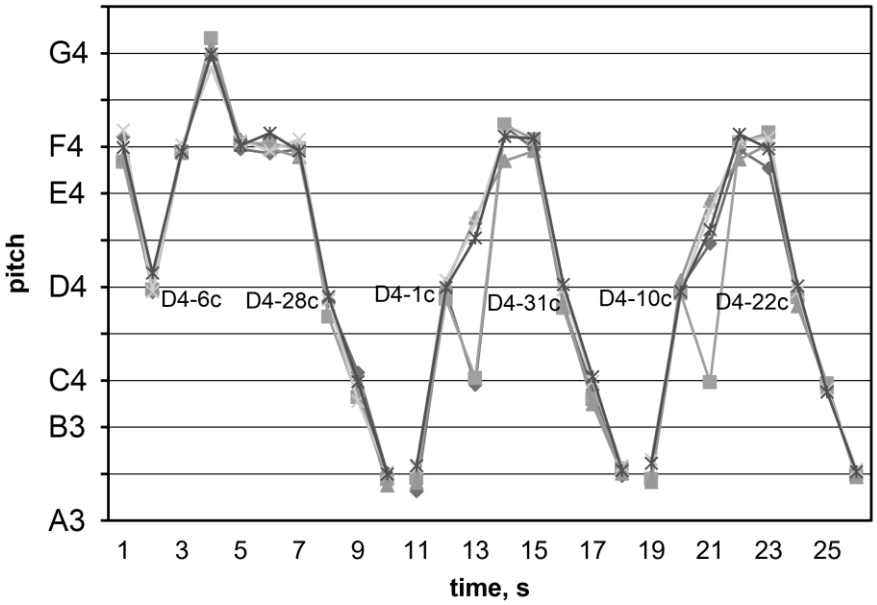


Figure 14. Measured pitch tracks of all melostrophes of the song "Vai jokit, jokit, jauni broleliai" (see the transcription in Figure 13). Phrases separated by gaps. The pitch medians of the third scale degree are indicated.

The thirds in the ascending sequences are systematically intoned approximately 28 cents higher than in the descending sequences, on average. Thus, sort of *rule of ascending/descending sequences* (case of *melodic intonation*) can be derived. This issue can be conditioned by the tendency to widen intervals.

3. Rationale

The performance rules are widely studied in the case of Western academic music, as well as in jazz. However, manifestation of the rules in traditional music has only been explored episodically. This paper aims to study the selected performance rules in the examples of Lithuanian, Belarusian, and Ukrainian traditional singing.

The samples for the study were drawn from various audio publications; see "Audio publications" section. The recordings cover various musical dialects of Lithuania, Belarus and Ukraine. The four main Lithuanian musical dialects (Aukštaitija, northeastern Lithuania; Žemaitija, western Lithuania; Dzūkija, southeastern Lithuania and Suvalkija, southwestern Lithuania) were analyzed separately. Contextual Belarusian and Ukrainian musical material was pooled into Belarusian and Ukrainian samples.

The Praat software was used for acoustic measurements.[5] When studying time-domain rules, the IOIs were measured: pairs of 511 durations studying the *Inégales* rule, pairs of 176 durations studying the *Double duration* rule, and pairs of 141 durations studying the *Duration contrast* rule (its 3:1 variant of nominal durations). Measurement quantities naturally vary due to different sampling frequencies. When studying pitch-domain rules, the pitches were measured: pairs of 165 pitches studying the *rule of ascending/descending sequences*, and pairs of 109 pitches studying the *rule of leading tone* (both are cases of *melodic intonation*).

4. Results

4.1. Inégales (nominal 1:1)

Medians and interquartiles (in parentheses) of T1/T2 (ratio of the first and second durations in the pair) for the examined samples of the Lithuanian dialects (A, S, Z, D) and pooled Belarusian and Ukrainian samples (BY, UA) are, respectively, 1.09 (0.94–1.24), 1.09 (0.99–1.22), 1.01 (0.90–1.13), 0.91 (0.78–1.08), 0.92 (0.70–1.01), and 0.85 (0.75–0.95) (Figure 15).

Interestingly, in the case of Dzūkai, we are faced with the phenomenon of 'inverted swing' (SL) or, in terms of Friberg and colleagues, with negative k (coefficient for the intensity of rule) values. This trend is also typical of Belarusians and Ukrainians. Thus, from the point of view of the present, the Dzūkai and the Eastern Slavs fall into one musical region. The feature of musical performance in question is, at first sight, seemingly insignificant. However, it fits perfectly into the overall set of musical features. The links between Dzūkai and East Slavic musical folklore are often noted (see, for instance, Nakienė 2000).

[5] Virtually any commercial audio editing software works for duration measurements. However, sound pitch measurements require specialized software such as Praat.

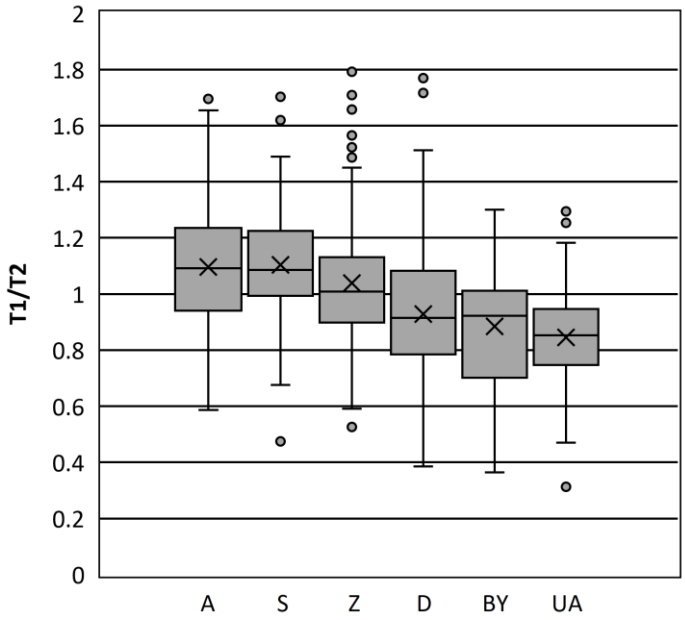


Figure 15. Box charts for duration ratios of paired sounds nominally presented in equal rhythmic values (the 1-line marks the exact proportion 1:1). A, S, Z, D, BY, UA, respectively: Aukštaičiai, Suvalkiečiai, Žemaičiai, Dzūkai, Belarusians (generalized), Ukrainians (generalized). The same notations in other figures.

The dominance of the SL formula is illustrated by several Ukrainian examples (Figures 16–19). Ellipses mark the pairs of sounds for which the *inégales* strategy is applied. Gray ellipses denote the SL formula, and empty ellipses denote the LS formula. See also the Lithuanian example in Figure 10.

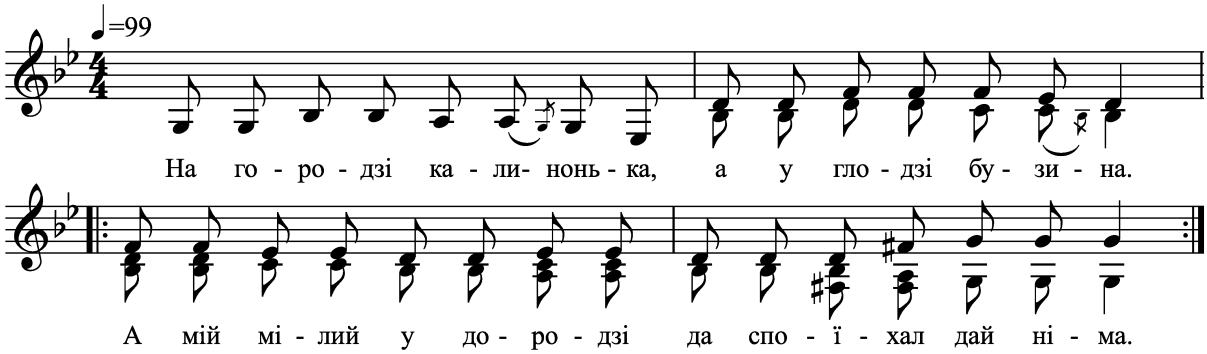


Figure 16. Transcription of the first melostrophe of the song “На городі калинонька”.

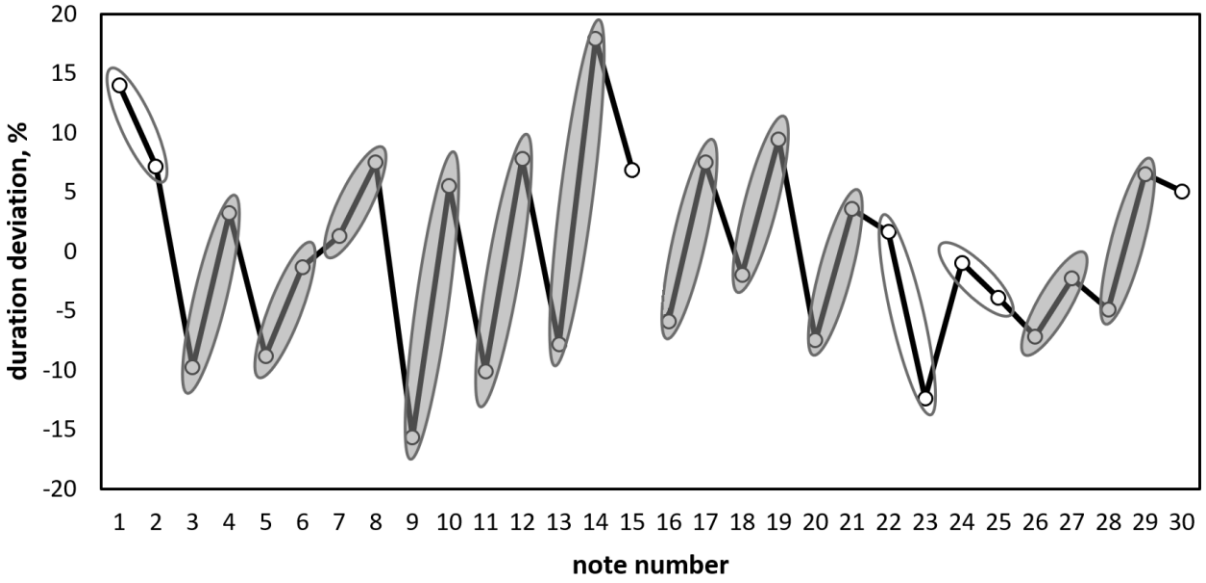


Figure 17. Tempo curve of “На городі калинонька” (see the transcription in Figure 16). Phrases separated by gaps. For ellipses, see the body text.

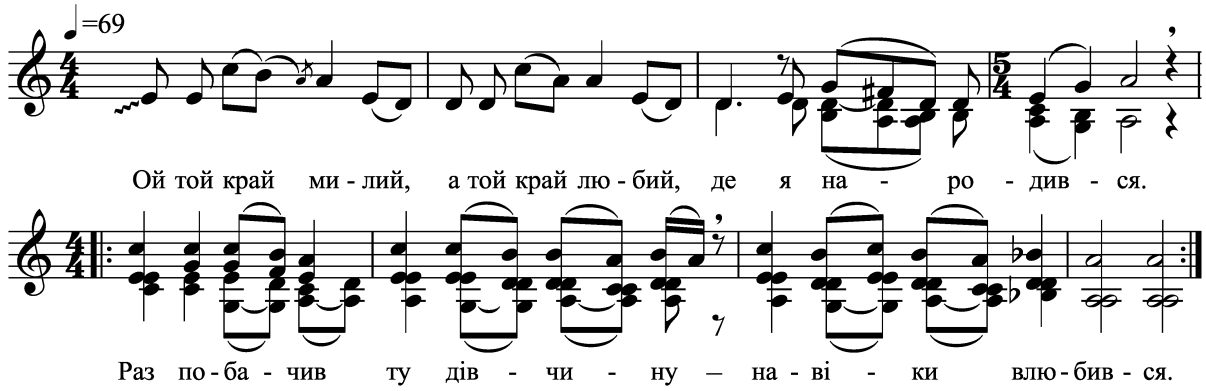


Figure 18. Transcription of the first melostrophe of the song “Ой той край милий”.

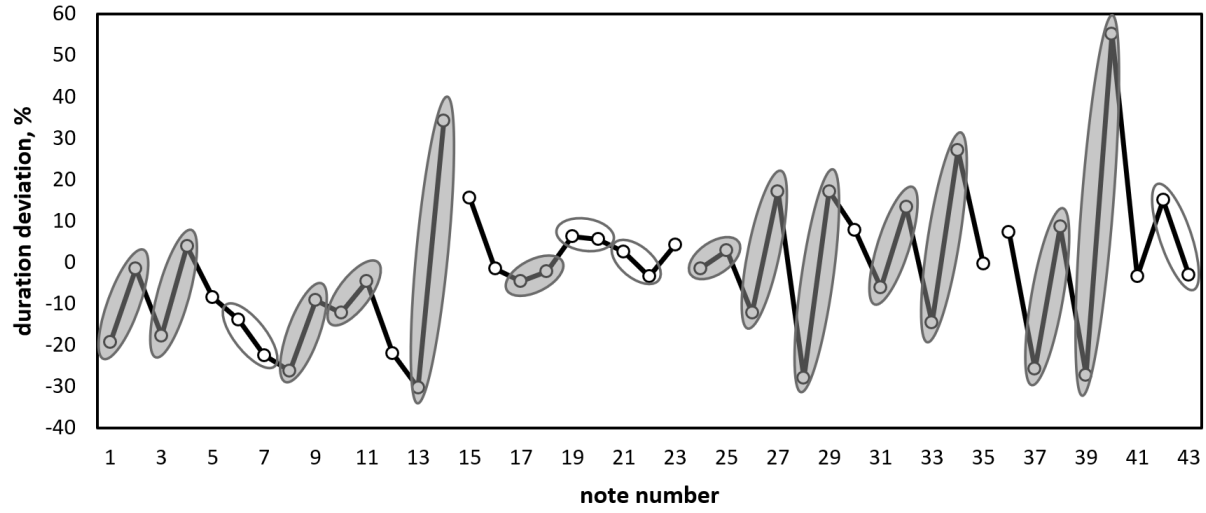


Figure 19. Tempo curve of "Ой той край милий" (see the transcription in Figure 18). Phrases separated by gaps.

As for the rules *phrase arch* and *final ritardando*, the matter is very simple. As can be seen from Figures 8, 10, 17, and 19, these rules are not detected in the studied samples. From our experience, we can presume that the *final ritardando* rule is typical of newer, "romance-type" songs, but there were no such examples among the examples examined.

4.2. Double duration (nominal 2:1)

Figure 20 shows the results for Dzūkai and (pooled) Belarusian and Ukrainian samples. The samples of other Lithuanian dialects were statistically insufficient, so they are not shown here. However, the few examples found show similar trends. Figure 21 shows the results of four songs of A and S (Aukštaičiai and Suvalkiečiai).

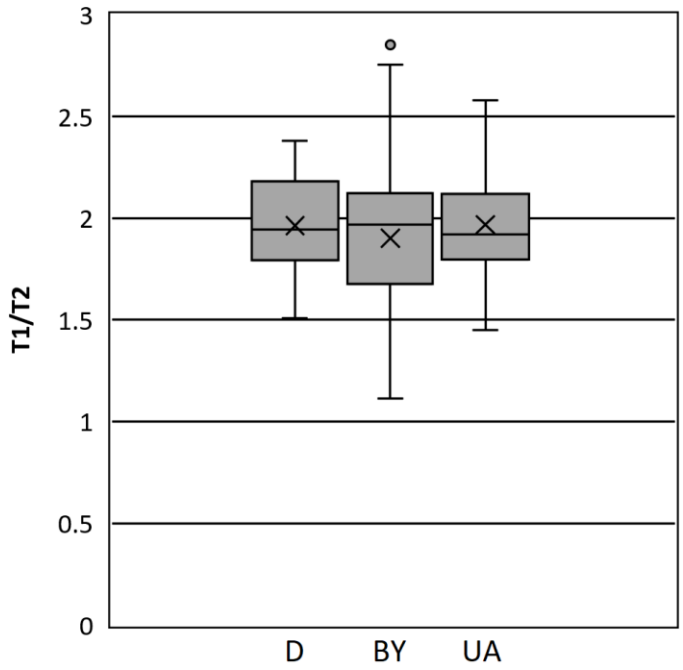


Figure 20. Box charts for duration ratios of paired sounds nominally presented in ratios of rhythmic values 2:1 (the 2-line marks the exact proportion 2:1).

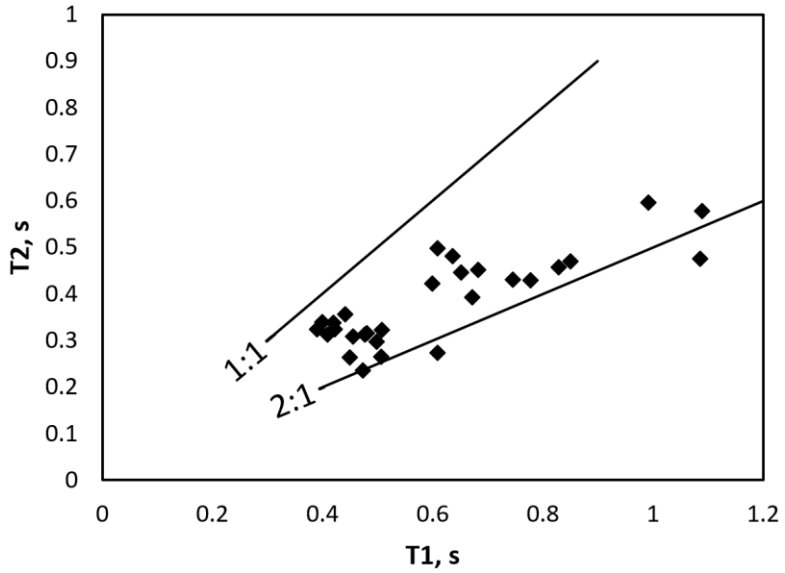


Figure 21. Actual durations of paired sounds nominally presented in ratios of rhythmic values 2:1; four songs of A and S. The oblique lines mark the exact proportions.

As in the case of Dzūkai, Belarusians, and Ukrainians, here we can state a tendency to soften the contrast of durations. Most occurrences range from 2:1 to 1.5:1 or even 2:1 to 1:1. Thus, this is broadly in line with the trend observed in the case of Western academic music.

4.3. Duration contrast (nominal 3:1)

In the examples considered, patterns 3:1 were rare. Again, there was a sufficient statistical amount of them in the samples of Dzūkai, Belarusians and Ukrainians. Therefore, we will only briefly discuss these samples below. Figure 22 shows the results.

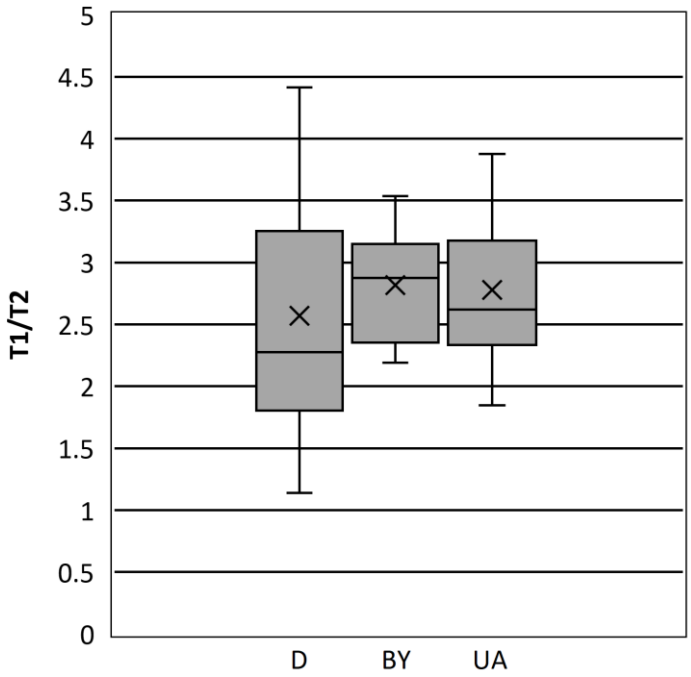


Figure 22. Box charts for duration ratios of paired sounds nominally presented in ratios of rhythmic values 3:1 (the 3-line marks the exact proportion 3:1).

It can be seen that the tendency of duration contrast to be attenuated becomes apparent. Thus, this is broadly out of line with the trend observed in the case of Western academic music. That is, unlike in the case of "double duration". In summary, there is a tendency in the traditional music in question (at least based on the examples examined) to soften any contrast of durations. We must note that the manifestation of the rule is quite broad, especially for Dzūkai.

It should be noted that only a statistical generalization of the time domain rule expression is presented here. As observed during the research, performances of individual songs (primarily genres, not singers) can vary considerably. This requires more detailed studies.

4.4. Melodic intonation: Leading tone

The manifestations of this rule are generalized in Figure 23. The results of the Žemaičiai musical dialect are not discussed here, as there are few such examples and their statistical generalization would be unreliable. But the results of all the other musical dialects are given (Aukštaičiai, Dzūkai, Suvalkiečiai, Belarusians, Ukrainians). Obviously, an examination of the individual Belarusian and Ukrainian dialects may reveal that some of those dialects

have an even stronger manifestation of that rule. The Dzūkai dialect is particularly prominent. However, although at different levels, the *leading tone* rule holds true in all cases: there is a clear tendency to intone sharper the "leading tone" in the context of tonal anchor (here: the third scale degree in the context of the fourth scale degree as the anchor).

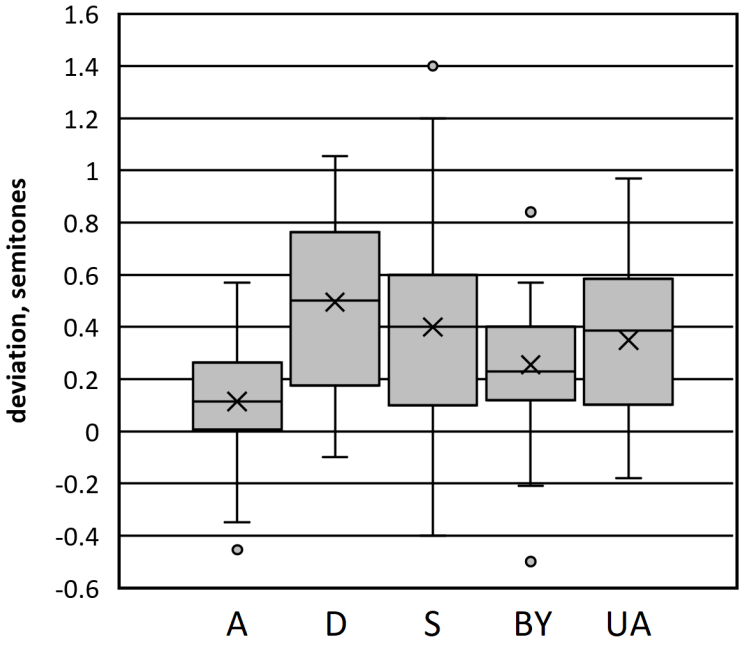


Figure 23. Box charts for deviations between the pitches of the third scale degree in "leading tone" and "non-leading tone" occurrences. D, S, Z, BY, UA, respectively: Dzūkai, Suvalkiečiai, Žemaičiai, Belarusians (generalized), Ukrainians (generalized).

In short, we can deduce the following rule, which, to a greater or lesser degree, works for all the musical dialects in question: a scale degree next to an anchor tone tends to "gravitate" to the anchor tone if the two tones are found in a pattern of strong interaction. In this particular case, this rule applies to the third degree of the musical scale (which ascends – i.e., gravitates toward the fourth degree – if present in the context of the fourth-degree tonal anchor).

4.5. Melodic intonation: Ascending/descending sequences

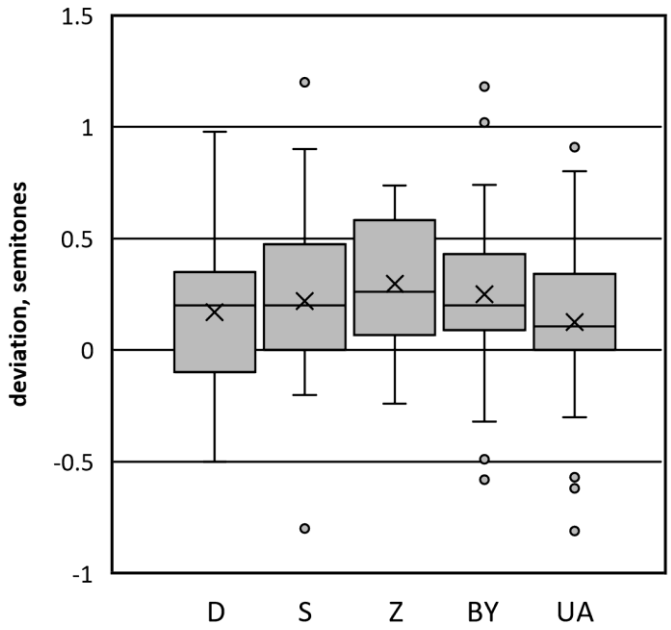


Figure 24. Box charts for deviations between the pitches of the third scale degree in "ascending" and "descending" occurrences. A, D, S, BY, UA, respectively: Aukštaičiai, Dzūkai, Suvalkiečiai, Belarusians (generalized), Ukrainians (generalized).

The manifestations of this rule are generalized in Figure 24. The results of the Aukštaičiai musical dialect are not discussed here, as there are few such examples and their statistical generalization would be unreliable. But the results of all the other musical dialects are given (Dzūkai, Suvalkiečiai, Žemaičiai, Belarusians, Ukrainians). We can state that the rule in question is most pronounced in Žemaičiai singing.

Thus, in summary, the tendencies of melodic intonation are the same as in the more widely studied Western academic music. We mean tendencies but not the precise intervals. For example, as mentioned, a semitone acting as a "leading tone" in academic performance is narrowed (of course, if the properties of the instrument allow). In the examples of traditional singing discussed here, the wider interval (neutral second or major second, i.e. two semitones) is narrowed rather than the corresponding (in the academic performance) semitone. So, the key here is that the psychological trend is universal: the narrowing intervals between the "leading tone" and the tonal anchors emphasize the significance of the tonal anchors.

5. Discussion

The rules found for Western academic (common practice period) music are valid to varying degrees in the case of the examined examples of traditional singing. Naturally, some rules perhaps could be considered (quasi)universal (at least by comparing the examined traditional singing and Western academic music). However, the expression of other rules found in the case of Western academic music does not hold true for other musics. Some differences in the studied musical traditions (in the examined aspect) were observed. Of course, for reliable conclusions on these differences, even larger samples would be desirable.

As for the timing rules, it should be noted that the examined examples are mainly of the "lyrical" style of performance. Examples of ceremonial style seem to be discursively distinctive (i.e., interpretation of rhythmic patterns may be different). The expression of the performance rules in them is expected to be determined by further research.

It can be suggested that the assessed rules could be placed into four groups. The first includes rules that manifest themselves analogously in both academic and traditional music (researched in the current study), so they can be considered at least quasi-universal. The second group's rules show similar trends to those found in the performance of academic music, but the range of their manifestation in traditional singing is very wide. The third group contains rules found in academic music but not found in traditional singing. And the fourth group includes those rules whose expression in traditional singing depends on the musical dialect. Thus, they can be considered as markers of local musical style.

Appendix. Metrics for song recordings cited

Jojau pro dvarą [I Was Riding Across the Farm]. Vincas Jurčikonis, 75, Babrai, Lazdijai Dst. Record of 1964 (Četkauskaitė 1995, N18).

Kad aš dukrelių daug turėčia [If I Had A Lot of Daughters]. Adelė Kazlauskienė (née Ambrasaitė), 81, Gustaičiai, Prienai Dst. Record of 1983 (Četkauskaitė 2002, N76).

Oi giria giria, girele žalioji [Oh, Grove, Green Grove]. Magdalena Radzevičienė, 65, Santaka, Marijampolė Dst. Record of 1937 (Nakienė/Žarskienė 2003, N31).

Vai jokit jokit, jauni broleliai [Hey, Ride, My Young Brothers]. Agota Mikulevičienė, 62, Orija, Marijampolė Dst. Record of 1937 (Nakienė/Žarskienė 2003, N28).

На городі калинонька [Viburnum in the Garden]. Group from Vepryk, Gadyatsky Dst., Poltava Oblast. Record of 2005 (Sopilka 2005a, N5).
Ой той край милий [Oh, That Dear Land]. Group from Kryachkivka, Pyryatynsky Dst., Poltava Oblast. Record of 2005 (Sopilka 2005a, N1).

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Also, several songs were taken from the Folk music archives at Lithuanian Academy of Music and Theatre.

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