The Processes of Creation and Recreation in Persian Classical Music

Volume Two

Thesis Submitted for the Degree of PhD

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March 1996

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Chapter Seven The Motivic Construction of *Segāh*

7.1 Introduction

Persian classical music is essentially motivic in nature, with individual melodies and phrases constructed from short motivic patterns. This distinctive feature of the music has been noted by a number of writers, who have suggested possible links with the intricate patterns found in the visual arts of the country:

> ... one cannot but compare it with the huge surfaces of ancient carpets covered with hundreds of small compartments all of them filled with ornamental motives which are of a uniform style yet never repeated. Obviously, the creative impetus is similar in both arts ... (Gerson-Kiwi 1963:22-3)

Given that all music is patterned, the main purpose of the preceding chapters has been to identify and seek to explain the patterns of Persian classical music at various structural levels. This final chapter will explore the motivic composition of twenty-nine versions of the *gusheh zābol*, examining regularities or otherwise in the use of motifs and in particular seeking to reach an understanding of the "rules" governing melodic movement in this music.[174] It is significant that the literature includes relatively little discussion of the music at this level, and only Nettl (with Foltin 1972 and 1987, mainly with reference to *dastgāh*s *Chāhārgāh* and *Māhur*) and Sādeghi (1971:80ff.) consider motivic structuring in any detail. Some of the inherent problems in analysing the music at this level of detail will be discussed in Section 7.2.

In the context of this study, the word "motif" denotes a short melodic pattern (usually of between two and five notes) never played in isolation, but combined

[174] *Zābol* is both a central *gusheh* in *Segāh* and also of a suitable length for the motivic analysis of this chapter. Whilst a comparative analysis would ideally extend to other *gushehs* and *dastgāhs*, it has only been possible to focus in detail on one *gusheh* in the present chapter. For each performance or *radif* analysed, the analysis was based on the main section of *zābol*, and this comprised one or more contiguous section(s), with the exception of the following: in Performance 1, *zābol* comprised sections 3 and 7 [see Appendix Two for section numbering]; in Performance 6, the central *chāhārmezrāb* [section 8] was not included in the analysis; and in Performance 15, *zābol* included sections 3 and 5. In examples where more than one musician was playing/singing, it was the music of the main soloist in each phrase which was analysed (as a result of which the analysis often moved from one musician to another in the course of the same rendition).

to form longer melodies. As discussed in Chapter Five, a "motif" is "... commonly regarded as the shortest subdivision of a theme or phrase that still maintains its identity as an idea." (Drabkin 1980:648; see Chapter Five, Footnote 125). As such, individual motifs might be regarded as the most basic "building blocks" of Persian classical music:

> Persian classical music is composed of short bits of sound - we call them motifs, gestures, particles, which are manipulated, altered, repeated, developed, expanded, reduced. (Nettl 1987:105)

These motifs appear to be varied little, if at all, from one *gusheh* (or even *dastgāh*) to another, and would thus seem to embody important principles of the musical structure, thereby constituting a central unifying element amidst the constant variation of other aspects of the music.[175] In the course of this study, it was increasingly felt that the motivic patterns of Persian classical music play an important role in maintaining the identity of the music. For this reason, the main focus of this chapter will be general aspects of motivic patterning in *zābol*, although the relationship between *radif* and performance, which has formed such an important part of the discussion of earlier chapters, will be considered (and will also be discussed further in Section 7.5).

7.2 The Motifs of *Zābol*

Consider, for example, the *gusheh zābol* in *radif*s 1 and 3, which included a great deal of motivic repetition. Given the didactic nature of the *radif*, this repetition perhaps serves to instill and reinforce the motifs - and in particular their shapes and the physical movement required to play them - into the sensori-motor memory of the pupil. Characteristic series and sequences of motifs such as the following,[176]

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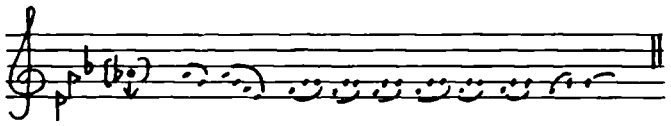
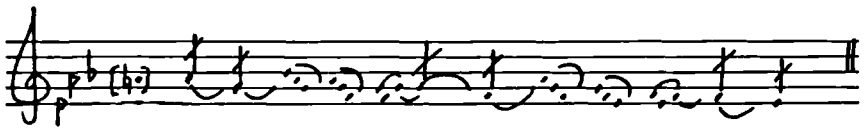
[175] As mentioned in Chapter One (Section 1.4.2), musicologists have also taken an interest in the ways in which motifs are used in the construction and development of phrases in western art music. The reader is referred to Reti (1961), Walker (1962), and Schoenberg (1967) amongst a number of publications on this subject.

[176] The terms "sequence" and "series" will be used regularly in this chapter. As discussed in Chapter Six, "sequence" refers to a musical pattern which is repeated at adjacent pitch levels. In this study, "series" is used to refer to consecutive statements of a motivic pattern at the same pitch level.



Radif 1 - Borumand - *tār* - I(1)



Radif 3 - Tofeegh - *setār* - I(2)

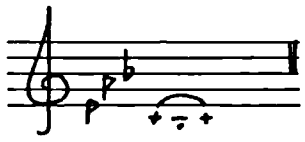
can be analysed into their constituent motivic units, such as:

Indeed, the very ways in which motifs were combined in the music enabled the analyst to identify such units. Twenty-three performances and six *radifs* of *zābol* (including *radifs* 5 and 6 not considered in previous chapters) were analysed for their constituent motifs in the same way, yielding a total of 5,840 motivic patterns, which were entered into a database and subsequently analysed.[177] For each motif, information was entered regarding the identity of the performer, the specific performance, and the musical instrument being played/voice. Data was also entered regarding the starting pitch, the number of notes in the motif, and the sizes of the intervals between the notes of the motif.[178] A three-note motif

[177] The versions of *zābol* analysed in this chapter are listed at the beginning of the thesis. In addition, transcriptions are presented in Appendix Five (showing how each version was motivically analysed), and sound recordings are given on accompanying Cassette 3. Three of the *radifs* were analysed from published notations: in the case of *radifs* 5 and 6, no sound recording was available; in the case of *radif* 4, it was decided to use the published notation for the motivic analysis, since even though the available sound recording apparently pre-dates the actual publication of Ma'rufi's *radif*, it is clearly a rendition of the notation (rather than the notation being a descriptive transcription of the rendition, as is the case for *radifs* 1 and 2). As such, exploring the ways in which Ma'rufi phrases and groups notes together was of great interest for the analyses of this chapter. The three published versions of *zābol* are also given in Appendix Five.

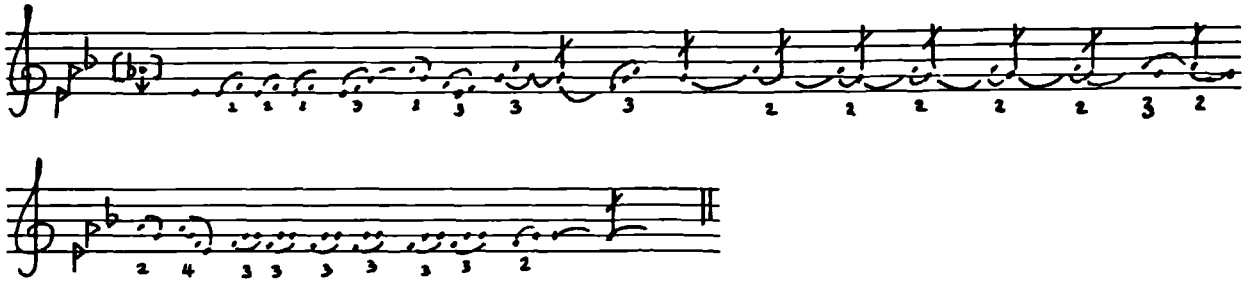
[178] It should be noted that for the purposes of the present analysis, the discussion of motifs focuses on aspects of pitch. To some extent, the identification of motifs itself depends on elements of phrasing and "pacing" which are of a rhythmic nature. However, these aspects of the music were not in themselves subject

starting on c with the intervals -1 +1 would indicate the following:



Information was also entered on the position of the motif in the context of the complete phrase (beginning, middle, or end of phrase), whether the motif was in a measured or an unmeasured section of music, as well as the details of the motifs which immediately preceded and followed the motif in question. Figure 20 shows the database record for one three-note motivic pattern (-9 in the database record indicates the absence of an interval. "0" could not be used, since this would indicate a repeated note). Since the central focus of interest in this analysis was the shape and length of particular motifs as opposed to matters of intonation, interval sizes are relative (exact sizes depending upon the pitches being used). Thus, the interval -1 starting on e-*koron* (three-quarters of a tone) will be smaller than the same interval beginning on g (whole tone). Starting pitches of motifs ranged three octaves (starting from the d below middle c), although musicians varied in the particular range which they used.[179]

In the course of this analysis, phrases were generally found to be constructed from motifs of between two and five notes (as well as single pitches), the most fundamental being two- and three-note motifs. Four- and five-note motifs were also heard, but were often in the form of compound motifs (that is, 2+2, 3+1, 3+2, or 4+1). Thus, the opening of *zābol* in *radif* 1 was analysed in terms of its constituent motifs as follows:



to detailed analytical enquiry.

[179] There are no pitches of variable intonation (*moteqayyer*) in *zābol*, this *gusheh* using the same pitches as the main *Segāh* scale, for details of which the reader is referred to Chapter Four.

Dastgāh: Segāh	Gusheh: Zābol

Performance: 16	Performer:27	Instrument: Santur
Number of Notes in Motif: 3	Initial Pitch: f	Position in Phrase:Middle

Interval 1: -1	Interval 2: +1	Interval 3: -9	Interval 4: -9

Preceding Motif

Number of Notes in Motif: 2		Initial Pitch: a-koron	
Interval 1: -1	Interval 2: -9	Interval 3: -9	Interval 4: -9

Following Motif

Number of Notes in Motif: 3		Initial Pitch: g	
Interval 1: +1	Interval 2: -1	Interval 3: -9	Interval 4: -9

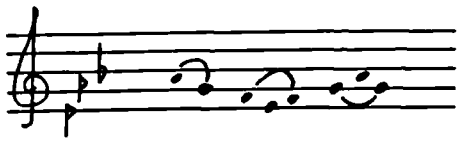


Figure 20 Database Record for One Three-Note Motivic Pattern in *Zābol*

A number of points regarding the analytical methodology used in this chapter, particularly in terms of the identification of motifs, should be mentioned. This is not a level of musical detail which is usually discussed by musicians within the tradition, and the motivic analysis was thus carried out by the author largely on the basis of her familiarity with the music: her limited experience in playing the music, and the ways in which her *setār* teacher phrased and grouped notes together, both in his playing and in the notations which he made during lessons; as well as on the evidence of published *radifs*, and again the phrasing and grouping of notes (although these were sometimes grouped according to western criteria) and the availability of some of these in both recorded and printed versions; and also the various patterns of combination and repetition in the analysed music itself (for example, a single pattern repeated at different pitch levels in a sequence, would seem to indicate that it is conceptualised as a unit). However, the process of motif identification and categorisation was not without problems, and sometimes involved difficult decisions. For example, it might be unclear whether a particular motif was a five-note motif or a three-note motif followed by a two-note motif. Even with the help of the various sources listed above, which allowed comparison and verification of the author's method of categorising motifs, it was ultimately necessary to check and recheck sections of music against transcriptions in order to make final decisions about individual motifs.

As with the procedures of Chapter Six, it would seem to be through both formal and informal learning that musicians build up a store of motivic patterns and knowledge as to their combination and variation. However, it should again be stressed that this analysis was not an attempt to replicate the cognitive processes by which musicians conceptualise the motivic structure of the music. Even more than the preceding chapters, this chapter (as stated above) focuses on a level of musical detail which is rarely discussed by musicians, and it has therefore not been possible to include information from such sources. Analyses of musical structures at this level of detail in any music will clearly involve subjective decisions on the part of the analyst, and are as much a representation of the scholar's own understanding of the music as of those of the musicians themselves and other members of the society. At best, one can hope to find patterns and correlations of interest in the material and suggest possible reasons for these. At

the heart of the analyses of this chapter lies the desire to understand how musicians improvise at the most detailed level of the music, and to attempt to explain why.

7.2.1 The Database Results

Once the data was entered for each motif, information regarding the occurrence of motivic patterns was obtained according to various criteria. This section will consider the occurrence of each type of motif in turn, followed by a more general discussion of the characteristic types of motif heard in *zābol*.[180]

The figures (in percentages) for each of the main types of motif (in terms of number of notes) were as follows:[181]

Two-note motifs	49%
Three-note motifs	36%
Four-note motifs	12%
Five-note motifs	3%

Thus, two-note motifs were the most common type of motif in *zābol*, followed in descending order by three-, four-, and finally a small percentage of five-note motifs. Whilst individual performances generally reflected the above percentages, there were a number of exceptions. Performance 10 (Majd), for example, had a fairly equal balance of two-, three-, and four-note motifs, and performance 12 (Malek) had exactly the same number of two- and three-note motifs.

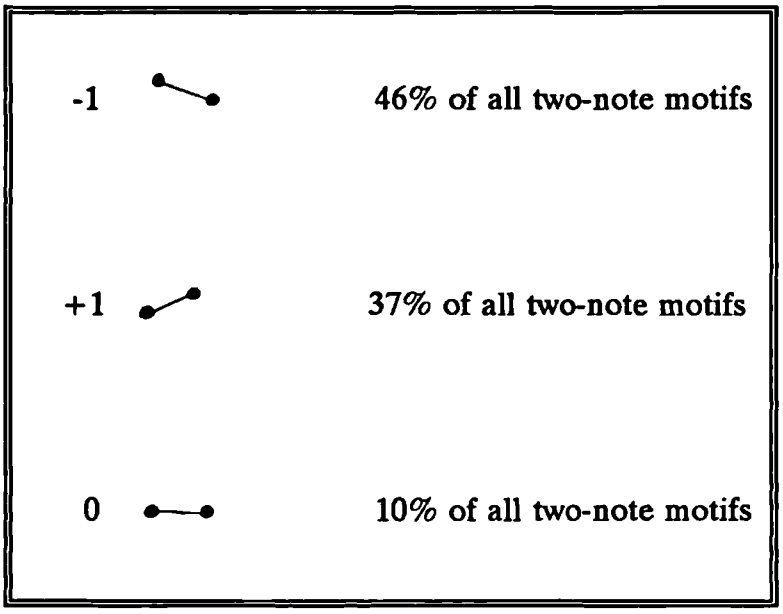
[180] The figures which will be analysed in this and the following sections represent motifs from both performances and *radifs*, since the aim is to reach a general understanding of motivic organisation in *zābol*. However, mention will be made of differences between the use of motifs in the analysed *radifs* and performances, and these points will be considered more fully in Section 7.5.

[181] A number of points regarding the statistical percentages given in this chapter should be clarified here. Firstly, all of the percentage figures are rounded to the nearest whole number, and as such slight discrepancies may occur in calculating total figures. Secondly, in the course of this chapter, comparisons will be made between figures for motifs heard, for example, on different instruments, in performance and *radif* versions of *zābol*, etc. It should be stressed that, since the analysed versions of *zābol* were of varying lengths, such comparisons are based on a different number of motifs for each instrument, version of *zābol*, etc, However, to the extent that the analyses are largely based on percentage figures, this is not a major issue. Finally, the question of probability is not discussed in the analyses, since this was felt to be inappropriate in the context of this study.

Performances 16 (Meshkātiān), 18 (Pāyvar), and 27 (Shajariān and Pāyvar) (largely *santur* performances) and *radif* 5 (Sabā - violin) all had a greater number of three- than two-note motifs, and performance 5 (Tului) had more four- than three-note motifs. Each type of motif will be considered individually below.

7.2.2 Two-Note Motifs

Whilst 49% of the total number of motifs in the analysed versions of *zābol* were two-note motifs (2805 motifs), 93% of these were of just three types:



In other words, 40% of all the motifs in the versions of *zābol* analysed were either -1 or +1. A particularly high percentage of two-note motifs was found in the analysed *radifs* (with the exception of the *radifs* of Sabā - 5 and 6):[182]

[182] Whilst *radifs* 5 and 6 were only available in printed form, they were written specifically for violinists, and it is likely that they represent descriptive notations of Sabā's own playing of the *radif*. In comparison, whilst *radif* 4 is less "instrument-specific" than *radifs* 5 and 6 (see Chapter Two, section 2.2.4), the *tār* was Ma'rufi's own instrument, tunings for the *tār* are given at the beginning of each *dastgāh* in the printed version, and the only sound recording of this *radif* is also played on the *tār* (by Ruhafzā). Hence the designation of instruments in the table below for *radifs* 4, 5, and 6, even though the analyses of this chapter were based on notations (rather than sound recordings) of these three *radifs*.

Radif	Instrument	% of Two-note Motifs (out of the total number of motifs for each *radif*)
radif 4	*tār*	71%
radif 3[183]	*setār*	68%
radif 2	male voice[184]	61%
radif 1	*tār*	60%
radif 6	violin	43%
radif 5	violin	33%

In the performances, individual musicians who used a high percentage of two-note motifs (over 50% of the motifs that they used) were as follows:

Performer	Instrument	% of Performer's Total Motifs
Sharif	*tār*	59%
Andalibi	*nei*	58%
Sabā	*setār*	58%
Bahāri	*kamāncheh*	54%
Borumand	*tār*	54%
Golpāyegāni	male voice	53%
R. Badii[185]	*kamāncheh*	53%

In addition, a number of performers had a percentage of two-note motifs just under 50%:

[183] The section of *zābol* from *radif* 3 which was used for the analysis of this chapter was played by Mehrbānu Tofeegh on the *setār*.

[184] All of the singers in the analysed versions of *Segāh* were male.

[185] All references to Badii in this chapter indicate Rahmatollāh Badii, since Habibollāh Badii is not among the musicians whose renditions of *zābol* are analysed in this chapter.

Performer	Instrument	% of Performer's Total Motifs
Alizādeh	*tār*	49%
Ebādi	*setār*	49%
Lotfi	*tār*	49%
Shajariān	voice	49%
Safvate	*setār*	48%
Shahidi	voice	48%
Tului	*tār*	48%
Shafeiān	*santur*	47%

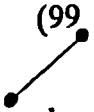
Finally, two-note motifs comprised less than 45% of all motifs in renditions by the following musicians:

Performer	Instrument	% of Performer's Total Motifs
Nāhid	*nei*	41%
Malek	*santur*	40%
Pāyvar	*santur*	34%
Kāmkār	*santur*	33%
Majd	*tār*	33%
Meshkātiān	*santur*	27%

Of particular interest was the consistently low percentage of two-note motifs among *santur* players (there were no *santur* players in the list of performers with over 50% of two-note motifs), and indeed this was confirmed in the figures for two-note motifs for individual instruments:

Instrument	% of all patterns for each instrument
setār	55%
nei	54%
voice	53%
kamāncheh	53%
tār	51%
santur	40%
violin	39%

Thus, whilst two-note motifs comprised 55% of all *setār* motifs, they comprised only 39% of all violin motifs.

Besides the three motifs listed above, a number of two-note motifs used larger intervallic movement, as follows: -2  (81 occurrences); +2  (99 occurrences); -3  (3 occurrences); +3  (11 occurrences); +4  (3 occurrences). Interestingly, these were most often heard in performances by *santur* players. It should be noted that the range of motifs heard in the *radif* versions of *zābol* under analysis was more restricted than in the performances, the former including few two-note motifs other than -1, +1, and 0.

7.2.3 Three-Note Motifs

Three-note motifs comprised 36% (2088 motifs) of all the motifs in the versions of *zābol* analysed. Whilst there were fewer three- than two-note motifs, the range of different types was wider: 26, as compared with 8 types of two-note motif. The most common three-note motifs were as follows:

+1 -1		24% of all three-note motifs
-1 +1		16% of all three-note motifs
-1 -1		14% of all three-note motifs
+1 +1		12% of all three-note motifs

Together, the above motifs accounted for 66% of all the three-note motifs in the sample analysed. The following musicians used a relatively high percentage of three-note motifs,

Performer	Instrument	% of Performer's Total Motifs
Meshkātiān	*santur*	66%
Kāmkār	*santur*	48%
Pāyvar	*santur*	46%
Nāhid	*nei*	41%

and these were all amongst those with a relatively low percentage of two-note motifs. Moreover, the appearance of a number of *santur* players in this group should be noted. In addition, *radif* 5 - which had a lower percentage of two-note motifs than any of the other *radifs* - also had a higher percentage of three-note motifs: 61%. The percentage of three-note motifs for other musicians ranged from 20% (Tului) to 39% (Ebādi and Safvate, both on *setār*). The percentages for individual instruments was as follows:

Instrument	% of all patterns for each instrument
violin	47%
santur	41%
nei	38%
kamāncheh	35%
voice	33%
setār	32%
tār	30%

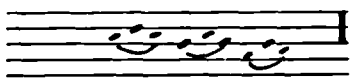
These figures, together with those presented earlier, suggest that the relatively low percentage of two-note motifs on violin and *santur* renditions is correlated with a relatively high percentage of three-note motifs on these instruments. This will be discussed further below.

Whilst it was not possible to analyse in detail the immediate contexts of individual motifs in terms of adjacent motifs, information regarding the occurrence of series and/or sequences (see Footnote 176) of the most commonly heard three-note motifs was obtained from the database, and is summarised in Figure 21. This is followed by a commentary on each motif, including a consideration of their use by individual musicians and on particular instruments:

Motif	Total number of occur-rences	Prece-ded by same motif	Foll-owed by same motif	Prece-ded and follow-ed by same motif	Prece-ded by same motif at the same pitch	Follow-ed by same motif at the same pitch	Prece-ded by same motif at adjacent pitch	Follow-ed by same motif at adjacent pitch
+1 -1	528	132	135	57	2	1	128	132
-1 +1	335	61	60	21	22	23	37	37
-1 -1	287	26	26	5	10	10	14	14
+1 +1	242	22	22	5	10	10	11	11
0 -1	99	20	20	2	20	20	0	0
+1 0	97	46	46	32	46	46	0	0
0 0	90	10	11	2	7	7	3	3
-1 0	86	4	4	0	0	0	4	4
+2 -1	78	5	5	0	1	1	4	4
+1 -2	77	20	20	6	20	20	0	0
-2 +1	45	6	6	1	6	6	0	0
0 +1	36	11	11	10	0	0	9	9

Figure 21 Contextual Information on the Most Commonly Heard Three-Note Motifs in *Zābol*

1. **Motif +1 -1**  was heard frequently in versions on *santur* and violin, particularly in the playing of Meshkātiān (31 occurrences), Pāyvar (17 occurrences), and Malek (14 occurrences) (all *santur*ists) as well as in *radif*s 5 and 6 (65 and 40 occurrences respectively). When preceded and/or followed by the same motif, this was almost exclusively as a sequence rather than a series, usually descending in direction. Almost half of the motifs of this type which were heard in sequence were both preceded and followed by the same motif (heard at a variety of pitch levels):



2. **Motif -1 +1**  was heard more commonly on *tār* and *setār*, particularly in the playing of Ebādi, Alizādeh, Sharif, and Borumand, and also the *kamāncheh* player Bahāri. It was heard both within series and sequences, although more

commonly as part of the latter. Ebādi, for example, played this motif in series but never in sequence, whilst Borumand, Lotfi, Meshkātiān, Alizādeh, and Shajariān generally used it in the context of sequences. Unlike motif +1 -1, sequences of this motif tended to be ascending rather than descending.

3. **Motif -1 -1** was also heard more often on *tār* and *setār*, particularly in performances by Sharif and Majd and in *radifs* 3 and 4. As with the preceding motif, it was heard both in series and in sequence (always descending). Tofeegh (*radif* 3) and Borumand (performance only) in particular used this motif in sequence. There was also an interesting section towards the end of Performance 16 (Meshkātiān) in which this motif was followed by the same motif in a scalar passage (twice), Meshkātiān being the only musician to use this motif in this way:

Performance 16 - Meshkātiān - *santur* - II(3)

4. **Motif +1 +1** was heard particularly in performances by Badii and Majd, and in *radif* 2. It was heard both in series and in sequence (the latter mainly ascending), particularly in versions by Malek (both series and sequences), Ebādi (series), and Safvate (sequences). Once again, Meshkātiān was the only musician to include this motif as part of a scalar pattern:

Performance 16 - Meshkātiān - *santur* - II(1)

5. After the four most common three-note motifs above, there was a significant drop in the number of occurrences of other three-note motifs. **Motif 0 -1** which was particularly characteristic of Lotfi, was not heard in sequence at all, but in series in the performances of five musicians: Malek, Pāyvar, Lotfi, Sabā, and Golpāyegāni.

6. **Motif +1 0**  was heard very commonly in the *radif*s analysed, particularly in *radif*s 1 and 4 (both for *tār*), where it was often heard in series. This motif was also heard in series in *radif* 3. In all of these cases, the initial pitch of the motif was f, and 32 occurrences of this motif were preceded and followed by the same motif at the same pitch, as follows:

7. **Motif 0 0** . This motif was heard particularly in the playing of Kāmkār and Andalibi (playing together in performance 15). It was heard in series and/or sequence in the playing of only four musicians (and these did not include Kāmkār or Andalibi).

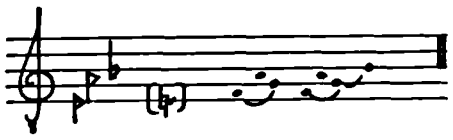
8. **Motif -1 0**  , was most commonly heard in the singing of Shajariān. It was not heard in series at all, but as a short sequence in the performances of three musicians - three times as a descending sequence and once as an ascending sequence (Shajariān). Since there were no instances of this motif being preceded and followed by the same motif, the sequences were very short, as follows:

Performance 22 - Malek - *santur* - II(5)

9. **Motif +2 -1**  . This motif was very characteristic of the playing of Pāyvar. Indeed 21% of all the three-note motifs played by this musician were of this one type, and this was his next most common three-note motif after +1 -1. Out of a total of 78 appearances of this motif, 54 were played by Pāyvar, as part of a short sequence on four occasions (in a *chāhārmezrāb*) (Pāyvar being the only performer to play this motif in sequence):

Performance 18 - Pāyvar - *santur* - III(4)

Badii was the only musician to present this motif in series:



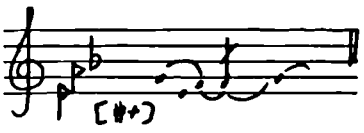
Performance 29 - Badii - *kamāncheh* - I(3)

10. **Motif +1 -2**  was heard most often in performance by Malek (Performance 12) and Ebādi. It was heard in series (never in sequence), particularly in the *radifs*.

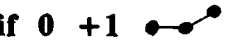
11. **Motif -2 +1**  was most characteristic of *radif* 2 - this being the only *radif* in which it was found - and the *setār* playing of Sabā, and almost always began on a-*koron* (39 out of 45 occurrences). It was performed in short series by five musicians, but was not heard at all in sequence. Alizādeh was the only musician who played more than two successive statements of this motif:

Performance 2 - Alizādeh - *tār* - IV(1-2)

A common way of following this motif was (Badii, Sabā, and Karimi):



Performance 3 - Sabā - *setār* - II(3)

12. **Motif 0 +1**  . Like motif +2 -1, this was heard most frequently in the playing of Pāyvar (16 out of 36 occurrences), as in the following phrase:

Performance 27 - Pāyvar - *santur* - IV(5)-V(1)

Besides the motifs listed above, a number of other three-note motifs were heard in performances (and less often in *radifs* which, as with two-note motifs, tended to adhere to the most common motifs).

It became clear in the course of the analysis that performers varied in the range of motifs which they used. Thus, Shafeiān used 18 different types of three-note motif, Pāyvar 17, Malek 16, and Safvate 15. As with two-note motifs, *santur* players used a greater variety of three-note motifs, perhaps because the layout of the instrument allows a freer scope for movement than other instruments (see discussion below).

7.2.4 Four-Note Motifs

A total of 778 four-note motifs comprised 12% of all the motifs analysed, and a greater range of four-note motifs were used (51 different types) than any other type of motif. The ten most common four-note motifs were as follows:

+1	-1	+1		14% of all four-note motifs
-1	-1	-1		11% of all four-note motifs
+1	+1	+1		11% of all four-note motifs
-1	0	-1		6% of all four-note motifs
-1	+1	+1		6% of all four-note motifs
+1	+1	-1		5% of all four-note motifs
+1	-1	-1		5% of all four-note motifs
0	-1	-1		4% of all four-note motifs
-1	-1	+1		4% of all four-note motifs

Musicians who used a relatively high percentage of four-note motifs in their performances were:

Performer	Instrument	% of Performer's Total Motifs
Majd	*tār*	29%
Tului	*tār*	27%
Malek	*santur*	24%
Alizādeh	*tār*	20%

The percentages for other performers ranged from 1% for Kāmkār to 17% for Pāyvar and Nāhid. The percentages for individual instruments are given below:

Instrument	% of all patterns for each instrument
tār	16%
santur	15%
voice	11%
kamāncheh	10%
violin	10%
setār	10%
nei	10%

Whilst on the basis of the patterns which emerged for two- and three-note motifs, one might have expected *santur* players to have a higher percentage of four-note motifs than *tār* players, this was not the case. However, the difference between the two was only 1%, and indeed, the overall range of variation between instruments was much less wide than the figures for two- and three-note motifs. Contextual information for the most commonly heard four-note motifs was as follows:

Motif	Total number of occurrences	Preceded by same motif	Followed by same motif	Preceded and followed by same motif	Preceded by same motif at same pitch	Followed by same motif at same pitch	Preceded by same motif at adjacent pitch	Followed by same motif at adjacent pitch
+1 -1 +1	106	9	9	4	2	7	2	7
-1 -1 -1	90	11	11	5	0	0	4	4
+1 +1 +1	82	23	23	12	0	0	21	21
-1 0 -1	49	9	9	1	0	0	9	9
+1 +1 -1	41	12	12	7	12	12	0	0
+1 -1 -1	36	1	1	0	0	0	1	1
0 -1 -1	34	8	8	0	0	0	8	8
-1 -1 +1	31	3	3	2	3	3	0	0
-1 +1 -1	31	13	13	11	0	0	12	12
0 -1 +1	27	10	10	2	0	0	10	10
+2 -1 -1	23	2	2	0	0	0	2	2
+1 +1 0	20	8	8	3	3	3	5	5

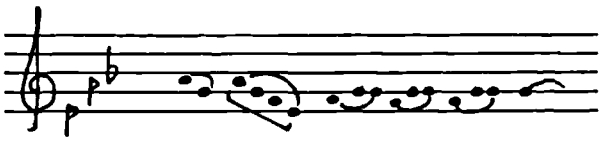
Figure 22 Contextual Information on the Most Commonly Heard Four-Note Motifs in *Zābol*

1. The most common four-note motif, **+1 -1 +1**  , was particularly characteristic of the *santur* players Malek and Shafeiān (28 and 20 occurrences[186] respectively). When this motif was preceded and/or followed by the same motif, this was more often in sequence than in series. However, all of the instances of this were from one version (*radif* 6) and it might thus be a characteristic of Sabā (or of the violin), although it was not heard in Sabā's other *radif* (*radif* 5). This motif did not appear in any of the other *radif*s of *Segāh*. Considering the total number of occurrences of this motif, it was heard surprisingly infrequently either in sequence or in series.

2. **Motif -1 -1 -1**  was characteristic of Borumand and Pāyvar (19 and 14 occurrences respectively) and was, in addition, the most commonly heard four-

[186] Where the number of appearances of a particular motif is relatively low, a percentage figure alone can be misleading. Therefore in such cases the number of actual occurrences will be given as well as, or instead of, the percentage figure.

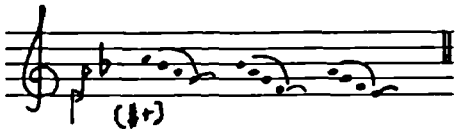
note motif in the *radifs*: it was the only four-note motif in *radifs* 1 and 3 (5 and 2 occurrences respectively) and five out of the six four-note motifs in *radif* 4 were of this type. This motif was also heard four times in *radif* 2. It appeared regularly in the *radifs* since it forms an important part of the following phrase in *zābol*:



Where preceded and/or followed by the same motif, this motif was only heard in sequence, with the exception of five instances of octave displacement in performance 27:

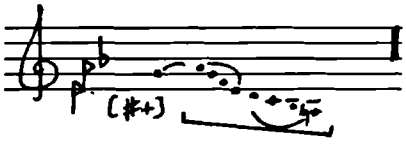
Performance 27 - Pāyvar - *santur* - VI(4-5)

The remaining examples of this motif in succession were either in descending sequences (Tului and Borumand):



Performance 26 - Borumand - *tār* - I(5)

or in descending scalar patterns (Pāyvar and Lotfi):



Performance 7 - Lotfi - *tār* - I(4)

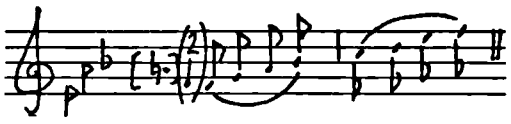
As with motif +1 -1 +1, one might have expected this relatively frequently heard four-note motif to have appeared more often in the form of sequences or

series.

3. **Motif +1 +1 +1**  was highly characteristic of the playing of Pāyvar (33 occurrences) and was also heard in *radif*s 5 and 6 (but was absent from the other *radif*s). Like motif -1 -1 -1 (of which it is an inversion), this motif was not heard at all in series, but was heard in sequence, particularly in performances by Pāyvar (in which 18 appearances of this motif were either preceded and/or followed by the same motif in sequence):

Performance 27 - Pāyvar - *santur* - III(3)

On two occasions, Pāyvar also used this motif in a scalar configuration:



Performance 27 - Pāyvar - *santur* - IV(4)

It is interesting to note that whilst motif -1 -1 -1 , with an overall descending shape, was only heard in descending sequences, motif +1 +1 +1 which is ascending in shape was conversely only heard in ascending sequences, as shown above. As will be discussed in Section 7.6, there would seem to be a correlation between the overall direction of a motif and the direction of the sequence in which it might be used, descending motifs tending to be heard in descending sequences, and ascending motifs generally heard in ascending sequences.

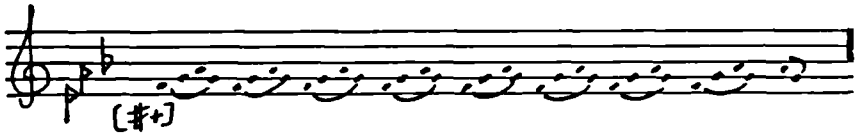
4. **Motif -1 0 -1**  was heard particularly in renditions by *tār* players, especially Borumand (in performance 11, 10 occurrences). When preceded or followed by the same motif, it was only heard in sequence, always descending (with the exception of one ascending sequence by Borumand). Only on one occasion was this motif preceded and followed by the same motif, implying than

most instances of the motif in sequence were relatively short, as follows:

Performance 11 - Borumand - *tār* - II(3)

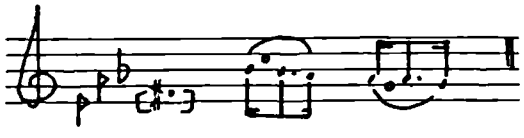
This was heard four times in performance 11 and also in performances by Badii and Majd. The only *radif* in which this motif appeared was *radif* 2 (2 occurrences).

5. **Motif +1 +1 -1**  was heard particularly in performances by Malek (12 occurrences), Lotfi (8 occurrences), and Borumand (6 occurrences in performance, not heard in his *radif*). The only *radif*s in which this motif appeared were *radif*s 4 and 5 (one occurrence each). Unlike the preceding four motifs, this motif was not heard in sequence at all, but in series, for example in performances by Lotfi (8 occurrences, all starting on f), Malek (3 occurrences, also on f), and Borumand (2 occurrences, both on g). The tendency of this motif to be heard in series based on the same pitch may result from its shape which leads back to its own starting pitch:



Performance 7 - Lotfi - *tār* - II(3)

6. **Motif +1 -1 -1**  featured particularly in the playing of *santur*ists Shafeiān (8 occurrences) and Malek (6 occurrences), and was also heard in *radif*s 2 (1 occurrence) and 6 (2 occurrences). There was only one instance where this motif was followed by the same motif - in *radif* 6 in the form of a short descending sequence:

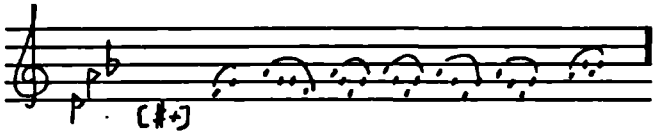


Radif 6 - Sabā - violin - I(3)

7. **Motif 0 -1 -1**  was a pattern mainly heard on *tār* (Tului - 10 occurrences and Borumand - 5 occurrences) and voice (Shajariān - 5 occurrences). It was not heard in any of the *radifs*. Whilst this motif did not appear in series, six musicians included it in a two-stage sequential pattern, and all eight occurrences of this short sequence were based on the same pitches:

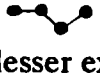
Performance 1 - Shajariān - voice - II(3)

8. **Motif -1 -1 +1**  was heard both on *santur* (Malek - 6 occurrences and Pāyvar - 5 occurrences) and also on *tār* (Tului - 5 occurrences). Like the motif above, it was not heard in any of the *radifs*. As with its inversion, +1 +1 -1 , this is a motif which tends to "turn back on itself" and thus seems to lend itself more to performance in series than in sequence, as heard in the following phrase:

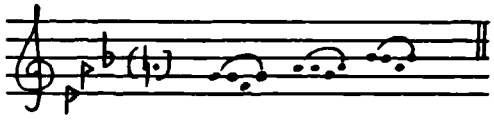


Performance 3 - Sabā - *setār* - I(3-4)

9. **Motif -1 +1 -1**  was heard mainly in performances on *tār*, particularly by Alizādeh (13 occurrences) and Tului (5 occurrences). Most of Alizādeh's renditions of this motif were in the form of a sequence, either using adjacent pitches (11 occurrences) or at the distance of two notes (1 occurrence). Indeed, the use of this motif in sequence seemed to be particularly characteristic of the playing of Alizādeh.

10. **Motif 0 -1 +1**  was particularly characteristic of Shajariān (11 occurrences) and to a lesser extent of Borumand (6 occurrences). There were no examples of this motif in any of the *radifs* under study. This motif was preceded and/or followed by the same motif in performances by Shajariān (4 occurrences), Borumand (3 occurrences), Lotfi (2 occurrences), and Malek (1 occurrence),

always in the form of an ascending sequential pattern (there were no examples of this motif in series):



Performance 27 - Shajariān - voice - VI(2)

11. **Motif +2 -1 -1**  . This motif was heard in performances by Pāyvar and Safvate (8 occurrences each). It was not heard in series, but in sequence on two occasions in the playing of Safvate. This motif was the only one listed above which included an interval larger than +1.

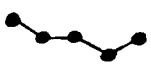
12. **Motif +1 +1 0**  was heard particularly in the playing of Malek (11 occurrences), both in series and in an ascending sequence. The only other example of this motif preceded and/or followed by the same motif was in performance by Borumand where it formed a short ascending sequence (2 occurrences).

As with two- and three-note motifs, musicians differed in the range of four-note motifs used. Whilst Kāmkār and Tofeegh only used one type of four-note motif each, Malek used 28 different four-note motifs, Sabā used 19, Shafeiān used 18, and Pāyvar and Alizādeh used 16 each. Interestingly, the musicians with a wider range of four-note motifs were also those who used a greater variety of two- and three-note motifs, and this was particularly apparent among *santur* players (with the exception of Kāmkār, who generally used a smaller range of motif types in comparison with other *santur* players).

7.2.5 Five-Note Motifs

Five-note motifs comprised only 3% (175) of all the *zābol* motifs analysed. Twenty-six different types of five-note motifs were heard - less than for four-note motifs, and a small number considering the possible permutations using even only intervals between -1 and +1. The six most commonly heard five-note motifs

were as follows:

-1 0 -1 +1		42 occurrences (24% of all five-note motifs)
+1 -1 +1 -1		38 occurrences (22% of all five-note motifs)
-1 +1 -1 -1		24 occurrences (14% of all five-note motifs)
+1 -1 -1 +1		18 occurrences (10% of all five-note motifs)
+1 -1 -1 -1		12 occurrences (7% of all five-note motifs)
+1 +1 +1 +1		8 occurrences (5% of all five-note motifs)

These six patterns accounted for 142 (or 81% of all) five-note motifs. Musicians whose performances included a high percentage of five-note motifs were:

Performer	Instrument	% of Performer's Total Motifs
Kāmkār	*santur*	17% (14 occurrences)
Shahidi	voice	10% (3 occurrences)
Sharif	*tār*	10% (9 occurrences)

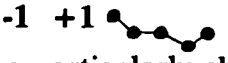
Other musicians also used a relatively high number of five-note motifs, although these did not form a large percentage of their total number of motifs (since this total number varied from one version of *zābol* to another): Shafeiān (40 occurrences, 6%), Malek and Pāyvar (both 15 occurrences, 3%) (all three *santur*

players), Sabā (28 occurrences - 4 (3%) and 8 (5%) in *radifs* 5 and 6 respectively [violin]; 16 in performance [*setār*], 5%), and Shajariān (voice, 17 occurrences, 5%).

The percentage figures for five-note motifs for individual instruments were as follows:

Instrument	% of all patterns for each instrument
santur	4% (85 occurrences)
violin	4% (12 occurrences)
voice	3% (21 occurrences)
setār	3% (22 occurrences)
tār	2% (29 occurrences)
kamāncheh	1% (4 occurrences)
nei	1% (2 occurrences)

The largest number of five-note motifs was thus in performances by *santur* players. The only performer who did not play any five-note motifs was Hassan Nāhid, a *nei* player of the older generation. Also significant was the absence of five-note motifs from a large number of *radifs*: *radifs* 1, 2, 3, and 4. The only *radifs* to include five-note motifs were those of Sabā (5 and 6), and even these only used one type of motif (+1 -1 -1 -1). Each of the five-note motifs listed above will now be discussed individually.

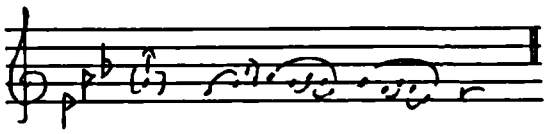
1. **Motif -1 0 -1 +1**  was heard in the renditions of six musicians, and seemed to be particularly characteristic of Sabā (*setār*) and Shajariān. An analysis of the immediately adjacent motifs showed that in approximately half of its appearances, this motif was preceded and followed by the same motif at the same pitch:

Performance 7 - Shajariān - voice - I(3)

This motif thus seemed to lend itself to playing in series (rather than in sequence as some of the five-note motifs below), and this was particularly apparent in performances by Sabā and Shajariān.

2. **Motif +1 -1 +1 -1**  was heard in a total of nine performances (seven musicians), and was particularly characteristic of *santur* renditions (28 out of 38 occurrences). This motif was part of a sequential pattern in 14 occurrences, again particularly in *santur* renditions, and was not heard at all in series.

3. **Motif -1 +1 -1 -1**  was another five-note motif heard most often on *santur* (15 out of 24 occurrences) in one performance each by Shafeiān and Pāyvar (but interestingly, not heard in the other performances by these musicians). In about half of its appearances this motif formed part of a sequence:



Performance 18 - Pāyvar - *santur* - II(6)

4. **Motif +1 -1 -1 +1**  was heard in 7 performances (including two by the same musician), all but one of these being played on *santur*. Shafeiān was the performer in 10 out of 18 occurrences, and this motif might therefore be regarded as particularly characteristic of his playing. Unlike the three preceding motifs, this motif was not heard either in series or in sequence.

5. **Motif +1 -1 -1 -1**  was the only five-note motif to appear in *radif*s -those of Sabā, there being 4 occurrences in *radif* 5, and 8 in *radif* 6. It is significant that this motif was not heard in any of the analysed performances, not even that by Sabā himself. Of the 12 occurrences of this motif, 4 were within a sequential pattern:

Radif 6 - Sabā - violin - I(1)

6. Motif +1 +1 +1 +1  was heard 8 times, 7 of these being on *santur*, played by Pāyvar (5) and Shafeiān (2). Indeed, this motif seemed particularly characteristic of the types of melodic movement heard on *santur*, especially in the playing of Pāyvar, a point which will be discussed further below.

Whilst every analysed performance and *radif* of *zābol* included two- three- and four-note motifs, five-note motifs appeared to be somewhat optional, as evidenced by their relative absence from the *radif*s and from one performance by an older musician. Where five-note motifs were used, the general pattern was that *santur* players tended to include a wider range of motifs than musicians playing other instruments or singing, Shafeiān using the widest range of five-note motifs (ten different types).

The preceding discussion has shown that certain types of motif are more commonly heard than others, and also that some motifs appear to be essential to the music, whilst others are optional. For example, as noted above, whilst all of the versions of *zābol* included two-, three-, and four-note motifs, five-note motifs were absent from one performance and all but one of the *radif*s, suggesting that these are not part of the essential "core" of *zābol*. In terms of specific motifs, -1 and +1 were the only motifs included in every version of *zābol*, and these would thus seem to be essential to the identity of the *gusheh*. Among three-note motifs, +1 -1 and +1 +1 were each heard in all but one version, and -1 +1 and -1 -1 were each heard in all but two versions. Thus, whilst not absolutely essential, these motifs nevertheless form an important part of *zābol*. There was less consensus among musicians in the case of four-note motifs (partly because of the wider range of options), motif -1 -1 -1 being heard in all but seven versions, and motifs +1 +1 +1 and +1 -1 +1 each heard in all but ten versions. As might be expected, these "core" motifs also tended to be those which were heard with the greatest frequency, although there was not always a straightforward correlation between these two indicators of a motif's significance. Thus, motif 0 -1, the fifth most commonly heard three-note motif was heard in only 13 versions of *zābol*, whilst the slightly less common motif +1 0 was heard in 18 versions.

7.3 Motifs and Aesthetic Criteria

Among the many questions raised by the analyses of Section 7.2, two would seem to be particularly important: firstly, why are certain motifs heard so much more often than others; and secondly, why do certain motifs appear to be characteristic of particular instruments or musicians? Questions such as these are clearly related to broader issues such as what is acceptable in terms of the motivic construction of this music, and ultimately the types of aural and physical patterning which lie at the heart of the music.

To take the first question, it was interesting, for example, that 93% of all two-note motifs were of just three types. Similarly, the four most commonly heard three-note motifs comprised a significant proportion (66%) of the total number of this type of motif. As the number of notes in a motif increases, so clearly does the potential number of different types of motivic patterns. Thus, using the intervals -2, -1, 0, +1, and +2 (which account for the vast majority of melodic intervals heard in Persian classical music), it is possible to generate 5 different two-note motifs, 25 different three-note motifs, 125 different four-note motifs, and 625 different five-note motifs (as an illustration of this, Figure 23 lists all the possible three-note motifs generated in this way). However, this range of motifs was not reflected in the analysed versions of *zābol*, particularly in the case of four- and five-note motifs. Thus, whilst all of the possible two-note motifs (as well as -3, +3, and +4) and 21 of the possible 25 three-note motifs (and also -3 +4, +3 -1, +3 0, +4 -1, and +4 0) were heard, only 47 out of a possible 125 four-note motifs and even more significantly, only 26 out of a possible 625 five-note motifs were used by musicians.[187]

The limited range of motifs used by musicians and the resulting absence of a large number of potential motivic patterns in the music imply possible relationships between motifs which are heard and underlying aesthetic criteria within the music. Whilst it would be premature to propose a "grammar" of motivic patterns, certain regularities in the data above suggest that it might be possible to identify common criteria among the more regularly heard (and

[187] See Baily (1987, 1991) for similar issues with regard to the plectrum patterns on the Afghan *rubab*.

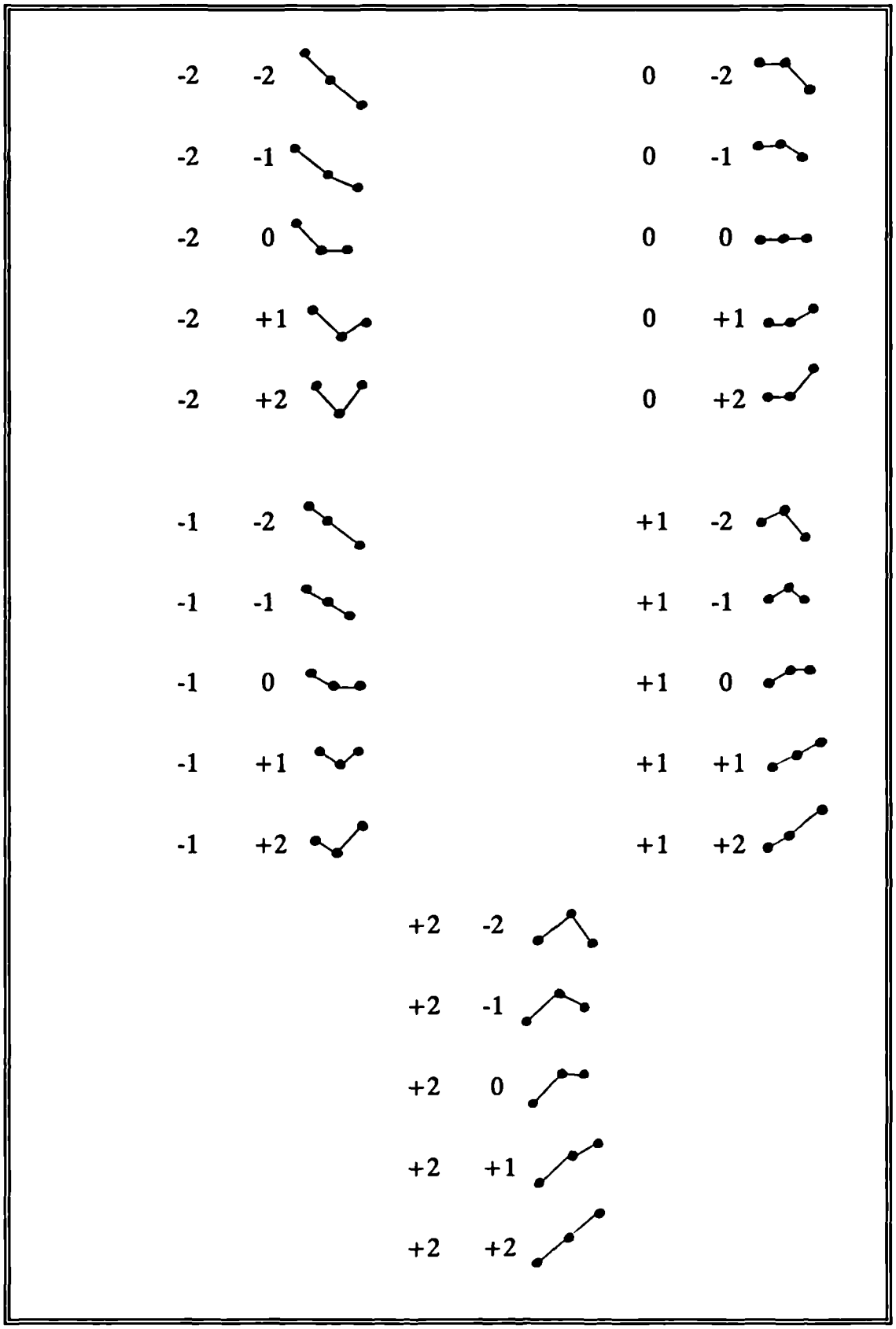


Figure 23 Three-Note Motifs Generated Using Intervals Between -2 and +2

arguably more important) motifs. Likewise, shared features among those motifs heard least often or omitted altogether might account for their being close to or outside the boundaries of the acceptable in terms of motivic structure for this music. Such an enquiry might thus lead to a deeper understanding of what the aesthetically desirable musical patterns in this music are, and why.

7.3.1 Identifying the Criteria

In attempting to explain why some motifs in the analysed versions of *zābol* were heard more often than others, the basic analytical data presented above was examined in greater detail. The motifs within each main category (two-note, three-note, etc.) were grouped according to regularity of appearance, beginning with those most commonly heard. For each of these groups of motifs, it was hoped to be able to identify the criteria which determine their degree of occurrence in the music, as well as the relative position of individual motifs within each group.[188]

The analyses showed that two-note motifs accounted for approximately half of the total number of motifs analysed, suggesting that short motifs are more aesthetically desirable in this music. Moreover, some two-note motifs were heard more often than others, the most commonly heard being those which moved by step (83%), rather than repetition of a note (10%). Disjunct movement (by a leap) was the least common type of two-note motif (7%). The direction of motifs was also significant, such that the movement of two-note motifs by step was more often descending (46%) than ascending (37%). These figures thus point to a tendency for two-note motifs in the analysed versions of *zābol* to move by step, usually in a descending direction. Whilst this confirms what is evident in playing and listening to the music, there are important implications in examining other types of motifs.

If one applies the first criterion for two-note motifs - movement by step - to three-note motifs, the following patterns result, these representing all the possible

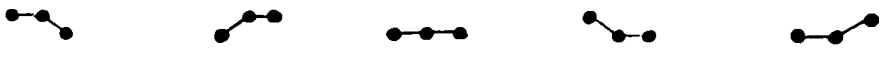
[188] Whilst individual musicians clearly differed in the relative importance accorded to specific motifs, it is the frequency of appearance of motifs in the body of data as a whole which is of interest here.

ways of moving by step (that is, using only intervals -1 and +1) using three notes:

+1 -1 (528)[189] | -1 +1 (335) | -1 -1 (287) | +1 +1 (242)

These were, of course, the most commonly heard three-note motifs, and it would thus seem that the criterion which defines the most commonly heard two-note motifs also applies to three-note motifs. Comparing the group above in terms of regularity of appearance, it is clear that motifs which involve a change of direction are more commonly heard than those which move in one direction only. Thus, it might be suggested that a second criterion - the avoidance of successive intervals in the same direction (that is, the inclusion of both a "+" and a "-" interval in the motif) - is important in three-note motifs. Finally, there would seem to be a preference for motifs which end with a descending interval (as in the first and third motifs above), although this is subsidiary to the second criterion.

The next group of three-note motifs (in terms of regularity of appearance) incorporated repeated notes (interval "0"):



0 -1 (99) | +1 0 (97) | 0 0 (90) | -1 0 (86) | 0 +1 (36)

In this group, the third criterion mentioned above was clearly important, since the most common motif in this group ended with the interval -1, followed by three motifs ending with 0 and finally motif 0 +1, whose relatively low occurrence may be related to the fact that it ended with interval +1. With the exception of this last motif, all of those in the group above were heard more commonly than

[189] Figures in brackets under each motif indicate the total number of occurrences of the motif in the analysed versions of *zābol*.

the following group of motifs, which used intervals -2 and +2 in combination with -1 and +1:


+2 -1
(78)


+1 -2
(77)


-2 +1
(45)


-1 +2
(17)

Interestingly, the first two motifs in both of the above groups are in a retrograde relationship to one another (as are the third and fourth motifs in the second group). In the second group, there was a marked avoidance of successive intervals in the same direction, a criterion mentioned earlier, and once more the most common motifs were those which ended with a descending movement, preference being given to the smaller interval. Thus, the last two motifs in this group ended with a rising interval (again, with the smaller interval more commonly heard).

The next group of three-note motifs (in terms of regularity of appearance) comprised those which used intervals -2 and +2 in conjunction with interval 0, as follows:


+2 -2
(11)


+2 0
(8)


0 +2
(8)


-2 +2
(5)


-2 0
(4)


0 -2
(3)

Once again, none of the motifs used consecutive intervals in the same direction, and the most common motif in the group ended with a descending interval (although the least common motif in this group did so too). In the case of this group, it is more difficult to specify the criteria which might determine the greater regularity of one motif over another. Since these motifs occur relatively infrequently in comparison with the preceding groups, it might be that one reaches a point at which the motivic patterns result from the idiosyncrasies of particular performers rather than from generalities of the musical system, even though some of the same principles may still apply.

In addition to the 19 motifs considered in the groups above, a further seven three-note motifs were heard in the analysed versions of *zābol*. Five of these used intervals larger than +2 or -2, and the remaining two, -2 -1 and +1 +2, which occurred once each (Sabā and Shafeiān) were somewhat of an anomaly in the general trend, not belonging to any of the groups above, and contravening what emerged as a general principle of avoiding successive intervals in the same direction where one of the intervals is larger than +1 or -1. Thus, all four of the motifs omitted from the 25 possible three-note motifs generated using intervals between -2 and +2 (see Figure 23) were those which would have used this kind of melodic movement: -2 -2, -1 -2, +2 +1, and +2 +2 were not heard at all in the versions of *zābol* analysed. Moreover, motifs -2 -1 and +1 +2 were the least frequently heard three-note motifs and as such were possibly at the very boundaries of the permissible in terms of motivic construction in this music.

What was particularly interesting in the above analysis was that there were clear correlations between the structure of a motif and its regularity of appearance, and it was thus possible to identify certain criteria which seemed to determine the frequency of occurrence (and hence possibly importance) of a motif. The most commonly heard two- and three-note motifs were those which moved only by step, followed by those which also used repeated notes, and finally motifs which used disjunct intervals. Within each of these groups there were further criteria which made a motif more or less likely to be heard. On the basis of this, Figure 24 lists the criteria or principles which seem to determine the frequency of occurrence of three-note motifs. These principles account for all of the three-note motifs heard in the analysed versions of *zābol*, and their frequency of occurrence (with one exception: motif 0 +1). Thus, if there is only one condition for a criterion (i), then it is obligatory, whilst if there is a choice (1,2,3,4, i,ii,iii) then these are placed in descending order of importance. The one transcending principle would seem to be the avoidance of successive intervals in the same direction. In the case of the motifs in group 1 (that is, just using intervals +1 and -1), such movement is not prohibited, but preference is given to motifs which use intervals of both directions.

The most commonly heard four-note motif fulfils criterion 1 above in moving entirely by step, and avoiding successive intervals in the same direction:

1. Motifs using movement by step to adjacent pitches (intervals +1 and -1):

    i. using both "+" and "-"
    ii. using only "+" or "-" (ie successive intervals in the same direction preferred less)

    i. ending with -1
    ii. ending with +1

2. Motifs using the above as well as repeated notes (intervals +1/-1 and 0):

    i. one of each size of interval always present

    i. ending with -1
    ii. ending with 0
    iii. ending with +1

3. Motifs using intervals -2/+2 and -1/+1 (not 0):

    i. using both "+" and "-" intervals (successive intervals in the same direction prohibited)

    i. one of each size of interval always present

    i. ending with -1 or -2
    ii. ending with +1 or +2

    i. larger interval precedes smaller interval
    ii smaller interval precedes larger interval

4. Motifs using intervals -2/+2 and 0:

    i. -2 or +2 always present

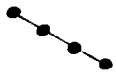
    i. successive intervals in the same direction prohibited

Figure 24 Criteria for Regularity of Appearance of Three-Note Motifs

+1 -1 +1
(106)

However, in contrast with three-note motifs, where the most common motifs in each group tended to end with a descending interval, this motif ended with interval +1. Indeed, the inversion of this motif, -1 +1 -1, which might according to the criteria discussed above have been expected to occur more often, only appeared 31 times, suggesting that the principle of ending with -1 may not be significant in the context of four-note motifs.

The next group of four-note motifs (in terms of frequency of occurrence) moved by step, but unlike the three-note motifs, these only moved in one direction:



-1 -1 -1
(89)

+1 +1 +1
(82)

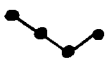
However, the principle of ending with a descending interval was maintained, with the first motif heard slightly more often than its inversion.

The next most common group of four-note motifs also moved by step, and seemed to return to the principle of motif +1 -1 +1 above, with the first two motifs (the most commonly heard) in this group both having an overall rising contour:

-1 +1 +1
(46)

+1 +1 -1
(41)

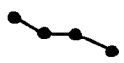
+1 -1 -1
(36)



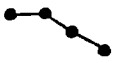
-1 -1 +1
(31)

As with three-note motifs, the next group of four-note motifs used interval 0 in addition to +1 and -1 (note that the first two motifs below overlap with the

previous group in terms of frequency of occurrence).[190] Within this group, the most frequently heard motifs were those which ended with interval -1. The first four motifs in this group had a descending contour within an overall range of three pitch levels,[191]



-1 0 -1
(49)



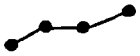
0 -1 -1
(34)

-1 -1 0
(2)

followed by those with an ascending contour, and the same overall range:

+1 +1 0
(20)

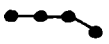
0 +1 +1
(3)



+1 0 +1
(2)

A further twelve four-note motifs which used intervals +1, -1, and 0, but within a range of 2 pitch levels, are shown below (not in order of frequency of appearance, but with each motif paired with its inversion):

0 -1 +1
(27)



0 0 -1
(7)

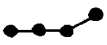
-1 +1 0
(7)

-1 0 0
(5)

-1 0 +1
(5)

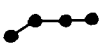
0 -1 0
(2)

0 +1 -1
(9)



0 0 +1
(4)

+1 -1 0
(3)



+1 0 0
(9)

+1 0 -1
(2)

0 +1 0
(5)

Motif 0 0 0 was heard 18 times. As with two- and three-note motifs, the

[190] It seems that as the number of notes in a motif increases, it becomes less possible to make such clear-cut distinctions between groups of motifs on the basis of both shape and occurrence, as it was for three-note motifs.

[191] "Pitch levels" is used in this study to refer to the range between the highest and lowest notes in a motif. Thus, motif -1 0 -1, starting on g and ending on e-*koron* spans three pitch levels.

majority of motifs used only intervals -1, 0, and +1. Four-note motifs which included intervals -2 and +2 were heard less frequently than those above (with some exceptions) and tended to be idiosyncratic of individual musicians, in particular *santur* players, who can use types of melodic movement which are less easily played on other instruments. A total of 21 such motifs were heard, and these did follow some of the types of patterning identified above, such as the absence of successive intervals in the same direction where one of the intervals was larger than -1 or +1. The most common of these motifs were as follows:

+2 -1 -1
(23 total - including 8 Pāyvar 8 Safvate)

-1 +1 -2
(12 total - 9 Sabā)

-1 -1 +2
(11 total - 6 Alizādeh)

0 0 -2
(7 total - all Pāyvar)

0 0 +2
(7 total- 5 Pāyvar)

Musicians who made the most regular use of four-note motifs with intervals -2 and +2 were the *santur* players Malek, Shafeiān, and Pāyvar and the *tār* player Alizādeh. The only interval larger than -2 or +2, +3, was heard in the following motifs: +1 -1 +3, +3 -1 0, +3 -1 -1, and +3 -1 +2. The main pattern seemed to be that +3 in four-note motifs was always either preceded or followed by -1.

The above analysis suggests that, with some modifications, many of the principles governing the occurrence of three-note motifs can also be applied to four-note motifs. The most frequently heard motifs were still those which only used intervals +1 and/or -1, although successive intervals +1 or -1 in the same direction were not the least common type of motif in group 1 as they were for three-note motifs. As with three-note motifs, the use of +1 and -1 in conjunction with 0 was generally heard more often than larger intervals, although there were some exceptions, perhaps as a result of the idiosyncrasies of individual musicians. The criteria which seemed to determine the occurrence of four-note motifs are listed in Figure 25 (the criteria which correspond with those for three-note motifs are highlighted). Ascertaining the principles governing the patterning of four-note motifs proved to be more problematic than for the shorter motifs. Moreover, since it is possible to gain insights into a musical system as much by

1. Motifs using movement by step to adjacent pitches (intervals +1 and -1)

a. no two successive intervals in the same direction
   i. ending with +1
   ii. ending with -1

b. all intervals in the same direction
   i. ending with -1
   ii. ending with +1

c. including two (but no more than two) successive intervals in the same direction
   i. with an overall rising contour
   ii. with an overall falling contour

2. Motifs using intervals +1 and - 1, as well as repeated notes (interval 0):

   i. using either +1/-1 and 0, with an overall range of 3 pitch levels
   ii. using any combination of 0, -1, +1, with an overall range of 2 or 1 pitch level(s)

3. Motifs using intervals -2/+2 and -1/0/+1:

   i. successive intervals larger than +1 and -1 avoided

   i. at least two different sizes of intervals always present

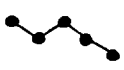
Figure 25 Criteria for Regularity of Appearance of Four-Note Motifs

identifying what is omitted from the music as by what is included, the difficulty encountered in explaining the omission of a large number of four-note motifs may not be coincidental. As stated above, only 47 (if one discounts the 4 types of motif using interval +3) out of a total possible 125 different types of four-note motif were heard in the analysed versions of *zābol*. Only two motifs in the analysed sample contravened the principle of avoiding successive intervals in the same direction if one is larger than +1 or -1. These were motifs +1 -2 -1 (2 occurrences - Sabā and Malek) and +1 -1 -2 (1 occurrence - Pāyvar), both of which began with interval +1, followed by two descending intervals. Motifs which avoided such successive intervals accounted for 36 of the 78 unused potential four-note motifs, leaving 41 four-note motifs whose absence from the music is difficult to explain. A number of the above criteria also applied to five-note motifs. For example, the following was the most commonly heard five-note motif (with one unusual exception) and, like the most common two-and three-note motifs, involved movement to adjacent pitches and ended with a descending interval:

+1 -1 +1 -1
(38)

The first three intervals of this motif were the same as for the most common four-note motif, which might also explain why its inversion, -1 +1 -1 +1, was by contrast only heard on 2 occasions (compare with -1 +1 -1, which also began in the same way, and which was also heard relatively infrequently).

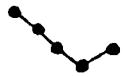
The next group of five-note motifs also moved by step using only intervals -1 and +1, but including at least two consecutive intervals in the same direction (-1 in all but two motifs):



-1 +1 -1 -1
(24)

+1 -1 -1 +1
(16)

+1 -1 -1 -1
(12)



-1 -1 -1 +1
(3)

-1 -1 +1 -1
(3)

-1 +1 +1 -1
(3)

-1 -1 +1 +1
(1)

There would clearly seem to be a correlation between the relatively infrequent occurrence of the last two motifs above (using +1 in succession), and the absence of the following from the analysed versions of *zābol*:

+1 +1 +1 -1
(0)

-1 +1 +1 +1
(0)

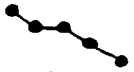
+1 +1 -1 -1
(0)

+1 -1 +1 +1
(0)

Also in this group, motif +1 +1 +1 +1 (3 occurrences) was the only five-note motif to begin with two consecutive +1 intervals, and along with its inversion (-1 -1 -1 -1) was among the few five-note motifs to move in one direction only (the others being -1 0 -1 -1, -1 0 0 0, and -1 0 -1 -1, all with an overall descending contour).

The omission of certain motifs may simply be a factor of the relatively small number of five-note motifs and the inevitably wider "spread" which results. Moreover, since there were so few of each type of motif, it may be that (as with some of the less frequently heard four-note motifs) one is dealing with the idiosyncrasies of individual musicians rather than general tendencies within the music. However, whilst a larger sample might have yielded slightly different results, it is likely that the overall results would have been similar given the overwhelming number of certain motifs in the analysis.

In the next group of five-note motifs, which used interval 0 as well as -1 and +1, the only motif heard with an overall range of four pitch levels was the following:



-1 0 -1 -1
(3)

In other words, all of the following possible motivic patterns were omitted from the performances and *radifs* analysed:

+1 +1 +1 0
(0)

+1 +1 0 +1
(0)

+1 0 +1 +1
(0)

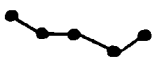
0 +1 +1 +1
(0)

-1 -1 -1 0
(0)

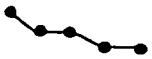
-1 -1 0 -1
(0)

0 -1 -1 -1
(0)

Of the motifs in this group with an overall range of two or three pitch levels, only the following were heard:



-1 0 -1 +1
(42)

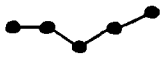


-1 0 -1 0
(1)

0 -1 +1 0
(1)

-1 +1 0 -1
(1)

0 -1 0 0
(1)

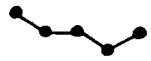


0 -1 +1 +1
(1)

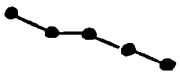
It should be noted that motif -1 0 -1 +1 was heard with a much greater frequency than others in this group, and was in fact the most commonly heard five-note motif in *zābol*. Whilst this may be important in defining the criteria for five-note motifs, it is difficult to ascertain whether the two main features which distinguish this motif from others in the same group - the use of all three intervals -1, 0, and +1, and the overall descending contour - are in fact significant in determining the common use of this motif, since motif -1 +1 0 -1 also shared these features, but was only heard once. The only other five-note motif in this group not considered above was 0 0 0 0, and this was only heard once (Shafeiān).

Thus, among the eight motifs in this group (five-note motifs using intervals -1

and/or +1, and/or 0) actually heard in the music under analysis, only two were heard on more than one occasion. Interestingly, there is a close relationship between the shapes of these two motifs: the first three intervals are the same, but whilst one ends with an ascending movement, the other continues in downward progression:



-1 0 -1 +1



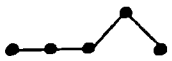
-1 0 -1 -1

As noted earlier, the first motif above was heard in series in about half of its appearances. Interestingly, the second (which was only heard on three occasions) was always either preceded or followed by motif -1 0 -1 +1.

Five-note motifs using intervals -2 and/or +2 (in combination with -1, 0, and/or +1) were relatively infrequent, despite the large number of potential motifs using this range of intervals. Moreover, when they were heard, these motifs were often in performances by a limited number of musicians (several of whom overlapped with the same category for four-note motifs):

-2 +1 -2 +2
(1 Alizādeh)

-2 +1 +1 -1
(1 Malek)



0 0 +2 -2
(1 Shafeiān)

0 +1 -2 +1
(2 Shafeiān)

0 +1 -1 +2
(2 Tului)

+1 -1 -1 +2
(1 Malek)

+2 -1 -1 -1
(1 Majd)

There were no five-note motifs with intervals larger than -2 or +2. Indeed, the emerging pattern suggests that as the number of notes in a motif increases, the likelihood of large intervals in the motif decreases.

There was thus a considerable divergence between the potential number of different types of five-note motifs using intervals between -2 and +2 (625) and

those actually heard in the music analysed (26). Even if one just considers motifs using intervals between -1 and +1, then 19 out of a total potential of 81 five-note motifs were used. As with shorter motifs, attempting to identify the factors which determine the inclusion and omission of five-note motifs can lead to interesting insights. Following similar principles outlined for three- and four-note motifs, no five-note motifs contained two consecutive intervals in the same direction where one of the intervals was larger than +1 or -1. Moreover, as with four-note motifs, the avoidance of this type of movement accounted for approximately half of the unused motifs. However, again as with four-note motifs, it was less easy to specify other regularities in the omission of motifs, and this will be discussed further in Section 7.3.2, with specific reference to one type of five-note motif.

The analyses of this section have indicated that the use of motivic patterns in *zābol* is far from arbitrary. Whilst Section 7.2 suggested that specific motifs may be characteristic of particular musicians and/or instruments, it is also possible to identify general trends, since certain motivic patterns (and hence types of melodic movement) were clearly used by musicians more often than others. As discussed above, these motifs seem to embody certain central principles, and the same principles are found in motifs of different sizes. This will be considered further below.

7.3.2 A "Grammar" for Five-Note Motifs Beginning with the Interval -1

Since the most commonly heard motivic patterns appear to follow certain structural principles and embody certain types of melodic movement, a question central to the analysis would seem to be the following: are there underlying (and unverbalised) "rules" which govern the types of melodic movement (and hence motivic patterns) "permitted" or aesthetically desirable in this music, or is the occurrence of motivic patterns arbitrary and subject to the idiosyncratic choices of individual musicians? The previous section has suggested that certain criteria do correlate with the regularity of appearance (or total absence) of motifs, although it became progressively difficult to specify these as motifs increased in

length.

Five-note motifs were particularly problematic, especially in view of the limited number of motifs of this type in the analysed music. This section will focus on five-note motifs beginning with the interval -1, in an attempt to identify regularities and to suggest possible "rules" which determine the inclusion or omission of motifs of this type. -1 was the most common starting interval among the five-note motifs analysed, 11 types of motivic pattern beginning in this way (out of a total 125 potential five-note motifs starting with -1). Figure 26 lists all 125 potential five-note motifs starting with -1, with an indication of which motifs were actually heard in the analysed versions of *zābol* and their frequency of occurrence. On the basis of this information, the following rules were formulated, with which it is possible to generate the majority of five-note motifs beginning with the interval -1 heard in the music under study, whilst prohibiting the majority of those not heard:

Rule 1 - Interval 2 or Interval 3 or Interval 4 does not = +2 or -2
Rule 2 - If Interval 2 = -1, then Interval 3 and/or Interval 4 does not = 0
Rule 3 - If Interval 2 = 0, then Interval 3 does not = +1 (ie +1 cannot follow 0)
Rule 4 - If Interval 2 = +1, then Interval 3 and/or Interval 4 does not = 0
Rule 5 - Consecutive intervals of 0 are prohibited
Rule 6 - The overall contour of a motif does not ascend

If one invokes these rules, the only five-note motif beginning with -1 in the analysed versions of *zābol* not accounted for was -1 +1 0 -1. This motif contravenes rule 4, and it might therefore be possible to refine this rule to read "If Interval 2 = +1, then Interval 3 (and/or Interval 4) does not = 0 **unless followed by -1**", which would then allow this motif.

Although the above rules appear to account for the presence and absence of all five-note motifs beginning with the interval -1 in the analysed versions of *zābol*, the word "rule" is used with a certain degree of caution, since there is no question of their replicating (or even attempting to replicate) the cognitive processes of the musician. Thus, they are not intended as a definitive "grammar" of such motifs,

Figure 26 List of All Potential Five-Note Motifs Beginning with the Interval -1

Interval 1	Interval 2	Interval 3	Interval 4	Occurrence	Contravenes
-1	-2	-2	-2	0	rule 1
-1	-2	-2	-1	0	rule 1
-1	-2	-2	0	0	rule 1
-1	-2	-2	+1	0	rule 1
-1	-2	-2	+2	0	rule 1
-1	-2	-1	-2	0	rule 1
-1	-2	-1	-1	0	rule 1
-1	-2	-1	0	0	rule 1
-1	-2	-1	+1	0	rule 1
-1	-2	-1	+2	0	rule 1
-1	-2	0	-2	0	rule 1
-1	-2	0	-1	0	rule 1
-1	-2	0	0	0	rules 1 & 5
-1	-2	0	+1	0	rule 1
-1	-2	0	+2	0	rule 1
-1	-2	+1	-2	0	rule 1
-1	-2	+1	-1	0	rule 1
-1	-2	+1	0	0	rule 1
-1	-2	+1	+1	0	rule 1
-1	-2	+1	+2	0	rule 1
-1	-2	+2	-2	0	rule 1
-1	-2	+2	-1	0	rule 1
-1	-2	+2	0	0	rule 1
-1	-2	+2	+1	0	rule 1
-1	-2	+2	+2	0	rule 1
-1	-1	-2	-2	0	rule 1
-1	-1	-2	-1	0	rule 1
-1	-1	-2	0	0	rule 1
-1	-1	-2	+1	0	rule 1
-1	-1	-2	+2	0	rule 1
-1	-1	-1	-2	0	rule 1
-1	**-1**	**-1**	**-1**	**2**	
-1	-1	-1	0	0	rule 2
-1	**-1**	**-1**	**+1**	**3**	

Figure 26 (continued)

Interval 1	Interval 2	Interval 3	Interval 4	Occurrence	Contravenes
-1	-1	-1	+2	0	rule 1
-1	-1	0	-2	0	rules 1 & 2
-1	-1	0	-1	0	rule 2
-1	-1	0	0	0	rules 2 & 5
-1	-1	0	+1	0	rule 2
-1	-1	0	+2	0	rules 1 & 2
-1	-1	+1	-2	0	rule 2
-1	**-1**	**+1**	**-1**	**1**	
-1	-1	+1	0	0	rule 2
-1	**-1**	**+1**	**+1**	**3**	rule 1
-1	-1	+1	+2	0	rule 1
-1	-1	+2	-2	0	rule 1
-1	-1	+2	-1	0	rule 1
-1	-1	+2	0	0	rule 1
-1	-1	+2	+1	0	rule 1
-1	-1	+2	+2	0	rule 1
-1	0	-2	-2	0	rule 1
-1	0	-2	-1	0	rule 1
-1	0	-2	0	0	rule 1
-1	0	-2	+1	0	rule 1
-1	0	-2	+2	0	rule 1
-1	0	-1	-2	0	rule 1
-1	**0**	**-1**	**-1**	**3**	
-1	**0**	**-1**	**0**	**1**	
-1	**0**	**-1**	**+1**	**42**	
-1	0	-1	+2	0	rule 1
-1	0	0	-2	0	rules 1 & 5
-1	0	0	-1	0	rule 5
-1	0	0	0	0	rule 5
-1	0	0	+1	0	rule 5
-1	0	0	+2	0	rules 1 & 5
-1	0	+1	-2	0	rules 1 & 3
-1	0	+1	-1	0	rule 3
-1	0	+1	0	0	rule 3

Figure 26 (continued)

Interval 1	Interval 2	Interval 3	Interval 4	Occurrence	Contravenes
-1	0	+1	+1	0	rule 3
-1	0	+1	+2	0	rules 1 & 3
-1	0	+2	-2	0	rule 1
-1	0	+2	-1	0	rule 1
-1	0	+2	0	0	rule 1
-1	0	+2	+1	0	rule 1
-1	0	+2	+2	0	rule 1
-1	+1	-2	-2	0	rule 1
-1	+1	-2	-1	0	rule 1
-1	+1	-2	0	0	rule 1
-1	+1	-2	+1	0	rule 1
-1	+1	-2	+2	0	rule 1
-1	+1	-1	-2	0	rule 1
-1	**+1**	**-1**	**-1**	**24**	
-1	+1	-1	0	0	rule 4
-1	**+1**	**-1**	**+1**	**2**	
-1	+1	-1	+2	0	rule 1
-1	+1	0	-2	0	rules 1 & 4
-1	**+1**	**0**	**-1**	**1**	
-1	+1	0	0	0	rules 4 & 5
-1	+1	0	+1	0	rule 4
-1	+1	0	+2	0	rules 1 & 4
-1	+1	+1	-2	0	rule 1
-1	**+1**	**+1**	**-1**	**4**	
-1	+1	+1	0	0	rule 4
-1	+1	+1	+1	0	rule 6
-1	+1	+1	+2	0	rules 1 & 6
-1	+1	+2	-2	0	rule 1
-1	+1	+2	-1	0	rule 1
-1	+1	+2	0	0	rule 1
-1	+1	+2	+1	0	rule 1
-1	+1	+2	+2	0	rule 1
-1	+2	-2	-2	0	rule 1

Figure 26 (continued)

Interval 1	Interval 2	Interval 3	Interval 4	Occurrence	Contravenes
-1	+2	-2	-1	0	rule 1
-1	+2	-2	0	0	rule 1
-1	+2	-2	+1	0	rule 1
-1	+2	-2	+2	0	rule 1
-1	+2	-1	-2	0	rule 1
-1	+2	-1	-1	0	rule 1
-1	+2	-1	0	0	rule 1
-1	+2	-1	+1	0	rule 1
-1	+2	-1	+2	0	rule 1
-1	+2	0	-2	0	rule 1
-1	+2	0	-1	0	rule 1
-1	+2	0	0	0	rules 1 & 5
-1	+2	0	+1	0	rules 1 & 6
-1	+2	0	+2	0	rule 1
-1	+2	+1	-2	0	rule 1
-1	+2	+1	-1	0	rule 1
-1	+2	+1	0	0	rules 1 & 6
-1	+2	+1	+1	0	rules 1 & 6
-1	+2	+1	+2	0	rule 1
-1	+2	+2	-2	0	rule 1
-1	+2	+2	-1	0	rules 1 & 6
-1	+2	+2	0	0	rules 1 & 6
-1	+2	+2	+1	0	rules 1 & 6
-1	+2	+2	+2	0	rules 1 & 6

but simply to show that regularities of motivic patterning do exist, and that these regularities point to the existence of underlying rules of some kind. It would seem likely that such rules are embedded within the musical structures and are learnt by musicians over many years of playing the music.

Since there may be more than one way of accounting for the same motifs, it might be possible to outline an entirely different set of rules which would result in the same motivic patterns as those allowed by the rules above and which would be as valid (although not necessarily closer to the cognitive processes of the musician). For example, the rules outlined above are all prohibitive - they define what should not happen given certain conditions, for example if a = w, then b does not = x. It might be possible to identify rules which work in an "enabling" manner, for example if a = x, then b = y or z. Furthermore, it should be noted that the rules above do not apply in the same way to five-note motifs with other starting intervals, which seem to have somewhat different operative patterns.[192]

7.3.3 Underlying Principles

Whatever specific rules are at work in this music, the analyses of Section 7.3 have suggested a number of general underlying principles, such as the preference for short motifs, movement by step, and a limit to the number of successive intervals in the same direction. Thus, two-note motifs comprised the largest category of motifs, and as the size of motifs increased, so their frequency of occurrence decreased. There were no examples of motifs with successive intervals (in the same direction) larger than +1 or -1. Moreover, even motifs such as -1 -1, +1 +1, -1 -1 -1, +1 +1 +1, -1 -1 -1 -1, and +1 +1 +1 +1, which *did* move only in one direction, were rarely followed by further movement in the same direction, the general tendency being to follow a motif in one direction with movement in the opposite direction. Thus, extended scalar passages were not a common feature of the analysed versions of *zābol*, the melodic movement being

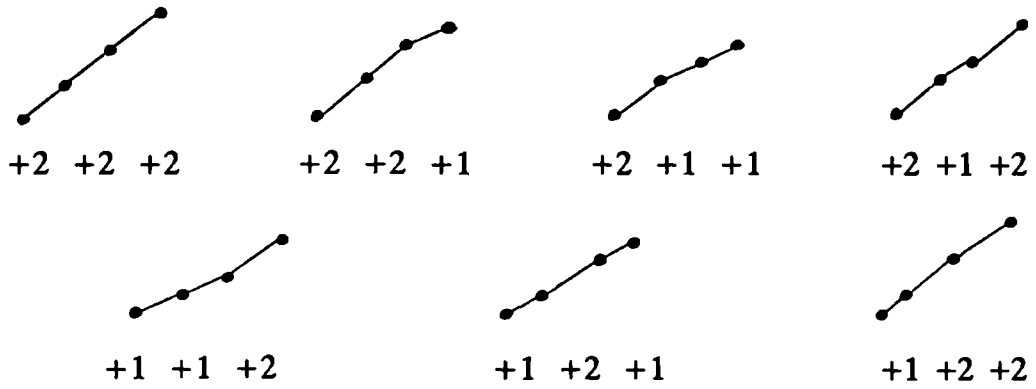
[192] Defining such "rules" for other types of five-note motifs was a much more complex process. In such cases, it might prove fruitful to explore the possibility of devising a computer programme which could be used to identify regularities in the musical patterns.

characterised instead by short sequential patterns and a type of "meandering" within the limits of a few pitches.

The principle of movement by step has been clearly demonstrated in the analyses of this chapter. It should also be mentioned that 82% of all the analysed motifs started either with interval -1 (41%) or +1 (41%), and therefore involved at least an initial movement by step, as compared with 11% which began with a repeated note (interval 0), 5% which began with an interval larger than +1, and 3% with an interval larger than -1. It would seem that the "underlying principles" outlined above are embedded within the musical structures, and that these play an important role in allowing certain types of melodic movement in the music.[193]

7.4 Aesthetic and Structural Considerations

On the basis of detailed musical analysis, the preceding section has identified the most common types of melodic movement in *zābol* as involving short motifs with step-wise intervallic movement, often descending in direction, and the avoidance of extended movement in any single direction. But why should this be the case? Why, for example, do the following motivic patterns (not heard in the analysed versions of *zābol*) appear to go beyond what is acceptable in this music?:



Musical systems are clearly not arbitrary collections of sound patterns, but highly

[193] It should be clear that the above analysis has only dealt with intervallic movement within motifs and not between motifs. The latter would be a important consideration when examining how motifs are joined to construct complete phrases. However, intervallic movement between motifs does appear to follow the same kinds of principles as that within motifs, such as descending stepwise movement.

structured and with their own internal logic and dynamics which have developed over many centuries. This section will explore the idea that the typical types of melodic movement in *zābol* (and perhaps in Persian classical music as a whole), result from the interaction between a number of mutually reinforcing factors, in particular between aesthetic factors and the physical allowances and limitations of individual musical instruments.

In the introduction to this chapter, mention was made of parallels which are often drawn between the intricate patterns of Persian visual arts (for example, geometrical patterns, figurative miniature painting, etc.), which continually explore the potential of a small area, and which produce a very "dense" image, and the detailed motivic patterns of the music. Such similarities are of great interest for what they suggest about the underlying aesthetics of Persian culture. Both the visual arts and music display a propensity for small movements and the constant exploration of a musical or visual area of limited range. It is thus possible that the typical motivic patterns identified above derive directly from aesthetic criteria operative not only in the music, but which are deeply rooted within the culture.

However, whilst aesthetic factors clearly play a crucial role in the music, they cannot be fully understood without a consideration of their interaction with other factors, such as instrument morphology. The discussion of Section 7.2 (and also Section 7.3) has already suggested that certain motifs may be characteristic of particular instruments, and a number of examples have been briefly discussed. These are particularly interesting, since they point to ways in which the interaction between instrument morphology and the human body allows (and possibly suggests) or disallows certain types of movement and hence melodic patterns (briefly discussed in Chapter One). Thus, what is of central interest is the relationship between the interaction of instrument structure and musical structure on the one hand and the underlying musical aesthetics on the other.[194]

[194] Given the (albeit slightly diminishing) importance of vocal music in this tradition, poetry may also play a role in shaping motivic patterns, particularly in terms of rhythmic aspects of the music. Whilst this chapter has not directly analysed motivic rhythm, such an analysis would need to consider the role which poetic texts play in this.

7.4.1 Motifs Characteristic of Particular Instruments

An important point to emerge from the preceding discussion concerned the apparent differences between the types of motif (and hence melodic movement) characteristic of the long-necked lutes (in particular the *tār* and *setār*) on the one hand, and the *santur* (and also the violin) on the other. For example, a clear pattern emerged in the distribution of two- and three-note motifs, such that the *santur* and violin versions had a consistently lower percentage of two-note motifs than other instruments (and voice), but a higher percentage of three-note motifs. Whilst this might have suggested that longer motifs are more characteristic of the *santur* and violin, the pattern differed for four-note motifs, which comprised a (slightly) higher percentage in *tār* renditions, followed closely by the *santur*, and then by the voice and other instruments. Five-note motifs, however, were more characteristic of *santur* and violin, with a higher percentage than for other instruments.

Also of interest were figures obtained for individual instruments regarding the initial interval of motifs (regardless of the type of motif):[195]

	Initial Interval				
	-1	+1	0	larger than -1	larger than +1
tār	46% (692)	36% (546)	13% (190)	2% (31)	3% (49)
setār	44% (325)	35% (261)	11% (81)	3% (24)	7% (50)
nei	36% (50)	38% (52)	14% (19)	5% (7)	7% (10)
voice	57% (372)	20% (129)	19% (123)	2% (15)	2% (13)
santur	35% (704)	45% (906)	11% (223)	3% (63)	6% (129)
violin	20% (59)	78% (229)	0.3% (1)	0%	1% (3)
kamāncheh	38% (119)	51% (162)	3% (9)	3% (10)	5% (16)

[195] The percentage figures represent the percentage of the total number of motifs for each instrument, whilst the figures in brackets are the actual number of each type of motif. Since the total body of motivic patterns includes a larger number of motifs for some instruments than for others, it is the percentage figures which are significant.

Comparing the first two columns, there is a clear pattern whereby instruments in the *tār* "group" used a higher percentage of motifs beginning with the descending interval -1 in comparison with the *santur* "group", in which a proportionately higher number of motifs began with the ascending interval +1 (compare this with the figures given in Section 7.3.3, in which an equal percentage of intervals -1 and +1 started motifs). In the third column (motifs beginning with the interval 0), the first group tended to have a higher percentage relative to the second (with a slight overlap). Patterns are less clear in the final two columns, but the *tār*, voice, and violin had a lower percentage of motifs beginning with intervals larger than +1 or -1 in comparison with the other instruments.[196] The *setār* and *nei* had a surprisingly high proportion of motifs which began with an ascending interval larger than +1, even slightly higher than the *santur*. In the case of the *nei*, this resulted from the low overall number of motifs for this instrument.

Focusing on direct comparison between the characteristic motifs of *tār* and *santur* - these instruments seeming to exemplify extremes in types of melodic movement in this music - the tendency of the former to begin motifs with the interval -1 and the latter with +1 is seen clearly in the most commonly heard three-, four-, and five-note motifs on these instruments:

	tār	*santur*
Three-note Motifs	-1 - 1 -1 +1	+1 -1
Four-note Motifs	-1 - 1 -1 -1 0 -1 -1 +1 -1 0 - 1 -1	-1 -1 -1 -1 +1 +1 +1 -1 -1 +1 -1 +1 +1 +1 0 +1 +1 +1
Five-note Motifs		-1 +1 -1 -1 +1 -1 -1 + 1 +1 -1 +1 -1 +1 +1 +1 + 1

[196] The low percentage of intervals other than -1 and +1 on the violin may be related to the fact that both violin renditions were from *radifs* of *Segāh* rather than from performances. It is likely that performance renditions on the violin would have resulted in a larger number of such intervals.

All but one of the characteristic *tār* motifs began with the interval -1, whilst eight of the eleven characteristic *santur* motifs began with +1. In addition, all but one of the *tār* motifs ended with -1, although the pattern in the ending intervals of *santur* motifs was less clear: five ended with -1, five with +1, and one with 0. Moreover, the greater variety of characteristic motifs heard on the *santur*, a significant proportion of which were four- and five-note motifs, contrasted with the more restricted range of characteristic motifs on the *tār*, and which did not include any five-note motifs.

These findings raise important questions regarding the relationship between instrument morphology and sound structure. Why did the most characteristic motifs on *tār* tend to begin with a descending movement whilst those on *santur* began with an ascending movement? Is there something in the morphology of these instruments and in the interaction between musician and instrument which inhibits, or even prohibits, certain types of movement whilst permitting and possibly encouraging others? Comparison of the morphology of the *tār* and the *santur* shows there to be a number of important differences between these instruments, in particular the ways in which the strings are laid out (see Figures 27 and 28).[197] The *tār* is a long-necked lute with six strings arranged in three double courses, usually tuned c c', g g, c'c' (although this may vary according to the *dastgāh* being played). The melody is usually played on the upper two courses, whilst the lowest course acts mainly as an intermittent drone. The musician sounds the strings with a metal plectrum held in the right hand, whilst the fingers of the left hand stop the strings on the fretted neck. Since the left hand generally moves along, rather than across, the neck, the layout of strings corresponds with what Baily has termed a "linear array" (1985:244). The *santur* is a hammered dulcimer with 18 courses of four strings arranged in two series across the instrument, and producing a large musical range over a relatively small playing area. Each course of strings is tuned to a single pitch (and the tunings have to be changed for different *dastgāh*s), and musicians move from one string to another to obtain different pitches rather than along the same string as in the case of the *tār* (although the positioning of bridges does allow two pitches an octave apart to be obtained from the same course of strings in the upper

[197] For further information on the *tār* and *santur* the reader is referred to Zonis 1973:156-159 and 164-168; and During 1984a:47-66.

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Figure 27 - Photograph of a Musician Playing the *Tār*, Showing Playing Position

(NB. The musician featured above is in fact left-handed; as explained on pg. 445, the neck of the instrument would usually be held in the left, and not the right, hand).

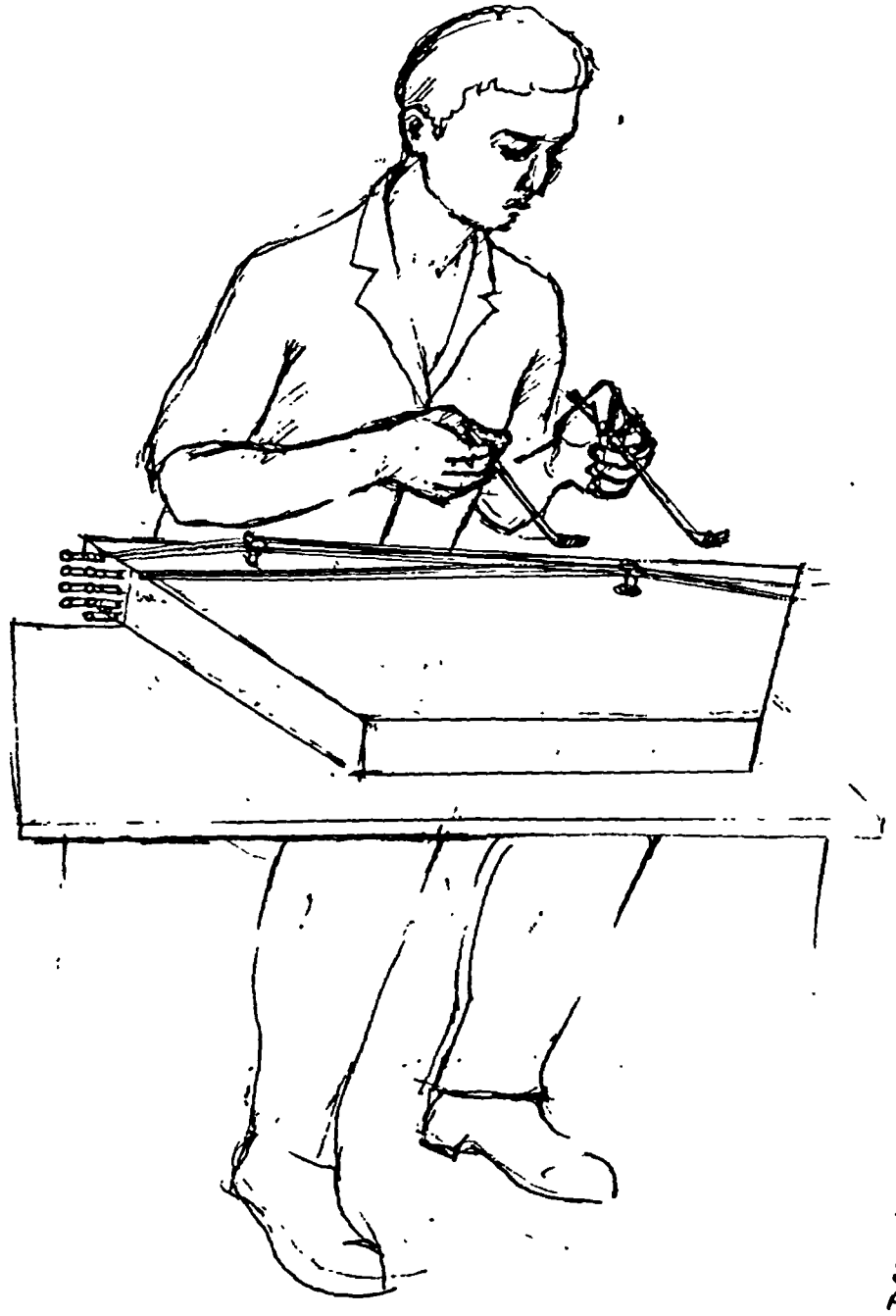


Figure 28 - Diagram of the *Santur*, Showing the Layout of Two Courses of Strings and the Playing Position (not to scale)

register).

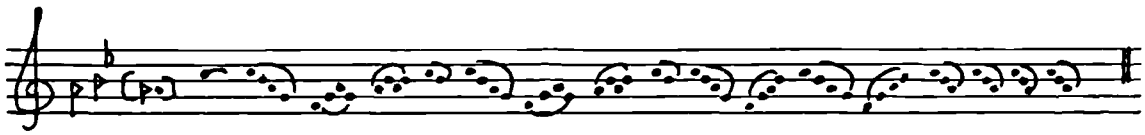
These basic structural differences have implications regarding the typical movement patterns that result from the interaction of the body of the musician and the instrument. For example, if a *tār* player moves his left hand away from his body along the neck of the instrument, a descending melody will result. However, a similar movement away from the musician's body on the *santur* will produce an ascending melody. Could it be that a general tendency for movement away from the body generates predominantly descending motifs on the *tār*, and ascending motifs on the *santur*, as noted above? Evidence from other instruments was less clear-cut. For example, movement away from the body on the *kamāncheh* results in ascending movement, and indeed this instrument was grouped with the *santur* in the table above indicating initial intervals of motifs. However, generally speaking, the *kamāncheh* tended to use motifs similar to those characteristic of the *tār* rather than the *santur*. Similarly, despite the fact that movement away from the body on the violin produces descending melodic movement, as on the *tār*, this instrument was grouped with the *santur* and kamāncheh in the table above, and did generally share the types of motifs characteristic of the *santur* (rather than the *tār*). This is clearly a complex area of discussion, and there are likely to be a number of factors which shape the characteristic motivic patterns of particular instruments.

There is a hierarchy in terms of strength between the left-hand fingers used to stop the strings of the *tār*, the index finger being the strongest, followed by the middle finger, and so on. Since the index and middle fingers are those most often used in stopping the strings, it is possible that the high percentage of two-note motifs using adjacent pitches on the *tār* may derive from this interaction between the musician's fingers and the layout of strings on the neck of the instrument.[198] Whilst considerations of fingering are irrelevant to the *santur* (where both hands are used to strike the strings with small hammers), the high proportion of three- and five-note motifs on this instrument might be explained by the momentum of hammer strokes, which once established by musicians is easier to maintain than to stop. Less easy to account for is the almost equal

[198] But see Baily (1977:318-9), whose reference to Persian music suggests that one might expect a higher percentage of three-note motifs on the long-necked lutes.

proportion of four-note motifs on the *tār* and *santur*, with a slightly higher proportion for the former (16% and 15% of the total number of motifs for each instrument respectively). Indeed, three of the four musicians listed in Section 7.2.4 as having a relatively high proportion of four-note motifs were *tār* players and one of these, Tului, actually played more four- than three-note motifs, being the only musician in the sample analysed to do so.

Another important difference is that whilst the *tār* is supported by the musician during playing, the *santur* rests on a table in front of the performer, who has no direct physical contact with the instrument (just with the hammers). As such, the *santur* offers fewer limitations in terms of what is physically possible on the instrument, and together with the arrangement of strings, this enables the musician to cover a wider melodic range using less physical movement than is the case with the *tār*. This can be heard in the wider variety of different types of motifs, and in particular the higher proportion of motifs using intervals larger than +1 and -1 in *santur* playing. Indeed, the ability to cover a wide melodic range with ease on the *santur* (and also on the violin)[199], was apparent not only in the use of motifs, but also in other aspects of the music, such as the rapid scalar passages which, although not characteristic of this music as a whole, were heard in *santur* (and violin) renditions. Consider, for instance, the following example by Pāyvar, whose playing was particularly characterised by such scalar passages:

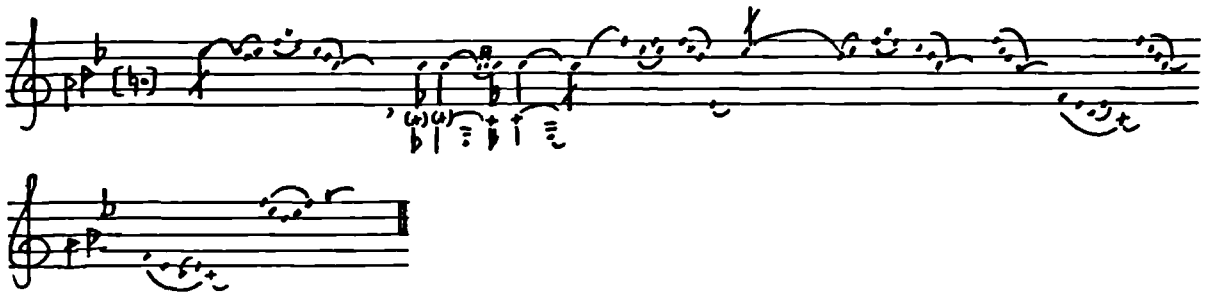


Performance 17 - *mokhālef* - I(3-4)

Since it is not possible to play more than four consecutive pitches on the *tār* without moving hand position (and bearing in mind that, unlike the *santur*, the weight of the instrument neck rests on the musician's hand and arm), passages

[199] Whilst the morphology of the violin has not been considered in detail, the playing of this instrument is characterised by similar types of melodic movement as heard on the *santur*.

such as the above are not easily rendered on the *tār* as they are on the *santur*. Similarly, the relatively smooth transition from one octave to another, involving minimal physical movement in comparison with other instruments, results in many examples of *zir-bamm* by *santur* players, for example:[200]



Performance 16 - *maqlub* - Meshkātiān - *santur* - I(1-2)

A combination of the above factors has resulted in a somewhat virtuosic style of *santur* playing, involving rapid passagework and movement between octaves, which is less feasible on the *tār* (and rarely encountered on instruments other than the *santur*, with the exception of the violin), and which is sometimes felt to be at odds with the spirit of Persian classical music.

During has suggested that the fundamental structures of Persian classical music are based on the ergonomic configuration of the long-necked lutes, in particular the *tār* and *setār*, instruments which are central to this music. The evidence above would seem to support this hypothesis. The "underlying principles" suggested in Section 7.3.3 - short motifs, movement by step (often descending), and a limit to the number of successive intervals in the same direction - are all well-suited to these instruments. Moreover, the motifs which were found to be most characteristic of the music as a whole also tended to be those most characteristic of the *tār* (rather than the *santur*).[201] Thus, for example, the high proportion of two-note motifs and of motifs beginning with the interval -1 in the music as a whole was also seen in the figures for *tār*, and contrasted with those for *santur*. At this level of analysis, therefore, it would seem that the most basic

[200] Whilst *zir-bamm* is occasionally heard on other instruments, this is by no means common, and was not encountered in the examples of *zābol* analysed.

[201] And this, despite the fact that the database included more motifs for the *santur* than for any of the other instruments represented.

characteristics of the music in terms of motivic movement are those most compatible with the morphology of the long-necked lutes.

However, this relationship between the structures of the long-necked lutes and the characteristic patterns of the music extends beyond motivic movement. For example, the long neck and the arrangement of strings on the *tār* and *setār* are ideally suited to the kinds of sequential phrases commonly heard in the music: short motivic patterns repeated at successively lower (usually) pitch levels. It is possible, therefore, that interaction between musicians and instruments over many generations, has resulted in aspects of the music such as descending sequences, becoming embedded in the musical structures. In discussing sequences in Persian music, Berenjiān considered these to derive from the structures of the long-necked lutes (see Chapter Three, Section 3.2.2.3). However, it is difficult to ascertain whether long-necked lutes became prominent as a result of an existing aesthetic preference for musical features such as short motifs and descending sequences, or whether such features emerged subsequent to, and in direct response to, the rise to prominence of these instruments. It is likely that what happened in practice was an amalgam of the two.

Historical considerations are also relevant here. In comparison with the *tār*, the *santur* has only relatively recently gained a prominent position in Persian classical music, adding further weight to the argument that the types of melodic movement heard on the *tār* are more deeply embedded in the basic structures of the music. Indeed, the increased popularity of the *santur* in the early decades of the twentieth century appears to be related to changing aesthetic tastes, which valued the wider potential and display of virtuosity offered by the instrument (particularly in measured pieces such as *chāhārmezrābs*).[202] Such changes in aesthetic preferences were strongly influenced by greater contact with (and status value attached to) western culture (see Chapter Two), pointing to a complex interaction between instrument morphology, socio-cultural factors, and aesthetic

[202] Nettl discusses the rise in popularity of the *santur* in the course of this century (1978:166), and notes the prestige value attached to similarities between the *santur* and the piano, "Thus, a Persian may say: 'We, in Iran, have a piano too; it is the *santour* ...'" (ibid.:165; see also Whiting 1985). The introduction of the violin to Persian classical music in the early twentieth century, and in particular its characteristic use of a wide melodic range and rapid scalar passages (see Nettl 1985:47-50), was no doubt also influential on *santur* players.

preferences. A reverse aesthetic trend was seen throughout the 1970s, culminating in and after the 1979 Islamic Revolution, with a "return to roots" approach which marks the playing of many of the university-educated musicians born after 1950. The tendency of the two *santur* players from this generation in the present analysis, Kāmkār and Meshkātiān, to make less use of the virtuosic potential of the instrument, in direct contrast to the playing of Pāyvar and Shafeiān, is evidence of this changing aesthetic.

However, whilst the above discussion has suggested that the differences in melodic patterns on *tār* and *santur* might be directly related to the relative freedom of movement that the morphology of the *santur* allows the musician, it is perhaps somewhat surprising that passages displaying such freedom were not heard more often. Despite the important differences noted above, relatively speaking, there was an overall adherence by *santur* players to the patterns of melodic movement typical of the music as a whole (as outlined in the underlying principles above), and learnt by musicians as part of the various motifs and phrases of the *radif*, and also during informal listening. If these patterns are indeed derived from the structures of the long-necked lutes, then it would seem that for *santur* players, there is a dynamic tension between the types of melodic movement which belong to the "norms" of the music and the wider potential offered by the structure of the instrument.

This section has suggested that the "underlying principles" and resulting motivic patterns characteristic of Persian classical music are based partly on instrument morphology and partly on aesthetic criteria. To some extent, the one is embedded in the other: it is likely, for example, that the "underlying principle" which limits musical movement in a single direction is determined both by the structure of the *tār* (and *setār*) as well as by deep-rooted aesthetic preference within the culture for certain kinds of melodic movement, and which may itself have contributed to the development and rise to prominence of the long-necked lutes.

7.5 *Radif* and Performance Compared

The main focus of the discussion of this chapter has been general aspects of motivic patterning in *zābol*, examining the body of data as a whole, including motifs from both *radif*s and performances. In the course of this discussion, some mention has been made of motifs which seem to be particularly characteristic of the analysed *radif*s. This section will briefly compare *radif*s and performances of *zābol* more directly in terms of their motivic structuring.

The *radif*s analysed were the same as those used in Chapters Four to Six (with the addition of *radif*s 5 and 6) and the reader is referred to Chapter Two (Section 2.2.4), Chapter Four (Section 4.3.1), and Appendix One for details of these. Of the six *radif*s analysed, one was available only as a sound recording (*radif* 3), three were available both as sound recordings and published transcriptions (*radif*s 1, 2, and 4),[203] and two were only available in printed form (*radif*s 5 and 6). Two were played on the *tār* (*radif*s 1 and 4), one was sung (*radif* 2), and the two versions which existed only in printed form were intended for the violin. *Radif* 3 included a number of musicians playing different instruments, but the versions of *zābol* analysed for this chapter were played on the *setār*. However, the degree of "instrument-specificity" varied from one *radif* to another. Thus, whilst the *tār* was the instrument clearly implied in *radif* 4 (the *tār* being Ma'rufi's own instrument, and *tār* tunings being indicated at the beginning of each *dastgāh*), as discussed in Chapter Two, this publication was essentially intended as a preservative document rather than as a teaching tool and is generally regarded as being applicable to other instruments as well. Similarly, *radif* 1, which is also played on the *tār*, is learnt by students playing a range of instruments.

In contrast to *radif*s 1, 3 and 4, which are aimed at students of a variety of instruments, *radif*s 2, 5, and 6 are specifically intended for students of voice (2) and violin (5 and 6). Moreover, as mentioned in Chapter Two, it is also common

[203] As in Chapters Five and Six, the author's own transcription of material from *radif*s 1 and 2, as played by Borumand and sung by Karimi respectively, were used for the analyses of this chapter, rather than the transcriptions of During (1991a) and Massoudieh (1978) respectively. However, the published transcriptions are referred to as appropriate in the course of the study (see Chapter Four, Footnote 95). As discussed earlier (see Footnote 177), the motivic anaylsis of *radif* 4 was made from the notated version of *zābol* from this *radif*.

for *kamāncheh* and *nei* students to learn the vocal *radif* as well as an instrumental *radif*, since the extended sound of these instruments is closer to the voice than to the decaying sound quality of plucked and struck stringed instruments. *Radifs* 5 and 6 were both from the published *radifs* of Sabā: *Dowreh-ye Avval-e Violon* (First Violin Course) and *Dowreh-ye Dovvom-e Violon* (Second Violin Course). These were the only analysed *radifs* not available as sound recordings, and the published notations are of a highly prescriptive nature, including a number of ornamental signs which were transcribed in full by the author before the motivic analysis was undertaken. Sabā was an extremely versatile musician, prominent both as a performer (see performance 3) and as a teacher of various instruments. Although he published teaching material for other instruments, he is best known for his violin *radif*.

Whilst each of the analysed *radif* versions of *zābol* had its own characteristics, there were particularly marked differences between *zābol* in the *radifs* of Sabā and in the other *radifs*. In attempting to analyse as many different *radif* versions of *zābol* as possible, it was decided to use both of Sabā's violin *radifs*, firstly because no other *radifs* for violin were available, and secondly because these two versions differed from one another both in length and also, interestingly, in their melodic material. All six *radif* versions of *zābol* differed with respect to their lengths, and the relatively long versions of *zābol* in Sabā's *radifs* resulted in a slightly higher than average proportion of the overall number of motifs for these *radifs* (291 motifs out of a total of 746 motifs for all six *radifs*). Moreover, Sabā's *radifs* tended to use types of melodic movement which, since they were intended for the violin, were not necessarily typical of the motifs used in *zābol* as a whole. As a result, the figures presented below did occasionally reflect the rather untypical nature of the slightly higher number of motifs in *radifs* 5 and 6. Therefore, where appropriate, figures are given both with and without those for Sabā's *radifs* in order that relevant comparisons can be made.[204]

Further methodological issues were raised in trying to present a broad range of

[204] Of course, this raises the issue of whether one should be trying to identify the typical "norms" of the music or the "deviations" represented by individual versions such as Sabā's *radif*. Throughout this study, the aim has been to achieve a balance between identifying such "norms", and studying the individual manifestations through which such norms are defined and perpetuated. Clearly, some musicians (Sabā being a case in point) may choose to vary the norms more than others.

versions of *zābol* with musicians of various ages playing different instruments. One result of the limited number of available versions of *zābol* was that it was not always possible to directly compare *radif*s and performances on the same instruments. Thus, whilst a relatively high proportion of the motifs heard in performance were played on the *santur* (34.6%), none of the analysed *radif*s were presented on this instrument.[205] Similarly, there were no performance versions of *zābol* on violin with which to directly compare the use of motifs in *radif*s 5 and 6. However, it was possible to compare *radif* and performance versions on *tār*, *setār*, and voice.

7.5.1 Motifs in the *Radif*

The figures for motifs of various sizes in *radif*s and performances of *zābol* show that whilst the percentage of three-note motifs was the same for both, a higher percentage of two-note motifs and a smaller percentage of four-note motifs was found in the *radif* versions of *zābol* in comparison with the performances:[206]

	*Radif*s	Performances	Overall
Two-note Motifs	55% (of all *radif* motifs)	47% (of all performance motifs)	49%
Three-note Motifs	36%	36%	36%
Four-note Motifs	7%	14%	12%
Five-note Motifs	2%	3%	3%

[205] Whilst a version of the *radif* played by Majid Kiāni (a pupil of Borumand) on the *santur* was available, it was decided not to use this *radif* in the motivic analysis, since it was almost identical to that of Borumand, and would have effectively simply doubled the figures already obtained for *radif* 1. The closeness of this rendition to *radif* 1 suggests that in some *radif*s at least, there is less differentiation between instruments in the use of motifs (clearly those *radif*s aimed explicitly at specific instruments/voice, such as *radif*s 2, 5, and 6 would be exceptions to this).

[206] Since the body of data analysed included more motifs from performances than from *radif*s, any meaningful comparison can only be made in terms of percentage figures (as in the earlier part of this chapter). It should also be noted that these figures are average percentages, individual versions of *zābol* obviously varying to some extent in their use of different sized motifs. The figures discussed in Section 7.3 (including motifs from both *radif* and performance versions of *zābol*) are presented for purposes of comparison in the column marked "overall". However, these are not averages of *radif*s and performances, since they include a larger number of motifs from the latter than from the former. The problems posed by statistical data of this nature have already been mentioned (see Footnote 181).

Examining individual categories of motif in greater detail, the percentages for the most common two-note motifs were as follows:

	Radifs	Performances	Overall
Motif +1	48% (of all *radif* two-note motifs)	35% (of all performance two-note motifs)	37%
Motif -1	47%	45%	46%
Motif 0	4%	11%	10%
Other Motifs	1%	9%	7%

One of the differences between *radifs* and performances in the use of two-note motifs was that whilst performances used a larger percentage of motif -1, in the *radifs* motifs -1 and +1 were almost equal in number (+1 slightly higher). This was partly a result of the high percentage of motif +1 in the *radifs* of Sabā (74% and 58% of all two-note motifs in *radifs* 5 and 6 respectively), and characteristic of the violin, as discussed earlier. Disregarding the figures for these two *radifs* gives percentages of 36% for motif +1, closer to the performance figures, and 55% for motif -1, a larger percentage than for performance. Another difference was that in comparison with performances, *radifs* had a low percentage of two-note motifs other than +1 and -1, these two comprising 95% of all two-note motifs in the *radifs*.

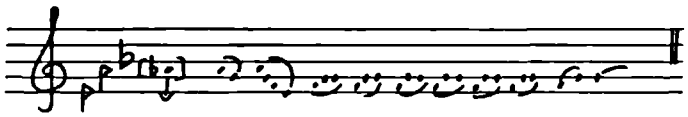
The figures for the most commonly heard three-note motifs in the *radif* versions of *zābol* were as follows:

	Radifs	Performances	Overall
Motif +1 -1	45% (of all *radif* three-note motifs)	21% (of all performance three-note motifs)	25%
Motif -1 -1	13%	14%	14%
Motif +1 +1	11%	11%	12%
Motif -1 +1	4%	18%	16%
Motif 0 0	0.4%	5%	4%
Motif 0 -1	0%	6%	5%

Whilst the percentages for motifs -1 -1 and +1 +1 were the same (or very similar) in *radif* and performance versions, those for motifs +1 -1 and -1 +1 were markedly different. Motif +1 -1 was still the most commonly heard three-note motif, but comprised a much higher percentage in *radif* than in performance. Motif -1 +1 (the second most commonly heard three-note motif in performance) on the other hand, was heard much less frequently in the *radifs*. This was partly a result of the high percentage of motif +1 -1 in Sabā's *radifs* (80% and 70% of all three-note motifs in *radifs* 5 and 6 respectively), and without which the figures were 13% for motif +1 -1 and 8% for motif -1 +1 (both lower than performance, the first significantly reduced), but with a higher percentage (25%) for motif -1 -1. Fewer three-note motifs beginning with a repeated note (interval 0) were heard in the *radifs* than in performances, but there was a higher percentage of the following motifs:

	Radifs	Performances	Overall
Motif +1 -2	6%	3%	4%
Motif +1 0	15%	3%	5%

The high percentage of motif +1 0 was particularly apparent in *radifs* 1 and 4 (both on *tār*; 77% and 29% of all three-note motifs in these *radifs* respectively), but this motif was omitted from *radifs* 2, 5, and 6. In *radifs* 1 and 4, it formed part of the following central phrase within *zābol*:



Radif 1 - Borumand - *tār* - I(1)

Four-note motifs comprised only 7% of all the motifs heard in the *radifs* (as compared with 14% in performances). Figures for the most commonly heard motifs were as follows:

	Radifs	Performances	Overall
Motif -1 -1 -1	26% (of all *radif* four-note motifs)	10%	5%
Motif -1 +1 -2	18%	0.4%	2%
Motif +1 -1 +1	12%	14%	14%
Motif +1 +1 +1	10%	11%	11%
Motif -1 +1 +1	10%	5%	6%

The most commonly heard four-note motif in the *radifs*, -1 -1 -1, formed part of the phrase from *zābol* presented above. Indeed, this was the only four-note motif in *radifs* 1 and 3 (heard four times and twice respectively). The next most commonly heard four-note motif, -1 +1 -2, was heard only in *radif* 6, and rarely in performance. Whilst *radifs* 2 and 6 (voice and violin) used the largest range of four-note motifs (six different types in each), as with performances there were no "core" four-note motifs heard in every *radif*.

As mentioned earlier, only one type of five-note motif was heard in the *radifs*: motif +1 -1 -1 -1, which appeared four times in *radif* 5 and eight times in *radif* 6 (Sabā). And yet, interestingly, this motif was not heard in any of the performances of *zābol*, not even performance 3 by Sabā himself (*setār*). This raises questions regarding the relationship between *radif* and performance already discussed in Chapters Four to Six.

Following similar patterns established for other aspects of the music in earlier chapters, the *radifs* tended to use a smaller range of motif types in comparison with performances:

	Number of Different Types of Motifs Used	
	Radifs	Performances
Two-note Motifs	6	8
Three-note Motifs	12	26
Four-note Motifs	11	51
Five-note Motifs	1	25

In each case, the number of motif types used was greater in the performances than in the *radifs*. However, whilst the widest range of motif types in performance was found in four-note motifs, in *radifs* it was found in three-note motifs (but with a less marked difference between three- and four-note motifs). The only motifs to be heard in *radif* versions, but not in performances, were both from the *radifs* of Sabā: the four-note motif +1 -2 -1 (heard once in *radif* 6) and the five-note motif +1 -1 -1 -1 (*radifs* 5 and 6, discussed above).

The only "core" two-note motifs (those heard in every *radif*) were -1 and +1 (in *radif* 6, these were the only two-note motifs heard) and these were of course, also the only "core" two-note motifs in the performances of *zābol*. Similarly, the three-note motifs heard in every *radif*, +1 -1 and +1 +1, were also heard in all but one performance each (the closest to a "core" that was reached for three-note motifs in performance). Less central was motif -1 -1, heard in all but one *radif* and all but two performances, and motif -1 +1, heard in four of the six *radifs* and in all but two performances. The most common four-note motif, both in terms of frequency of appearance and also inclusion in different versions (both in *radif* and performance), -1 -1 -1, was heard in all but two *radifs* and all but five performances. Thus, it is interesting to note that whilst the range of motifs was more restricted in the *radifs* than in performances, there were clear correlations between the central motifs in both. Other four-note motifs and the one five-note motif in the *radifs* were only heard in one or two *radif* versions, and this is in line with the earlier findings that as motifs increase in length, they become less "central", and therefore less likely to be heard in all versions of *zābol*.

As well as important correlations in the motifs heard in *radifs* and performances of *zābol* and discussed above, there were also a number of differences (as with other aspects of the music discussed in earlier chapters). Thus, for example, the table below presents figures for the initial intervals of motifs:

	Initial Interval				
	-1	+1	0	< -1	<+1
Radifs	37%	58%	2%	1%	1%
Performances	42%	38%	13%	3%	5%
Overall	41%	41%	11%	3%	5%

Whilst the majority of initial intervals were by step, both in *radif*s and performances, the *radif*s had a higher percentage of motifs beginning with interval +1 and a lower percentage (although with a smaller difference) beginning with -1. Once more, this seemed to have been determined by the motifs in *radif*s 5 and 6, without which the figures for *radif*s were as follows:

	Initial Interval				
	-1	+1	0	< -1	<+1
***Radif*s 1-4**	47%	46%	4%	1%	2%

The percentage of motifs beginning with the interval 0 was still relatively low, but there was a fairly even balance between motifs beginning with -1 and +1 (as in the "overall" figures), the percentage of interval -1 now higher than performance, and the figure for +1 reduced, although still higher than in performance.

The analysed versions of *zābol* included *radif*s and performances by both Sabā and Borumand, and it was thus interesting to note a number of apparent disparities between the *radif*(s) and performance(s) of the same musician. For example, as discussed above, Sabā included the five-note motif +1 -1 -1 -1 in both of his violin *radif*s, but it was omitted from his own performance of *zābol* (performance 3; and all of the other analysed performances. The fact that performance 3 was played on the *setār* may be an important factor). Conversely, the two-note motif 0 was heard only once in the *radif* of Borumand, whilst in performance 26 the same musician used an unusually high percentage of this motif.

Generally speaking, the "underlying principles" suggested earlier - the prevalence of shorter motifs (more often descending in direction, discounting the figures for *radif*s 5 and 6), the tendency to move by step (and hence the small number of motifs with intervals larger than -1 or +1), and the absence of motifs with successive intervals in the same direction where one of the intervals is larger than -1 or +1 (with the exception of +1 -2 -1) - were maintained in the *radif*s, and indeed were sometimes intensified. Thus, as in the "overall" figures for *zābol*, shorter motifs were heard more frequently in the *radif*s than longer ones, but with an even higher proportion of two-note motifs. Similarly, other points observed

in the "overall" figures, such as the low percentage of motifs starting with the interval 0, and the relatively low percentage of four- and five-note motifs, were further accentuated in the *radif* versions. It was suggested earlier that the "underlying principles" of the music may be rooted in aesthetic considerations within the general culture, as well as in the potential offered by different instruments. In addition, it would seem likely that such principles have, in the course of time, become "embedded" within the formalised structures of the *radif* (and, indeed, any teaching repertoires which may have preceded the *radif* as it is known today), thus representing an important means by which musicians internalise the motivic patterns of the music.

7.5.2 The Generation of Motifs in Performance

The relative unity of motivic patterns in the analysed versions of *zābol* suggests that in learning the *radif*, musicians internalise certain basic patterns, both aural and motor. In terms of the motor patterns, the consistent use of the same "core" motifs (and therefore habitual types of movement) in *radif* and in performance points to a unity in physical movement at the most detailed level of the music. At the same time, however, there were differences between *radif*s and performances, such as the wider range of motif types used in the latter, and the freer (although still limited) use of motifs with intervals larger than -1 or +1. This would seem to indicate that in performance, musicians generate motivic patterns on the basis of those learnt from the *radif* (as was suggested for the developmental procedures discussed in Chapter Six. See Sections 6.2.5 and 6.6), and that they also learn motifs from the performance tradition itself, by hearing the playing of other musicians.

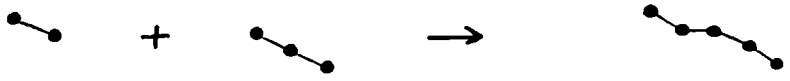
For example, consider all of the three-note motifs found in the analysed *radif*s of *zābol*:

-2 +1	-1 -1 -1 0 -1 +1 -1 +2	0 0 0 +1	+1 -2 +1 -1 +1 0 +1 +1	+2 -1

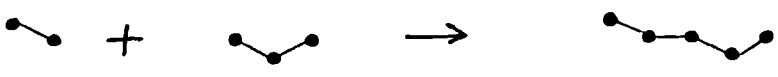
All of the above were also heard in the analysed performances, but in addition, fourteen other types of three-note motifs were heard in performances, but were not found in the *radifs*:

-3 +4	-2 -1 -2 0 -2 +2		0 -2 0 -1 0 +2	+1 +2	+2 -2 +2 0	+3 -1 +3 0 +4 -1 +4 0

It is interesting to note that all of the motifs above - that is, those only heard in the analysed performances of *zābol* - included intervals larger than -1 and/or +1, and the consistent use of these larger intervals would seem to distinguish these motifs from those which were only heard in the *radifs*. However, despite this clear difference, it is possible that these motifs were in fact generated on the basis of motifs and patterns of movement found within the *radif*. Thus, for example, it might be suggested that the movements inherent in motifs -2 +1 and -1 +2 in the *radif*, are drawn upon by musicians in order to generate -2 +2 in performance (this motif was not heard in any of the *radifs* of *zābol*). In the case of five-note motifs in particular, there was a great difference between the number of types of motif found in the analysed *radifs* (1) and those heard in the analysed performances (25). One possible explanation for this is that five-note motifs in performance may be generated through the combination of shorter motifs. Thus, four-note motifs such as -1 -1 -1 and +1 -1 +1 can be extended to generate -1 -1 -1 -1 and +1 -1 +1 -1. Similarly, motif -1 0 -1 -1, may result from a combination of -1 and -1 -1,



and -1 0 -1 +1 from a combination of -1 and -1 +1:



Clearly, there is likely to be some experimentation on the part of musicians during improvisation, resulting, for example, in the motifs using intervals -3, +3, and +4, not heard in the *radif*. The main point, however, is that many of the motifs heard only in performance appear to be based on the same fundamental principles as those found within the *radif*, suggesting that the former may be generated on the basis of the latter, and in particular, the motor patterns embedded within them. This lends further weight to the suggestion that it is through the very process of learning the *radif* that musicians internalise the underlying principles outlined above, these principles largely determining the types of motifs heard in performance.

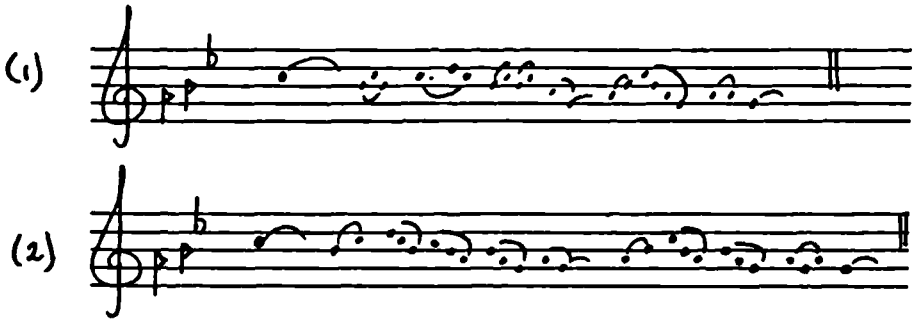
On the basis of the discussion of this chapter, the use and generation of motivic patterns in *zābol* may be compared with that of formulaic patterns in certain traditions of oral poetry, as discussed in Chapter One (Section 1.4.2). In a similar way to the poet, the Persian musician builds up a store of formulaic motivic patterns - a "vocabulary" of motifs - through learning the *radif*, through listening to the performances of other musicians, and through the subsequent creation of new patterns. These motifs can be drawn upon during improvisation, and either played as they are, or used as the basis for the generation of further patterns, which may be added to the musician's mental store. These patterns may also be heard and learnt by other musicians, and thus perpetuated in different ways within the tradition. However, whilst the evidence would seem to suggest that motivic generation does take place, how this might be conceptualised by musicians is unclear, particularly since (as with other aspects of the music), the use of motifs in *radif* and performance is not generally discussed by musicians, even in the teaching situation. This will be discussed briefly below.

7.6 Motifs in Context

Whilst the discussion of this chapter has, for analytical purposes, focused on the structure of individual motifs, these motifs are never heard (or conceptualised) in isolation, but are combined to form complete phrases. Thus, just as there appear to be certain "rules" governing the use of individual motifs by musicians, so there would seem to be regularities in the combination of these motifs (and presumably also learnt through the *radif* and performance tradition). Identifying such regularities (for example, which motifs may follow or precede which) would point towards a "grammar" at the level of the phrase, and for a body of data of this size (almost 6,000 motifs) would require considerable computational power. Limits of space have precluded detailed consideration of this and other contextual aspects of motifs, such as the use of different motifs in measured and unmeasured sections of the music, and at different points in phrases (beginning, middle, and end), information regarding which was entered into the original database. Nevertheless, a number of points which have emerged in the course of the preceding discussion will be considered briefly in this section.

It seems unlikely that decisions regarding the generation and combination of motifs in a particular phrase are made at the level of awareness during performance, due to the time limits involved. Other factors may play a role here, such as the overall shapes of phrases, the "stock" combinations of motifs often heard in the music, and the habitual patterns which musicians themselves develop in the course of many years of playing. For example, the overall shape of a phrase may partly determine a musician's choice in this respect, an arch-shaped phrase perhaps requiring a different arrangement of motifs from a phrase with an inverted arch shape. As mentioned above, in learning the *radif* (and through informal listening), musicians accumulate a "vocabulary" of motifs. Since teachers do not discuss the motivic construction of phrases with pupils, it is likely that, as with the developmental procedures discussed in Chapter Six, it is the occurrence of the same motifs in different contexts within the *radif* that teaches musicians how individual phrases may be constructed. Thus, perhaps musicians subconsciously analyse phrases in terms of their constituent motivic patterns, and are then able to use these patterns in different contexts in performance (again, the role of the *radif* as "unverbalised theory" [see Chapter Three, Section 3.1] is

clear). For instance, in the first example below, a number of motifs are combined to effect a movement down the scale, very much in the manner of the sequence which follows it. Thus, motifs may be "substituted" for one another without changing the overall structure of the phrase:



Phrases such as those above are particularly interesting for what they suggest of the ways in which musicians conceptualise the motivic structure of the music.

Section 7.2 included a consideration of two specific types of motif combination: sequences and series. Generally speaking, sequences (particularly descending sequences) were heard more frequently than series in the examples analysed, often constituting ways of moving from one pitch level to another (as in the examples above). Moreover, some interesting patterns emerged. For example, whilst motifs ending with the interval -1 (particularly if the last note of the motif was two pitch levels lower than the first) tended to be heard in descending sequences, those which ended with +1 (or 0) tended to be heard in ascending sequences. Thus, motifs +1 -1, +1 -1 -1, and 0 -1 -1 were generally heard in descending sequences, whilst motifs -1 +1, +1 +1 +1, 0 -1 +1, and +1 +1 0 were heard mainly in ascending sequences. Unspoken structural rules are clearly at work. The fact that the following combination of motifs in sequence was not heard in any of the examples analysed (and is very untypical of Persian classical music in general) lends support to the idea that one of the underlying "grammatical" rules at the level of the phrase in this music is that motifs with an overall descending movement should only be played in descending sequences and vice versa:

Motifs with an alternation of intervals -1 and +1 (for example, -1 +1 -1) were generally heard in both ascending and descending sequences.

This necessarily brief consideration of motifs within the context of complete phrases suggests that just as the use of individual motifs by musicians is determined by underlying principles, similarly the combination of motifs is far from arbitrary, but subject to certain aesthetic and structural criteria. This clearly points to a further level of potential analysis in the process of understanding the ways in which musicians create in performance.

7.7 Concluding Discussion

The analyses of this chapter have suggested that the use of motifs in *zābol* is largely determined by certain "underlying principles" of melodic movement, which in turn are closely related to factors such as instrument morphology and general aesthetic preferences within the culture. As with other aspects of the music discussed in the preceding chapters, it would seem that through learning the *radif* and over many years of experiencing the music as listeners and performers, musicians build up a "store" of motifs, to which they may also add motifs generated on the basis of those already known. Over many years, these motifs, which effectively form the most basic "building blocks" of the music, gradually become embedded into the motor and cognitive memory of the musician.

When one considers the potential number of motifs available to musicians in performance, the limited use of such patterns in improvisation is striking. Even motifs which appear to be generated by musicians tend to follow certain types of patterning, and are generally based on the underlying principles of melodic movement described earlier. The degree of regularity in the use of motifs suggests that this is a level of the music in which individual creativity plays a limited role, and where musicians tend to follow habitual patterns of sound and movement built up over years of playing. Moreover, whilst the analyses of this chapter have focused on *zābol*, a brief exploration of other *gushehs* in *Segāh*, and also of other *dastgāhs*, suggests that the types of motif heard in *zābol* are typical of the music as a whole, thus supporting the idea of a consistent, almost

predictable, use of certain central motifs. In turn, this would seem to lend support to the proposal that these central motifs embody important principles of musical patterning and "ways of moving" (on an instrument), principles which underlie the basic "motif grammar" of the music, and which, as with aspects of the music discussed in earlier chapters, are embedded within (and learnt from) the structures of the *radif*. Whilst the combination of motifs into complete phrases and the joining of phrases into longer sections may allow greater room for personal creativity, there are still certain limits. Not only is the speed with which detailed creative choices have to be made at the motivic level of the music perhaps one factor which encourages predictability in the use of motifs, but perhaps the relatively stable motivic structure represents an important means by which the identity of the music itself is established and maintained, given the many other variative factors in the music.

Conclusions

> It all goes from imitation to assimilation to innovation. You move from the imitation stage to the assimilation stage when you take little bits of things from different people and weld them into an identifiable style - creating your own style. Once you've created your own sound and you have a good sense of the history of music, then you think of where the music hasn't gone and where it can go - and that's innovation. (Walter Bishop Jr., quoted in Berliner 1994:120)

In his study of the creative processes in jazz, Berliner describes creativity as the "Act of Fusion and Transformation" (ibid.:138). Like the jazz musician, the Persian classical musician also spends a lifetime accumulating knowledge and experiences through which the musician's own individual creative expression takes shape. As human beings, we are constantly striving to explain everything around us, from the atom to the universe, and ultimately (inevitably, maybe) ourselves. The aim of this study has been to reach some understanding of perhaps the most elusive of human attributes - the creative impulse - in the context of Persian music. Whilst the main points of conclusion have been considered at the end of each chapter, these various points will be drawn together in this section for a concluding discussion.

Each of the analytical chapters (Four to Seven) considered a different aspect of musical organisation. In each case, the analyses showed that improvisation in Persian classical music is in no sense "free". The performances were closely mediated both by the musician's knowledge of the *radif*, as well as by other musical experiences. At every level of musical analysis - whether in terms of the overall sectional organisation of the *dastgāh*; the defining elements of a *gusheh*; the variational potential of a *gusheh*; compositional procedures; or motivic patterns - performances and *radif*s were found to be structured in similar ways (but with a wider range of variation in the performances). This lent support to the idea that the structure of the *radif* itself teaches musicians how to create in performance, and in a broader perspective, that any musical tradition ultimately

embodies the "rules" by which it is perpetuated and renewed. Furthermore, if it is largely through memorising the *radif* that musicians learn to improvise, this may be one reason why teachers rarely discuss matters of interpretation or improvisation with their pupils (together with the relative dearth of technical musical terminology in this tradition). It is therefore through the learning process itself - the experiencing and learning of many different versions of the repertoire by imitation and memorisation - that pupils learn the rules of recreation, and thus how to improvise. It was, however, noted in Chapter One that more recently, the emergence of a younger generation of largely university-educated musicians has resulted in a move towards greater rationalisation and verbalisation in teaching.

Whilst the analyses showed the *radif* to be central to much creativity in Persian classical music, defining the way(s) in which the *radif* forms a "framework" for improvisation is complex, since each performing musician draws upon his own individual synthesis of the particular versions of the *radif* learnt during training. Over many years of learning different versions of the *radif*, and listening to other performers, the musician builds up a body of knowledge (both aural and sensori-motor), including information about the overall organisation of each *dastgāh*; the "core" elements as well as the limits and rules of variation for each *gusheh*; specific developmental procedures, generative phrase structures, and melodic material; and motivic patterns. This information, which is embedded in the motor and cognitive memory, and which forms the basis for creativity in performance, is in a continual state of change, always being added to through new experiences, and also through patterns which are generated on the basis of those already known. Thus, each rendition of a *dastgāh* draws from and contributes to the re-creation of the performance tradition, enriching it, changing it slightly, and providing ideas which other musicians may choose to include in their own improvised performances. In addition to the structural similarities, there were also important points of difference between the analysed performances and the *radif*s. In particular, it became evident that current performance trends play an important role in creative improvisation, interacting with a musician's knowledge of the *radif* in the performance situation. Moreover, it should be noted that whilst some of the musicians whose performances were analysed used the material of the *radif* as a more or less exact model for performance, others used it simply as a starting point for their improvised performances.

Chapters Four and Five showed that each section of repertoire has relatively clear limits in terms of its minimum defining requirements, and in terms of its potential for variation. Thus, both the overall structural organisation of *Segāh*, and the structure of each individual *gusheh* can be varied within certain understood boundaries, beyond which the identity of the *dastgāh* or *gusheh* is lost. Among the analysed versions of *Segāh*, no two shared exactly the same overall sectional organisation, but there were regularities. Thus, it was possible to suggest a central "core" of sectional (and thus modal) progression in *Segāh*, which is subject to controlled variation, and which is partly determined by aesthetic factors relating to the overall "shape" of a performance. In terms of individual *gushehs*, the range of acceptable variation for a particular *gusheh* was found to be related to the extent to which the *gusheh* has a pre-defined structure: more closely defined *gushehs* being subject to less variation in performance (and from one version of the *radif* to another). Indeed, the analyses of Chapters Five and Six suggested that the *gushehs* of *Segāh* are of essentially two main types: one type having a relatively flexible structure which allows musicians greater freedom of expression in performance, whilst the other has a more pre-defined structure, and is less subject to improvisation. In the latter case, material and procedures from the *radif* are maintained as a unit in performance as part of the basic structure of the *gusheh*. There was found to be a close correlation between the variational potential of a *gusheh* and its length and importance, with the more prominent *gushehs* subject to greater variation. It was noted that the variational potential and relative importance of *gushehs* are rarely discussed by teachers, but that this information seems to form part of the subliminal knowledge of musicians (and also informed listeners), internalised during the process of learning different versions of the repertoire. In terms of the defining elements of each *gusheh*, the analyses of Chapter Five discussed for each *gusheh* of *Segāh*, elements which seemed to be specific to, essential for, or characteristic of the *gusheh*, or of particular performers or instruments. Whilst it was noted that the defining elements on which the identity of individual *gushehs* rest vary to some extent from one *gusheh* to another, the musical element which was consistently important in the definition of *gushehs* in *Segāh* was that of mode.

In light of the general discussion in Chapter One, Chapter Six pointed to possible parallels between the creative processes of music and spoken language,

particularly in the case of the central *gushehs* of *Segāh*. Whilst *radif* and performance versions of these *gushehs* did share important features, the relationship between the two in terms of specific musical material was complex: similar musical material and compositional techniques could be identified in both, but these were often in different contexts, with particular musical material being attached to different compositional techniques in *radif* and performance, and vice versa. This suggested that musicians are able to abstract basic principles of musical construction from material learnt in the *radif*, and to re-apply these in performance to generate phrases which are at once unique and yet part of the musical tradition. This in turn seemed to suggest parallels with the ways in which children subconsciously abstract grammatical rules from the language which they hear around them, and re-apply these rules. Thus, both musical and linguistic creation seem to depend upon hearing and internalising existing structures, which are then abstracted and analysed, and on the basis of which new statements are generated. Moreover, it was also suggested that such a faculty is not unique to music and language, but rooted in the "genetic software" of the human mind. Whilst no attempt was made to devise a formal grammar as such, it is clear that certain rules are at work at every level of music, and that as in language, many of these creative processes take place below the level of awareness, as a result of many years of experiencing the music. Whilst limits of space have meant that this study has focused on one *dastgāh*, the consideration of *Māhur* in Chapter Six demonstrated that similar processes are also at work in other *dastgāhs*.

The analysis of the motivic structuring of *zābol* in Chapter Seven indicated that certain types of motifs are heard much more frequently than others, and also that musicians tend to use a limited number of motif types relative to the total potential number of types available to them. This suggested that at this basic "building block" level of the music there is minimal individual creativity, musicians apparently following habitual patterns of sound and movement learnt over many years of playing. Furthermore, those motifs which were frequently heard were shown to share certain "underlying principles" of melodic movement, and by implication "ways of moving" (on an instrument), such principles appearing to underlie the basic "motivic grammar" of the music. Although the focus of this chapter was on *zābol*, a limited exploration of motivic structuring in other *gushehs* of *Segāh* (and indeed other *dastgāhs*) suggested similar findings. As with other

aspects of the music, these principles are embedded within (and indeed learnt from) the structures of the *radif*, but they are also closely mediated by factors such as instrument morphology and general aesthetic preferences for certain types of melodic movement. In Chapters Six and Seven, the use of certain melodic phrases, compositional procedures, and motivic patterns, was compared to the formulaic nature of much oral poetry. Thus, musicians have a large repertoire of musical "formulae" which can be drawn upon during performance, and which can also be used as a basis for the generation of new formulae. For example, on the basis of motivic patterns learnt from the *radif*, musicians are able to generate other motivic patterns, and in the same way, compositional procedures learnt from the *radif* (and from other sources) may be used creatively to generate new procedures.

Throughout this study, it has been noted that similar principles of organisation can be identified at different levels of the music. Thus, just as the overall structural organisation of performances was subject to controlled variation, so individual *gushehs* were varied in different ways, but always within understood limits. Thus, it was suggested that through something which might be called "controlled variation", the identity of individual sections of repertoire is maintained around certain unspoken "norms". Other examples of similar structural principles at different levels of the music were also discussed. Thus, for example, not only was *Segāh* shown to be more stereotyped at the beginning and end of the complete *dastgāh* relative to the central sections, but this was also found within the individual *gushehs* of *Segah*; just as *Segāh* (and other *dastgāhs*) was found to be arch-shaped in its overall melodic contour, so too (on the whole) were the contours of individual *gushehs* and phrases within *gushehs*. Similarly, some *gushehs* were varied to a greater extent than others, and this was also the case with individual sections within a *gusheh*. In addition, the analyses of Chapter Five showed how the structure of *hodi va pahlavi* embodied the modal progression of the complete *dastgāh* within one *gusheh*. It was suggested that these similar principles of organisation at different levels of the music play an important role in providing a sense of unity in the music.

What has emerged clearly from these analyses is that Persian classical music has a set of underlying rules which are embodied within the music itself, and which

musicians learn consciously or subconsciously through playing and hearing the musical structures. Whilst musicians clearly do have some freedom in the choices which they make before or during an improvised performance, there are many factors at every level of musical organisation, including principles which are possibly aesthetically-rooted, which direct improvisations in certain directions and through which the boundaries of acceptable musical variation are controlled. Indeed, it seems likely that underlying rules are to be found in any music, and that for each musical style or tradition, there is a basic unity in the types of creative procedures heard, something which defines both the limits of creativity and how to create within the tradition, and on which the continuation of any musical tradition depends. Like the snow crystal, the performance of Persian classical music embodies infinite variety within a framework of unity. Ultimately, the processes of creation are also those of re-creation: each musician creates his individual musical expression by re-shaping the music of the past in order to give it new meaning in terms of the present. As stated at the outset of this study, it is through performance that the musician expresses and re-affirms his place in the world, and gives the listener a means to do the same. Music can symbolise the individual, the wider community, and our shared humanity at one and the same time. It is the many individual "voices" which forge the ongoing and perpetually changing "tradition", and it is through the creativity of each individual that the tradition lives.

Glossary of Terms Used

Āvāz "*Āvāz*" literally means "song" or "voice", and refers (among other things) to the main unmeasured section of a Persian classical music performance (even a non-vocal performance). If there is a vocalist, s/he will usually be accompanied by a solo instrument, and the music alternates between lines of sung poetry and interludes in which the instrument "replies" to, and possibly extends, what the voice has just sung. In an ensemble performance, the voice will often be accompanied by a different solo instrument for each successive *gusheh*, and the whole *āvāz* rendition will usually be "framed" by one or more measured pieces (see below).

Chāhārmezrāb (lit. "four strokes") - A rapid virtuosic solo instrumental piece, usually in duple or quadruple metre, and which can generally be heard at any point in a performance, adapting itself to the mode of the *gusheh* in which it is played. The *chāhārmezrāb* is very commonly heard in violin and *santur* performances, since these instruments allow the large leaps and rapid scalar passages and sequences which characterise this type of piece. The *chāhārmezrāb* may be composed and even notated by a known composer, such as in the case of the well known *chāhārmezrāb* called *zang-e shotor* (lit. "the camel's bell", somewhat programmatic in its title) composed by Abol Hassan Sabā, and based on the short melodic pattern of that name in *Dastgah Segāh*. However, it is most common for the *chāhārmezrāb* to be improvised, put together by the performer on the basis of patterns learnt from the *radif* and from playing other measured pieces.

Dastgāh The complete repertoire of Persian Classical music is made up of twelve modal systems, or *dastgāh*s, each of which has its own distinctive scale, melodic patterns, and ethos. There are seven main *dastgāh*s: *Shur*, *Māhur*, *Segāh*, *Chāhārgāh*, *Homāyun*, *Rāst-Panjgāh*, and *Navā*; and five subsidiary *dastgāh*s (also known as *āvāz*): *Afshāri*, *Dashti*, *Abu-Atā*, *Bayāt-e Tork* and *Bayāt-e Esfāhān*. Each *dastgāh* comprises a number of short pieces called *gushe*hs.

Eshāreh (lit. "hint" or "allusion") - A brief musical reference to one *gusheh* or *dastgāh* in the context of another.

Gusheh The individual modally-related sections which comprise each *dastgāh*. Each *gusheh* has its own name, and may share the mode of the parent *dastgāh* or may introduce new note functions, pitches, or melodic patterns.

Kamāncheh A bowed spike-fiddle which is held in front of the player. The neck is unfretted and there is a some variation in the number of strings and their tuning, although nowadays (particularly in the main urban centres of the country) it is most common for the instrument to have four strings tuned like the western violin. The sound-table of the *kamāncheh* is made from sheepskin. The left hand of the musician supports the neck of the instrument, which may be rotated while playing, and the right hand holds the bow.

Nei An end-blown flute with a cylindrical bore, made of cane and about 50-60 centimetres long. It may have a metal mouthpiece and there are usually six finger holes in front and one at the back. The *nei* is also used in the rural folk music, and is traditionally associated with shepherds.

Persian/Iranian The distinction between these two words should be clarified. Whilst "Iran" refers to the culturally and linguistically diverse modern nation state, "Persian" indicates the dominant ethnic group (culturally, politically, and numerically) within the country. The language spoken by Persians is "Fārsi" (from which the English word "Persian" derives) (since the borders of Iran at one time stretched into present day Afghanistan, and the Republics of Uzbekistan and Tadjikistan, Persian is also spoken in these countries). The difference between "Persian" and "Iranian", therefore, is rather like the difference between "English" and "British".

Pishdarāmad (lit. "before the *darāmad*") - A slow, measured, ensemble piece, usually heard before the main *āvāz* section in an ensemble performance (although it is sometimes played in solo performances). *Pishdarāmad*s are generally by a named composer, and may be notated, although they are never performed from notation. In a *pishdarāmad*, the modal areas of the main *gushe*hs of the *dastgāh* to be performed are usually presented, with a return to the *daramad* mode between each of these modes, and at the end of the piece.

Radif The complete repertoire of Persian Classical music as learnt during training, and which subsequently forms the basis for improvised performance. The *radif* is found in a number of versions, both in published form and also as taught by individual teachers. The *radif* comprises twelve *dastgāh*s.

Reng A dance piece in compound duple metre, usually heard at the end of a *dastgāh* performance. A *reng* is generally played by an ensemble,

although solo *reng*s are sometimes heard.

Santur A dulcimer which is struck with small wooden hammers, and which rests on a table in front of the performer. The 18 courses of metal strings (four strings per course) are arranged across the instrument on small moveable bridges so as to give a large range over a relatively small playing surface.

Setār A long-necked lute, plucked with the nail of the (right hand) index finger, which is grown long for this purpose. The *setār* has four strings, usually tuned c, c', g, c'. It is smaller than the *tār*, and has a wooden sound-table, which gives it a quieter, more intimate sound.

Tār A long-necked lute with six strings arranged in three double courses, usually tuned c c', g g, c'c' (with a mixture of metal and gut strings). The melody is generally played on the upper two courses, whilst the lowest course acts mainly as an intermittent drone. The instrument rests on the lap of the musician, who sounds the strings with a metal plectrum held in the right hand, whilst stopping the strings on the fretted neck with the fingers of his left hand. The sheep-skin sound table of the *tār* gives the instrument a highly resonant sound quality.

Tasnif A slow, measured song in which a solo voice is usually accompanied by an instrumental ensemble. A *tasnif* is generally heard at the beginning or end of a *dastgāh* performance (where it may follow a *pishdarāmad* and/or precede a *reng*), although it can also be performed separately. Like the *pishdarāmad*, the *tasnif* is usually written by a named composer, and is generally based in one of the twelve *dastgāh*s, where it outlines the modal progression of the whole *dastgāh*.

Tombak (or *zarb*) A wooden goblet-shaped drum with one membrane, usually made from sheepskin, which is glued to the body of the drum. The drum is played with the fingers and palms of both hands, and is held diagonally across the player's lap. The tombak has gained in popularity during this century as a result of the increased preference for music with a regular metre.

Zarbi A generic term for a measured piece, either solo or ensemble, improvised or pre-composed, particularly one which does not belong to any of the other categories of measured piece outlined above.

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Rezā Qāsemi, Imperial College, University of London, 6.3.88

Navā Music Ensemble, Hammersmith Town Hall (London), 10.9.88

Ostād Shajariān in Concert with the Āref Ensemble, Royal Festival Hall, 20.11.89

Asqar Bahāri, Purcell Room, 4.2.90

Hossein Alizādeh and Ensemble, with Shahrām Nāzeri, Royal Festival Hall, 14.4.90

Āref Ensemble, Saddler's Wells Theatre, 11.11.90

Farāmarz Pāyvar, and Group, Royal Albert Hall, 13.11.90

Parviz Meshkātian and Group, Queen Elizabeth Hall, July 1992

Kāmkār Group, Queen Elizabeth Hall, Summer 1993

Shajariān and Meshkātiān in concert, Royal Festival Hall, 9.9.95

Discography of recordings used, other than those listed above and in Appendix One.

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Video recording of a private interview with Rezā Shafeiān by Viram Jasani. Recorded by the National Sound Archive. 19.9.85 (T8211 BW)

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Hossein Alizādeh	23.2.86
Taqi Tafazoli	various occasions between November 1987 and May 1988
Firooz Berenjiān	various occasions between June 1988 and June 1995
Farāmarz Pāyvar	8.11.90 (Asqar Bahāri also present)
Jean During	8.12.90
Parviz Meshkātiān	20.7.92

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APPENDICES

Appendix One

A - Details of Performances and *Radifs* Analysed in This Study

Details of the performances and *radifs* analysed in this study are presented below, including the musicians playing/singing on each recording (those who only play in ensemble sections are listed in parentheses), date(s) and place(s) of recording/publication, and publisher (where appropriate). It should be noted, however, that recording/publication details were not always available, particularly since commercial recordings are often not well documented. In the case of re-releases, for example, it is common for details of the original recordings not to be given. Moreover, many good recordings are regularly circulated in pirate copies, and these rarely include recording/publication details. Despite this, as much information as possible has been given below for each recording, and the format in which each rendition was available for this study (eg. cassette, disc, etc.) is also indicated in brackets.

Performances

Segāh

1 *Gorooh-e Sheydā*

Abdol Naqi Afshārniā (*nei*)	"*Chavosh* no. 9" (part of a series);
Ali Akbar Shekārchi (*kamāncheh*)	Recording of a live concert in Tehran, July 1977; commercial cassette
Mohammad Rezā Lotfi (*tār*)	published by the *Kanoon-e Honari va*
Mohammad Rezā Shajariān (male voice)	*Fekri-e Chavosh*, 1977 (cassette)
Pashang Kāmkār (*santur*)	
(Zeidollāh Tului (*tār*))	
(Bijan Kāmkār (*tombak*))	
(Mirā Esmāil Sedqi Āsā (*'ud*))	
(Darvish Rezā Monazami (*kamānceh*))	

2	Hossein Alizādeh (*tār*)	From a live recording of a concert given at Leighton House, London W14 on 21.2.86 (reel)
3	Abol Hassan Sabā (*setār*)	From an informal performance, recorded in Iran in the 1950s (cassette)
4	Ahmad Ebādi (*setār*)	From "*Ostādān-e Musiqi-e Sonnati-e Irān*" ("Masters of Iranian Traditional Music") series, SARTMS, no. 5, on the *Āhang-e Ruz* label. Originally recorded and published in Iran as a commercial LP disc, before 1979; re-released as a commercial cassette in the USA, post-1979, by Soundex Enterprises Inc. (ARCT 226) (cassette)
5	Zeidollāh Tului (*tār*)	From a recording of a live concert given in London in 1987 (cassette)
6	Rezā Shafeiān (*santur*)	From a recording of a performance broadcast by BBC Radio 3, c1987 (cassette)
7	Mohammad Rezā Lotfi (*tār*) Mohammad Rezā Shajariān (male voice) with the Orchestra of Iranian Radio and Television, conducted by Farhād Fakhroldini	"*Golhā-ye Tāzeh*" no. 147; commercial recording of a programme originally broadcast by Iranian Radio in the 1970s (cassette)
8	Asqar Bahāri (*kamāncheh*)	From "*Ostādān-e Musiqi-e Sonnati-e Irān*" ("Masters of Iranian Traditional

		Music") series, SARTMS, no. 12, on the *Āhang-e Ruz* label. Originally recorded and published in Iran as a commercial LP disc, before 1979; re-released as a commercial cassette in the USA post-1979 (cassette)
9	Rezā Shafeiān (*santur*) Nāsser Mehrāvar (*tombak*)	From a recording of a live concert given in Germany, c1987 (cassette)
10	Lotfollāh Majd (*tār*)	From "*Ostādān-e Musiqi-e Sonnati-e Irān*" ("Masters of Iranian Traditional Music") series, SARTMS, no. 8, on the *Āhang-e Ruz* label. Originally recorded and published in Iran as a commercial LP disc, before 1979; re-released as a commercial cassette in the USA post-1979 (cassette)
11	Golpāyegāni (male voice) Nur Ali Borumand (*tār*)	From "A Musical Anthology of the Orient, Iran I" Bärenreiter Musicaphon BM 30L 2004; recorded in Iran, and published in Germany in the early 1960s. (LP disc)
12	Hossein Malek (*santur*)	From "A Musical Anthology of the Orient, Iran II" Bärenreiter Musicaphon BM 30L 2005; recorded in Iran, and published in Germany in the early 1960s. (LP disc)
13	Farhang Sharif (*tār*) Hossein Tehrāni (*tombak*)	From "Iranian Dastgah - Modal Music and Improvisations" Philips 6586 005; recorded in Iran; date and place of publication not given (LP disc)

14	Jalil Shahnāz (*tār*) Asqar Bahāri (*kamāncheh*) Abdol Vahāb Shahidi (male voice and *'ud*) (Farāmarz Pāyvar - *santur*) (Hassan Nāhid - *nei*) (Rahmatollāh Badii - violin) (Hossein Tehrāni - *tombak*) (Shojā-aldin Lashkarlou - violin) (Fereidoon Zarinbal - viola)	From *Āhang-e Ruz* SARLP 22; commercial LP disc recorded and published in Iran before 1979 (LP disc)
15	Pashang Kāmkār (*santur*) Jamshid Andalibi (*nei*) Arjang Kāmkār (*tombak*)	From a commercial cassette, recorded and published in Iran by *Sherkat-e Ruh-Afzā*, c1987 (cassette)
16	Parviz Meshkātiān (*santur*) Nāsser Farhangfar (*tombak*)	From a commercial cassette, recorded and published in Iran, c1984/5, publisher unknown (cassette)
17	Jalil Shahnāz (*tār*) Abdol Vahāb Shahidi (male voice and *'ud*) Farāmarz Pāyvar (*santur*) Hassan Nāhid (*nei*) (Hossein Tehrāni - *tombak*) (Asqar Bahāri - *kamāncheh*)	From "Iran: Musique Persane" Ocora 57; recorded in Tehran in 1979, and published in Paris in 1984 (LP disc)
18	Farāmarz Pāyvar (*santur*)	From a live recording of a performance given at the School of Oriental and African Studies (University of London) c1966 (reel)
19	Mehdi Khāledi (violin) H. Hamediān (*tombak*)	From "*Ostādān-e Musiqi-e Sonnati-e Irān*" ("Masters of Iranian Traditional Music") series, SARTMS, no. 21, on

		the *Āhang-e Ruz* label. Originally recorded and published in Iran as a commercial LP disc, before 1979; re-released as a commercial cassette in the USA in 1984 by C&G Audio & Video Recording & Duplicating Inc. (C&G Inc. 376) (cassette)
20	Mahmud Mahmudi Khonsāri (male voice) Ahmad Ebādi (*setār*) Habibollāh Badii (violin)	"*Barg-e Sabz*" no. 165, commercial recording of a programme originally broadcast by Iranian Radio in the 1970s; re-released in the USA in 1987 by Caspian Inc. (518) (cassette)
21	Mohammad Rezā Shajariān (male voice) Ahmad Ebādi (*setār*)	"*Mokhālef-e Segāh*", originally recorded in Iran, before 1979; re-released as part of a commercial cassette in the USA by C&G Inc. (SXC 468) in the early 1980s (cassette)
22	Hossein Malek (*santur*)	From "*Ostādān-e Musiqi-e Sonnati-e Irān*" ("Masters of Iranian Traditional Music") series, SARTMS, no. 10, on the *Āhang-e Ruz* label. Originally recorded and published in Iran as a commercial LP disc, before 1979; re-released as a commercial cassette in the USA in 1984 by C&G Inc. (380) (cassette)
23	Jean During (*setār*) Ziā Mir Adbolbāghi (*tombak*)	From a live recording of a concert given at Leighton House, London W14 on 29.10.83 (reel)

24	Dāriouche Safvate (*setār*) (spelt Dāryush Safvat just on this publication)	From a commercial recording, published by The Center for Traditional and Spiritual Music of the East, New York (no date given)
25	Nur Ali Borumand (*tār*)	Live recording, made in Urbana by Bruno Nettl and Stephen Blum in May 1967 (made available courtesy of Professor Nettl) (reel)
26	Nur Ali Borumand (*tār*)	Live recording, made in Urbana by Bruno Nettl and Stephen Blum in May 1967 (made available courtesy of Professor Nettl) (reel)
27	Mohammad Rezā Shajariān (male voice) Farāmarz Pāyvar (*santur*)	From a commercial cassette recorded and published by *Moasseseh-ye Honari va Farhangi-e Māhur* in Iran, 1980. (Distributed outside Iran by the Farabi Cultural Institute, Finland) (cassette)
28	Mohammad Rezā Shajariān (male voice) Hooshang Zarif (*tār*) Hassan Nāhid (*nei*) (Farāmarz Pāyvar - *santur*) (Rahmatollāh Badii - violin) (Mohammad Esmāili - tombak)	"*Golhā-ye Tāzeh*" no. 107 ("*Hodi va Pahlavi*"); commercial recording of a programme originally broadcast by Iranian Radio in the 1970s (cassette)
29	Farāmarz Pāyvar (*santur*) Rahmatollāh Badii (*kamāncheh*) (Hooshang Zarif - *tār*) (Hassan Nāhid - *nei*) (Mohammad Esmāili - *tombak*)	From: "*Āsāri az Darvish Khān*"; commercial cassette recorded and published in Iran, before 1979; publisher unknown (cassette)

Māhur

30	Hossein Alizādeh (*tār*)	From a live recording of a concert given at Leighton House, London W14 on 21.2.86 (same as performance 2) (reel)
31	Hossein Alizādeh (*tār*)	From a commercial cassette, "*Ney Navā*", recorded and published in Iran c1984 by *Sāzmān-e Enteshārāti va Farhangi-e Ebtekār* (cassette)
32	Mohammad Rezā Lotfi (*setār*) Nāsser Farhangfar (*tombak*)	From a commercial cassette, "*Yādi az Darvish Khān*", recorded and published in Iran c1984 by the *Kanoon-e Honari va Fekri-e Chavosh* (cassette)
33	Farāmarz Pāyvar (*santur*) Abdol Vahāb Shahidi (male voice and *'ud*) Asqar Bahāri (*kamāncheh*) (Hassan Nāhid - *nei*) (Jalil Shahnāz - *tār*) (Hossein Tehrāni - *tombak*)	From "Iran: Musique Persane" Ocora 57; recorded in Tehran in 1979, and published in Paris in 1984 (LP disc) (same publication as performance 17)
34	Mohammad Rezā Shajariān (male voice) Habibollāh Badii (violin) with the Orchestra of Iranian Radio and Television, conducted by Fereidoon Sha'bāziān	"*Golhā-ye Tāzeh*" no. 77 ("*por kon piāleh rāh*"); commercial recording of a programme originally broadcast by Iranian Radio in the 1970s (cassette)
35	Dāriush Talāi (*tār*) Jamshid Shemirāni (*tombak*)	From "Tradition Classique de l'Iran. Le Tār" Harmonia Mundi HM 1031;

		recorded in France in 1979, and published in France in 1980 (LP disc)
36	Zeidollāh Tului (*tār*)	Commercial recording of a live concert given by the *Anjoman-e Farhangi-e Irān va Itāliā* at the Italian Embassy in Tehran c1985/6 (cassette)
37	Ahmad Ebādi (*setār*)	From "Classical Music of Iran. Dastgah Systems. Volume I", Folkways 8831; recorded in Iran and published in the USA in 1966 (disc)
38	Eskandar Ebrāhimi (*setār*)	From "Music from Iran" Argo ZFB 51; recorded in Mashhad, Iran, in 1955 and published by Decca (UK) in 1971 (disc)
39	Dāriush Talāi (*setār*)	From "Iran. Volume I. Anthologie de la Musique Traditionelle" Ocora 5585 40; recorded in France and first published in 1979.
40	Parisā (female voice) *Gorooh-e Darvish* (musicians not specified)	Commercial cassette recorded and published in Iran c1977; publisher unknown (cassette)
41	Farāmarz Pāyvar (*santur*) Khātereh Parvāneh (female voice) Rahmatollāh Badii (*kamāncheh*) Hooshang Zarif (*tār*) Mohammad Esmāili (*tombak*)	From "A Persian Heritage. Classical Music of Iran" Nonesuch H 72060; recorded in Ann Arbor, Michigan (USA) in 1973 and published in 1974 (disc)

Radifs

***Radif* 1** The *Radif* of Mirzā Adbollāh in the version of Nur Ali Borumand (*tār*), recorded in 1972 by the Iranian Radio and Television Organisation. A notated version of this *radif*, with transcriptions by Jean During (and accompanied by the cassette recordings) was published in 1991 (During 1991a) (cassette)

***Radif* 2** *Radif-e Āvāzi* (vocal *radif*) of Mahmud Karimi, recorded for the Iranian government in the mid 1970s and published in 1978, together with transcriptions by Mohammad Taghi Massoudieh (Massoudieh 1978). (cassette)

***Radif* 3** *Radif* published in 1976 as a set of ten long-playing discs by *Kānoon-e Parvaresh-e Fekri-e Koodakān va Nowjavānān* (Institute for the Intellectual Development of Children and Young Adults) under the supervision of Kāmbeez Roshanravān; *Āhang-e Ruz* 2001-2010 (disc). The following musicians are heard on these recordings:

Mohammad Rezā Shajariān - male voice
Esmāil Tehrāni - *santur*
Hooshang Zarif - *tār*
Mehrbānu Tofeegh - *setār*
Rahmatollāh Badii - *kamāncheh*
Kamāl Sāmeh - *nei*
(Mohammad Delnavāzi - *'ud*)
(Kāzem Ālami - *tār*)
(Dāvood Vāseghi - *tombak*)

***Radif* 4** The *radif* of Mussā Ma'rufi published in 1963 (Barkeshli and Ma'rufi 1963).

A recording of *dastgāh Segāh* from this *radif* played on the *tār* by Soleymān Ruhafzā (probably dating from 1959-60), and with an

introduction by Ma'rufi himself was also available for this study (courtesy of Professor Bruno Nettl; original copies provided by the University of Tehran) (cassette).

For the present study, the author has used the sound recording of *Segāh* from this *radif* for the analyses of Chapters Four, Five, and Six, and the published notation for the analyses of Chapter Seven.

***Radif* 5** The first book of Abol Hassan Sabā's violin *radif* (*Dowreh-ye Avval-e violon*), c.1967 (originally published in the 1950s)

***Radif* 6** The second book of Abol Hassan Sabā's violin *radif* (*Dowreh-ye Dovvom-e violon*), c.1967 (originally published in the 1950s)

***Radif* 7** *Māhur* from the *radif* of Mirzā Abdollāh, played on the *santur* by Pashang Kāmkār; commercial cassette recorded and published in Iran in 1983 by *Sherkat-e Ruh-Afzā* (cassette)

B - Musicians Performing as Soloists in the Analysed Performances and *Radifs*

Afshārniā, Abdol Naqi	*nei*	performance 1
Alizādeh, Hossein	*tār*	performances 2, 30, and 31
Andalibi, Jamshid	*nei*	performance 15
Badii, Rahmatollāh	*kamāncheh*	performances 29 and 42; *radif* 3
Badii, Habibollāh	violin	performances 20, 34, and 42
Bahāri, Asqar	*kamāncheh*	performances 8, 14, and 33
Borumand, Nur Ali	*tār*	performances 11, 25, and 26; *radif* 1
During, Jean	*setār*	performance 23
Ebrāhimi, Eskandar	*setār*	performance 39
Ebādi, Ahmad	*setār*	performances 4, 20, 21, and 38
Golpāyegāni	male voice	performance 11
Kāmkār, Pashang	*santur*	performances 1 and 15; *radif* 7
Karimi, Mahmoud	male voice	*radif* 2
Khāledi, Mehdi	violin	performance 19
Mahmudi Khonsāri, Mahmud	male voice	performance 20
Lotfi, Mohammad Rezā	*tār* and *setār*	performances 1, 7, 32, and 37
Majd, Lotfollāh	*tār*	performance 10
Malek, Hossein	*santur*	performances 12 and 22
Meshkātiān, Parviz	*santur*	performance 16
Musavi, Mohammad	*nei*	performance 43
Nāhid, Hassan	*nei*	performances 17 and 28
Nāzeri, Shahrām	male voice	performance 37
Parisā (Fātemeh Vā'ezi) (known simply as Parisā)	female voice	performance 41
Parvāneh, Khātereh	female voice	performance 42
Pāyvar, Farāmarz	*santur*	performances 17, 18, 27, 29, 33, and 42
Ruhafzā, Soleymān	*tār*	*radif* 4 (recording)
Sabā, Abol Hassan	*setār*	performance 3
Safvate, Dāriouche	*setār*	performance 24
Sāmeh, Kāmal	*nei*	*radif* 3
Shafeiān, Rezā	*santur*	performances 6 and 9
Shahidi, Abdol Vahāb	male voice and *'ud*	performances 14, 17, and 33
Shahnāz, Jalil	*tār*	performances 14 and 17

Shajariān, Mohammad Rezā	male voice	performances 1, 7, 21, 27, 28, and 34 *radif* 3
Sharif, Farhang	*tār*	performance 13
Shekārchi, Ali Akbar	*kamāncheh*	performances 1 and 37
Talāi, Dāriush	*tār* and *setār*	performances 35 and 40
Tehrāni, Esmāil	*santur*	*radif* 3
Tofeegh, Mehrbānu	*setār*	*radif* 3
Tului, Zeidollāh	*tār*	performances 5 and 36
Zarif, Hooshang	*tār*	performances 28 and 42; *radif* 3

Appendix Two - Performances and *Radifs* of *Segāh* Analysed in Terms of Internal Organisation

Each of the performances and *radifs* of *Segāh* analysed in this study (with the exception of performances 19, 21, and 28) are presented in this Appendix with details of internal sectioning on which the discussion and analyses of Chapter Four are based. This includes the progression and length (in minutes and seconds) of 1) the main modal sections of each performance or *radif* (listed on the far left-hand side of each page, with a vertical line indicating the continuation of the modal section), and 2) the individual *gushehs* and their internal sectioning. The numbering of sections is purely for the purposes of analysis. The metrical character of each section of the rendition is indicated using capital letters as follows: M = measured; U = unmeasured; M-U = begins measured and becomes unmeasured. Finally, the pitch (relative to e-*koron* as *shāhed* of the *darāmad* of *Segāh*) on which each section of the rendition ends is indicated on the far right-hand side of the page (with instrument/voice indicated as appropriate; there is no indication of octave). A minus sign (-) after a pitch letter indicates *koron* (approximate half flat); an "f" after a pitch letter indicates "flat"; "*forud*" means that the section ends with a *forud* pattern and a final rest on e-*koron*. Due to limits of space, analysis of metre and final pitches has not been included in Chapter Four, but the basic data has been maintained in this Appendix.

In some of the measured pieces, such as *pishdarāmad* and *reng*, the progression of modal movement is indicated in brackets, using the following abbreviations: d = *darāmad*, z = *zābol*, mu = *muyeh*, mo = *mokhālef*, ma = *maqlub*, n.ma = *naqmeh-ye maqlub*, s.mu = *shekasteh muyeh*, he = *hesār*, and haz = *hazeen*. In performances with more than one soloist, the instruments/voice in each section of the performance are indicated, and the musicians can be identified by referring to Appendix One. As explained earlier in the thesis, "*eshāreh*" indicates a brief allusion to a *gusheh* (or *dastgāh*) in the context of another. The suffixes "*-e*" and "*-ye*" denote the possessive case. For example, *zarbi-e darāmad* indicates a measured piece in the *darāmad* mode.

Performance 1 (Ensemble)

darāmad	1. *pishdarāmad* (ensemble) (d,mu,mo,n.ma,d)	5:54 (M)	*forud*
	2. *darāmad* (*tār*, *santur*)	3:15 (U)	*forud*
9:09			
zābol	3. *kereshmeh-ye zābol* (*tār*)	0:54 (M)	E-
0:54			
darāmad	4. continuation of *darāmad* (*tār* and *santur*)	0:46 (U)	*forud*
	5. *zang-e shotor* (*zarbi-e darāmad*) (ensemble) (d, *eshāreh* to mu) (ends with clapping)	2:38 (M)	*forud*
6:21			
	6. continuation of *darāmad* (voice and *tār*)	2:57 (U)	voi. E-
zābol	7. *zābol* (voice and *tār*) (voice and *kamāncheh* at end)	1:59 (U)	E-
1:59			
muyeh	8. *muyeh* (voice and *kamāncheh*)	1:29 (U)	voi. G *kam.* G
1:29			
mokhālef	9. *mokhālef* (voice and *kamāncheh*)	0:54 (U)	voi. G *kam.* G
0:54			
muyeh	10. *muyeh* (*kamāncheh*)	0:37 (U)	*kam.* G
	11. *shekasteh muyeh* (voice and *kamāncheh*)	0:42 (U)	voi. E- *kam.*E-
1:19			
darāmad	12. *forud* (voice and *kamāncheh*)	0:13 (U)	E-
0:13			
muyeh	13. *shekasteh muyeh* (*kamāncheh* and *tār*)	0:25 (U)	E-
0:25			
darāmad	14. *forud* (*kamāncheh* and *tār*)	0:31 (U)	*forud*
0:31			
maqlub	15. *maqlub* (voice and *tār*)	0:08 (U)	C
0:08			
mokhālef	16. *mokhālef* (voice and *tār*)	0:18 (U)	G
	17. *chāhārmezrāb-e mokhālef* (mo, *eshāreh* to *masnavi*)(*tār*, *nei* and *zarb*)	2:16 (M)	C
6:07			
	18. continuation of *mokhālef* (*tār* - voice and *nei* - *nei* and *tār*)	3:33(U)	voi. A- *nei* A-
maqlub	19. *mokhālef be maqlub* (voice and *tār*)	0:32 (U)	C
0:32			
mokhālef	20. continuation of *mokhālef* (voice and *tār*)	0:53 (U)	voi. G

			tār A-
	21. *masnavi-e mokhālef* (voice and *nei* - *nei* and *tār*)	1:21 (U)	voi. A *nei* G
3:45			*tār* A-
	22. continuation of *mokhālef* (voice and *nei* - voice and *tār*)	1:31 (U)	voi. A- *tār* C
hesār	23. *hesār* (voice and *tār*)	0:36 (U)	voi. E- *tār forud*
0:36			
darāmad	24. *hodi va pahlavi* (voice and *tār*)	1:28 (M)	*forud*
1:28			
maqlub	25. *maqlub* (voice and *tār*)	0:16 (U)	C
0:16			
mokhālef	26. continuation of *mokhālef* (voice and *tār*)	0:18 (U)	A-
0:18			
muyeh	27. *shekasteh muyeh* (voice and *tār*)	0:13 (U)	voi. E- *tār* G
0:13			
darāmad	28. *forud* (voice and *tār*)	0:20 (U)	*forud*
0:20			
mokhālef	29. continuation of *mokhālef* (*tār*)	0:19 (U)	E-
0:19			
muyeh	30. *shekasteh muyeh* (*tār*)	0:26 (U)	G
0:26			
darāmad	31. *forud* (*tār*)	0:15 (U)	*forud*
	32. *tasnif* (voice and ensemble) (d,z,mu,mo,d - short section with free	8:11 (M)	E-
10:57	rhythm voice while ensemble keeps rhythm going)		
	33. *reng* (ensemble) (d,mu,mo,d)	2:31 (M)	*forud*
(clapping at end)		48:39	

Performance 2

darāmad	1. *pishdarāmad* (d,mu,za,d)	5:07 (M)	E-
5:30	2. *darāmad*	0:23 (U)	*forud*
zābol	3. *zābol*	0:31 (U)	E-
0:31			
darāmad	4. *darāmad*	0:34 (U)	E-
	5. *zarbi-e darāmad*	0:26 (M)	E-
3:35			
	6. continuation of *darāmad* (begins with retuning)	1:13 (U)	G
	7. *zarbi-e darāmad*	1:12 (M)	G
	8. continuation of *darāmad*	0:10 (U)	E-
zābol	9. *zābol*	0:07 (U)	G
	10. *zarbi-e zābol* (includes similar material to *zarbi-e darāmad*)	4:17 (M)	G
4:59			
	11. continuation of *zābol* (also *eshāreh* to *muyeh*)	0:35 (U)	E-
muyeh	12. *muyeh*	1:45 (U)	E-
	13. *zarbi-e muyeh*	1:24 (M)	E-
3:09			
mokhālef	14. *mokhālef*	0:39 (U)	G
	15. slow *zarbi* based on *masnavi*	1:20 (M)	A-
	then on *mokhālef*	2:37 (M)	
	(with *eshāreh* to n.ma)		
	16. *chāhārmezrāb-e mokhālef*	0:46 (M)	C
	then based on n.ma	1:24 (M)	
	then based on *mokhālef* again	0:55 (M)	
8:19			
	17. continuation of *mokhālef*	0:38 (U)	G
darāmad	18. *forud* (with short sections cf *zarbi-e darāmad*)	0:51 (U)	E-
	19. *hodi (va pahlavi)*	0:15 (M)	*forud*
4:42			
	20. *forud*	0:33 (U)	E-
	21. *hejrān*, piece in *darāmad* mode (with *eshāreh* to *mokhālef*)	3:03 (M)	E-
(clapping at end)		30:45	

Performance 3

darāmad	1.	*darāmad*	0:30 (U)	*forud*
	2.	*chāhārmezrāb-e darāmad*	1:39 (M)	E-
2:27				
	3.	continuation of *darāmad*	0:18 (U)	E-
zābol	4.	*kereshmeh-ye zābol*	0:30 (M)	E-
	5.	continuation of *zābol*	1:27 (U)	G
	6.	*chāhārmezrāb-e zābol*	0:37 (M)	A-
	7.	continuation of *zābol*	0:08 (U)	G
3:46				
	8.	*kereshmeh-ye zābol*	0:21 (M)	G
	9.	continuation of *zābol*	0:43 (U)	E-
muyeh	10.	*muyeh*	1:17 (U)	E-
	11.	*shekasteh muyeh*	0:49 (U)	E-
2:06				
mokhālef	12.	*mokhālef*	1:05 (U)	G
	13.	*kereshmeh-ye mokhālef*	0:25 (M)	A-
3:51				
	14.	continuation of *mokhālef* (*eshāreh* to *maqlub*)	1:33 (U)	C
	15.	*naqmeh-ye maqlub*	0:38 (M)	G
	16.	continuation of *mokhālef*	0:10 (U)	E-
muyeh	17.	*shekasteh muyeh*	0:16 (U)	E-
0:16				
darāmad	18.	*forud*	0:09 (U)	*forud*
0:09				
maqlub	19.	*maqlub*	0:47 (U)	C
0:47				
mokhālef	20.	continuation of *mokhālef*	0:05 (U)	G
	21.	*hazeen*	0:24 (U)	G
1:39				
	22.	*masnavi-e mokhālef*	1:10 (U)	G
darāmad	23.	*forud*	0:52 (U)	*forud*
0:52				
			15:53	

Performance 4

darāmad	1.	*darāmad*	0:57 (U)	*forud*
|				
|	2.	*chāhārmezrāb-e darāmad*	0:55 (M)	*forud*
| 2:59				
|	3.	continuation of *darāmad*	1:07 (U)	E-
|				
zābol	4.	*zābol*	0:11 (U)	G
|				
|	5.	*chāhārmezrāb-e zābol* (including *eshāreh* to *muyeh*)	1:00 (M)	E-
| 1:36				
|	6.	continuation of *zābol*	0:25 (U)	G
|				
muyeh	7.	*muyeh*	0:30 (U)	G
|				
|	8.	*chāhārmezrāb-e muyeh*	0:11 (M)	G
| 1:14				
|	9.	continuation of *muyeh*	0:33 (U)	E-
|				
darāmad	10.	*hodi va pahlavi*	0:47 (M)	E-
| 0:47				
muyeh	11.	*muyeh*	0:31 (U)	E-
| 0:31				
mokhālef	12.	*mokhālef*	0:02 (U)	C
|				
|	13.	*chāhārmezrāb-e mokhālef*	0:49 (M)	C
|				
|	14.	continuation of *mokhālef*	0:22 (U)	C
| 2:06				
|	15.	*naqmeh-ye maqlub*	0:38 (M)	A-
|				
|	16.	continuation of *mokhālef*	0:15 (U)	F
|				
darāmad	17.	*forud*	0:21 (U)	E-
| 0:21				
|				
			9:34	

Performance 5

darāmad	1.	*darāmad*	1:25 (U)	E-
	2.	slow *zarbi* in mode of *darāmad* (d,z,mu,mo,he,return to d after each section)	4:00 (M)	E-
	3.	continuation of *darāmad*	1:12 (U)	E-
	4.	*chāhārmezrāb-e darāmad* (d, brief *eshārehs* to *mokhālef* and *hesār*)	2:19 (M)	*forud*
9:31				
	5.	continuation of *darāmad*	0:35 (U)	*forud*
zābol	6.	*zābol*	1:04 (U)	G
	7.	*chāhārmezrāb-e zābol*	1:13 (M)	Bf(Bf-A-)
	8.	continuation of *zābol*	0:45 (U)	E-
3:02				
darāmad	9.	*zang-e shotor* (*chāhārmezrāb-e darāmad*) (*eshārehs* to other *gushehs*)	2:48 (M)	*forud*
2:56				
	10.	*forud*	0:08 (U)	G
mokhālef	11.	*mokhālef* (including *eshāreh* to *hazeen*)	0:59 (U)	A-
	12.	*masnavi-e mokhālef*	0:55 (U)	G
	13.	*naqmeh-ye maqlub*	0:23 (M)	G
3:28				
	14.	continuation of *mokhālef*	0:44 (U)	G
	15.	*eshāreh* to *hazeen* (continuation of *mokhālef*)	0:27 (U)	G
muyeh	16.	*muyeh*	0:25 (U)	Bf(C-Bf)
0:25				
mokhālef	17.	*chāhārmezrāb-e mokhālef*	0:24 (M)	G
0:24				
hesār	18.	*hesār*	0:11 (U)	G
0:11				
darāmad	19.	*forud*	0:27 (U)	E-
2:10				
	20.	*reng* (starts like *zang-e shotor*, but is varied, with *eshārehs* to other *gushehs*)	1:43 (M)	*forud*
			22:07	

Performance 6

darāmad	1.	*darāmad*	0:49 (U)	E-
	2.	*kereshmeh-ye darāmad*	0:32 (U)	E-
	3.	continuation of *darāmad*	1:23 (U)	*forud*
	4.	*pishdarāmad* (*chāhārmezrāb-e sangeen*) (d,z,mu,mo,d)	3:33(M)	*forud*
	5.	continuation of *darāmad*	1:07 (U)	*forud*
10:42	6.	*chāhārmezrāb-e darāmad* (d,z,mo,d)	3:18 (M)	*forud*
zābol	7.	*zābol*	2:14 (U)	E-
	8.	*chāhārmezrāb-e zābol*	2:08 (M)	E-
7:27	9.	continuation of *zābol* (*eshārehs* to *muyeh* and *mokhālef* at end)	3:05 (U)	*forud*
mokhālef	10.	*mokhālef*	1:52 (U)	G
	11.	*chāhārmezrāb-e mokhālef* (mo,ma,mo)	2:21 (M)	A-
	12.	*masnavi-e mokhālef*	1:50 (U)	A-
	13.	continuation of *mokhālef*	0:43 (U)	C
11:55	14.	*naqmeh-ye maqlub*	0:45 (M)	C
	15.	continuation of *mokhālef*	2:37 (U)	G
	16.	*qeteh-ye zarbi-e mokhālef* (in the rhythm of *kereshmeh*; *eshāreh* to *maqlub*)	1:15 (M)	C
	17.	continuation of *mokhālef*	0:32 (U)	G
hesār	18.	*hesār*	0:24 (U)	G
0:24				
muyeh	19.	*muyeh*	0:31 (U)	E-
	20.	*shekasteh muyeh*	0:50 (U)	E-
1:21				
darāmad	21.	*forud*	0:44 (U)	*forud*
	22.	*hodi va pahlavi*	1:08 (M)	*forud*
4:32	23.	*forud*	1:14 (U)	*forud*
	24.	*qeteh-ye zarbi az Sabā* (written for *santur*) (d)	1:26 (M)	*forud*
			36:21	

Performance 7 (Ensemble)

darāmad	1.	*pishdarāmad* (ensemble) (*eshāreh* to *mokhālef*)	1:05 (M)	*forud*
	2.	*tasnif* (ensemble and voice) (d,mu,mo,d)	5:56 (M)	*forud*
	3.	*darāmad* (*tār*)	1:03 (U)	*forud*
11:49				
	4.	*chāhārmezrāb-e darāmad* (*tār*)	1:39 (M)	*forud*
	5.	continuation of *darāmad* (voice and *tār*)	2:06 (U)	voi. E- *tār forud*
zābol	6.	*zābol* (voice and *tār*)	2:52 (U)	E-
2:52				
muyeh	7.	*muyeh* (voice and *tār*)	1:03 (U)	E-
	8.	*kereshmeh-ye muyeh* (*tār*)	0:22 (M)	G
	9.	*muyeh* (*tār*)	0:28 (U)	*forud*
	10.	*shekasteh muyeh* (voice and *tār*)	0:53 (U)	E-
3:43				
	11.	*kereshmeh-ye muyeh* (*tār*)	0:44 (M)	E-
darāmad	12.	*forud* (*tār*)	0:13 (U)	*forud*
0:13				
mokhālef	13.	*mokhālef* (voice and *tār*)	1:38 (U)	G
1:38				
muyeh	14.	*shekasteh muyeh* (voice and *tār*)	0:22 (U)	E-
0:22				
darāmad	15.	*forud* (voice and *tār*)	1:02 (U)	voi. E- *tār forud*
7:02				
	16.	*tasnif* (ensemble and voice) (same as 2) (d,mu,mo,d)	6:00 (M)	*forud*
			27:26	

Performance 8

darāmad	1.	*darāmad*	0:24 (U)	E-
|				
|				
|	2.	*pishdarāmad* (d,mu,mo,d)	1:31 (M)	*forud*
|				
| 2:59				
|	3.	continuation of *darāmad*	1:04 (U)	E-
|				
zābol	4.	*zābol*	1:10 (U)	E-
|				
| 1:10				
muyeh	5.	*muyeh*	0:52 (U)	*forud*
|				
| 0:52				
mokhālef	6.	*mokhālef*	1:31 (U)	A-
|				
|				
|	7.	slow *zarbi* in *mokhālef*	1:07 (M)	A-
| 2:38				
|				
hesār	8.	*hesār*	0:52 (U)	A-
|				
| 0:52				
mokhālef	9.	*eshareh* to *hazeen*	0:20 (U)	E-
|				
| 0:20				
darāmad	10.	*forud*	0:08 (U)	E-
| 0:08				
|				
zābol	11.	*zābol*	0:44 (U)	G
| 0:44				
|				
hesār	12.	*eshāreh* to *hesār*	0:09 (U)	G
| 0:09				
darāmad	13.	*forud*	1:02 (U)	*forud*
| 1:02				
			10:54	

Performance 9

darāmad	1.	*pishdarāmad* (z,mu,mo,ma,d)	6:52 (M)	*forud*
	2.	*darāmad*	3:08 (U)	*forud*
	3.	*chāhārmezrāb-e darāmad*	5:53 (M)	*forud*
19:56	4.	continuation of *darāmad*	4:03 (U)	*forud*
zābol	5.	*zābol* (*eshāreh* to *hazeen* in *forud*)	4:10 (U)	E-
4:10				
darāmad	6.	*reng-e darāmad*	0:50 (M)	E-
0:50				
	7.	*zarb* solo	3:49 (M)	
3:49				
mokhālef	8.	*chāhārmezrāb-e mokhālef*	(1:31) (M)	(C)
		(*eshāreh* to *maqlub* twice)	(5:46) (M)	(C)
			7:17 (M)	C
	9.	*mokhālef*	2:15 (U)	G
	10.	*masnavi*	0:59 (U)	G
	11.	continuation of *mokhālef*	2:18 (U)	G(Bf)
13:40	12.	*naqmeh-ye maqlub*	0:33 (M)	C
	13.	*eshāreh* to *hazeen*	0:18 (U)	A-
maqlub	14.	*kereshmeh-ye maqlub*	0:25 (M)	C
	15.	continuation of *maqlub*	1:12 (U)	C
1:37				
hesār	16.	*eshāreh* to *hesār*	0:18 (U)	G
0:18				
darāmad	17.	*forud*	0:17 (U)	E-
0:17				
muyeh	18.	*shekasteh muyeh*	0:20 (U)	E-
0:20				
darāmad	19.	*forud*	0:47 (U)	*forud*
	20.	*qeteh-ye zarbi dar darāmad* (d,mo,d)	1:28 (M)	E-
	21.	*tasnif* (instrumental) (d,mu,mo,s.mu,d)	2:32 (M)	E-
6:44	22.	*reng* (d,mo,d)	1:57 (M)	*forud*
	23.	*zarb* solo	2:59 (M)	
2:59				
			54:40	

Performance 10

darāmad	1.	*darāmad*	0:39 (U)	E-
|				
|				
|	2.	*chāhārmezrāb-e darāmad* (d,z,mu,d)	4:36 (M)	*forud*
| 8:40				
|				
|	3.	continuation of *darāmad*	3:25 (U)	E-
|				
|				
zābol	4.	*zābol*	1:06 (U)	E-
|				
| 1:06				
mokhālef	5.	*mokhālef*	1:17 (U)	G
|				
|				
|	6.	(section based on) *masnavi*	0:37 (U)	G
|				
| 3:02				
|	7.	continuation of *mokhālef*	1:08 (U)	G
|				
|				
muyeh	8.	*shekasteh muyeh*	0:16 (U)	E-
|				
| 0:16				
darāmad	9.	*forud*	1:36 (U)	*forud*
| 1:36				
			———	
			14:40	

Performance 11

darāmad	1.	*darāmad* (*tār*)	0:08 (U)	*forud*
|				
|	2.	*chāhārmezrāb-e darāmad* (*tār*) (d)	1:21 (M)	*forud*
| 4:26				
|	3.	continuation of *darāmad* (voice and *tār*)	2:57 (U)	voi. E- *tār* E-
|				
zābol	4.	*zābol* (voice and *tār*)	2:48 (U)	E-
|				
|	5.	*qeteh-ye zarbi-e zābol* (*tār*)	0:37 (M)	G
| 3:47				
|	6.	continuation of *zābol* (*tār*)	0:22 (U)	E-
|				
muyeh	7.	*muyeh* (voice and *tār*)	1:40 (U)	voi. E- *tār forud*
| 1:40				
mokhālef	8.	*mokhālef* (voice and *tār*) (including short *zarbi*)	2:59 (U)	voi. A- *tār* G
|				
|	9.	*kereshmeh-ye mokhālef* (*tār*)	0:46 (M)	G
| 5:10				
|	10.	continuation of *mokhālef* (voice and *tār*) (including short *eshāreh* to *maqlub*)	1:25 (U)	voi. A- *tār* A-
|				
maqlub	11.	*maqlub*	0:29 (U)	voi. Bf *tār* C
| 0:29				
hesār	12.	*hesār*	1:29 (U)	voi. G *tār* G
| 1:29				
darāmad	13.	*forud*	0:41 (U)	voi *forud* *tār* E-
| 1:31				
|	14.	*reng* (d)	0:50 (M)	*forud*
			18:32	

Performance 12

zābol	1.	*zābol*	1:28 (U)	E-
| 1:28				
darāmad	2.	*chāhārmezrāb-e darāmad* (d,z,d)	1:44 (M)	E-
| 1:44				
zābol	3.	*zābol*	1:38 (U)	G
|				
|	4.	*zarbi-e zābol*	1:22 (M)	E-
| 4:20				
|	5.	continuation of *zābol*	1:20 (U)	G
|				
muyeh	6.	*muyeh*	1:19 (U)	G
|				
|	7.	*zarbi-e muyeh*	0:53 (M)	E-
| 2:40				
|	8.	continuation of *muyeh*	0:28 (U)	E-
|				
mokhālef	9.	*mokhālef*	0:26 (U)	C
|				
|	10.	*chāhārmezrāb-e mokhālef*	0:49 (M)	G
|				
|	11.	continuation of *mokhālef* (including *eshāreh* to *hazeen*)	1:15 (U)	C
|				
|	12.	*naqmeh-ye maqlub*	1:19 (M)	G
| 6:48				
|	13.	continuation of *mokhālef*	1:15 (U)	C
|				
|	14.	*hazeen*	0:25 (U)	G
|				
|	15.	continuation of *mokhālef*	0:11 (U)	C
|				
|	16.	*chāhārmezrāb-e mokhālef*	0:58 (M)	C
|				
|	17.	continuation of *mokhālef*	0:10 (U)	G
			17:00	

Performance 13

darāmad	1.	*darāmad*	2:19 (U)	E-
|				
|				
|	2.	*chāhārmezrāb-e darāmad* (d,z,mu,mo,he,*eshāreh* to n.ma,d)	3:49 (M)	A-
| 7:40				
|	3.	continuation of *darāmad*	1:32 (U)	G
|				
|				
muyeh	4.	*muyeh*	0:35 (U)	G
|				
|				
|	5.	*shekasteh muyeh*	0:54 (U)	E-
| 1:29				
|				
zābol	6.	*zābol*	1:06 (U)	*forud*
|				
| 1:06				
mokhālef	7.	*mokhālef* (includes short measured sections)	3:08 (U)	Bf
|				
| 3:08				
hesār	8.	*hesār*	0:09 (U)	C>(Bf)
|				
| 0:09				
darāmad	9.	*forud*	0:31 (U)	E-
|				
| 0:31				
muyeh	10.	*shekasteh muyeh*	0:19 (U)	E-
|				
| 0:19				
darāmad	11.	*forud*	0:29 (U)	*forud*
| 0:29				
			14:51	

Performance 14 (Ensemble)

darāmad	1.	*pishdarāmad* (ensemble) (d,mu,d)	3:27 (M)	E-
	2.	*darāmad* (*tār*)	1:10 (U)	*forud*
11:41				
	3.	*chāhārmezrāb-e darāmad* (*tār*) (d,mu,mo,d)	2:42 (M)	*forud*
	4.	continuation of *darāmad* (voice and *tār*)	4:22 (U)	*forud*
muyeh	5.	*muyeh* (voice and *kamāncheh*)	2:10 (U)	E-
2:10				
mokhālef	6.	*mokhālef* (voice and *kamāncheh*)	2:18 (U)	E-
2:18				
muyeh	7.	*shekasteh muyeh* (voice and *tār*)	0:31 (U)	E-
0:31				
darāmad	8.	*forud* (voice and *tār*)	1:13 (U)	voi. E- *tār forud*
	9.	*tasnif* (ensemble and voice) (d,mu,mo,s.mu,d - cf performance 17)	5:31 (M)	E-
7:05				
	10.	*reng* (ensemble) (d - cf performance 17)	0:21 (M)	*forud*
			23:45	

Performance 15

(all sections played by *nei* and *santur* together/alternating unless stated otherwise)

darāmad	1.	*pishdarāmad* (d,mu,z,mo,d)	6:01 (M)	E-
10:15	2.	*darāmad*	4:14 (U)	*nei* E- *sanfonud*
zābol	3.	*kereshmeh ye zābol*	0:25 (M)	E-
0:25				
darāmad	4.	continuation of *darāmad*	0:36 (U)	*nei* E- *sanfonud*
0:36				
zābol	5.	*zābol*	1:44 (U)	*san*.E- *nei* E-
1:44				
darāmad	6.	slow *zarbi* in *darāmad* (d,mu,d)	2:02 (M)	E-
2:02				
muyeh	7.	*muyeh*	1:55 (U)	*sanfonud* *nei* E-
1:55				
mokhālef	8.	*mokhālef* (solo *santur*)	0:29 (U)	C
	9.	*chāhārmezrāb-e mokhālef* (mo,ma,mo)	2:49 (M)	Ef
	10.	continuation of *mokhālef*	0:13 (U)	*san*.G *nei* C
3:54				
	11.	*hazeen*	0:23 (U)	*san*.G *nei* G
maqlub	12.	*maqlub* (solo *nei*)	0:25 (U)	C
0:25				
mokhālef	13.	*masnavi-e mokhālef*	1:27 (U)	*san*.C *nei* G
1:27				
darāmad	14.	*forud* (solo *santur*)	0:16 (U)	*san*.C
0:16				
mokhālef	15.	*hazeen*	0:30 (U)	*san*.E- *nei* F
0:30				
darāmad	16.	*hodi va pahlavi*	1:20 (M)	*sanfonud* *neifonud*
3:06				
	17.	final *zarbi*, in the rhythm of *rajaz* (d,mu,mo,d)	1:46 (M)	*forud* (*santur* and *nei*)
			26:35	

Performance 16

darāmad	1.	*pishdarāmad* (d,z,mu,mo,ma,mu,d) (very comprehensive inclusion of modes)	5:41 (M)	E-
	2.	*darāmad*	1:06 (U)	*forud*
	3.	*naqmeh*	1:30 (U)	*forud*
10:03				
	4.	*zarbi-e darāmad* (based on *kereshmeh*) (d)	1:07 (M)	E-
	5.	continuation of *darāmad*	0:39 (U)	E-
zābol	6.	*zābol*, including a section of *bastenegār*	1:45 (U)	*forud*
1:45				
mokhālef	7.	*mokhālef*	0:40 (U)	A-
	8.	*chāhārmezrāb-e mokhālef* (mo,ma,mo)	2:46 (M)	C
5:38				
	9.	continuation of *mokhālef*	2:12 (U)	A-
maqlub	10.	(*mokhālef be*) *maqlub*	0:28 (U)	C
0:28				
mokhālef	11.	slow *zarbi* in mode of *mokhālef* (*eshāreh* to *naqmeh-ye maqlub*)	0:29 (M)	C
	12.	*hazeen*	0:29 (U)	E-
0:58				
muyeh	13.	*eshāreh* to *muyeh*	0:16 (U)	G
0:16				
darāmad	14.	*forud*	0:24 (U)	*forud*
3:16				
	15.	*chāhārmezrāb-e darāmad* (d,z,mu,mo,d)	2:52 (M)	*forud*
			22:24	

Performance 17 (Ensemble)

darāmad	1.	*pishdarāmad* (ensemble) (d)	0:58 (M)	*forud*
	2.	*darāmad* (*tār*)	0:42 (U)	E-
	3.	*chāhārmezrāb-e darāmad* (*tār* and *zarb*) (d)	1:44 (M)	*forud*
8:33				
	4.	continuation of *darāmad* (voice and *tār*)	5:09 (U)	voi.E- *tār forud*
zābol	5.	*zābol* (voice and *nei*)	1:14 (U)	voi.E- *nei* E-
1:14				
muyeh	6.	*muyeh* (voice, *nei* and *santur*)	2:03 (U)	voi.G *nei* G *san.*G
2:03				
mokhālef	7.	*mokhālef* (voice and *santur*)	2:59 (U)	E-
2:59				
muyeh	8.	*shekasteh muyeh* (voice and *santur*)	0:34 (U)	voi.and *san.* E-
0:34				
darāmad	9.	*forud* (*santur*)	0:39 (U)	*forud*
	10.	*tasnif* (voice and ensemble) (cf Performance 14) (d,mu,mo,s.mu,d)	6:00 (M)	E-
7:01				
	11.	*reng* (ensemble) (d) (cf Performance 14)	0:22 (M)	*forud*
			22:24	

Performance 18

darāmad	1.	*pishdarāmad* (d,mu,mo,d)	4:46 (M)	*forud*
	2.	*chāhārmezrāb-e darāmad* (d)	1:24 (M)	*forud*
	3.	*darāmad*	1:24 (U)	E-
	4.	*zarbi* based on *pishzanguleh*	1:56 (M)	*forud*
13:47				
	5.	continuation of *darāmad*	2:32 (U)	E-
	6.	*zarbi-e darāmad*	0:45 (M)	E-
	7.	continuation of *darāmad*	1:00 (U)	E-
zābol	8.	*zābol*	0:19 (U)	G
	9.	*chāhārmezrāb-e zābol*	0:56 (M)	G
	10.	continuation of *zābol*	1:00 (U)	G
4:10				
	11.	*chāhārmezrāb-e zābol*	0:20 (M)	G
	12.	continuation of *zābol*	1:35 (U)	E-
muyeh	13.	*muyeh*	1:31 (U)	E-
1:31				
mokhālef	14.	*mokhālef*	0:12 (U)	C
	15.	*chāhārmezrāb-e mokhālef*	1:07 (M)	C
	16.	continuation of *mokhālef*	1:18 (U)	G
4:02				
	17.	*kereshmeh-ye mokhālef*	0:30 (M)	G
	18.	*naqmeh-ye maqlub*	0:25 (M)	A-
	19.	continuation of *mokhālef*	0:30 (U)	C
maqlub	20.	*maqlub* (*mokhālef be*)	0:37 (U)	C
0:37				
mokhālef	21.	*naqmeh-ye maqlub*	1:25 (M)	A-
	22.	*masnavi* (*-e mokhālef*)	1:50 (U)	A-
3:15				
darāmad	23.	*forud*	0:53 (U)	(C)
0:53			cut short (should be E-)	
			28:15	

Performance 20

darāmad	1.	*darāmad* (*setār* solo)	2:34 (U)	E-
	2.	*zarbi-e darāmad* (*setār* solo)	2:20 (M)	E-
	3.	continuation of *darāmad* (*setār* solo) (poetry 0:26)	1:10 (U)	E-
8:13				
	4.	*chāhārmezrāb-e darāmad* (violin) (d)	2:09 (M)	*forud*
zābol	5.	*zābol* (voice and violin)	2:03 (U)	both E-
2:03				
muyeh	6.	*muyeh* (voice and violin)	3:34 (U)	voi. G vln. E-
3:34				
mokhālef	7.	*chāhārmezrāb-e mokhālef* (violin) (mo)	1:24 (M)	C
	8.	continuation of *mokhālef* (voice and violin)(including *eshāreh* to *masnavi*)	2:43 (U)	voi. G vln. C
8:09				
	9.	*naqmeh-ye maqlub* (violin)	0:11 (M)	C
	10.	continuation of *mokhālef* (voice and violin)	3:51 (U)	voi. G vln. A-
hesār	11.	*hesār* (voice and violin)	0:48 (U)	both G
0:48				
darāmad	12.	*forud* (voice and violin)	0:22 (U)	both E-
0:22				
muyeh	13.	*shekasteh muyeh* (voice and violin)	0:24 (U)	both E-
0:24				
darāmad	14.	*forud* (voice and violin)	0:36 (U)	both *forud*
0:36				
			24:09	

Performance 22

darāmad	1.	*darāmad*	1:25 (U)	*forud*
6:43	2.	*chāhārmezrāb-e darāmad* (d) (*santur* and *zarb*) (based on *zang-e shotor*)	5:07 (M)	G
	3.	continuation of *darāmad*	0:11 (U)	E-
zābol	4.	*zābol*	2:00 (U)	G
	5.	*chāhārmezrāb-e zābol*	0:19 (M)	G
	6.	*kereshmeh-ye zābol*	0:24 (M)	G
2:46	7.	continuation of *zābol*	0:03 (U)	G
muyeh	8.	*muyeh*	1:55 (U)	E-
1:55				
mokhālef	9.	*mokhālef* (and slight *eshāreh* to *masnavi*)	0:59 (U)	G
	10.	*masnavi* (*-e mokhālef*)	0:20 (U)	A-
2:41	11.	continuation of *mokhālef*	0:59 (U)	C
	12.	*hazeen*	0:15 (U)	G
	13.	*eshāreh* to *naqmeh-ye maqlub*	0:08 (U)	G
darāmad	14.	*forud*	0:33 (U)	E-
0:33				
			14:38	

Performance 23

darāmad	1.	*darāmad*	1:33 (U)	*forud*
	2.	*zang-e shotor* (*chāhārmezrāb-e darāmad*) (with *zarb*) (d)	2:02 (M)	*forud*
5:25	3.	continuation of *darāmad*	1:50 (U)	E-
zābol	4.	*zābol* (includes short section from *kereshmeh-ye muyeh* from Borumand's *radif*)	1:37 (U)	*forud*
	5.	*kereshmeh-ye zābol*	1:06 (M)	E-
	6.	continuation of *zābol*	0:36 (U)	*forud*
4:26	7.	*bastenegār*	1:07 (U)	G
hozān	8.	*hozān* (leading to *darāmad forud*)	0:21 (U)	*forud*
0:21				
hesār	9.	*hesār*	2:02 (U)	G
2:02				
hozān	10.	*hozān*	0:09 (U)	G
0:09				
darāmad	11.	*forud*	0:40 (U)	*forud*
0:40				
mokhālef	12.	*mokhālef*	0:43 (U)	C
	13.	*zarbi-e mokhālef* (with *zarb*) (mo,ma,d,mo)	2:27 (M)	E-
	14.	continuation of *mokhālef*	1:35 (U)	C
	15.	*naqmeh-ye maqlub*	0:26 (M)	Bf
5:47	16.	*zarbi-e mokhālef*	0:28 (M)	G
	17.	*forud-e mokhālef*	0:08 (U)	F
muyeh	18.	*muyeh* (*eshāreh* in *forud*)	0:14 (U)	E-
0:14				
darāmad	19.	*forud*	0:27 (U)	*forud*
	20.	*hodi va pahlavi*	1:04 (M)	*forud*
	21.	*rajaz*	0:34 (M)	E-
6:24	22.	*forud*	0:22 (U)	*forud*
	23.	*reng-e delgoshā* (with *zarb*) (d,z,mu,mo,haz,do, faster towards the end goes through same *gushehs*)	3:57 (M)	*forud*
			25:28	

Performance 24

darāmad	1.	*darāmad*	0:21 (U)	*forud*
	2.	*chāhārmezrāb* (based on *zang-e shotor*) (d,z,mu,mo,d)	1:27 (M)	*forud*
	3.	continuation of *darāmad*	1:10 (U)	*forud*
	4.	*kereshmeh-ye darāmad*	0:32 (M)	E-
	5.	continuation of *darāmad*	0:38 (U)	*forud*
	6.	*chāhārmezrāb-e darāmad* (*bahārmast*) (d,mu,mo,n.ma,d)	2:12 (M)	*forud*
	7.	continuation of *darāmad*	1:01 (U)	*forud*
12:35				
	8.	*kereshmeh-ye darāmad*	0:48 (M)	E-
	9.	continuation of *darāmad*	0:48 (U)	*forud*
	10.	*pishzanguleh*	1:12 (M)	*forud*
	11.	*zanguleh*	0:23 (M)	E-
	12.	continuation of *darāmad*	0:27 (U)	*forud*
	13.	*zarbi-e darāmad* (slow)	0:40 (M)	E-
	14.	continuation of *darāmad*	0:56 (U)	*forud*
zābol	15.	*zābol*	0:40 (U)	E-
	16.	*kereshmeh-ye zābol*	0:57 (M)	*forud*
	17.	continuation of *zābol*	0:16 (U)	G
	18.	*zarbi-e zābol* (including *eshāreh* to *hesār*)	1:09 (M)	*forud*

Performance 24 (continued)

| 3:57				
|	19.	*bastenegār*	0:55 (U)	*forud*
|				
mokhālef	20.	*mokhālef*	0:18 (U)	C
|				
|	21.	*naqmeh-ye maqlub*	0:30 (M)	C
|				
|	22.	continuation of *mokhālef*	0:16 (U)	C
|				
|	23.	*zarbi-e mokhālef*	0:18 (M)	C
|				
|	24.	continuation of *mokhālef*	0:11 (U)	C
| 2:11				
|	25.	*masnavi*	0:33 (U)	G
|				
|	26.	continuation of *mokhālef*	0:05 (U)	G
|				
darāmad	27.	*forud*	0:19 (U)	*forud*
|				
|	28.	*reng-e delgoshā* (d,mu,s.mu,d)	2:12 (M)	*forud*
2:31				
			21:14	

Performance 25

darāmad	1.	*pishdarāmad* (d,mu,z,mo,d)	5:23 (M)	*forud*
	2.	*chāhārmezrāb-e darāmad* (d)	1:12 (M)	*forud*
7:33				
	3.	*darāmad*	0:58 (U)	*forud*
zābol	4.	*zābol*	1:12 (U)	*forud*
1:12				
mokhālef	5.	*mokhālef* (starts in lower octave, cf Performance 26)	0:48 (U)	C
	6.	*naqmeh-ye maqlub*	0:23 (M)	Bf
1:37				
	7.	continuation of *mokhālef*	0:26 (U)	F
muyeh	8.	*shekasteh muyeh*	0:14 (U)	G
0:14				
darāmad	9.	*forud*	0:11 (U)	*forud*
	10.	*tasnif* (instrumental) (d,mu,mo,d)	2:40 (M)	E-
5:44				
	11.	*reng* (d,mu,mo[faster],ma,d) (this *reng* starts in the same way that found at the end of performance 26, but is longer)	2:53 (M)	*forud*
			16:20	

Performance 26

darāmad	1.	*darāmad*	2:18 (U)	*forud*
2:18				
zābol	2.	*zābol*	1:08 (U)	*forud*
1:08				
muyeh	3.	*muyeh*	1:26 (U)	*forud*
1:26				
mokhālef	4.	*mokhālef* (starts in lower octave, cf Performance 25)	0:39 (U)	C
	5.	*kereshmeh-ye mokhālef*	0:41 (M)	Ef
1:43				
	6.	continuation of *mokhālef*	0:23 (U)	A-
darāmad	7.	*forud*	0:21 (U)	*forud*
0:21				
mokhālef	8.	*tasnif-e mokhālef* (mo,mu,mo)	2:03 (M)	E-
2:03				
darāmad	9.	*reng* (d,mu,d) (cf Performance 25)	1:09 (M)	*forud*
1:09			10:08	

Performance 27 (Ensemble)
(sections 2 - 14 are voice and *santur* together/alternating unless stated otherwise)

darāmad	1.	*pishdarāmad* (ensemble) (d,mu,mo,d)	3:25 (M)	E-
10:22				
	2.	*darāmad*	6:57 (U)	voi.E- *san*.E-
zābol	3.	*zābol*	1:45 (U)	voi.E- *san*.G
	4.	*chāhārmezrāb-e zābol* (*santur* solo)	1:27 (M)	*san*.G
5:00				
	5.	continuation of *zābol*	1:48 (U)	voi.E- *san*.E-
muyeh	6.	*muyeh*	2:57 (U)	voi.E- *san*.E-
2:57				
mokhālef	7.	*mokhālef*	4:00 (U)	voi.G *san*.G
4:00				
maqlub	8.	(*mokhālef be*) *maqlub*	0:18 (U)	voi.C *san*.C
0:18				
mokhālef	9.	continuation of *mokhālef*	1:16 (U)	voi.G *san*.A-
1:16				
muyeh	10.	*muyeh* (in *forud*)	0:25 (U)	voi.E- *san*.E-
0:25				
hesār	11.	*hesār*	0:11 (U)	voi.E- *san*.E-
0:11				
darāmad	12.	*forud*	0:27 (U)	voi.E- *san*.E-
0:27				
hesār	13.	*hesār* (solo *santur*)	0:11 (U)	G
0:11				
darāmad	14.	*forud* (solo *santur*)	0:31 (U)	*forud*
1:59				
	15.	*reng* (ensemble) (d,mu,mo,d)	1:28 (M)	*forud*
			27:06	

Performance 29 (Ensemble)

darāmad	1.	*pishdarāmad*	5:09 (M)	*forud*
7:49				
	2.	*darāmad* (*kamāncheh*)	2:40 (U)	E-
zābol	3.	*zābol* (*kamāncheh*)	2:33 (U)	E-
2:33				
muyeh	4.	*muyeh* (*kamāncheh*)	2:21 (U)	E-
2:21				
mokhālef	5.	*chāhārmezrāb-e mokhālef* (*santur*)	3:00 (M)	C
	6.	*mokhālef* (*santur*)	0:35 (U)	C
5:01				
	7.	*naqmeh-ye maqlub* (*santur*)	0:42 (M)	C
	8.	continuation of *mokhālef* (*santur*)	0:44 (U)	A-
hesār	9.	*eshāreh* to *hesār* (*santur*)	0:17 (U)	G
0:17				
mokhālef	10.	continuation of *mokhālef* (*santur*)	0:55 (U)	G
0:55				
hesār	11.	*hesār* (*santur*)	0:10 (U)	E-
0:10				
darāmad	12.	*forud* in *segah* (*santur*)	0:40 (U)	*forud*
2:22				
	13.	*reng* (ensemble) (d,mu,mo,he,d)	1:42 (M)	*forud*
			21:28	

***Radif* 1**

(timings do not include spoken sections)

darāmad	1.	*chāhārmezrāb-e darāmad* (d)	0:44 (M)	*forud*
2:13	2.	*darāmad*	0:17 (U)	*forud*
	3.	*naqmeh*	1:01 (U)	E-
	4.	*kereshmeh*	0:11 (M-U)	E-
muyeh 2:36	5.	*kereshmeh bā muyeh*	2:36 (M-U)	*forud*
zābol 1:49	6.	*zābol*	0:56 (U)	E-
	7.	*bastenegār*	0:53 (U)	E-
muyeh 1:01	8.	*muyeh*	1:01 (U)	*forud*
mokhālef	9.	*mokhālef*	1:53 (U)	C
3:55	10.	*hāji hassani*	1:00 (U)	A-
	11.	*bastenegār*	1:02 (U)	A-
maqlub 0:18	12.	*maqlub*	0:18 (U)	C
mokhālef 1:35	13.	*naqmeh-ye maqlub*	1:07 (M)	A-
	14.	*hazeen*	0:28 (U)	E- (lower)
muyeh 0:23	15.	*muyeh*	0:23 (U)	*forud* (lower)
shur	16.	*rohāb*	0:54 (U)	C-D
2:31	17.	*masihi*	0:29 (U)	C-D
	18.	*shāh khatāi*	0:41 (U)	C-D
	19.	*takht-e tāqedis* (*yā takht-e kāvus*)	0:27 (U)	D-C-D
darāmad 2:38	20.	*reng-e delgoshā* (d,z,mu,mo,mu,d)	2:48 (M)	*forud*
			19:09	

Radif 2

darāmad	1.	*darāmad*	0:46 (U)	E-
| 3:09				
	2.	*darāmad now-e digar*	2:23 (U)	E-
zābol	3.	*zābol*	1:19 (U)	E-
| 1:19				
muyeh	4.	*muyeh*	1:30 (U)	G
| 2:59				
	5.	*shekasteh muyeh*	1:29 (U)	E-
hesār	6.	*hesār*	1:48 (U)	E-
| 1:48				
mokhālef	7.	*mokhālef*	1:15 (U)	G
| 1:15				
maqlub	8.	(*mokhālef be*) *maqlub* (*eshāreh* to *shekasteh muyeh* towards the end)	1:25 (U)	E-
| 1:25				
darāmad	9.	*hodi va pahlavi*	1:31 (M)	*forud*
| 1:31				
mokhālef	10.	*masnavi-e mokhālef*	1:33 (U)	E-
| 1:33				
			14:59	

Radif 3

(timings do not include spoken sections)

The scale of *Segāh*, played on the *santur*			0:06 (U)	C
darāmad	1.	*darāmad*, played on the *tār*	0:57 (U)	*forud*
zābol	2.	*zābol*, played on the *setār*	0:34 (U)	*forud*
darāmad	3.	*pishzanguleh, zanguleh*, played on the *tār*	0:59 (M) (0:25 (0:34	*forud* E-) *forud*)
muyeh	4.	*muyeh*, played on the *setār*	0:44 (U)	*forud*
darāmad	5-10.	(5) *darāmad*	0:32 (U)	*forud*
|		(6) *kereshmeh*	0:43 (M)	*forud*
|		(7) *zanguleh*	0:26 (M)	*forud*
zābol		(8) *zābol*	0:30 (U)	*forud*
|				
muyeh		(9) *muyeh*	0:30 (U)	E-
|				
darāmad		(10) *forud*, played on the *setār*	0:14 (U)	*forud*
mokhālef	11.	*mokhālef*, played on the *santur*	1:37 (U)	C
mokhālef	12-13.	(12) *mohkalef*	4:57 (U)	voi. G *kam.* G
|				
|				
darāmad		(13) *forud*	1:15 (U)	E-
|		(voice and *kamāncheh*)		

***Radif 3* (continued)**

maqlub	14.	*maqlub*, played on the *santur*	0:39 (U)	C
hozān	15-19.	(15) *hozān*	0:38 (U)	C
mokhālef		(16) *mokhālef*	1:10 (U)	A-
|		(17) *chāhārmezrāb-e mokhālef* (mo,ma,mo)	1:55 (M)	C
|		(18) *hazeen*	0:41 (U)	E-
darāmad		(19) *forud*, played on the *santur*	0:29 (U)	*forud*
darāmad	20.	*pishdarāmad* (ensemble) (d)	3:57 (M)	*forud*
darāmad	21.	*darāmad*, played on the *kamāncheh*	1:33 (U)	E-
darāmad	22.	*chāhārmezrāb-e darāmad*, played on the *tār* (d)	1:16 (M)	E-
mokhālef	23.	*mokhālef*, played on the *nei*	1:26 (U)	E-
darāmad	24.	*reng* (ensemble) (d) (based on *pishzanguleh* at the beginning)	2:11 (M)	*forud*
darāmad	25-27.	(25) *darāmad*	0:34 (U)	*forud*
|				
mokhālef		(26) *mokhālef*	0:35 (U)	G
|				
darāmad		(27) *bargasht be segah* (*forud*) played on the *setār* (includes movement to other *dastgāhs* - *Afshāri* and *Māhur*)	0:22 (U)	*forud*
|				
			31:30	

Radif 4[207]

(timings do not include spoken sections)

darāmad	1.	*moqaddameh*	0:46 (U)	*forud*
	2.	*darāmad-e avval* (first *darāmad*)	0:53 (U)	*forud*
	3.	*darāmad-e dovvom* (second *darāmad*)	1:11 (U)	*forud*
	4.	*darāmad-e sevvom* (third *darāmad*)	1:15 (U)	*forud*
8:45	5.	*kereshmeh*	1:16 (M-U)	E-
	6.	*pishzanguleh*	0:21 (M)	E-
	7.	*zanguleh*	0:45 (M-U)	*forud*
	8.	*zang-e shotor*	2:18 (U)	*forud*
zābol	9.	*zābol*	0:33 (U)	E-
	10.	*qesmat-e dovvom-e zābol* (second section of *zābol*)	0:46 (U)	E-
3:15	11.	*bastenegār*	1:23 (U)	E-
	12.	*zanguleh*	0:33 (M-U)	*forud*
muyeh	13.	*panjeh muyeh*	0:07 (U)	G
2:21	14.	*āvāz-e muyeh*	0:42 (U)	E-
	15.	*forud-e muyeh*	0:14 (U)	E-
	16.	*qesmat-e dovvom-e muyeh*	1:18 (U)	*forud*
hesār	17.	*hesār*	0:43 (U)	B-
	18.	*qesmat-e dovvom-e hesār*	0:35 (U)	B-
	19.	*zanguleh*	0:46 (M-U)	B-

[207] It should be noted that the numbering of sections given here corresponds with that on the tape of Ruhafza playing the *radif*. The numbering of sections in the published *radif* (Barkeshli and Ma'rufi 1963) is slightly different, although the musical material itself is the same.

Radif 4 (continued)

	20.	*qesmat-e sevvom-e hesār*	1:17 (U-M-U)	B-
	21.	*kereshmeh*	0:32 (M-U)	B-
4:29				
	22.	*forud-e hesār*	0:36 (U)	G
hozān	23.	*hozān*	0:37 (U)	C
0:37				
mokh->dar	24.	*pas hesār*	0:51 (U)	*forud*
0:51				
mokhālef	25.	*maarbad*	0:15 (U)	G
0:15				
mokhālef	26.	*mokhālef*	1:05 (U)	A-
	27.	*qesmat-e dovvom-e mokhālef*	0:47 (U)	G
	28.	*qesmat-e sevvom-e mokhālef*	0:37 (U)	C
	29.	*hāji hassani*	0:36 (U)	C
4:08				
	30.	*bastenegār*	1:03 (U)	C
maqlub	31.	*maqlub*	0:38 (U)	C
0:38				
mokhālef	32.	*naqmeh-ye maqlub*	1:23 (M-U)	C
	33.	*dobeiti*	1:24 (U)	C
	34.	*par-e parastu*	1:04 (U-M-U)	A-
	35.	*hazeen*	0:55 (U)	G
4:46				
hozān	36.	*hozān*	0:23 (U)	F
0:23				
muyeh	37.	*muyeh*	1:24 (U)	*forud*
1:24				
darāmad	38.	*reng-e delgoshā* (d,z,d,mu,mo,mu,mo,d)	2:38 (M)	*forud*
2:38				
			34:30	

Appendix Three - Tables Accompanying Chapter Four

The tables which comprise Appendix Three contain data from the analysis of the performances listed in Appendix Two and discussed in Chapter Four. Tables 1a - 1f give figures for the length of each *gusheh* (in real-time, expressed as a percentage) relative to the overall length of each rendition. For the central *gushehs* (Tables 1a -1d), percentages are also given for material in that mode in various positions within each version. Data from Tables 1a -1f is presented comparatively in Tables 2a and 2b. The figures in Tables 3a - 3f present comparison of the percentage of measured and unmeasured material in each of the main *gushehs* of *Segāh*. As explained in Appendix Two, it was not possible to include discussion of the figures relating to metre in the main text, but they are presented here for reference.

It should be noted that all of the percentages were rounded to the first decimal place, and as such, slight discrepancies occasionally occurred when calculating total figures.

Table 1a **Percentages of *Darāmad* in Performances and *Radifs* of *Segāh***
Table 1b **Percentages of *Zābol* in Performances and *Radifs* of *Segāh***
Table 1c **Percentages of *Muyeh* in Performances and *Radifs* of *Segāh***
Table 1d **Percentages of *Mokhālef* in Performances and *Radifs* of *Segāh***
Table 1e **Percentages of Other *Gushehs* in the Mode of *Mokhālef* in Performances and *Radifs* of *Segāh***
Table 1f **Percentages of Other *Gushehs* in Performances and *Radifs* of *Segāh***

Table 2a **Overall Percentages of the Broad Modal Sections of Performances and *Radifs* of *Segāh***
Table 2b **Proportions of Broad Modal Sections in Individual Performances and *Radifs* of *Segāh***

Table 3a **Percentages of Measured and Unmeasured Material in Performances and *Radifs* of *Segāh* (listed from renditions with the least to those with the most measured material)**
Table 3b **Percentages of Measured and Unmeasured Material in the *Darāmad* of *Segāh* (listed from renditions with the least to those with the most measured material)**
Table 3c **Percentages of Measured and Unmeasured Material in the *Darāmad* of *Segāh***
Table 3d **Percentages of Measured and Unmeasured Material in *Zābol***
Table 3e **Percentages of Measured and Unmeasured Material in *Muyeh***
Table 3f **Percentages of Measured and Unmeasured Material in *Mokhālef***

Table 1a Percentages of *Darāmad* in Performances and *Radifs* of *Segāh*

Performances (see key overleaf)

	A	B	C	D	E	F	G	H
1	59.6% [9]	25.5%	14.3%	33.4%	26.2%	1-2, 4-6, 12, 14	24,28, 31-33	33
2	44.8% [18]	28.2%	7.6%	29.5%	15.3%	1-2, 4-8	18-21	21
3	21.8% [25]	21.8%	5%	16.4%	5.5%	1-3, 18	23	23
4	43% [19]	43%	21.6%	39.4%	3.7%	1-3, 10	17	17
5	66.1% [7]	66.1%	14.5%	56.3%	9.8%	1-5, 9-10	19-20	20
6	41.9% [20]	41.9%	28.1%	29.4%	12.5%	1-6	21-24	24
7	69.5% [5]	22.1%	11.5%	43.9%	25.6%	1-5, 12	15-16	16
8	38.1% [21]	38.1%	13.5%	27.4%	10.7%	1-3	10, 13	13
9	50.8% [13]	27.4%	13.1%	38%	12.8%	1-4, 6	17, 19-22	23
10	70% [4]	70%	27.7%	59.1%	10.9%	1-3	9	9
11	32.1% [24]	32.1%	16.6%	23.9%	8.2%	1-3	13-14	14
12	10.2% [26]	10.2%	0%	10.2%	0%	2	-	17
13	58.4% [11]	58.4%	32.7%	51.6%	6.7%	1-3	9, 11	11
14	79% [2]	39.8%	23.3%	49.2%	29.8%	1-4	8-10	10
15	61.1% [8]	31.8%	18.2%	48.5%	12.7%	1-2, 4, 6	14, 16-17	17
16	59.4% [10]	21.3%	7.8%	44.9%	14.6%	1-5	14-15	15
17	69.5% [5]	36.8%	26.1%	38.2%	31.3%	1-4	9-11	11
18	51.9% [12]	35%	17.5%	48.8%	3.1%	1-7	23	23
20	38% [22]	38%	15.5%	34%	4%	1-4	12, 14	14
22	49.7% [14]	49.7%	10.9%	45.9%	3.8%	1-3	14	14
23	49% [15]	33.5%	13.3%	23.9%	25.1%	1-3, 11	19-23	23
24	71.1% [3]	60.7%	25.2%	59.3%	11.9%	1-14	27-28	28
25	81.3% [1]	14.4%	5.9%	46.2%	35.1%	1-3	9-11	11
26	37.5% [23]	26.2%	22.7%	22.7%	14.8%	1	7, 9	9
27	47.2% [17]	29.2%	25.6%	38.3%	9%	1-2	12, 14-15	15
29	47.4% [16]	15.5%	12.4%	36.4%	1%	1-2	12-13	13
Av.	**51.9% (26 renditions)**	**35.2%**	**16.6%**					

Table 1a (continued)

Radifs:

	A	B	C	D	E	F	G	H
1	**26.2% [4]**	11.6%	1.5%	11.6%	14.6%	1-4	20	20
2	31.1% [3]	31.1%	21%	21%	10.1%	1-2	9	10
3	49.1% [1]	36.6%	11.4%	41.7%	7.4%	1,3,5-7,20 21,22,24,25	10,13 19, 27	27
4	33% [2]	25.4%	9.6%	25.4%	7.6%	1-8	38	38
Av.	**34.9% (4 renditions)**	**26.2%**	**10.9%**					

A - the percentage of material in each rendition broadly in the *darāmad* mode, including measured sections such as *pishdarāmad*s, *tasnif*s, etc. at the beginnings and ends of renditions which, whilst they are located in the *darāmad* area, include a certain amount of material in modes other than that of the *darāmad*; [ ] indicates order of percentages from highest to lowest;

B - the percentage of material in each rendition in the *darāmad* mode, excluding measured pieces at the beginnings and ends of renditions which explore other modal areas, but including other measured sections (such as *chāhārmezrāb*s) which largely remain within the *darāmad* mode;

C - the percentage of material in each rendition in the "*gusheh*" *darāmad* (as opposed to *gushehs* which share the *darāmad* mode), and generally positioned at the beginning of renditions;

D - percentage of material in the *darāmad* mode in opening of rendition;

E - percentage of material in the *darāmad* mode at end of rendition;

F - numbers of sections in the *darāmad* mode in opening of rendition;

G - numbers of sections in the *darāmad* mode at end of rendition;

H - total number of sections in rendition.

Table 1b Percentages of *Zābol* in Performances and *Radifs* of *Segāh*

Performances

	A		B	C	D	E	F
1	5.9%	[24]	5.9%	-	3, 7	-	33
2	17.9%	[8]	17.9%	-	3, 9-11	-	21
3	23.7%	[2]	23.7%	-	4-9	-	23
4	16.7%	[11]	16.7%	-	4-6	-	17
5	13.7%	[13]	13.7%	-	6-8	-	20
6	20.5%	[3]	20.5%	-	7-9	-	24
7	10.4%	[16]	10.4%	-	6	-	16
8	17.4%	[9]	10.7%	6.7%	4	11	13
9	7.6%	[20]	7.6%	-	5	-	23
10	7.5%	[21]	7.5%	-	4	-	9
11	20.4%	[4]	20.4%	-	4-6	-	14
12	34.1%	[1]	34.1%	-	1, 3-5	-	17
13	7.4%	[22]	7.4%	-	6	-	11
14	-		-	-	-	-	10
15	8.1%	[18]	8.1%	-	3, 5	-	17
16	7.8%	[19]	7.8%	-	6	-	15
17	5.5%	[25]	5.5%	-	5	-	11
18	14.7%	[12]	14.7%	-	8-12	-	23
20	8.5%	[17]	8.5%	-	5	-	14
22	18.9%	[5]	18.9%	-	4-7	-	14
23	17.4%	[9]	17.4%	-	4-7	-	23
24	18.6%	[6]	18.6%	-	15-19	-	28
25	7.3%	[23]	7.3%	-	4	-	11
26	11.2%	[15]	11.2%	-	2	-	9
27	18.5%	[7]	18.5%	-	3-5	-	15
29	11.9%	[14]	11.9%	-	3	-	13
Av.	**13.5% (26) (14.1% (25))**						

Table 1b (continued)

***Radifs*:**

1	**9.5%**	[1]	9.5%	-	6-7	-	20
2	8.8%	[3]	8.8%	-	3	-	10
3	3.4%	[4]	3.4%	-	2, 8	-	27
4	9.4%	[2]	9.4%	-	9-12	-	38
Av.	**7.8% (4)**						

A - percentage of *zābol* material in each rendition; [ ] indicates order of percentages from highest to lowest

B - percentage of *zābol* material in opening of each rendition;

C - percentage of *zābol* material at the end of each rendition;

D - section numbers of *zābol* in opening of each rendition;

E - section numbers of *zābol* at end of each rendition;

F - total number of sections in rendition.

Table 1c Percentages of *Muyeh* in Performances and *Radifs* of *Segāh*

Performances

	A	B	C	D	E	F	G
1	7.9% [16]	6.6%	1.3%	4.3%	8,10-11(s),13(s)	27(s),30(s)	33
2	10.2% [13]	10.2%	-	-	12-13	-	21
3	14.9% [4]	13.2%	1.7%	8.1%	10-11(s)	17(s)	23
4	18.3% [1]	18.3%	-	-	7-9, 11	-	17
5	1.9% [20]	1.9%	-	-	16	-	20
6	3.7% [19]	-	3.7%	1.4%	-	19-20(s)	24
7	14.1% [5]	12.8%	1.3%	9.5%	7-11,(10=s)	14(s)	16
8	8% [15]	8%	-	-	5	-	13
9	0.6% [25]	-	0.6%	0%	-	18(s)	23
10	1.8% [21]	-	1.8%	0%	-	8(s)	9
11	9% [14]	9%	-	-	7	-	14
12	15.7% [3]	15.7%	-	-	6-8	-	17
13	12.1% [9]	10%	2.1%	3.9%	4-5(s)	10(s)	11
14	11.3% [11]	9.1%	2.2%	9.1%	5	7(s)	10
15	7.2% [17]	7.2%	-	-	7	-	17
16	1.2% [23]	-	1.2%	-	-	13	15
17	11.7% [10]	9.2%	2.5%	9.2%	6	8(s)	11
18	5.4% [18]	5.4%	-	-	13	-	23
20	16.5% [2]	14.8%	1.7%	14.8%	6	13(s)	14
22	13.1% [7]	13.1%	-	-	8	-	14
23	0.9% [24]	-	0.9%	-	-	18	23
24	-	-	-	-	-	-	28
25	1.4% [22]	-	1.4%	0%	-	8(s)	11
26	14.1% [5]	14.1%	-	-	3	-	9
27	12.4% [8]	10.9%	1.5%	-	6	10	15
29	10.9% [12]	10.9%	-	-	4	-	13
Av.	**8.6% (26) (9% (25))**						

Table 1c (continued)

***Radifs*:**

1	**20.9 [1]**	18.9%	2%	-	5, 8	15	20
2	19.9% [2]	19.9%	-	10%	4, 5(s)	-	10
3	3.9% [4]	3.9%	-	-	4, 9	-	27
4	10.9% [3]	6.8%	4.1%	-	13-16	37	38
Av.	**13.9% (4)**						

A - percentage of *muyeh* material in each rendition; [ ] indicates order of percentages from highest to lowest;

B - percentage of *muyeh* material in main part of each rendition;

C - percentage of *muyeh* material at end of each rendition;

D - percentage of *muyeh*, not including sections of *shekasteh muyeh*;

E - section numbers of *muyeh* in main part of each rendition;

F - section numbers of *muyeh* at end of each rendition;

G - total number of sections in each rendition.

Table 1d Percentages of *Mokhālef* in Performances and *Radifs* of *Segāh*

Performances

	A	B	C	D
1	20.6% [13]	23.4% [13]	9, 16-18, 20-22, 26, 29, (21)	33
2	18.1% [15]	27% [10]	14-17 (part of 15, 16)	21
3	20.8% [12]	34.6% [3]	12-16, 20-22, (15, 21, 22)	23
4	15.4% [17]	22% [15]	12-16 (15)	17
5	9.7% [22]	17.5% [21]	11-15, 17, (12, 13, 15)	20
6	25.7% [6]	32.8% [5]	10-17 (12, 14)	24
7	6% [25]	6% [26]	13	16
8	24.1% [8]	27.2% [9]	6-7, 9 (9)	13
9	21.7% [9]	25% [12]	8-13 (10, 12, 13)	23
10	16.5% [16]	20.7% [18]	5-7 (6)	9
11	27.9% [4]	27.9% [7]	8-10	14
12	29.8% [3]	40% [1]	9-17 (12, 14)	17
13	21.1% [10]	21.1% [17]	7	11
14	9.7% [22]	9.7% [25]	6	10
15	13.2% [20]	22% [15]	8-11, 13, 15 (11, 13, 15)	17
16	27.3% [5]	29.5% [6]	7-9, 11-12 (12)	15
17	13.3% [19]	13.3% [22]	7	11
18	12.8% [21]	25.8% [11]	14-19, 21-22 (18, 21, 22)	23
20	32.9% [2]	33.7% [4]	7-10 (9)	14
22	13.4% [18]	18.3% [20]	9-13 (10, 12, 13)	14
23	21% [11]	22.7% [14]	12-17 (15)	23
24	5.3% [26]	10.3% [23]	20-26 (21, 25)	28
25	7.6% [24]	9.9% [24]	5-7 (6)	11
26	37.2% [1]	37.2% [2]	4-6, 8	9
27	19.4% [14]	19.4% [19]	7, 9	15
29	24.3% [7]	27.6% [8]	5-8, 10 (7)	13
Av.	**19% (26)**	**23.3% (26)**		

Table 1d (continued)

***Radifs*:**

1	**9.8%** [2]	28.7% [3]	9-11, 13-14, (10, 11, 13, 14)	20
2	8.3% [3]	18.7% [4]	7, 10 (10)	10
3	37% [1]	39.2% [1]	11, 12, 16-18, 23, 26 (18)	27
4	7.2% [4]	29% [2]	24-30, 32-35 (24-5,29,30, 32-35)	38
Av.	**15.6%** (4)	**28.9%** (4)		

A - total percentage of the *gusheh mokhālef* in each rendition; [ ] indicates order of percentages from highest to lowest;

B - percentage of all *gushehs* in the mode of *mokhālef* in each rendition;

C - section numbers in the mode of *mokhālef* in each rendition (sections of other *gushehs* in the mode of *mokhālef* are indicated in parentheses);

D - total number of sections in each rendition.

Table 1e Percentages of Other *Gushehs* in the Mode of *Mokhālef* in Performances and *Radifs* of *Segāh*

Performances

	masnavi (U)	*naqmeh-ye maqlub* (M)	*hazeen* (M)	Others	Total
1	2.8% (21)	-	-	-	2.8%
2	4.3% (15) (M)	4.6% (16)	-	-	8.9%
3	7.3% (22)	4% (15)	2.5% (21)	-	13.8%
4	-	6.6% (15)	-	-	6.6%
5	4.1% (12)	1.7% (13)	2% (*eshāreh*) (15)	-	7.8%
6	5% (12)	2.1% (14)	-	-	7.1%
7	-	-	-	-	-
8	-	-	3.1% (*eshāreh*) (9)	-	3.1%
9	1.8% (10)	1% (12)	0.5% (*eshāreh*) (13)	-	3.3%
10	4.2% (6)	-	-	-	4.2%
11	-	-	-	-	-
12	-	7.7% (12)	2.5% (14)	-	10.2%
13	-	-	-	-	-
14	-	-	-	-	-
15	5.5% (13)	-	3.3% (11, 15)	-	8.8%
16	-	-	2.2% (12)	-	2.2%
17	-	-	-	-	-
18	6.5% (22)	6.5% (18, 21)	-	-	13%
20	-	0.8% (9)	-	-	0.8%
22	2.3% (10)	0.9% (*eshāreh*)(13) (U)	1.7% (12)	-	4.9%
23	-	1.7% (15)	-	-	1.7%
24	2.6% (25)	2.4% (21)	-	-	5%
25	-	2.3% (6)	-	-	2.3%
26	-	-	-	-	-
27	-	-	-	-	-
29	-	3.3% (7)	-	-	3.3%
Av.	**1.8% (26) (4.2% (11))**	**1.8% (26) (3.3% (14)**	**0.7% (26) (2.2% (8))**	-	**4.2% (26) (5.8% (19))**

Table 1e (continued)

***Radifs*:**

	masnavi	*naqmeh-ye maqlub* (M)	*hazeen* (M)	Others	Total
1	-	5.8% (13)	2.4% (14)	*hāji hassani* 5.2% (10) *bastenegār* 5.4% (11)	18.8%
2	10.3% (10)	-	-	-	10.3%
3	-	-	2.2% (18)	-	2.2%
4	-	4% (32)	2.7% (35)	*pas hesār* 2.5% (24) *maarbad* 0.7% (25) *hāji hassani* 1.7% (29) *bastenegār* 3% (30) *dobeiti* 4.1% (33) *par-e parastu* 3.1% (34)	21.8%
Av.	**2.6% (4)** (10.3% (1))	**2.5%** (4) (4.9% (2))	**1.8% (4)** (2.4% (3))	**6.4% (4)** (12.9% (2))	**13.3% (4)**

Numbers in brackets refer to the relevant section number in each performance, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based; M = measured section; U = unmeasured section.

Table 1f Percentages of Other *Gushehs* in Performances and *Radifs* of *Segāh*

Performances

	maqlub (U)	*hesār* (U)	*hozān* (U)
1	1.9% (15, 19, 25)	1.2% (23)	-
2	-	-	-
3	4.9% (19)	-	-
4	-	-	-
5	-	0.8% (18)	-
6	-	1.1% (18)	-
7	-	-	-
8	-	9.3% (8, 12)	-
9	3% (14(M)-15)	0.6% (16)	-
10	-	-	-
11	2.6% (11)	8% (12)	-
12	-	-	-
13	-	1% (8)	-
14	-	-	-
15	1.6% (12)	-	-
16	2.1% (10)	-	-
17	-	-	-
18	2.2% (20)	-	-
20	-	3.3% (11)	-
22	-	-	-
23	-	8% (9)	2% (8, 10)
24	-	-	-
25	-	-	-
26	-	-	-
27	1.1% (8)	1.4% (11, 13)	-
29	-	2.1% (9, 11)	-
Av.	**0.7% (26)** (2.4% (8))	**1.4% (26)** (3.3% (11))	**0.1% (26)** (2% (1)

Table 1f (continued)

***Radifs*:**

	maqlub (U)	*hesār* (U)	*hozān* (U)
1	**1.6%** (12)	-	-
2	9.4% (8)	12% (6)	-
3	2.1% (14)	-	2% (15)
4	1.8% (31)	13% (17-22)	3% (23, 36)
Av.	**3.7%** (4)	**6.3%** (4) (12.5% (2))	**1.3%** (4) (2.5% (2))

Numbers in brackets refer to the relevant section number in each performance, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based; M = measured section; U = unmeasured section.

Table 2a Overall Percentages of the Broad Modal Sections of Performances and *Radifs* of *Segāh*

Performances

	darāmad	*zābol*	*muyeh*	*mokhālef*	others
1	59.6% (25.5%)	5.9%	7.9%	23.4% (20.6%)	3.1%
2	44.8% (28.2%)	17.9%	10.2%	27% (18.1%)	-
3	21.8% (21.8%)	23.7%	14.9%	34.6% (20.8%)	4.9%
4	43% (43%)	16.7%	18.3%	22% (15.4%)	-
5	66.1% (66.1%)	13.7%	1.9%	17.5% (9.7%)	0.8%
6	41.9% (41.9%)	20.5%	3.7%	32.8% (25.7%)	1.1%
7	69.5% (22.1%)	10.4%	14.1%	6% (6%)	-
8	38.1% (38.1%)	17.4%	8%	27.2% (24.1%)	9.3%
9	50.8% (27.4%)	7.6%	0.6%	25% (21.7%)	16%
10	70% (70%)	7.5%	1.8%	20.7% (16.5%)	-
11	32.1% (32.1%)	20.4%	9%	27.9% (27.9%)	10.6%
12	10.2% (10.2%)	34.1%	15.7%	40% (29.8%)	-
13	58.4% (58.4%)	7.4%	12.1%	21.1% (21.1%)	1%
14	79% (39.8%)	-	11.3%	9.7% (9.7%)	-
15	61.1% (31.8%)	8.1%	7.2%	22% (13.2%)	1.6%
16	59.4% (21.3%)	7.8%	1.2%	29.5% (27.3%)	2.1%
17	69.5% (36.8%)	5.5%	11.7%	13.3% (13.3%)	-
18	51.9% (35%)	14.7%	5.4%	25.8% (12.8%)	2.2%
20	38% (38%)	8.5%	16.5%	33.7% (32.9%)	3.3%
22	49.7% (49.7%)	18.9%	13.1%	18.3% (13.4%)	-
23	49% (33.5%)	17.4%	0.9%	22.7% (21%)	10%
24	71.1% (60.7%)	18.6%	-	10.3% (5.3%)	-
25	81.3% (14.4%)	7.3%	1.4%	9.9% (7.6%)	-
26	37.5% (26.2%)	11.2%	14.1%	37.2% (37.2%)	-
27	47.2% (29.2%)	18.5%	12.4%	19.4% (19.4%)	2.5%
29	47.4% (15.5%)	11.9%	10.9%	24.3% (27.6%)	2.1%
Av.	**51.9% (35.2%)**	**13.5% (26)** (14.1% (25))	**8.6% (26)** (9% (25))	**23.3% (19%)**	**2.7% (26)** (4.7% (15))

Table 2a (continued)

***Radifs*:**

1	**26.2% (11.6%)**	9.5%	20.9%	28.7% (9.8%)	14.7%
2	31.1% (31.1%)	8.8%	19.9%	18.7% (8.3%)	21.4%
3	49.1% (36.6%)	3.4%	3.9%	39.2% (37%)	4.1%
4	33% (25.4%)	9.4%	10.9%	29% (7.2%)	17.8%
Av.	**34.9% (26.2%)**	**7.8%**	**13.9%**	**28.9% (15.6%)**	**14.5%**

A - In the *darāmad* column, the main figure corresponds with column A of Table 1a: material broadly in the *darāmad* mode, including measured sections at the beginnings and ends of renditions; the figure in parentheses corresponds with column B of Table 1a: material in the *darāmad* mode, excluding measured pieces at the beginnings and ends of renditions, but including other measured sections (such as *chāhārmezrābs*) which largely remain within the *darāmad* mode;

B - In the *mokhālef* column, the main figure corresponds with Column B of Table 1d: the percentage of all *gushehs* in the mode of *mokhālef* in each rendition; the figures in parentheses correspond with column A in Table 1d: the total percentage of the *gusheh mokhālef* in each rendition.

Table 2b Proportions of Broad Modal Sections in Individual Performances and *Radifs* of *Segāh*

	darāmad	*mokhālef*	*zābol*	*muyeh*	others
performance 25	81.3%	9.9%	7.3%	1.4%	0%
performance 10	70%	20.7%	7.5%	1.8%	0%
performance 5	66.1%	17.5%	13.7%	1.9%	0.8%
performance 15	61.1%	22%	8.1%	7.2%	1.6%
performance 16	59.4%	29.5%	7.8%	1.2%	2.1%
performance 18	51.9%	25.8%	14.7%	5.4%	2.2%
performance average	**51.9%**	**23.3%**	**13.5%**	**8.6%**	**2.7%**
performance 9	50.8%	25%	7.6%	0.6%	16%
performance 23	49%	22.7%	17.4%	0.9%	10%
performance 29	47.4%	24.3%	11.9%	10.9%	2.1%
performance 27	47.2%	19.4%	18.5%	12.4%	2.5%
performance 2	44.8%	27%	17.9%	10.2%	0%
performance 6	41.9%	32.8%	20.5%	3.7%	1.1%
performance 8	38.1%	27.2%	17.4%	8%	9.3%
performance 11	32.1%	27.9%	20.4%	9%	10.6%

	darāmad	*mokhālef*	*muyeh*	*zābol*	others
performance 17	69.5%	13.3%	11.7%	5.5%	0%
performance 1	59.6%	23.4%	7.9%	5.9%	3.1%
performance 13	58.4%	21.1%	12.1%	7.4%	1%
radif 3	49.1%	39.2%	3.9%	3.4%	4.1%
performance 4	43%	22%	18.3%	16.7%	0%
performance 20	38%	33.7%	16.5%	8.5%	3.3%
performance 26	37.5%	37.2%	14.1%	11.2%	0%
***radif* average**	**34.9%**	**28.9%**	**13.9%**	**7.8%**	**14.5**
radif 4	33%	29%	10.9%	9.4%	17.8%

Table 2b (continued)

	darāmad	*zābol*	*mokhālef*	*muyeh*	others
performance 24	71.1%	18.6%	10.3%	0%	0%
performance 22	49.7%	18.9%	18.3%	13.1%	0%

	darāmad	*muyeh*	*mokhālef*	*zābol*	others
performance 14	79%	11.3%	9.7%	0%	0%
radif 2	31.1%	19.9%	18.7%	8.8%	21.4%

	darāmad	*muyeh*	*zābol*	*mokhālef*	others
performance 7	69.5%	14.1%	10.4%	6% (6%)	0%

	mokhālef	*darāmad*	*muyeh*	*zābol*	others
radif 1	28.7%	26.2%	20.9%	9.5%	14.7%

	mokhālef	*zābol*	*darāmad*	*muyeh*	others
performance 3	34.6%	23.7%	21.8%	14.9%	4.9%

	mokhālef	*zābol*	*muyeh*	*darāmad*	others
performance 12	40%	34.1%	15.7%	10.2%	0%

Table 3a Percentages of Measured and Unmeasured Material in Performances and *Radifs* of *Segāh* (listed from renditions with the least to those with the most measured material)

Performances

	Measured		Unmeasured	
11	19.2%	(4)	80.8%	(10)
27	23.4%	(3)	76.6%	(12)
8	24.2%	(2)	75.8%	(11)
20	25.1%	(4)	74.9%	(10)
13	25.7%	(1)	74.3%	(10)
3	26.2%	(6)	73.8%	(17)
10	31.4%	(1)	68.6%	(8)
26	38.3%	(3)	61.7%	(6)
22	39.9%	(3)	60.1%	(11)
17	40.5%	(4)	59.5%	(7)
12	41.7%	(6)	58.3%	(11)
6	43.7%	(8)	56.3%	(16)
4	45.3%	(6)	54.7%	(11)
23	47.4%	(8)	52.6%	(15)
18	48%	(10)	52%	(13)
1	49.1%	(7)	50.9%	(26)
29	49.2%	(4)	50.8%	(9)
14	50.6%	(4)	49.4%	(6)
15	54.1%	(6)	45.9%	(11)
7	57.5%	(6)	42.5%	(10)
16	57.7%	(5)	42.3%	(10)
5	58%	(7)	42%	(13)
24	58.1%	(12)	41.9%	(16)
9	63.3%	(11)	36.7%	(12)
2	74%	(9)	26%	(12)
25	76.6%	(5)	23.4%	(6)
Average:	**44.9%**		**55.1%**	

Table 3a (continued)

***Radifs*:**

	Measured		Unmeasured	
2	**10.2**	(1)	89.9%	(9)
4	18.5%	(10)	81.5%	(36)
1	31.5%	(5)	68.5%	(17)
3	36.3%	(7)	63.7%	(20)
Average:	**24.1%**		**75.9%**	

(Note: In a small number of *gushehs* in *radifs* 1 and 4, the music goes from measured to unmeasured material (and also vice versa in two *gushehs* in *radif* 4, in which the music then moves back to unmeasured again). For these *gushehs*, the percentage of material has simply been divided between the "measured" and "unmeasured" columns above, as appropriate).

The percentage figures refer to the percentage of the time of each performance allocated to measured or unmeasured material; the numbers in brackets indicate the number of sections in each performance allocated to measured or unmeasured material.

Table 3b Percentages of Measured and Unmeasured Material in the *Darāmad* of *Segāh* (*darāmad* as a broad modal section, corresponding with column A in Table 1a; renditions listed from those with the least to those with the most measured material)

	Measured	Unmeasured	Total
Radif 2	10.1%	21%	31.1%
Performance 12	10.2%	-	10.2%
Performance 3	10.4%	11.4%	21.8%
Performance 26	11.3%	26.2%	37.5%
Radif 4	11.6%	21.4%	33%
Performance 11	11.8%	20.3%	32.1%
Performance 8	13.9%	24.2%	38.1%
Performance 4	17.8%	25.3%	43%
Performance 27	18.1%	29.2%	47.2%
Performance 20	18.5%	19.5%	38%
Radif 1	18.9%	7.3%	26.2%
Performance 13	25.7%	32.6%	58.4%
Performance 6	25.9%	16%	41.9%
Performance 23	29.9%	19.1%	49%
Radif 3	30.3%	18.8%	49.1%
Performance 18	31.3%	20.6%	51.9%
Performance 10	31.4%	38.6%	70%
Performance 29	31.9%	15.5%	47.4%
Performance 2	32.7%	12.1%	44.8%
Performance 22	35%	14.7%	49.7%
Performance 9	35.7%	15.1%	50.8%

Table 3b (continued)

	Measured	Unmeasured	Total
Performance 17	40.5%	29%	69.5%
Performance 15	42%	19.2%	61.1%
Performance 1	42.6%	17%	59.6%
Performance 16	43.2%	16.3%	59.4%
Performance 24	44.4%	26.7%	71.1%
Performance 5	49%	17.1%	66.1%
Performance 14	50.6%	28.4%	79%
Performance 7	53.5%	16%	69.5%
Performance 25	74.3%	7%	81.3%

Table 3c Percentages of Measured and Unmeasured Material in the *Darāmad* of *Segāh*

(*darāmad* as a broad modal section, corresponding with column A in Table 1a)

Performances

	Measured	Unmeasured	Total
1	42.6% (5)	17% (7)	59.6% (12)
2	32.7% (5)	12.1% (6)	44.8% (11)
3	10.4% (1)	11.4% (4)	21.8% (5)
4	17.8% (2)	25.3% (3)	43% (5)
5	49% (4)	17.1% (5)	66.1% (9)
6	25.9% (4)	16% (6)	41.9% (10)
7	53.5% (4)	16% (4)	69.5% (8)
8	13.9% (1)	24.2% (4)	38.1% (5)
9	35.7% (6)	15.1% (4)	50.8% (10)
10	31.4% (1)	38.6% (3)	70% (4)
11	11.8% (2)	20.3% (3)	32.1% (5)
12	10.2% (1)	-	10.2% (1)
13	25.7% (1)	32.6% (4)	58.4% (5)
14	50.6% (4)	28.4% (3)	79% (7)
15	42% (4)	19.2% (3)	61.1% (7)
16	43.2% (3)	16.3% (4)	59.4% (7)
17	40.5% (4)	29% (3)	69.5% (7)
18	31.3% (4)	20.6% (4)	51.9% (8)
20	18.5% (2)	19.5% (4)	38% (6)
22	35% (1)	14.7% (3)	49.7% (4)
23	29.9% (4)	19.1% (5)	49% (9)
24	44.4% (8)	26.7% (8)	71.1% (16)
25	74.3% (4)	7% (2)	81.3% (6)
26	11.3% (1)	26.2% (2)	37.5% (3)
27	18.1% (2)	29.2% (3)	47.2% (5)
29	31.9% (2)	15.5% (2)	47.4% (4)
Av.	**32% (26 performances)**	**19.9% (26)** (20.7% (25))	**51.9% (26)**

Table 3c (continued)

***Radifs*:**

1	18.9% (3)	7.3% (3)	26.2% (5)
2	10.1% (1)	21% (2)	31.1% (3)
3	30.3% (6)	18.8% (8)	49.1% (14)
4	11.6% (4)	21.4% (7)	33% (9)
Av.	**17.7% (4 *radifs*)**	**17.1% (4)**	**34.9% (4)**

The numbers in brackets indicate the number of sections allocated to measured and unmeasured material, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based.

Table 3d Percentages of Measured and Unmeasured Material in *Zābol* Performances

	Measured	Unmeasured	Total
1	1.8% (1)	4.1% (1)	5.9% (2)
2	13.9% (1)	4% (3)	17.9% (4)
3	9.2% (3)	14.5% (4)	23.7% (6)
4	10.4% (1)	6.3% (2)	16.7% (3)
5	5.5% (1)	8.2% (2)	13.7% (3)
6	5.9% (1)	14.6% (2)	20.5% (3)
7	-	10.4% (1)	10.4% (1)
8	-	17.4% (2)	17.4% (2)
9	-	7.6% (1)	7.6% (1)
10	-	7.5% (1)	7.5% (1)
11	3.3% (1)	17.1% (2)	20.4% (3)
12	8% (1)	26.1% (3)	34.1% (4)
13	-	7.4% (1)	7.4% (1)
14	-	-	- (0)
15	1.6% (1)	6.5% (1)	8.1% (2)
16	-	7.8% (1)	7.8% (1)
17	-	5.5% (1)	5.5% (1)
18	4.5% (2)	10.2% (3)	14.7% (5)
20	-	8.5% (1)	8.5% (1)
22	4.9% (2)	14% (2)	18.9% (4)
23	4.3% (1)	13.1% (3)	17.4% (4)
24	9.9% (2)	8.7% (3)	18.6% (5)
25	-	7.3% (1)	7.3% (1)
26	-	11.2% (1)	11.2% (1)
27	5.4% (1)	13.1% (2)	18.5% (3)
29	-	11.9% (1)	11.9% (1)
Av.	**3.4% (26 performances)** (6.3% (14 performances))	**10.1% (26)** (10.5% (25))	**13.5% (26)** (14.1% (25))

Table 3d (continued)

Radifs:

1	-	9.5% (2)	9.5% (2)
2	-	8.8% (1)	8.8% (1)
3	-	3.4% (2)	3.4% (2)
4	0.8% (1)	8.6% (3)	9.4% (4)
Av.	**0.2% (4 *radifs*)** (0.8% (1 *radif*))	**7.6% (4)**	**7.8% (4)**

The numbers in brackets indicate the number of sections allocated to measured and unmeasured material, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based.

Table 3e Percentages of Measured and Unmeasured Material in *Muyeh* Performances

	Measured	Unmeasured	Total
1	-	7.9% (6)	7.9% (6)
2	4.6% (*zarbi*) (1)	5.6% (1)	10.2% (2)
3	-	14.9% (3)	14.9% (3)
4	1.9% (*chāhārmezrāb*) (1)	16.4% (3)	18.3% (4)
5	-	1.9% (1)	1.9% (1)
6	-	3.7% (2)	3.7% (2)
7	4% (two *kereshmehs*) (2)	10.1% (4)	14.1% (6)
8	-	8% (1)	8% (1)
9	-	0.6% (1)	0.6% (1)
10	-	1.8% (1)	1.8% (1)
11	-	9% (1)	9% (1)
12	5.2% (*zarbi*) (1)	10.5% (2)	15.7% (3)
13	-	12.1% (3)	12.1% (3)
14	-	11.3% (2)	11.3% (2)
15	-	7.2% (1)	7.2% (1)
16	-	1.2% (1)	1.2% (1)
17	-	11.7% (2)	11.7% (2)
18	-	5.4% (1)	5.4% (1)
20	-	16.5% (2)	16.5% (2)
22	-	13.1% (1)	13.1% (1)
23	-	0.9% (1)	0.9% (1)
24	-	-	- (0)
25	-	1.4% (1)	1.4% (1)
26	-	14.1% (1)	14.1% (1)
27	-	12.4% (2)	12.4% (2)
29	-	10.9% (1)	10.9% (1)
Av.	**0.6% (26 performances)** (3.9% (4 performances))	**8% (26)** (8.3% (25))	**8.6% (26)** (9% (25))

Table 3e (continued)

***Radifs*:**

1	6.8% (*kereshmeh*) (1)	14.1% (3)	20.9% (3)
2	-	19.9% (2)	19.9% (2)
3	-	3.9% (2)	3.9% (2)
4	-	10.9% (5)	10.9% (5)
Av.	**1.7%** (4) (6.8% (1))	**12.2%** (4)	**13.9%** (4)

The numbers in brackets indicate the number of sections allocated to measured and unmeasured material, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based.

Table 3f Percentages of Measured and Unmeasured Material in *Gusheh Mokhālef*
(corresponding with column A in Table 1d)

Performances

	Measured	Unmeasured	Total
1	4.6% (*chāhārmezrāb*) (1)	16% (7)	20.6% (8)
2	14% (zarbi and *chāhārmezrāb*) (2)	4.1% (2)	18.1% (4)
3	2.6% (*kereshmeh*) (1)	18.2% (4)	20.8% (5)
4	8.5% (*chāhārmezrāb*) (1)	6.9% (3)	15.4% (4)
5	1.9% (*chāhārmezrāb*) (1)	7.8% (2)	9.7% (3)
6	9.9% (*chāhārmezrāb* and *kereshmeh*) (2)	15.8% (4)	25.7% (6)
7	-	6% (1)	6% (1)
8	10.2% (*zarbi*) (1)	13.9% (1)	24.1% (2)
9	13.3% (*chāhārmezrāb*) (1)	8.4% (2)	21.7% (3)
10	-	16.5% (2)	16.5% (2)
11	4.1% (*kereshmeh*) (1)	23.8% (2)	27.9% (3)
12	10.5% (two *chāhārmezrābs*) (2)	19.3% (5)	29.8% (7)
13	-	21.1% (1)	21.1% (1)
14	-	9.7% (1)	9.7% (1)
15	10.6% (*chāhārmezrāb*) (1)	2.6% (2)	13.2% (3)
16	14.5% (*chāhārmezrāb* and slow *zarbi*) (2)	12.8% (2)	27.3% (4)
17	-	13.3% (1)	13.3% (1)
18	5.7% (*chāhārmezrāb* and *kereshmeh*) (2)	7.1% (3)	12.8% (5)
20	5.8% (*chāhārmezrāb*) (1)	27.1% (2)	32.9% (3)
22	-	13.4% (2)	13.4% (2)
23	11.5% (two *zarbis*) (2)	9.6% (3)	21% (5)
24	1.4% (*zarbi*) (1)	3.9% (4)	5.3% (5)
25	-	7.6% (2)	7.6% (2)
26	27% (*kereshmeh* and *reng*) (2)	10.2% (2)	37.2% (4)
27	-	19.4% (2)	19.4% (2)
29	14% (*chāhārmezrāb*) (1)	10.3% (3)	24.3% (4)
Av.	**6.5% (26 performances)** (9.5% (18 performances))	**12.5% (26)**	**19% (26)**

Table 3f (continued)

***Radifs*:**

1	-	9.8% (1)	9.8% (1)
2	-	8.3% (1)	8.3% (1)
3	6% (*chāhārmezrāb*) (1)	31% (5)	37% (6)
4	-	7.2% (3)	7.2% (3)
Av.	**1.5% (4 *radifs*)** (6% (1 *radif*))	**14.1% (4)**	**15.6% (4)**

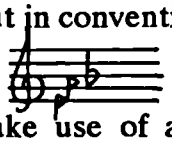
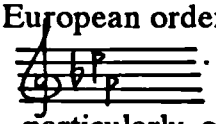
The numbers in brackets indicate the number of sections allocated to measured and unmeasured material, with the exception of the "average" row, where they indicate the number of renditions on which the average figure is based.

Appendix Four - Musical Examples Accompanying Chapter Five

Note on the Transcriptions in Chapters Five to Seven, and Appendices Four and Five

The musical transcriptions on which much of the discussion of Chapters Five to Seven are based were carried out using conventional western (five-line) staff notation. The notations were made on the basis of attempting to convey the sound of the music being transcribed as closely as possible to the reader. As such, sections of the music which are unmeasured have been transcribed without the use of note stems or bar-lines, both of which would be redundant, and phrase markings are used to indicate approximate lengths of sustained pitches. In sections of the music which are regularly measured, notes are stemmed, but not linked using beams, since this would have meant employing a system of note grouping rooted in western European concepts of divisive rhythm not necessarily appropriate to the Persian context. Note stems are occasionally used to indicate a short measured section in a largely unmeasured *gusheh*.

In the same way, time signatures are indicated (in parentheses) as, for example, (3/♩) rather than 3/4, and divisions of pulse are indicated using "half" rather than full bar-lines. It should be noted that the time signatures often indicate no more than the pre-dominant pulse, and there are many examples of sections with uneven bars, or a section with a 4-beat pulse, which shifts to 5-beats for one bar. Double "half" bar-lines are given at the end of a *gusheh*, and in many of the examples in Chapters Five and Six, at the end of a musical example (although a comma may also be used for the latter, particularly in the case of short examples).

For reasons similar to those outlined above regarding the notation of pulse and rhythm, "key signatures" are not set out in conventional western European order, but in order of ascent, for example,  rather than  .

Persian classical musicians often make use of a light drone, particularly on stringed instruments, the drone usually being played on the lowest sounding string(s). Generally speaking, the drone (where there is one) has been transcribed in the notations which follow, but it should be noted that there are a number of examples where it has not been notated.

In vocal sections, the words of the sung Persian text have been written using Roman letters under the music notation.

For ease of comparison, all of the transcriptions have been notated with e-*koron* as the *shāhed* of the *darāmad* of *Segāh* (or with c as the *shāhed* of the *darāmad* in the examples from *Māhur*). The actual starting pitch is indicated in brackets at the beginning of each example. All of the examples are notated using the treble stave. Many of those examples in which the actual starting pitch is in the area of a-*koron*/a-flat/a-natural are thus notated either (approximately) a fifth higher or a fourth lower than the actual sound. The decision of whether to notate a particular example higher or lower than pitch was generally determined

by the melodic range of the music, and where it would lie comfortably on the stave.

The following symbols were also used in the course of the transcriptions (some of these follow conventional five-line notation symbols):

pitch is slightly sharp (↑) or flat (↓)

an arrow underneath the music indicates that the music is getting faster (→) or slower (←)

koron, approximately quarter-tone flat (for example, a-*koron* lies between a-natural and a-flat)

riz or tremolo; this is the only occasion when note stems are used in unmeasured sections of music; in cases where two notes an octave apart are each being played tremolo, the following sign is used:  but if the tremolo is between these two pitches, the following is used: 

phrase markings are used to indicate a) approximate lengths of pitches, b) groupings of note patterns, and occasionally c) longer phrase sections

an accented note

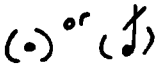
a slightly extended note may be indicated using a dot rather than a phrase marking

above/below a section indicates that the music sounds an octave higher/lower

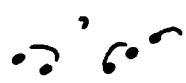
dorāb, an ornamental pattern, found at the beginning of phrases, particularly on *tār* and *setār*

a slide between two pitches in which the intermediate pitches are not clearly individually discernable

mālesh, heard occasionally on lute-type instruments, this technique is rather like an exaggerated "vibrato", caused by rotating the finger of the left hand on the vibrating string.



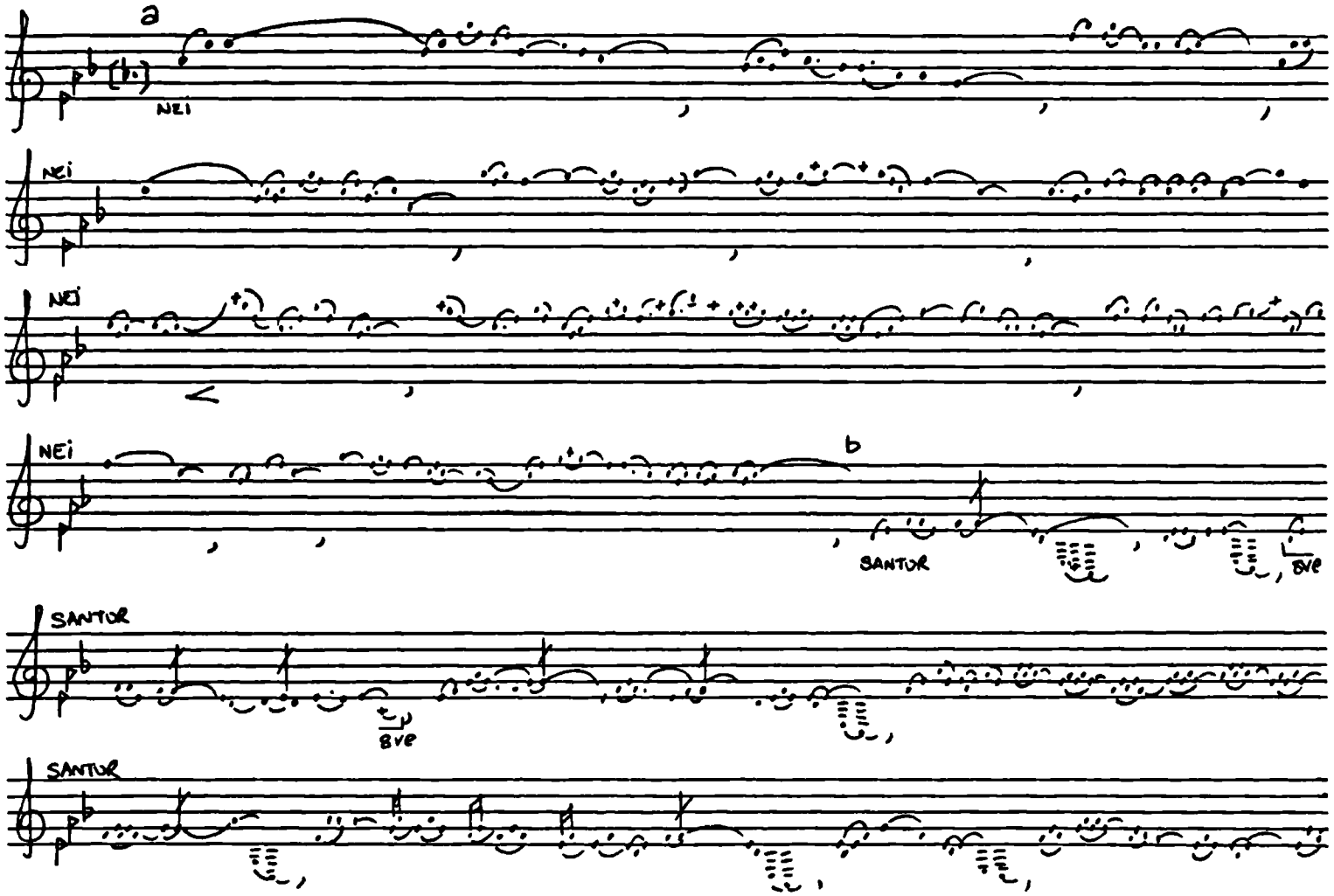
a very faint pitch may be indicated in parentheses



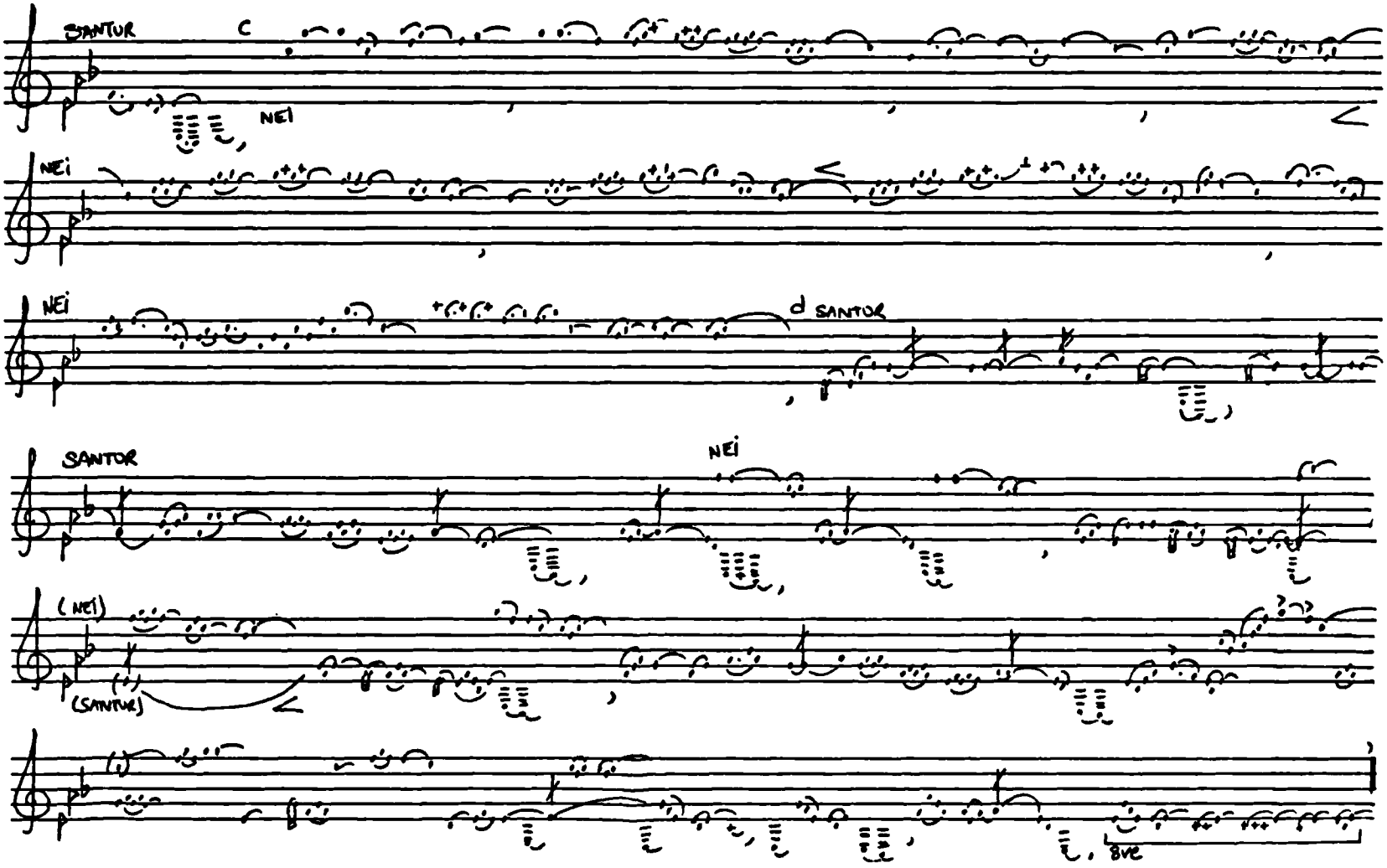
pauses between phrases are indicated using a comma

significant changes of volume may be indicated using conventional western symbols:

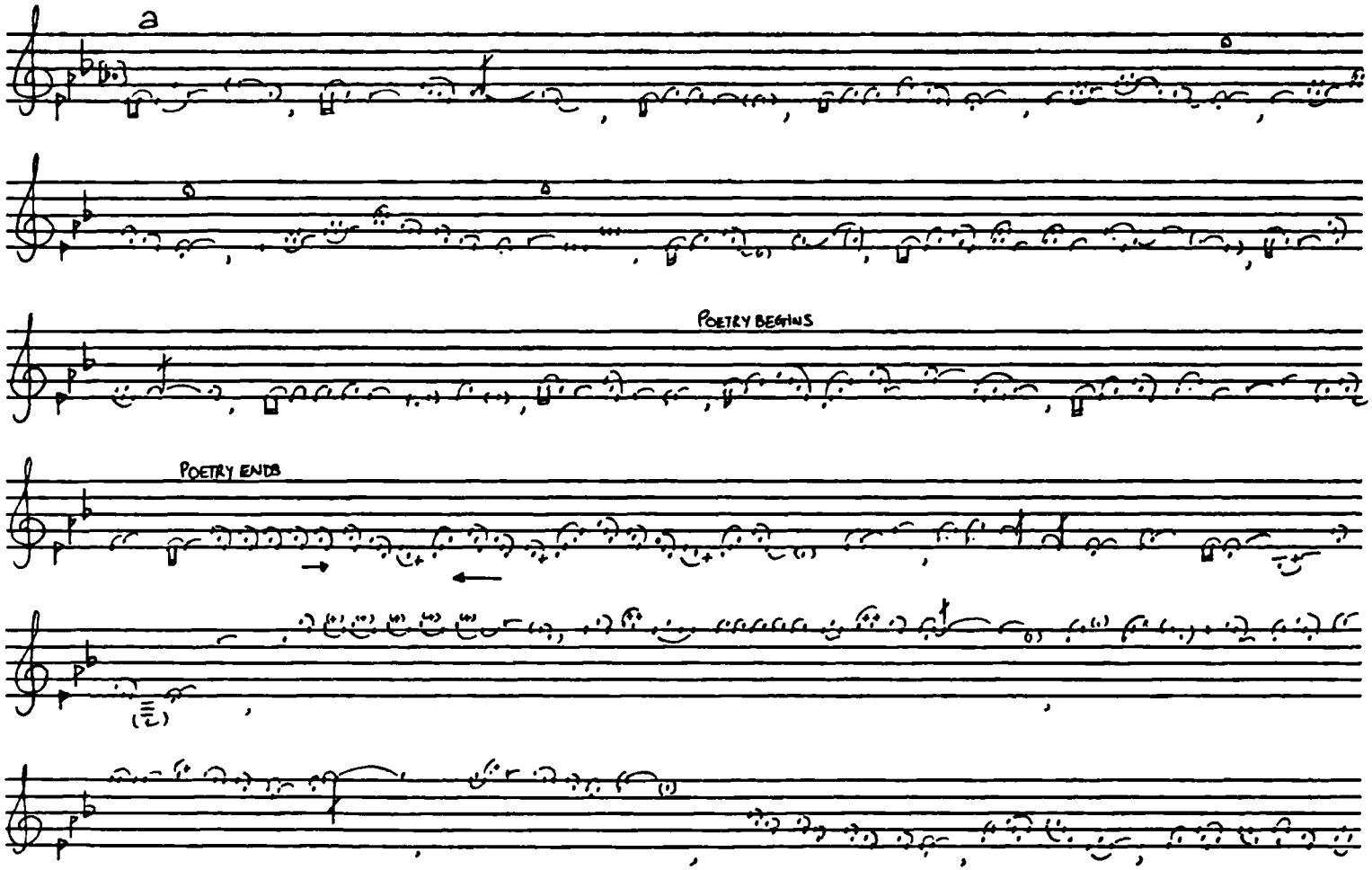
Chapter Five - **Example 1** - *Segāh, Darāmad* - Performance 15 - Pashang Kāmkār (*santur*), Jamshid Andalibi (*nei*) (Cassette 1(A), 0'25")



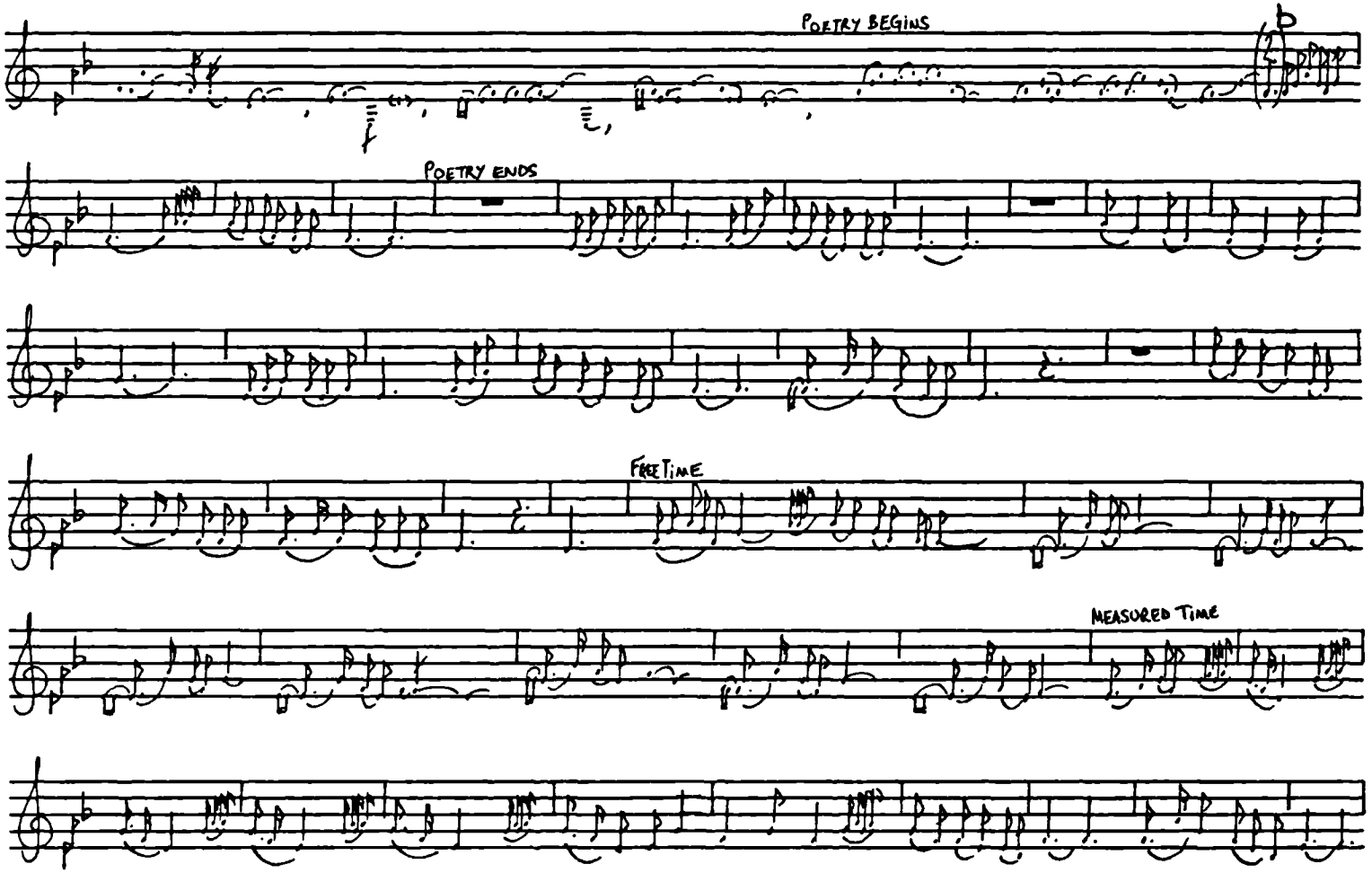
Example 1 (continued)



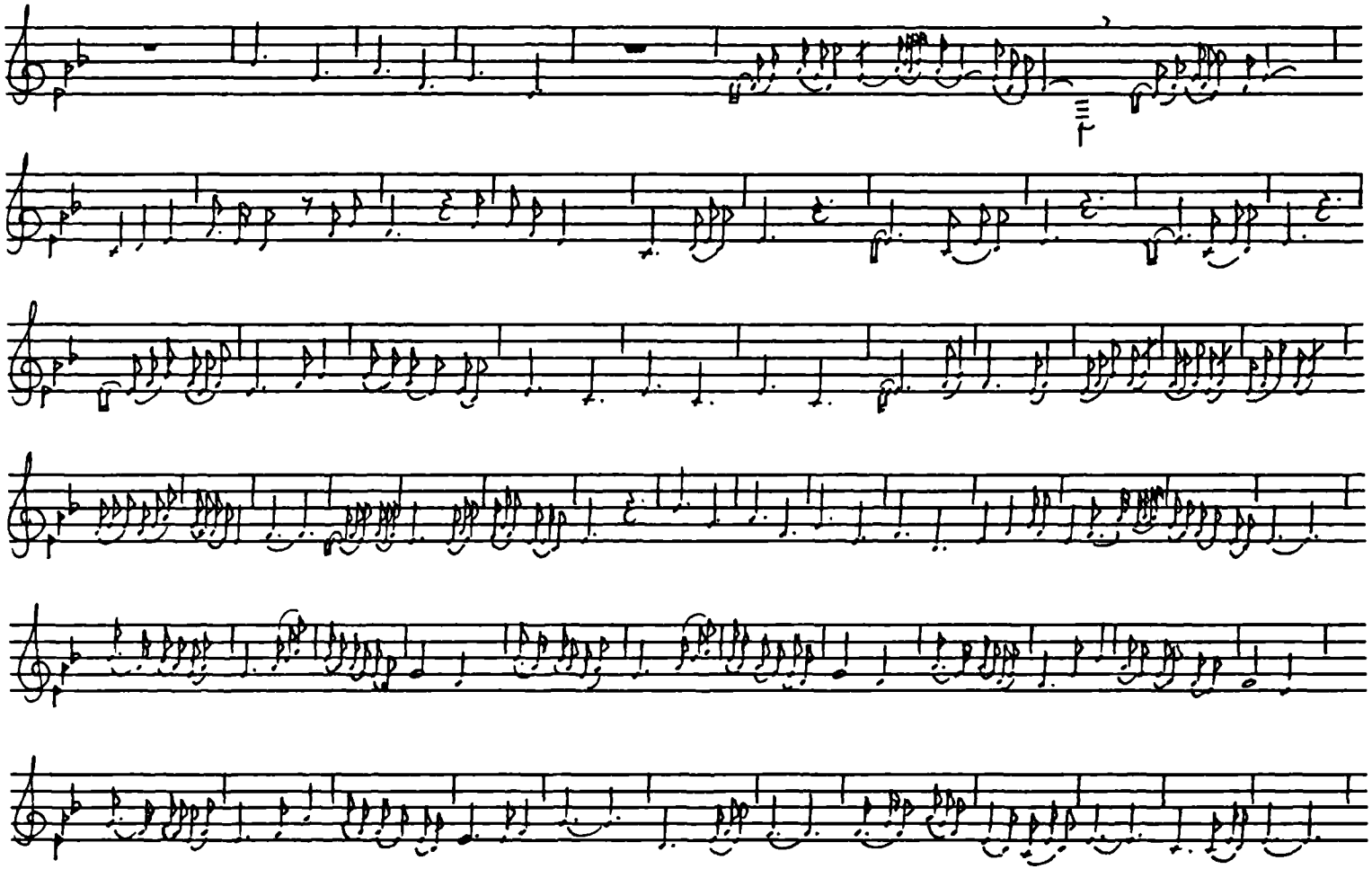
Chapter Five - **Example 2** - *Segāh, Darāmad* - Performance 20 - Ahmad Ebādi (*setār*) (Cassette 1(A), 4'45")



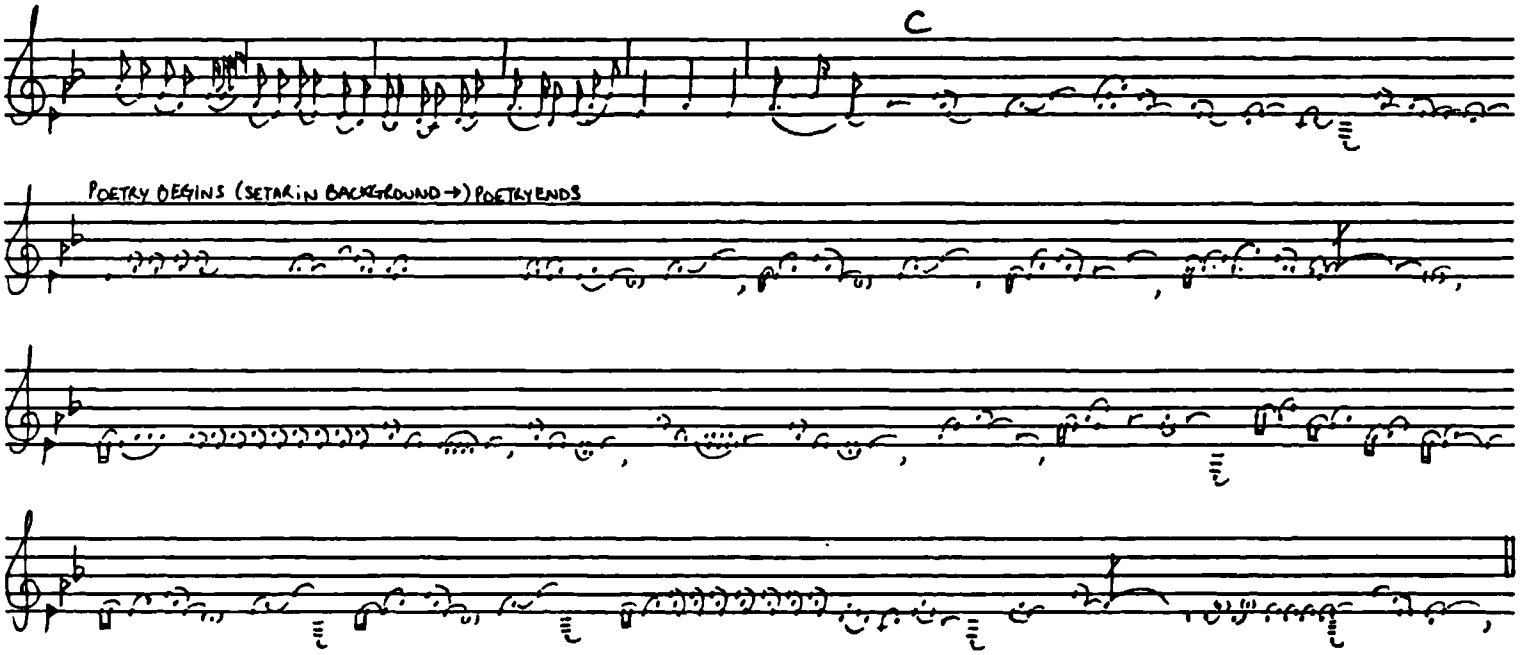
Example 2 (continued)



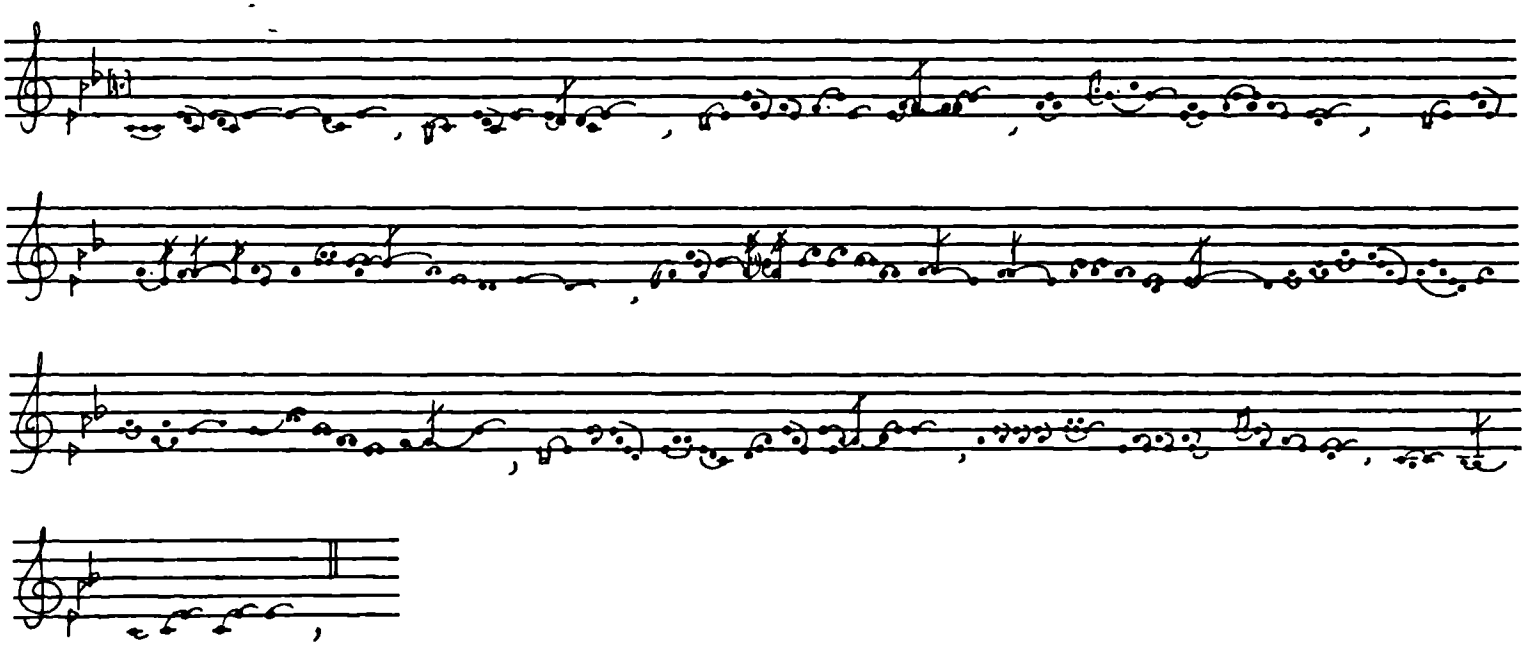
Example 2 (continued)



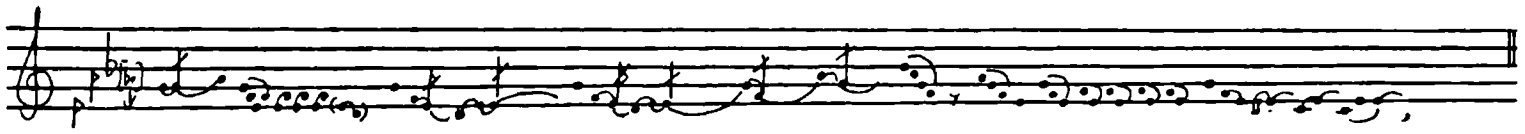
Example 2 (continued)



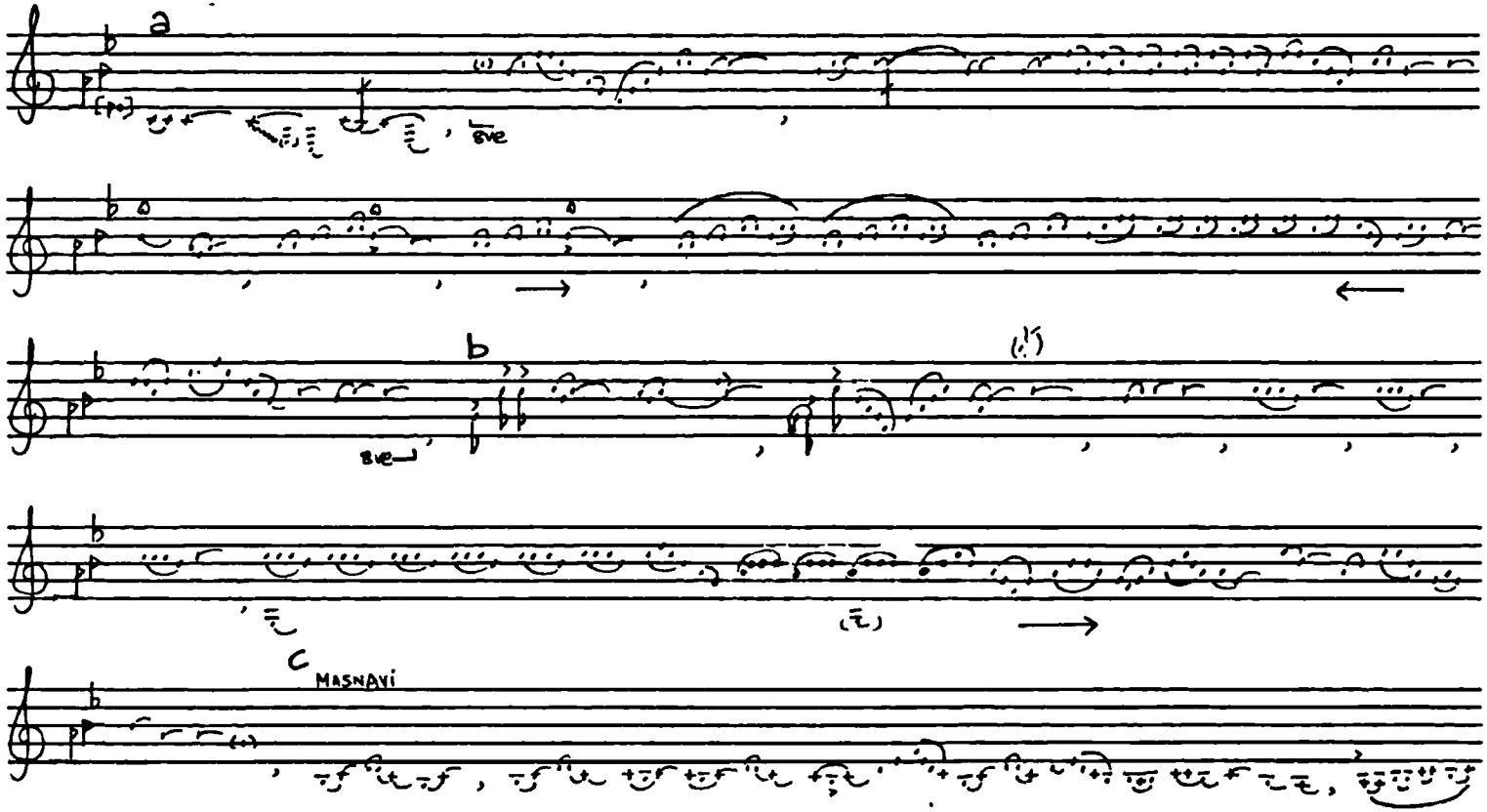
Chapter Five - **Example 3** - *Segāh, Darāmad* - *Radif* 3 - Hooshang Zarif (*tār*) (Cassette 1(A), 11'22")



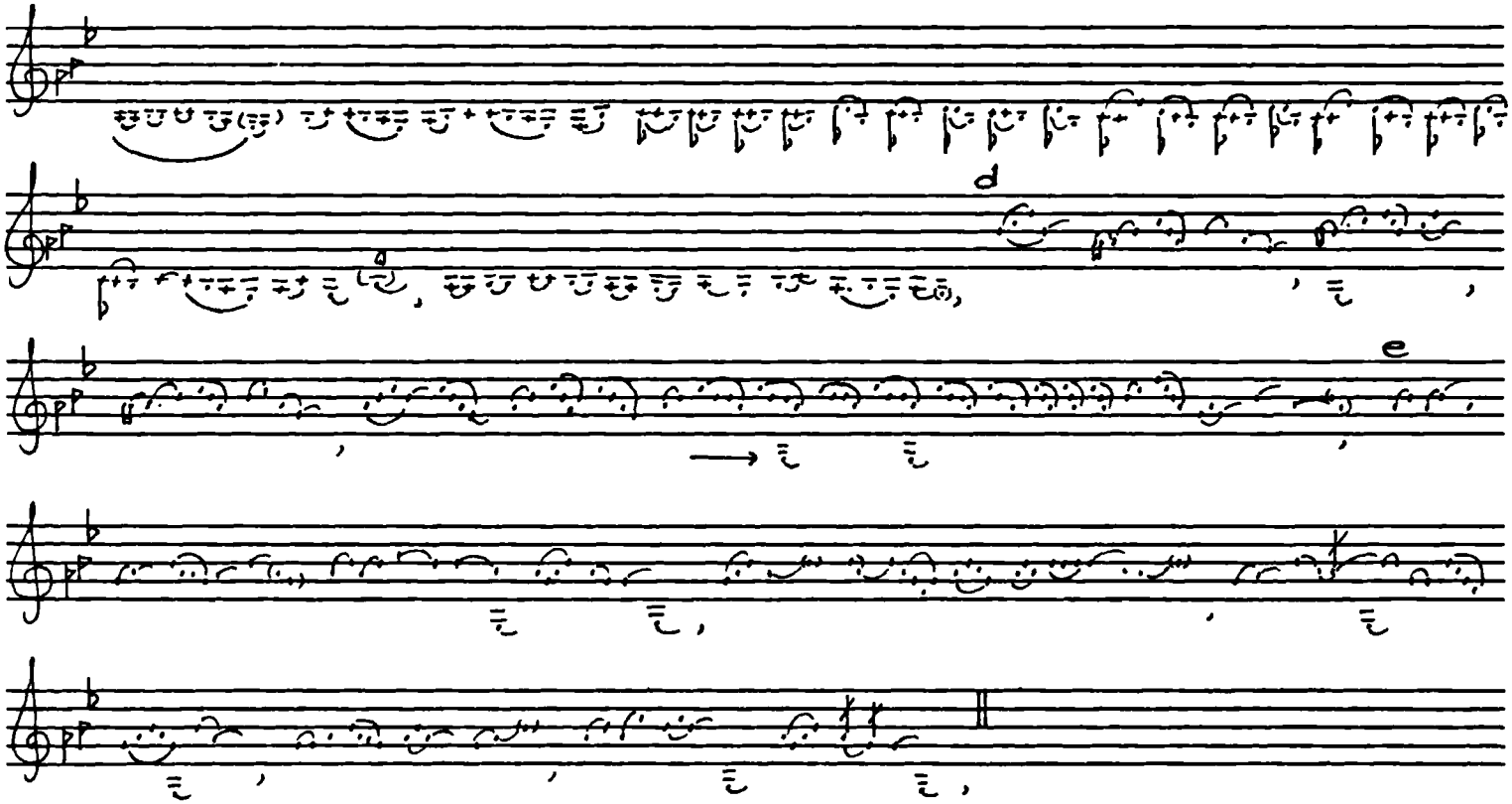
Example 4 - *Segāh, Darāmad* - *Radif* 1 - Nur Ali Borumand (*tār*) (Cassette 1(A), 12'34")



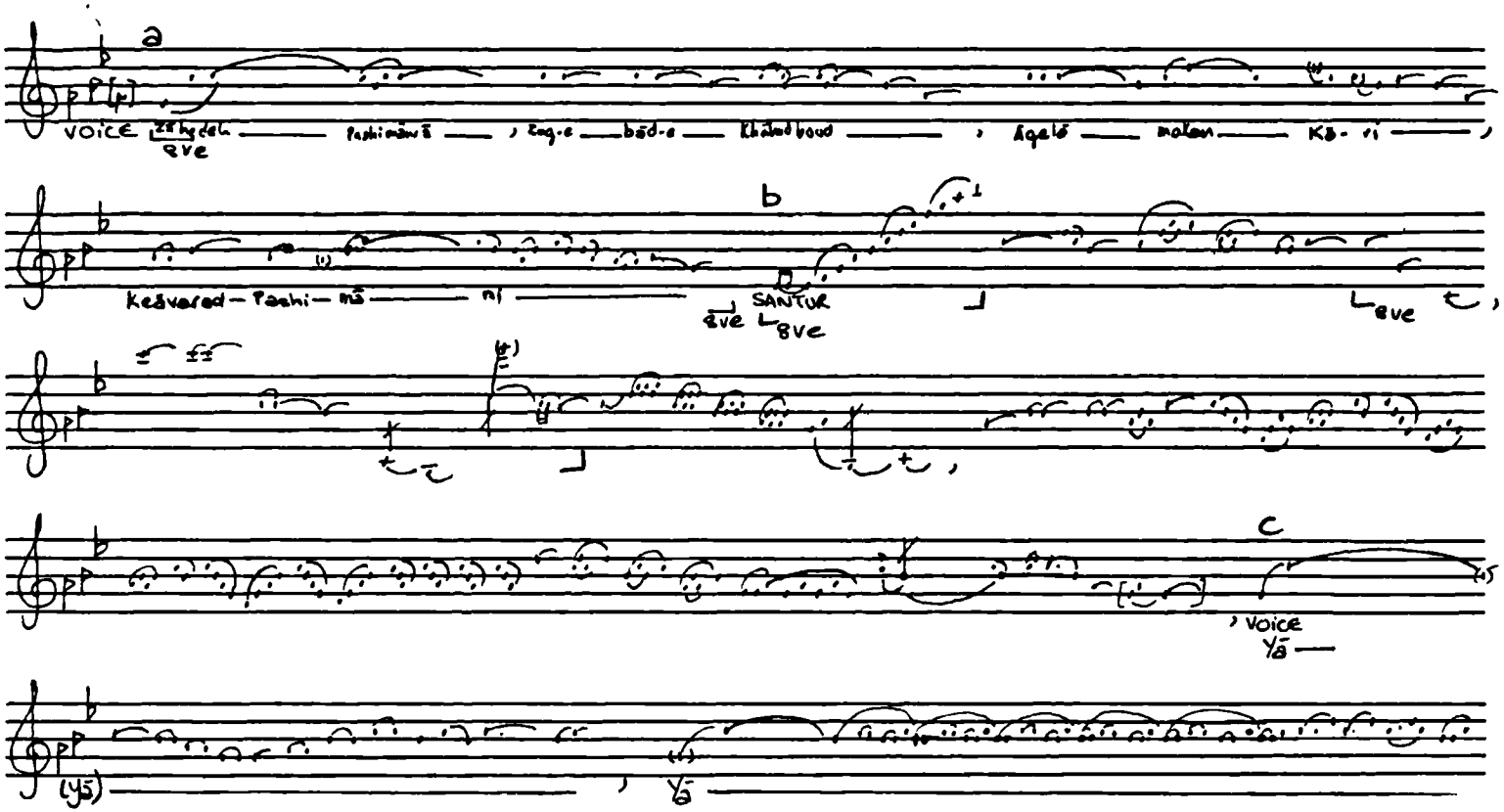
Chapter Five - **Example 5** - *Segāh, Mokhālef* - Performance 10 - Lotfollāh Majd (*tār*) (Cassette 1(A), 13'06")



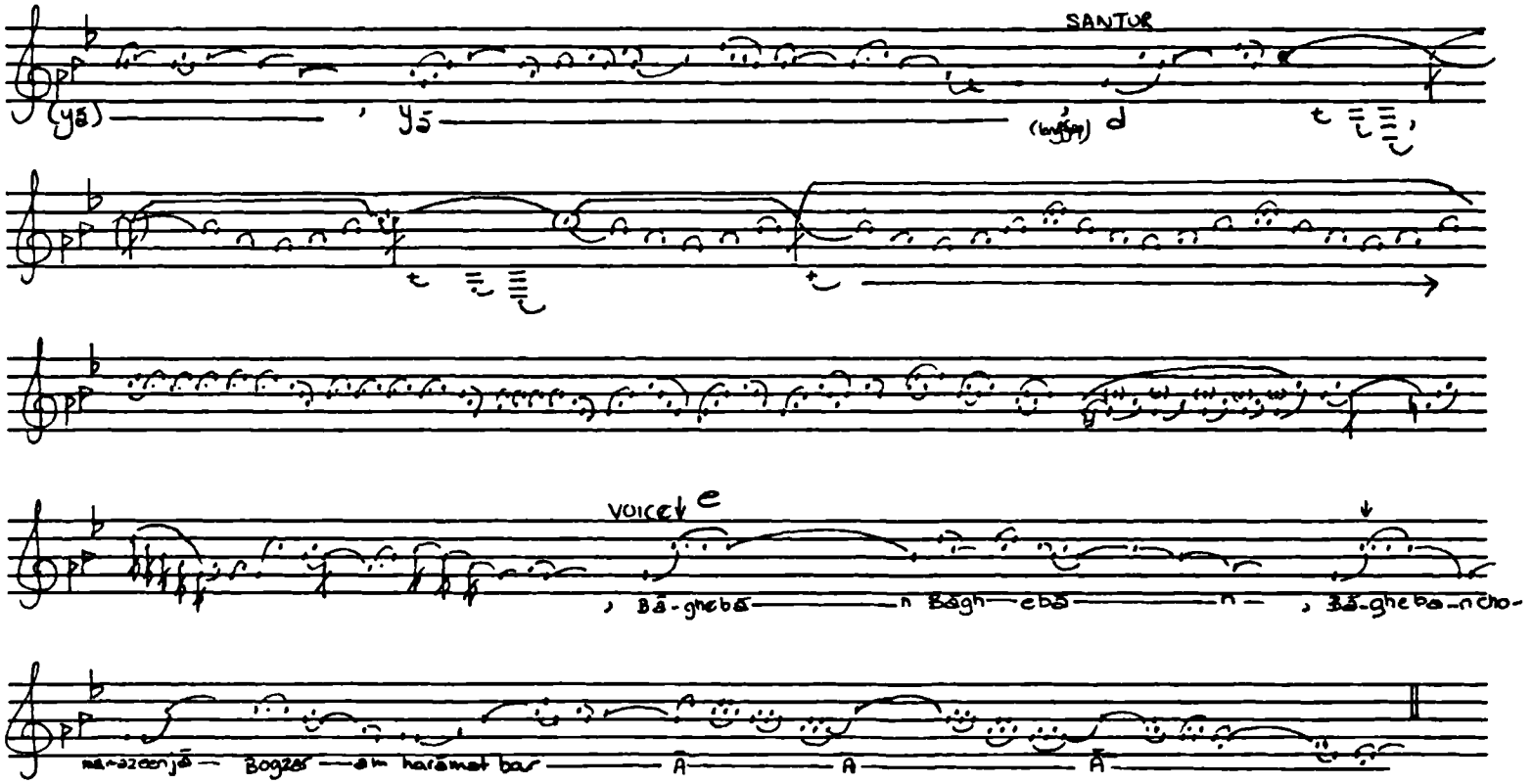
Example 5 (continued)



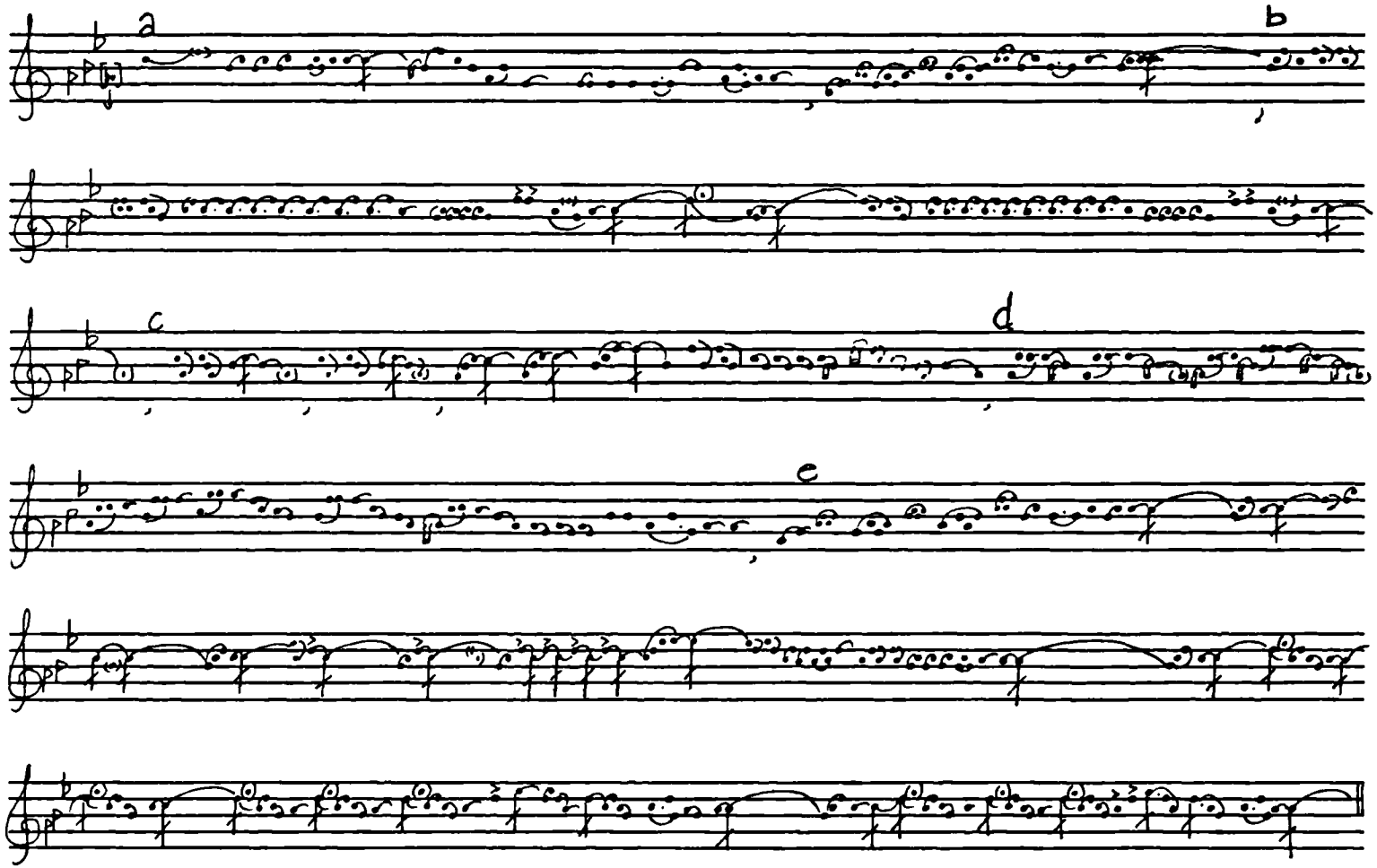
Chapter Five - **Example 6** - *Segāh, Mokhālef* - Performance 17 - Abdol Vahāb Shahidi (male voice), Farāmarz Pāyvar (*santur*)
(Cassette 1(A), 16'12")



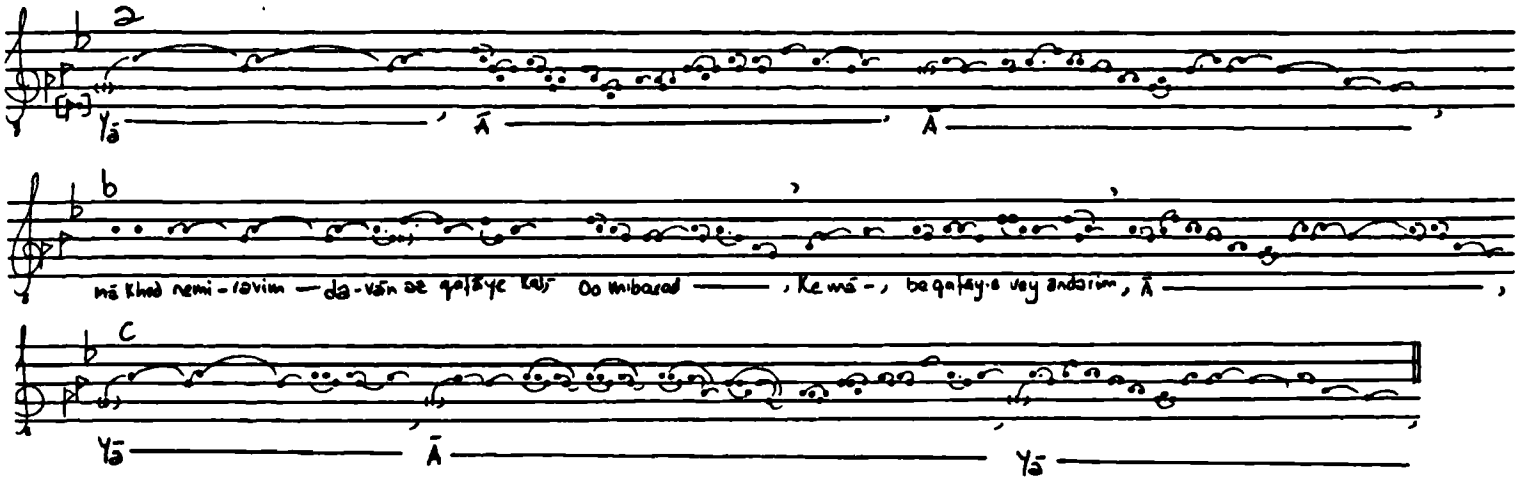
Example 6 (continued)



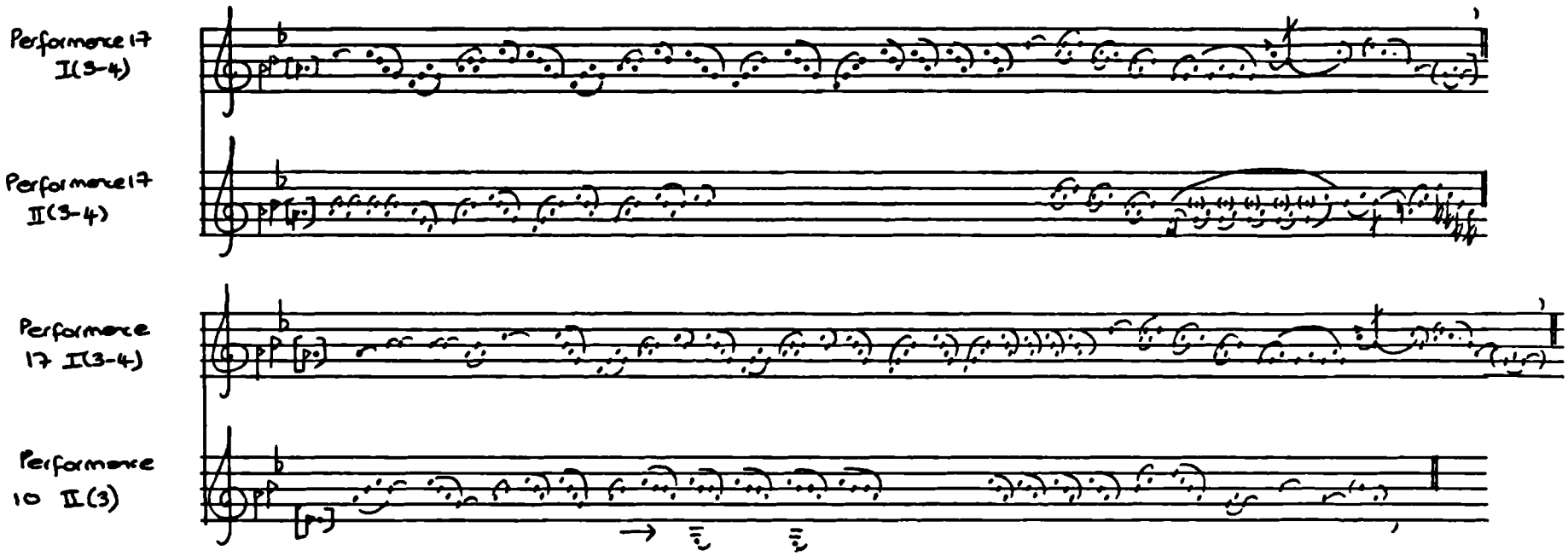
Chapter Five - **Example 7** - *Segāh, Mokhālef* - *Radif* 1 - Nur Ali Borumand (*tār*) (Cassette 1(A), 19'45")



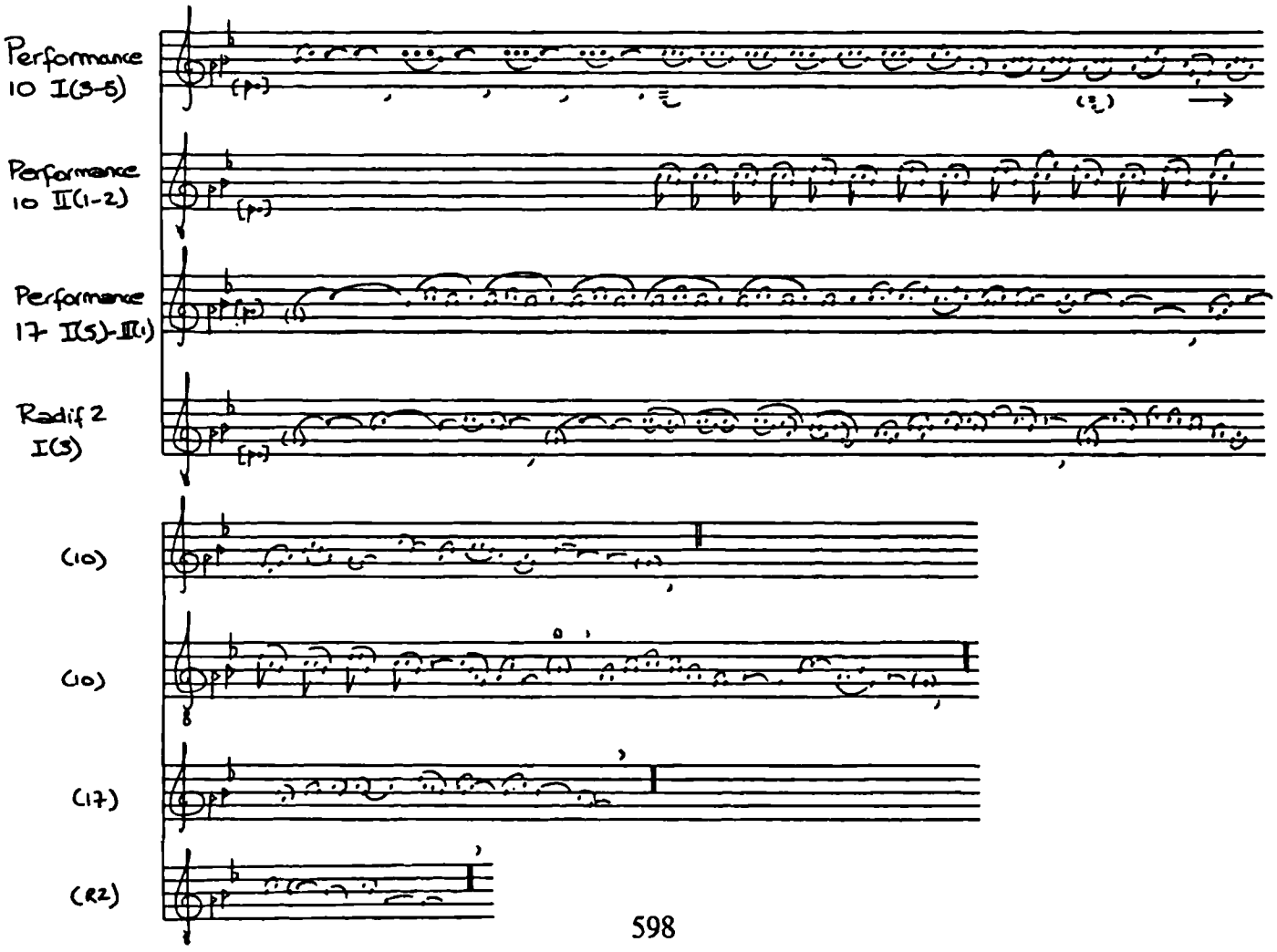
Chapter Five - Example 8 - *Segāh, Mokhālef - Radif* 2 - Mahmud Karimi (male voice) (Cassette 1(A), 21'53")



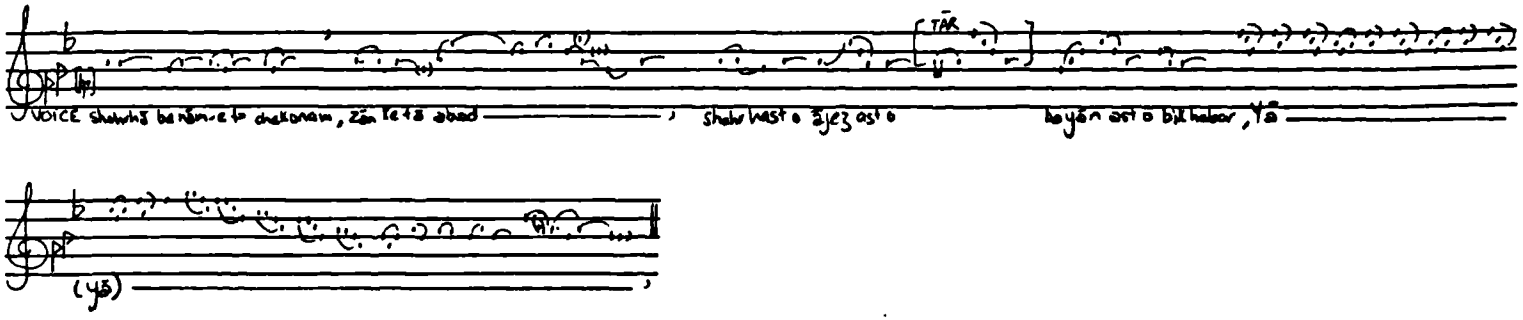
Chapter Five - **Example 9a** - *Segāh, Mokhālef* - Comparative Examples



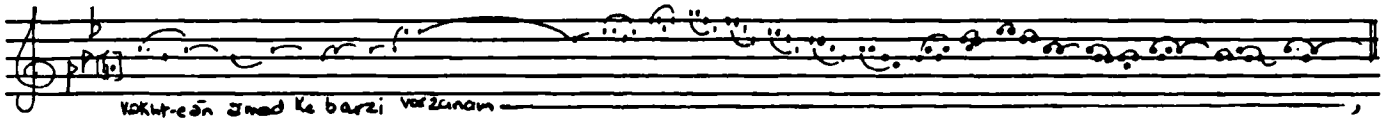
Chapter Five - **Example 9b** - *Segāh, Mokhālef* - Comparative Examples



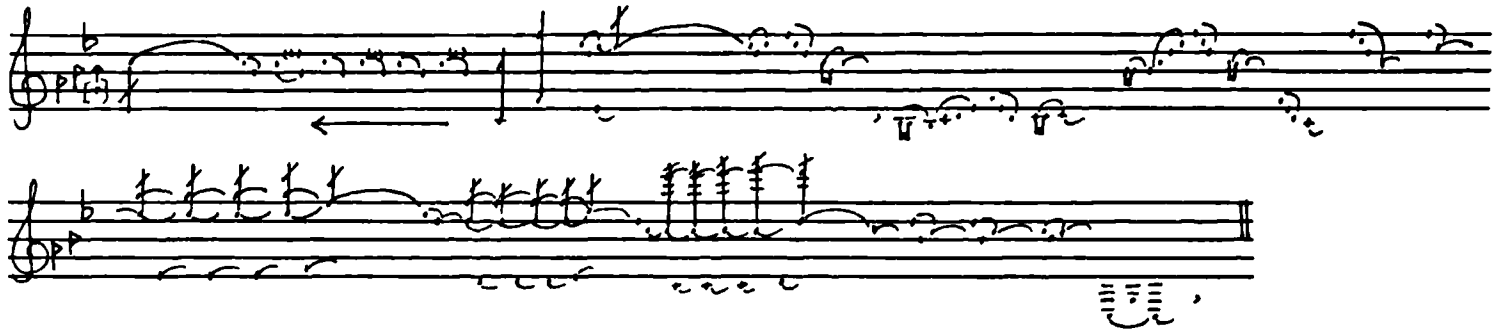
Chapter Five - **Example 10 (1)** - *Segāh, Maqlub* - Performance 1 - Mohammad Rezā Shajariān (male voice) (Cassette 1(A), 23'22")



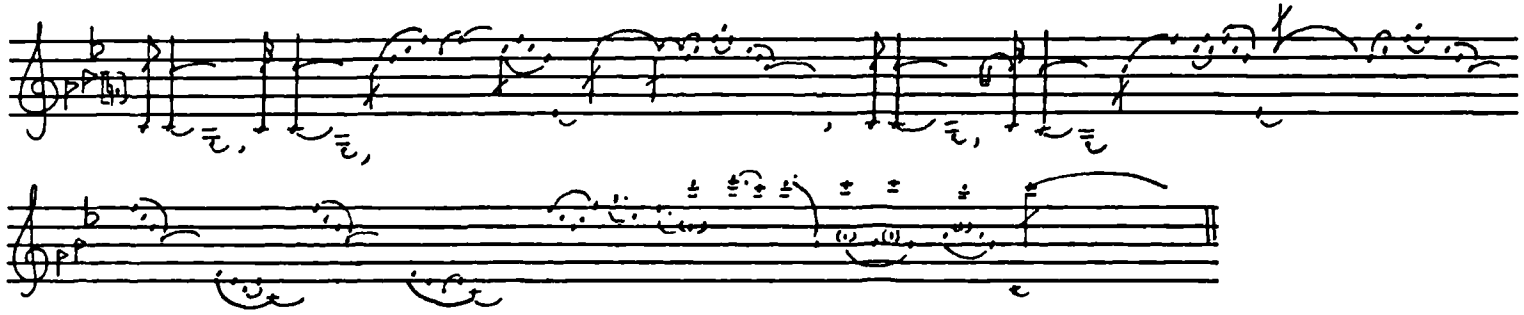
Example 10 (2) - *Segāh, Maqlub* - Performance 1 - Mohammad Rezā Shajariān (male voice) (Cassette 1(A), 24'03")



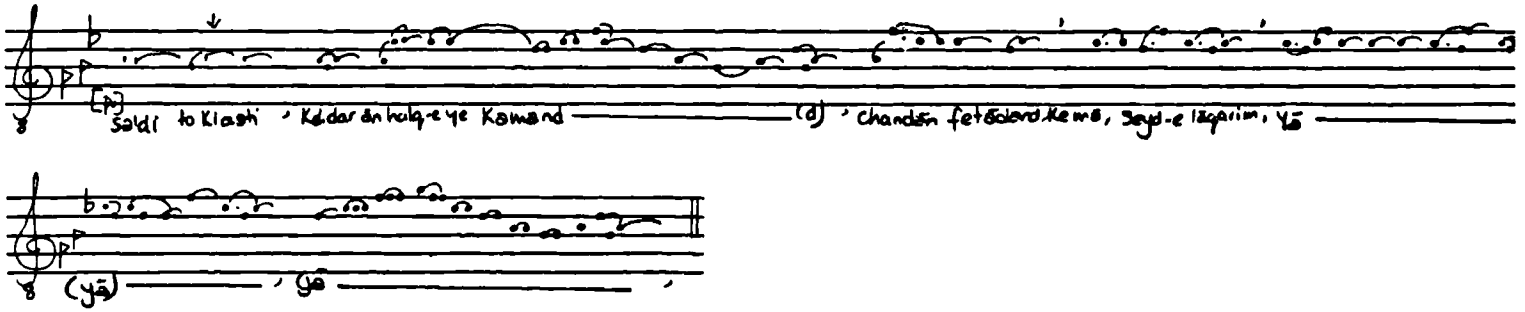
Chapter Five - **Example 11** - *Segāh, Maqlub* - Performance 18 - Farāmarz Pāyvar (*santur*) (Cassette 1(A), 24'30")



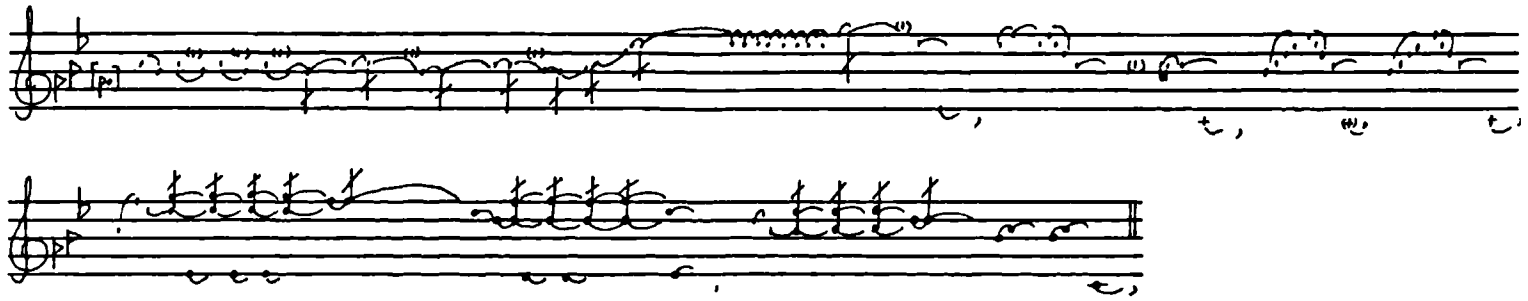
Example 12 - *Segāh, Maqlub* - Performance 16 - Parviz Meshkātiān (*santur*) (Cassette 1(A), 25'26")



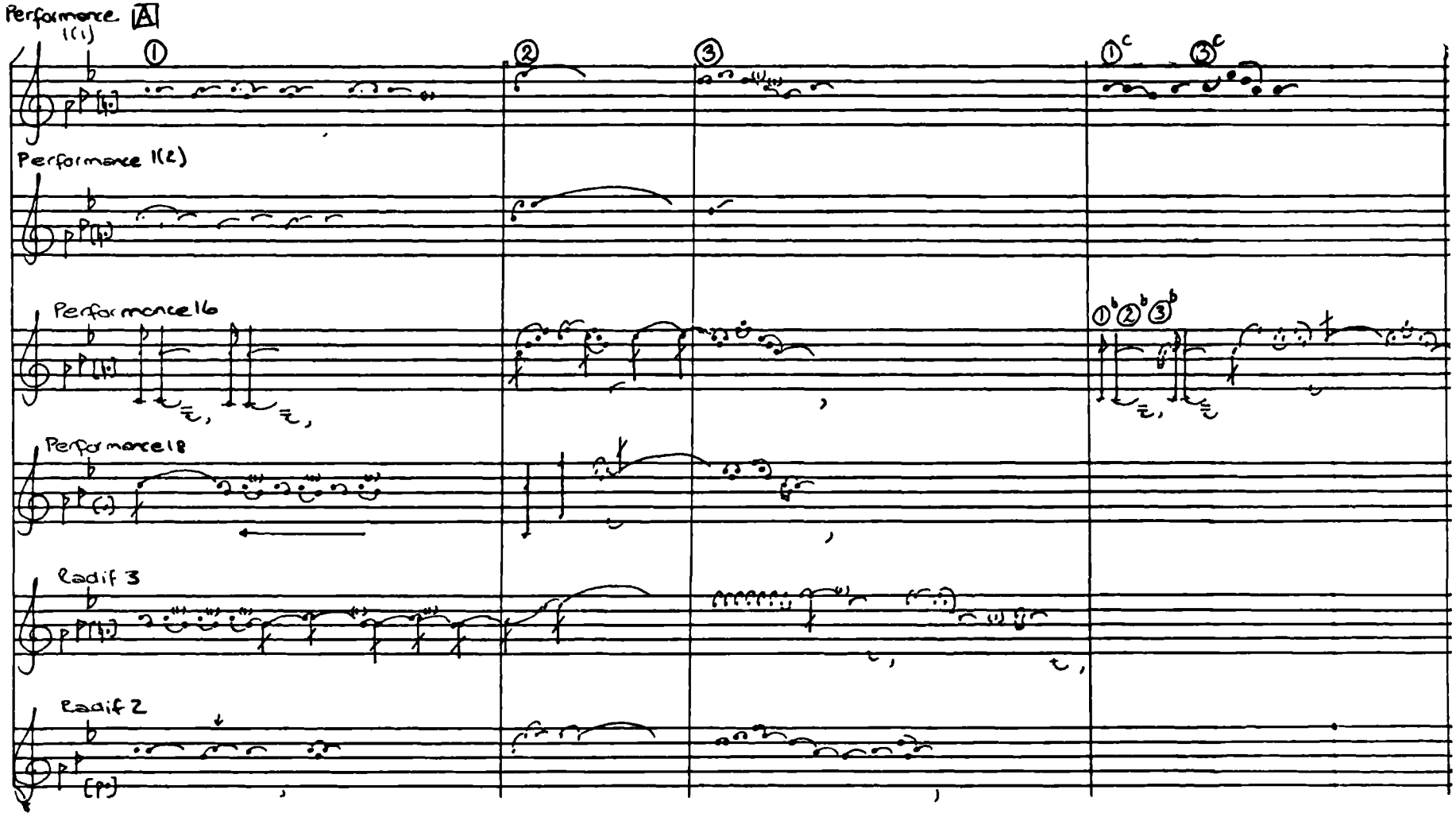
Chapter Five - **Example 13** - *Segāh, Maqlub* - *Radif* 2 - Mahmud Karimi (male voice) (Cassette 1(A), 26'04")



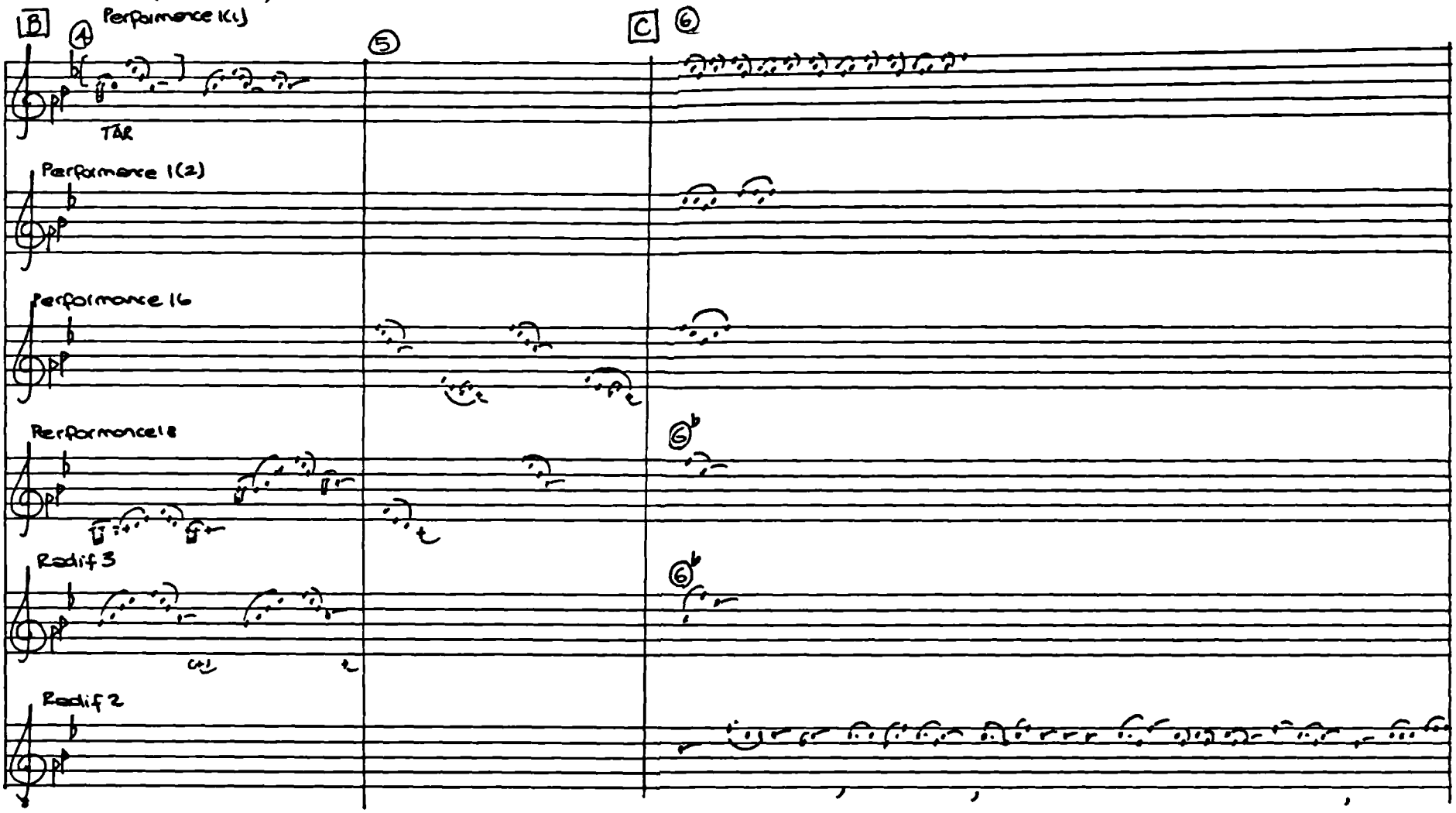
Example 14 (Cassette 1(A), 26'51") - *Segāh, Maqlub* - *Radif* 3 - Esmāil Tehrāni (*santur*)



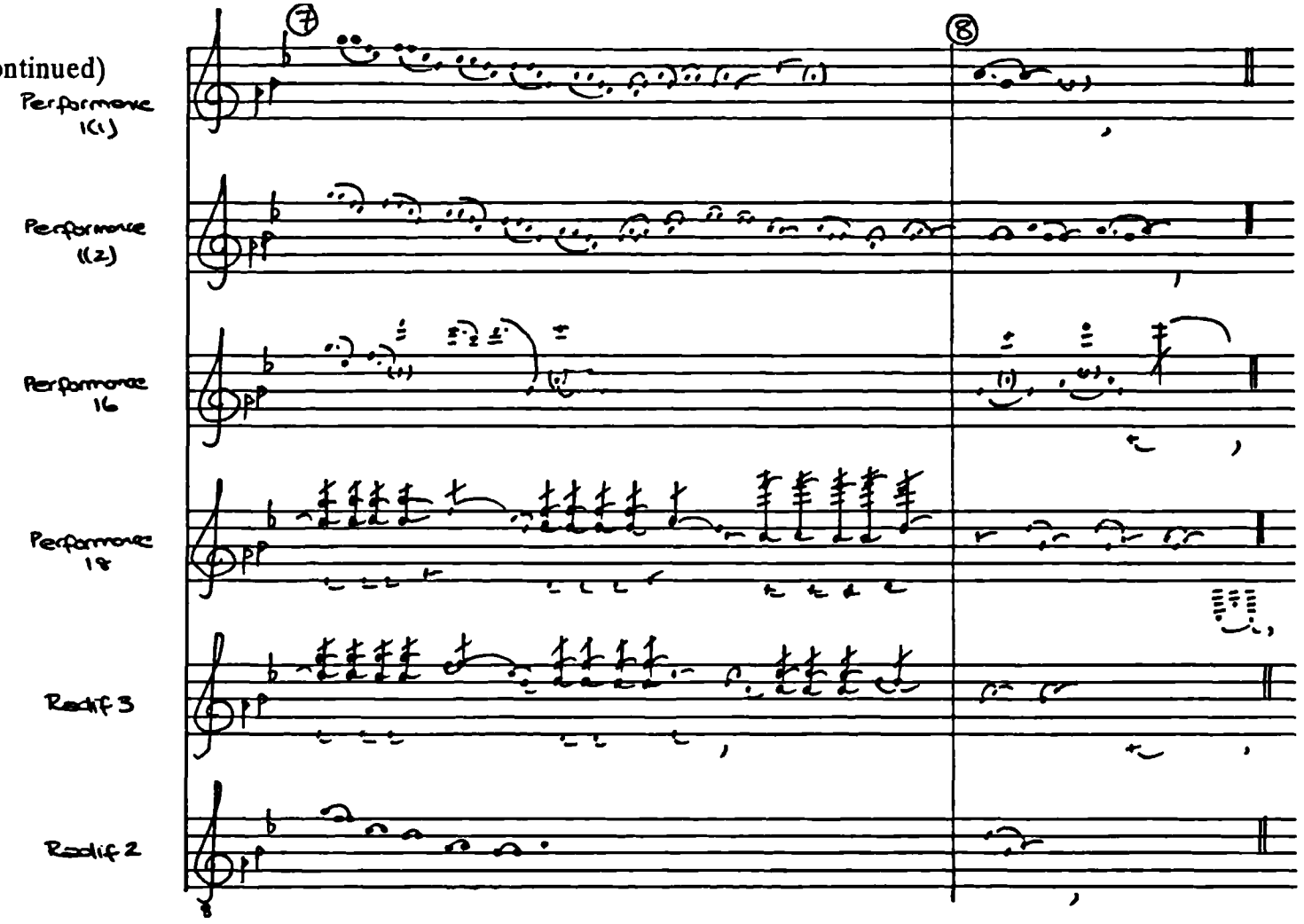
Chapter Five - **Example 15** - *Segāh, Maqlub* - Comparative Examples



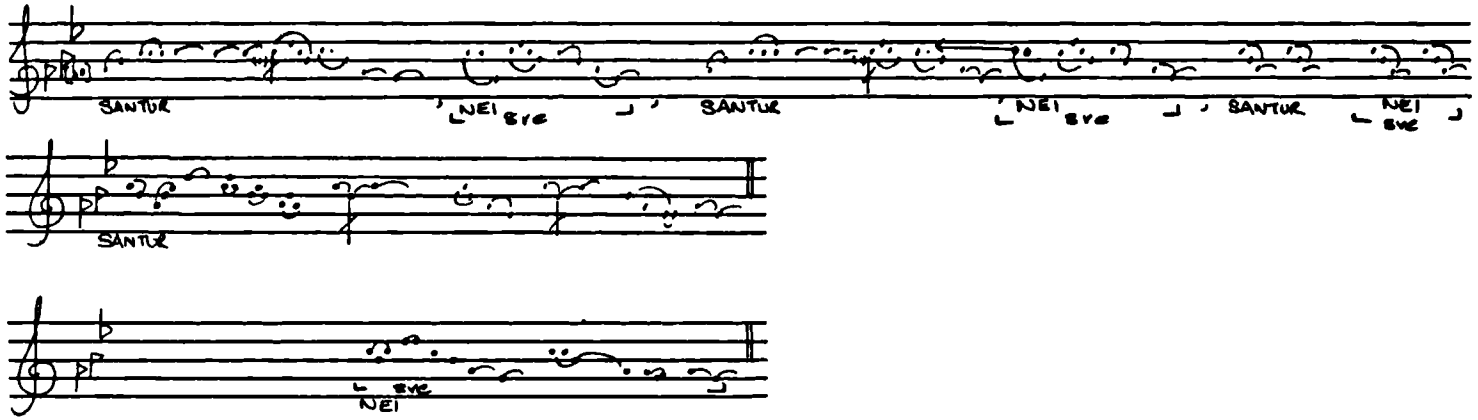
Example 15 (continued)



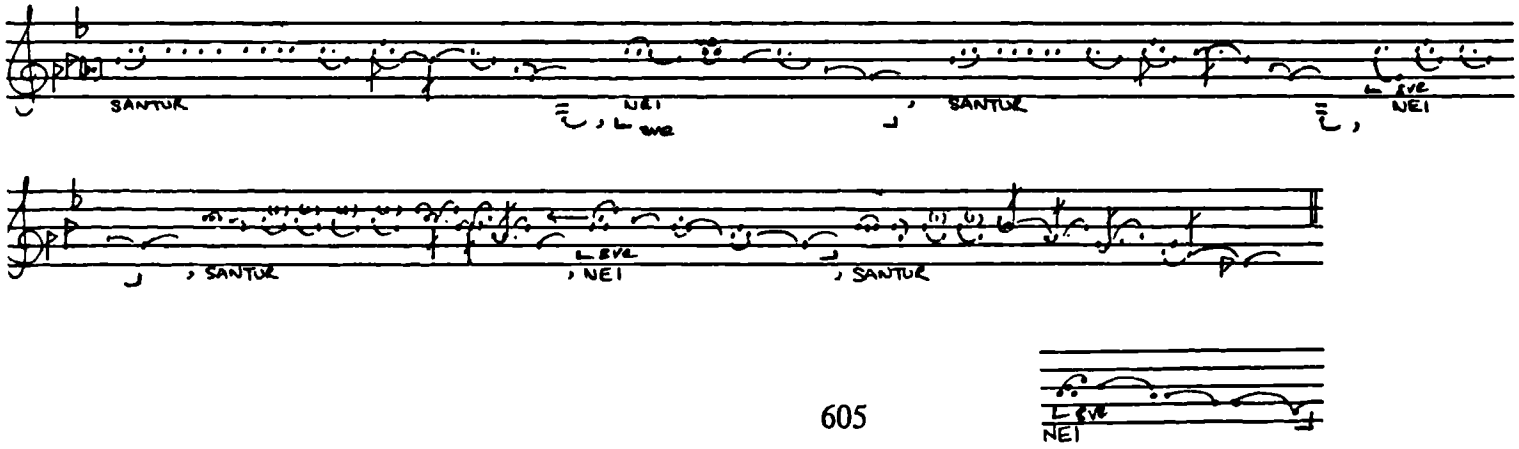
Example 15 (continued)



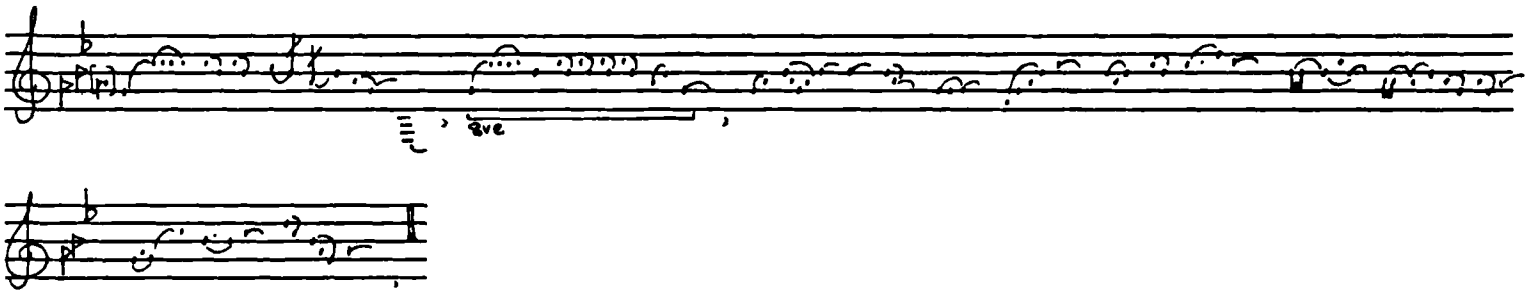
Chapter Five - **Example 16(1)** - *Segāh, Hazeen* - Performance 15 - Pashang Kāmkār (*santur*), Jamshid Andalibi (*nei*)
(Cassette 1(A), 28'00")



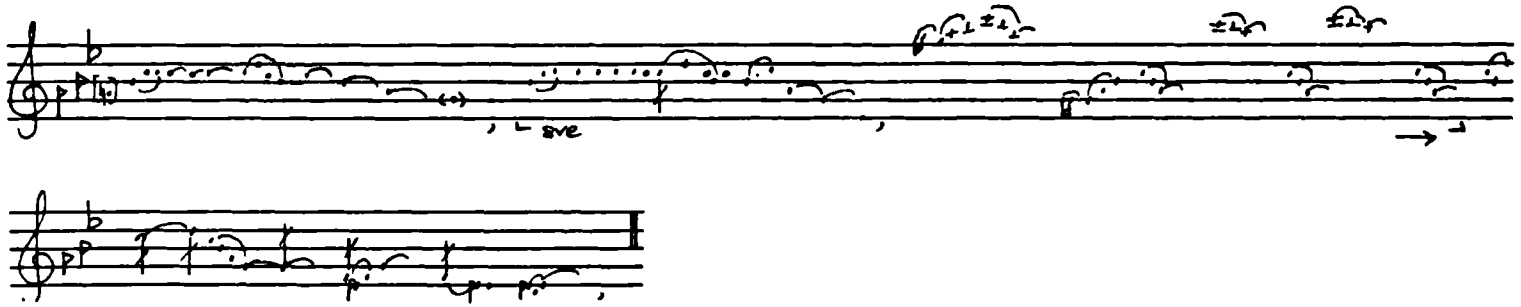
Example 16(2) - *Segāh, Hazeen* - Performance 15 - Pashang Kāmkār (*santur*), Jamshid Andalibi (*nei*) (Cassette 1(A), 28'35")



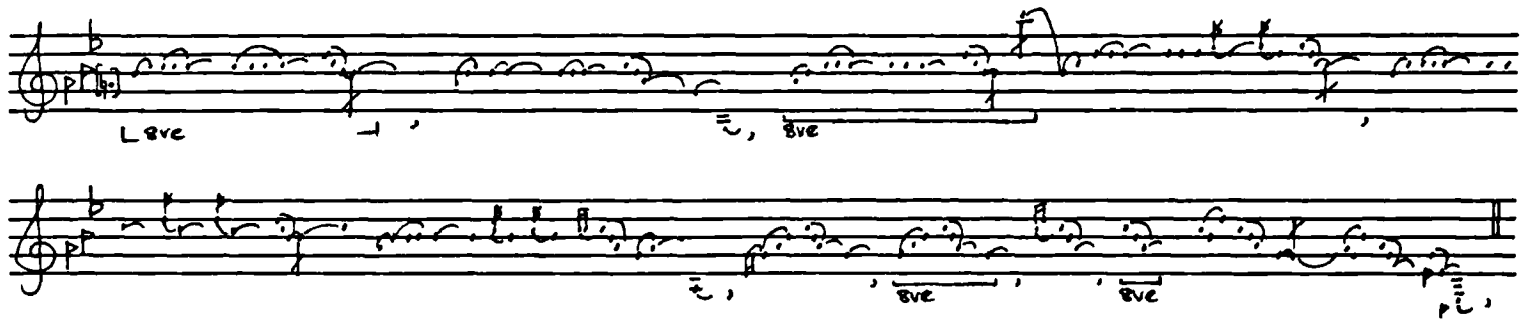
Chapter Five - **Example 17** - *Segāh, Hazeen* - Performance 9 - Rezā Shafeiān (*santur*) (Cassette 1(A), 29'19")



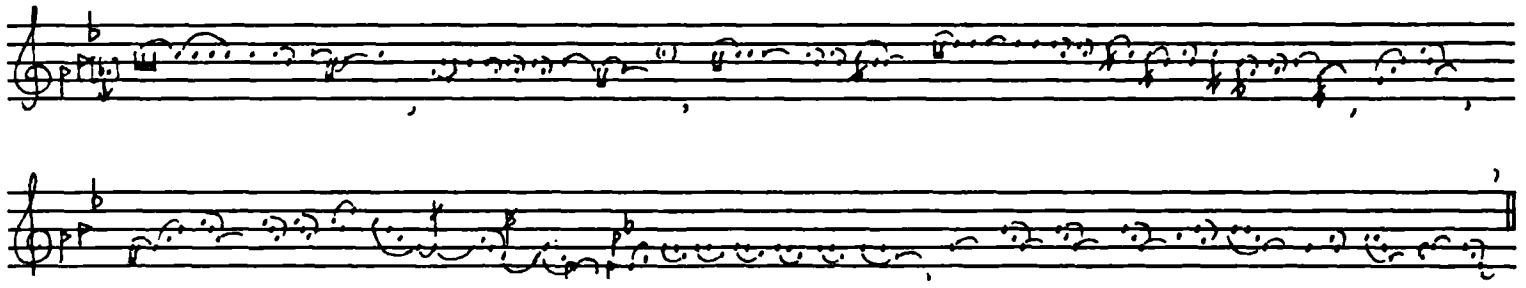
Example 18 - *Segāh, Hazeen* - Performance 16 - Parviz Meshkātiān (*santur*) (Cassette 1(A), 29'46")



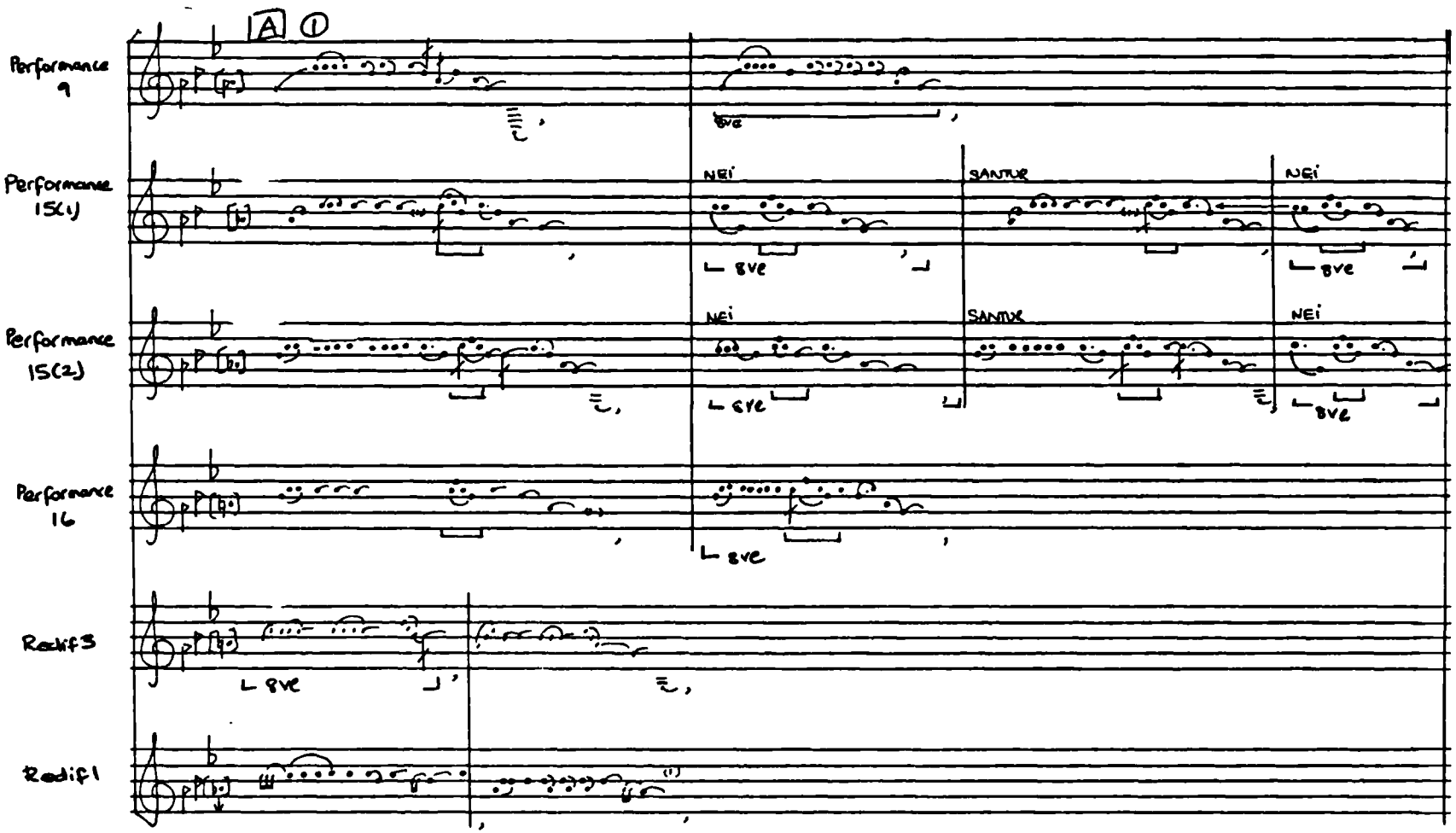
Chapter Five - **Example 19** - *Segāh, Hazeen - Radif* 3 - Esmāil Tehrāni (*santur*) (Cassette 1(A), 30'17")



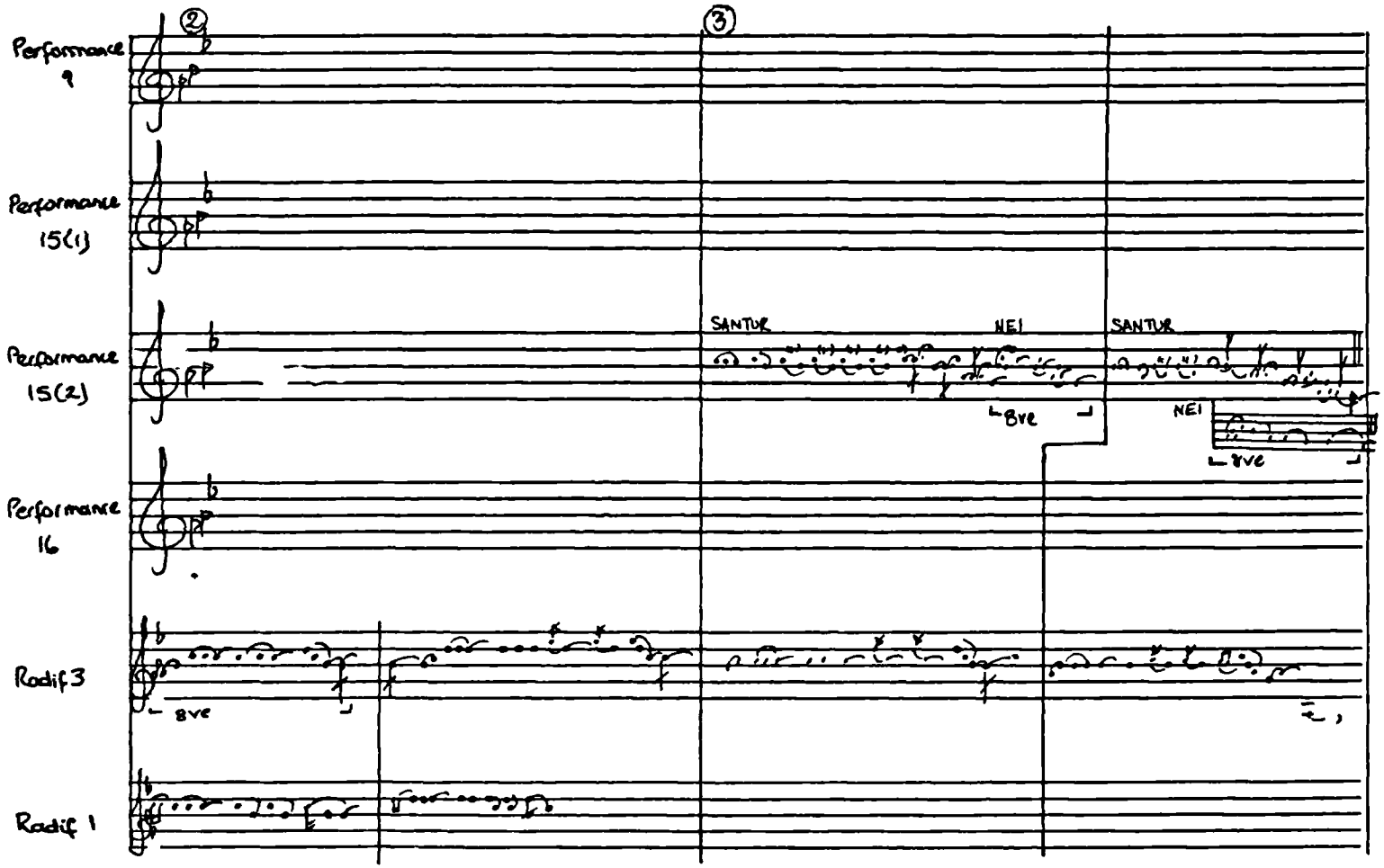
Example 20 - *Segāh, Hazeen - Radif* 1 - Nur Ali Borumand (*tār*) (Cassette 1(B), 0'08")



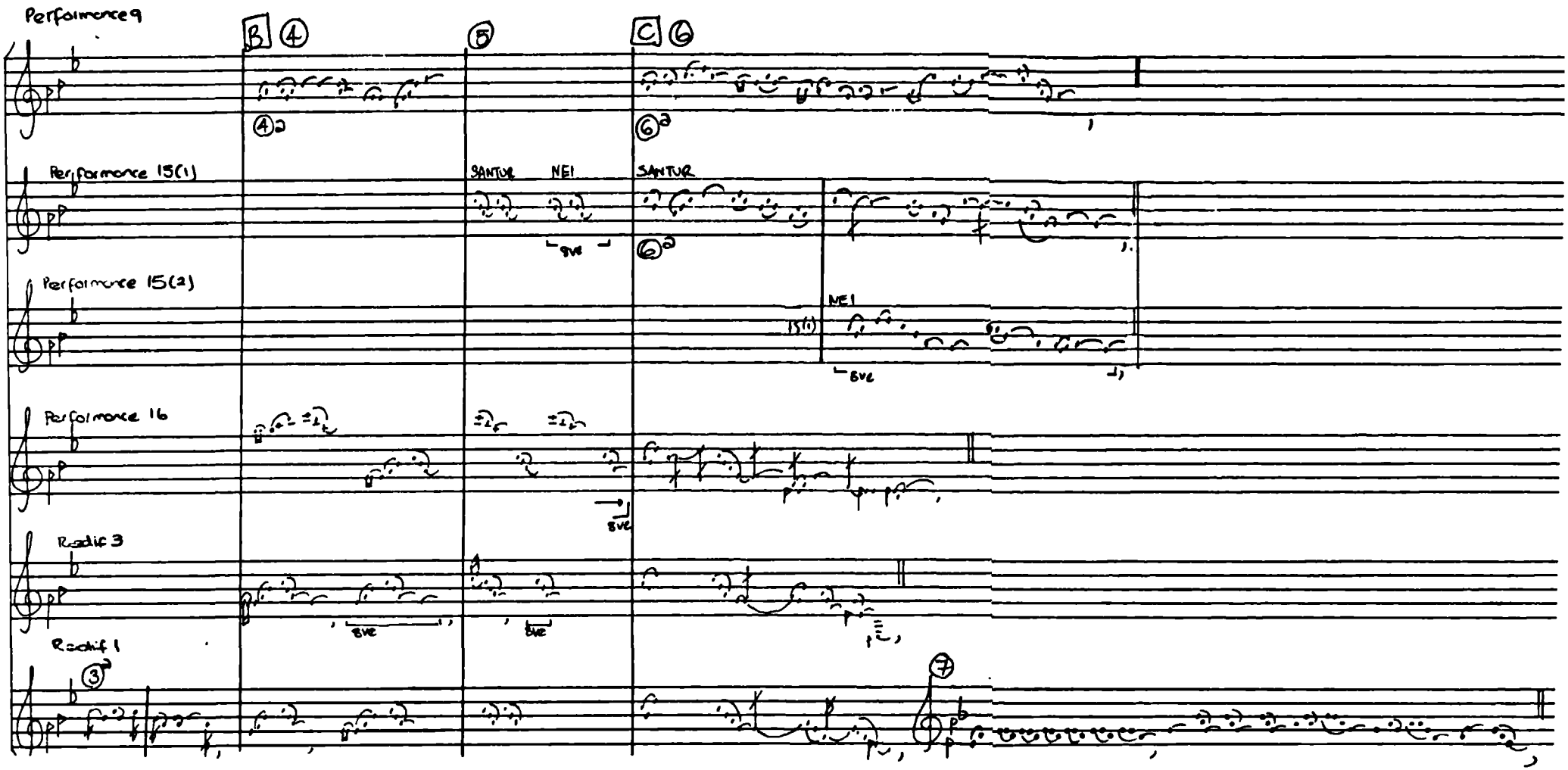
Chapter Five - **Example 21** - *Segāh, Hazeen* - Comparative Examples



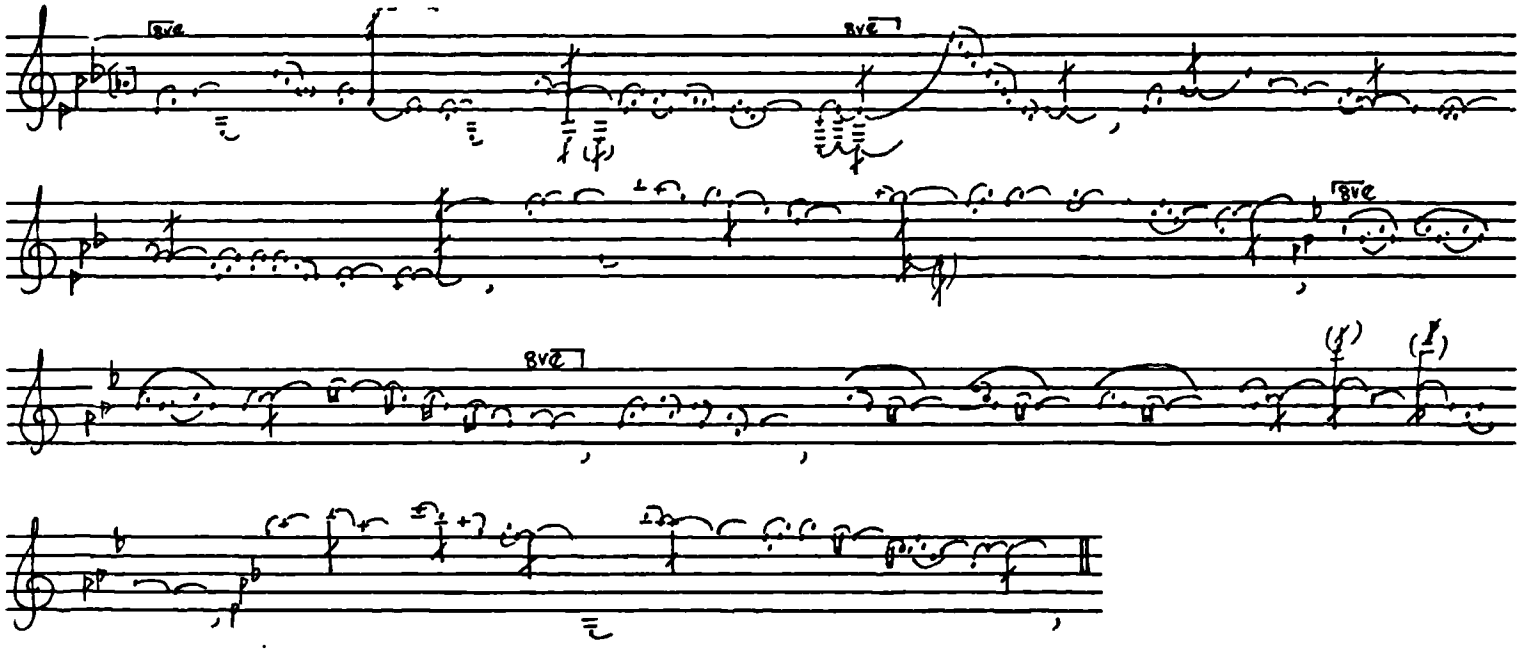
Example 21 (continued)



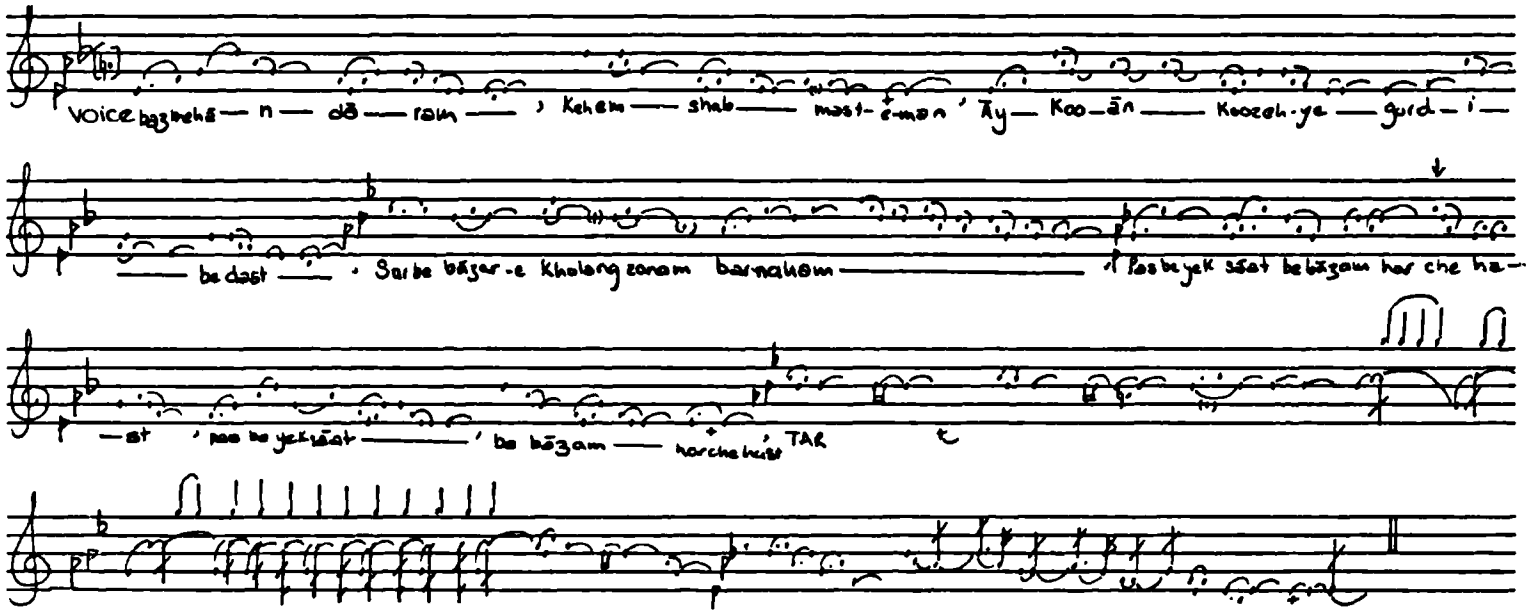
Example 21 (continued)



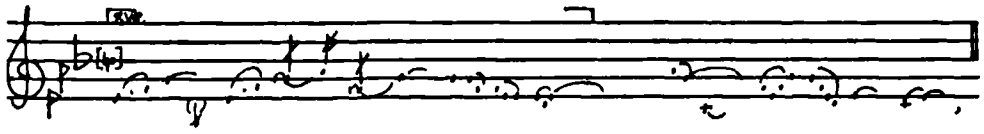
Chapter Five - **Example 22** - *Segāh, Hodi va Pahlavi* - Performance 6 - Rezā Shafeiān (*santur*) (Cassette 1(B), 0'45")



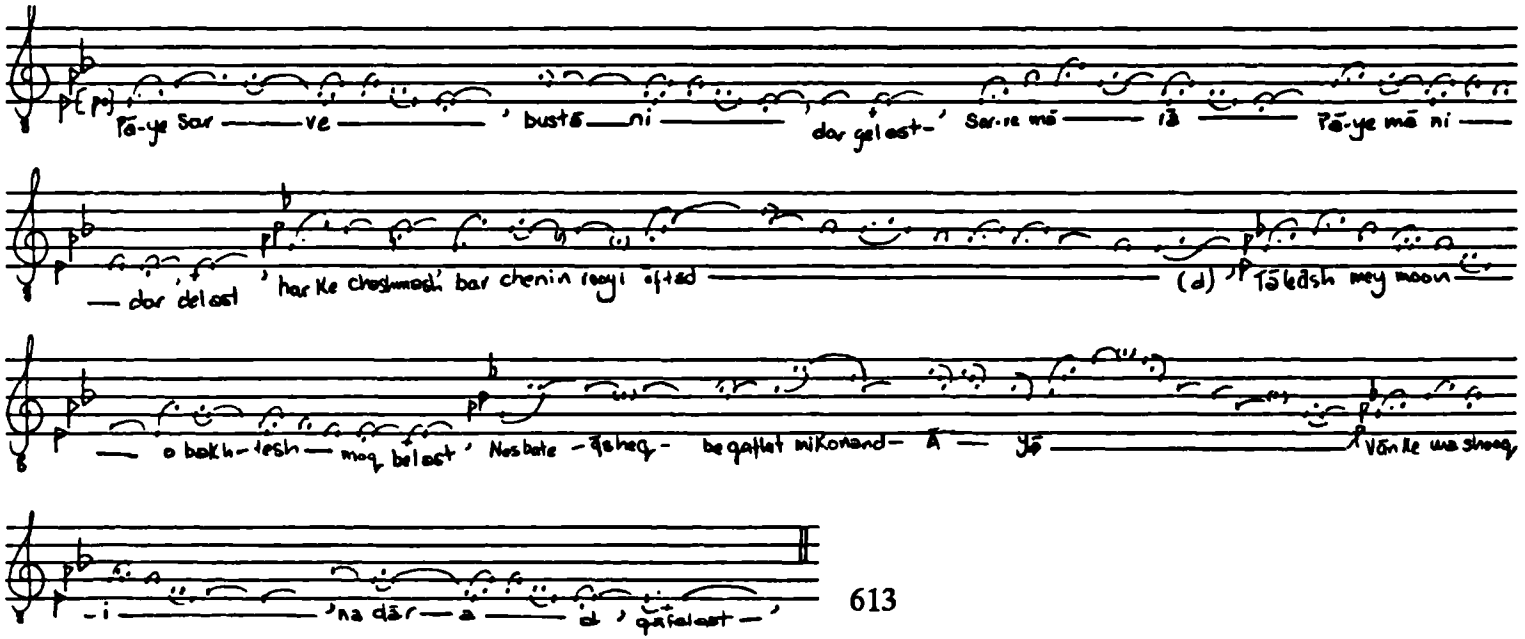
Chapter Five - **Example 23** - *Segāh, Hodi va Pahlavi* - Performance 1 - Mohammad Rezā Shajariān (male voice), Mohammad Rezā Lotfi (*tār*) (Cassette 1(B), 2'08")



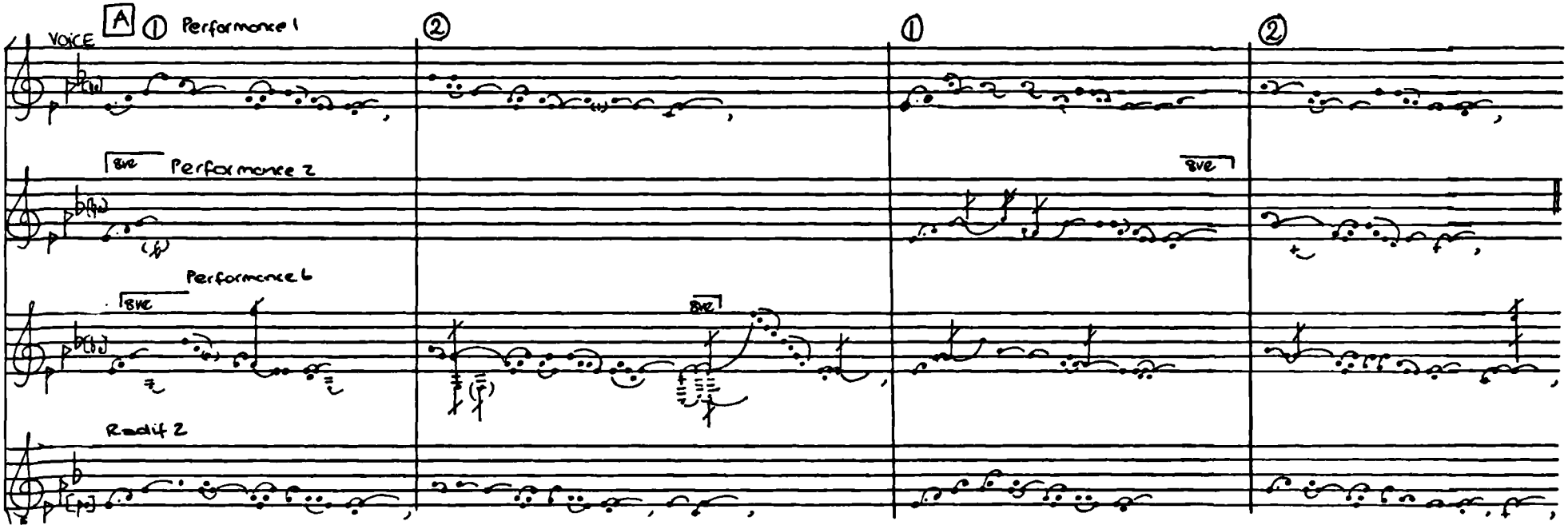
Chapter Five - **Example 24** - *Segāh, Hodi va Pahlavi* - Performance 2 - Hossein Alizādeh (*tār*) (Cassette 1(B), 3'45")



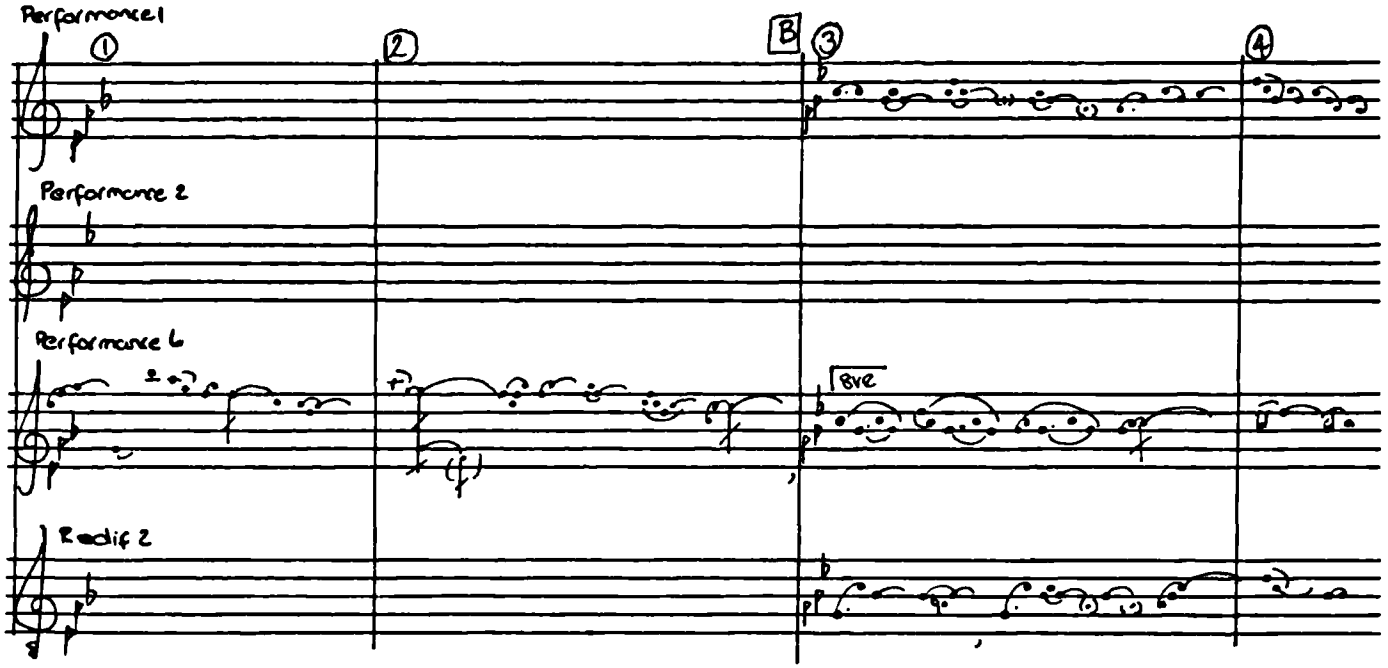
Example 25 - *Segāh, Hodi va Pahlavi* - *Radif* 2 - Mahmud Karimi (male voice) (Cassette 1(B), 4'15")



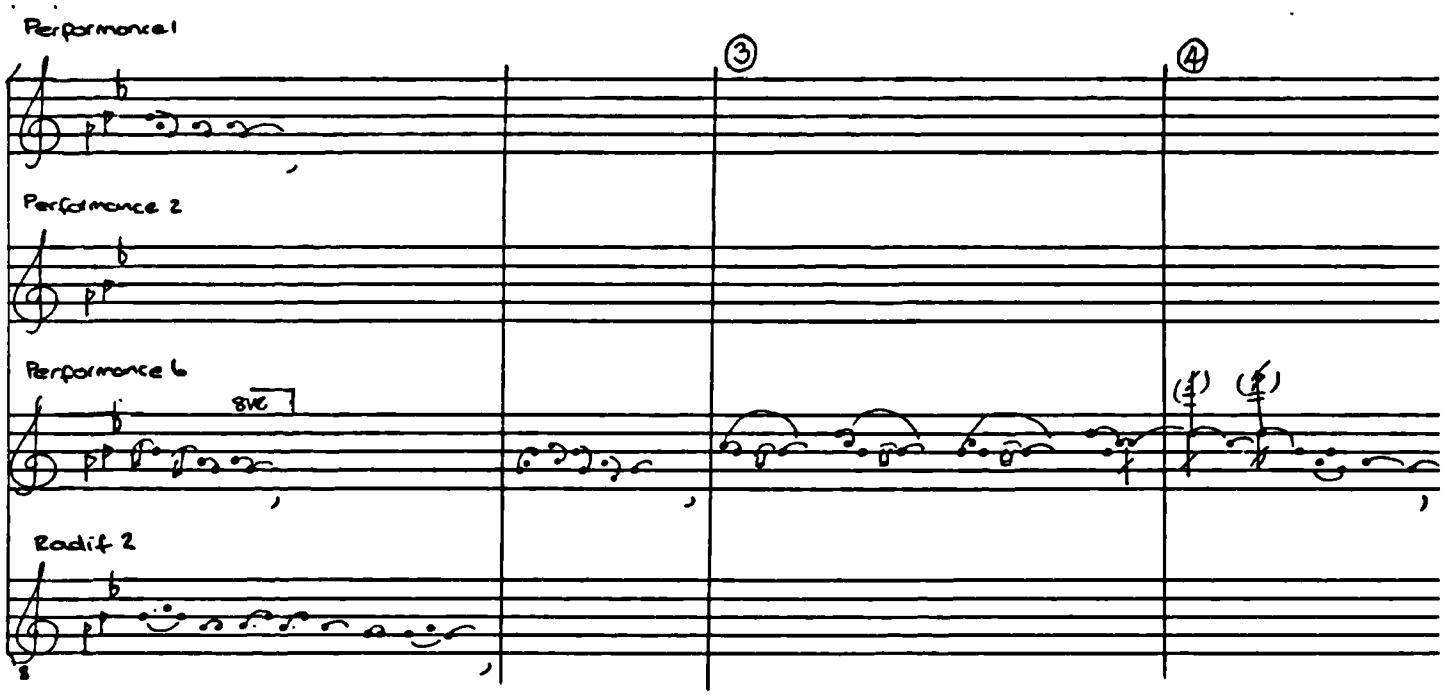
Chapter Five - **Example 26** - *Segāh, Hodi va Pahlavi* - Comparative Examples



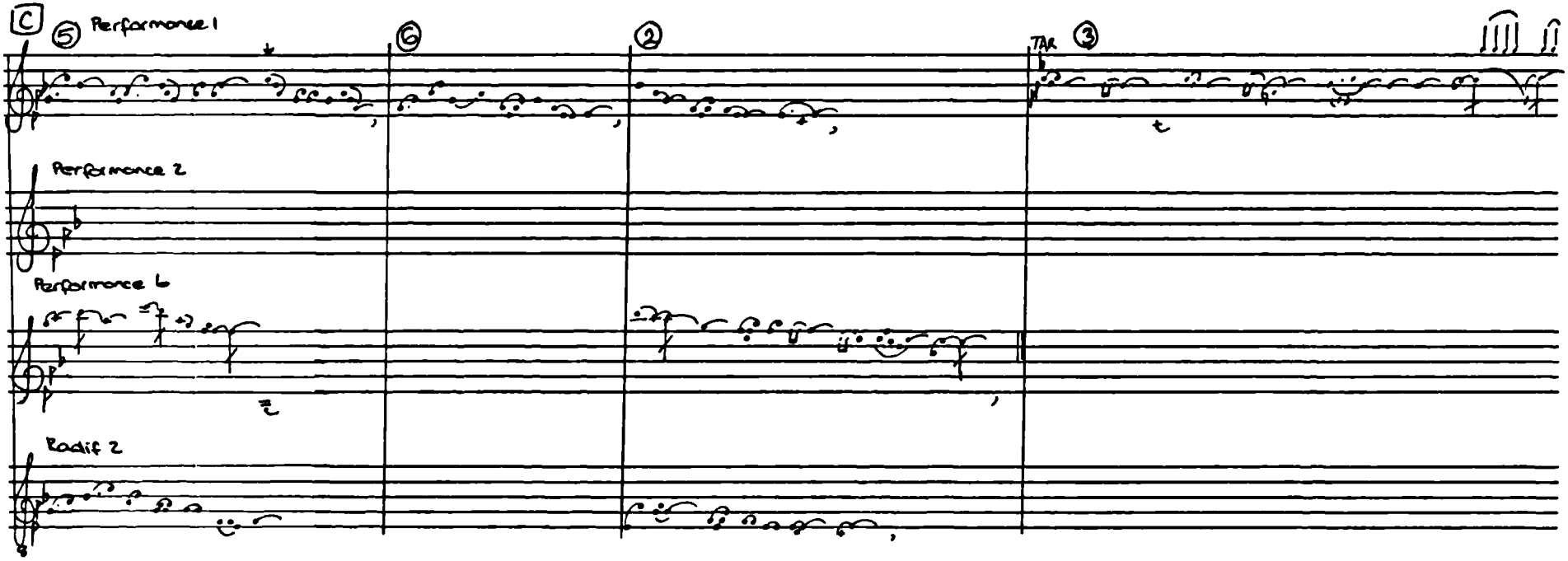
Example 26 (continued)



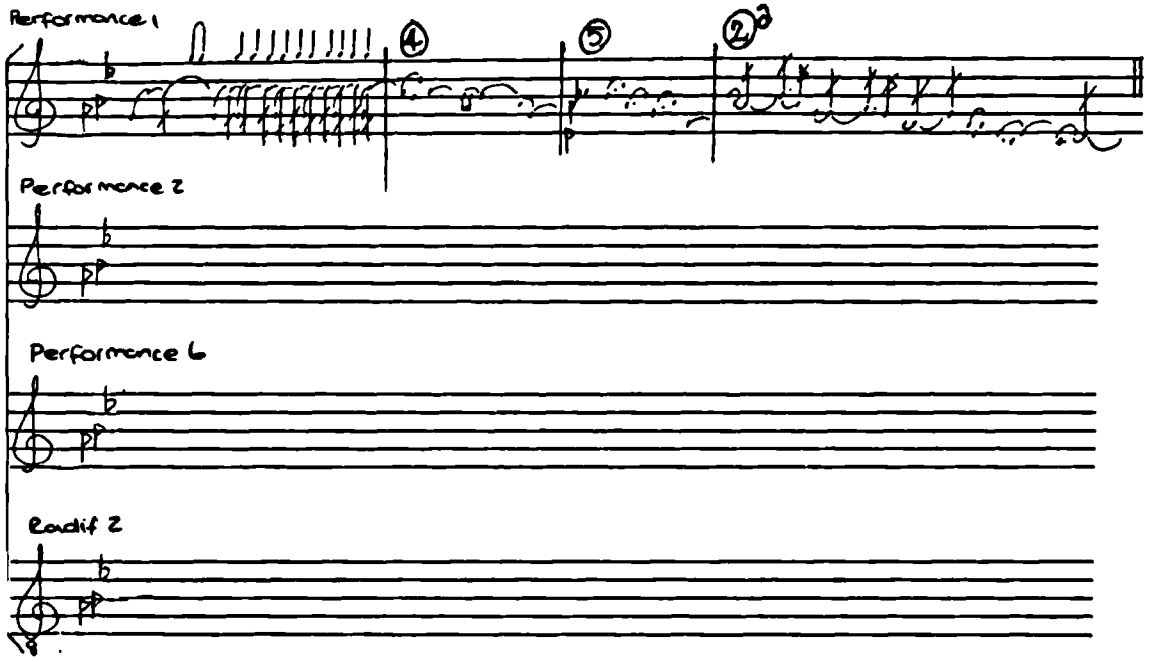
Example 26 (continued)



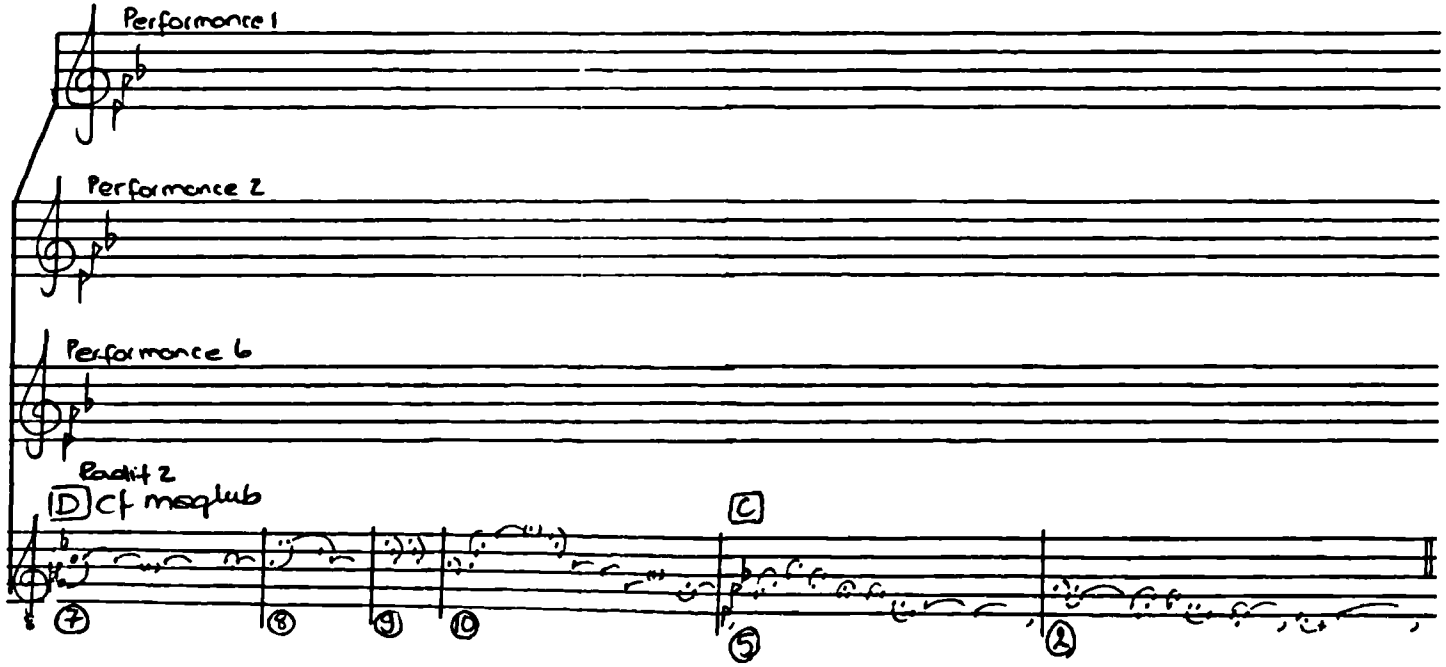
Example 26 (continued)



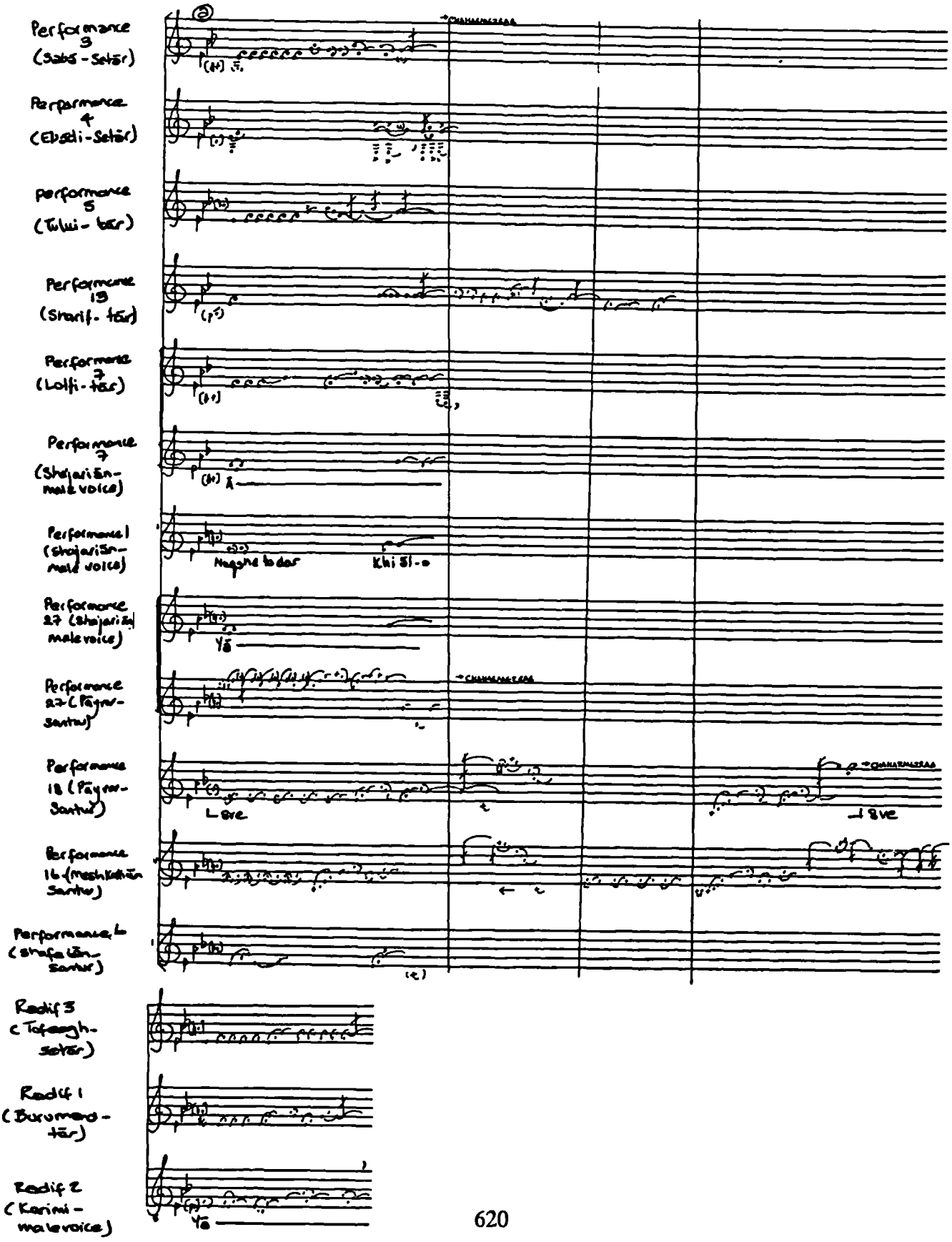
Example 26 (continued)



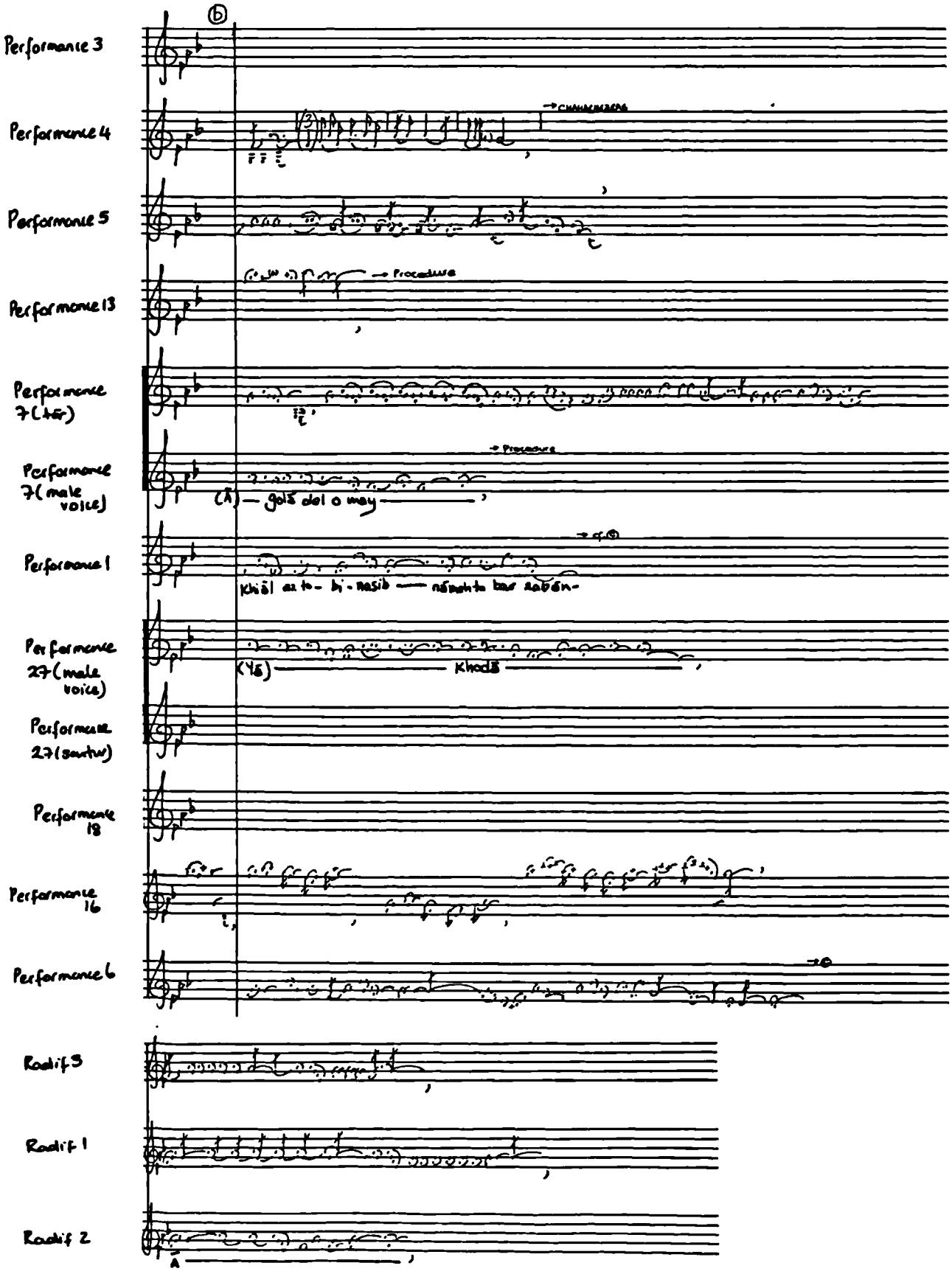
Example 26 (continued)



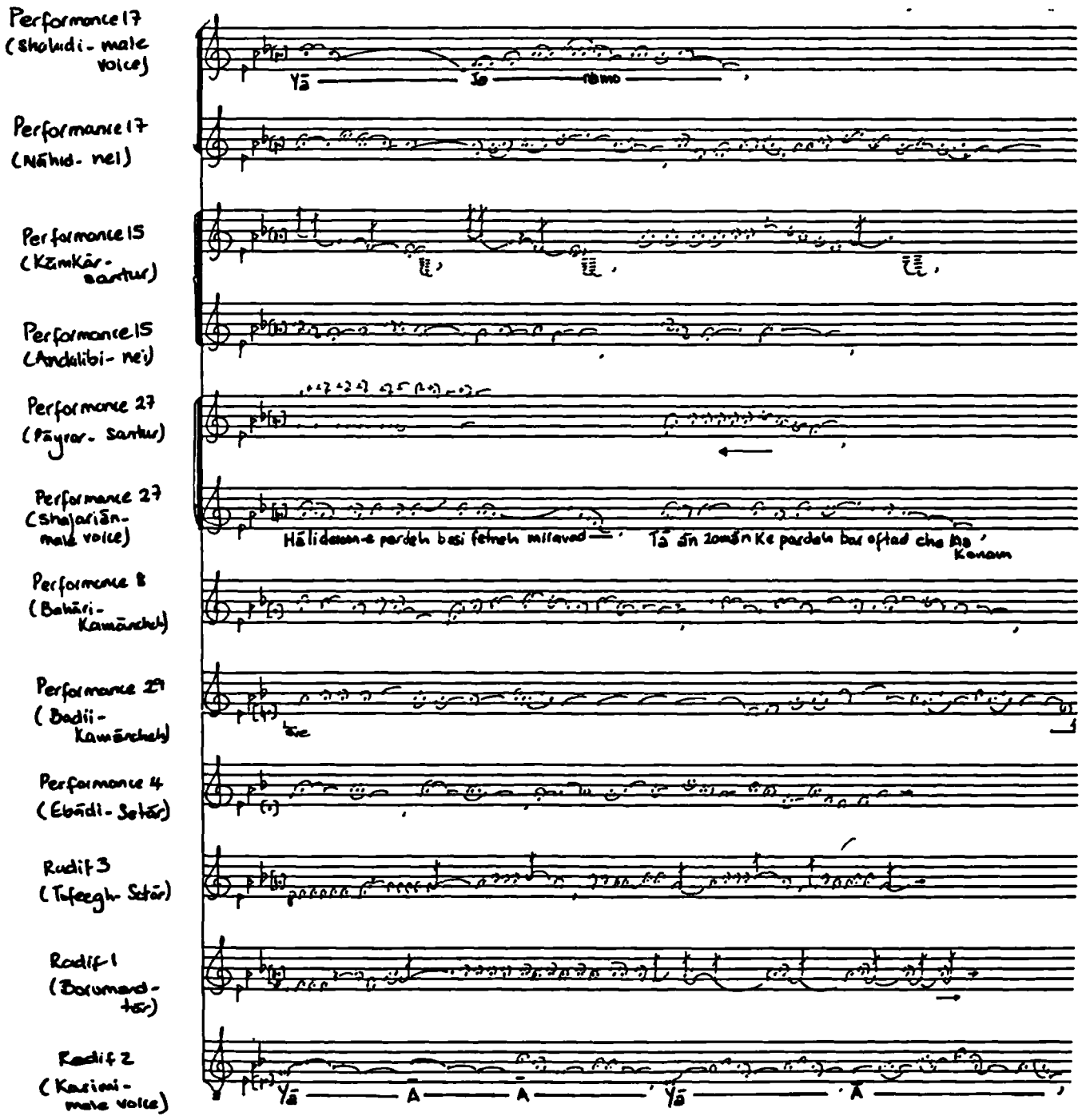
Chapter Five - **Example 27** - - Opening of *Zābol* - Comparative Examples
(Cassette 1(B), 6'06 - 13'05")



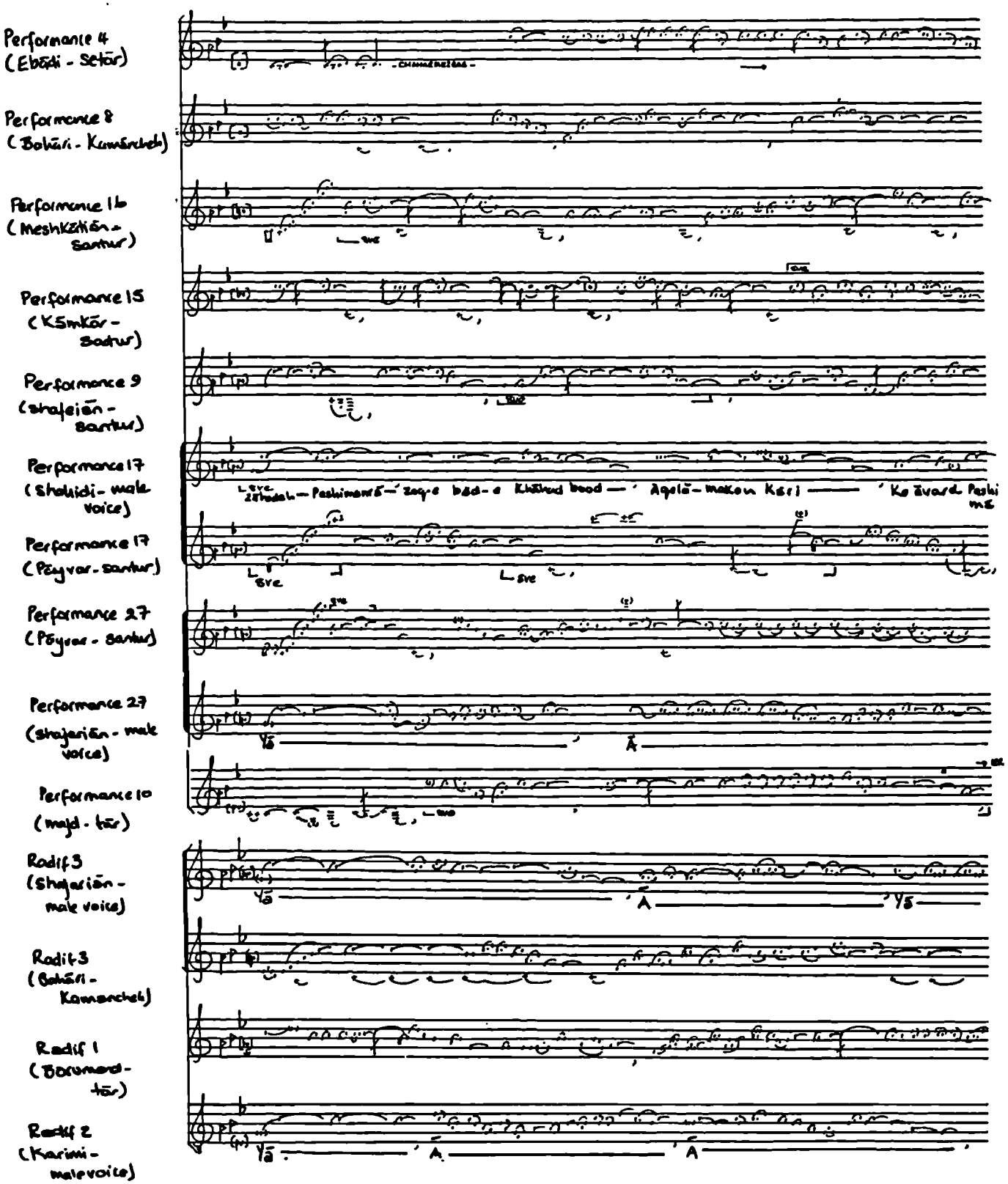
Example 27 (continued)



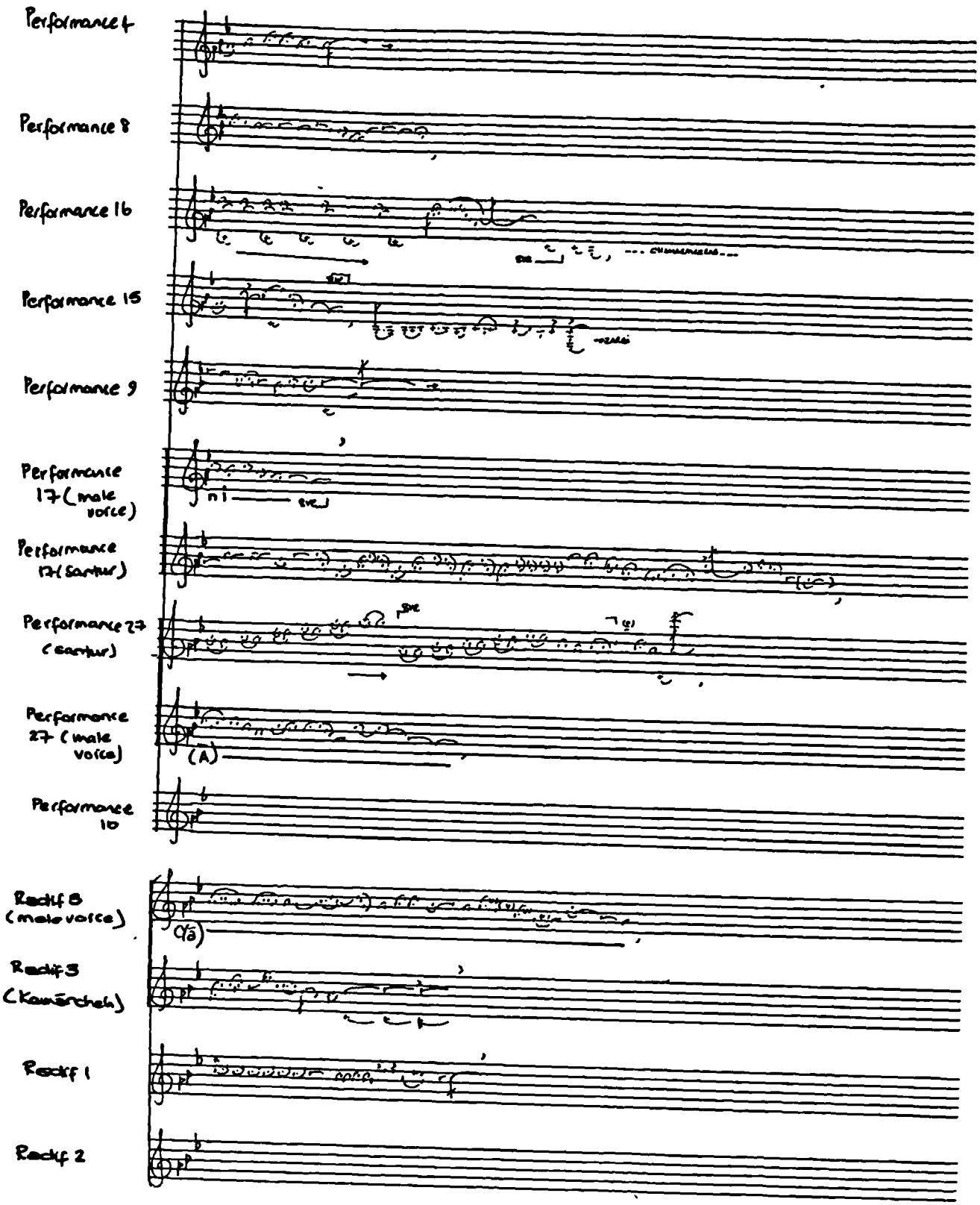
Chapter Five - **Example 28** - Opening of *Muyeh* - Comparative Examples
(Cassette 1(B), 13'35 - 19'03")



Chapter Five - **Example 29** - Opening of *Mokhālef* - Comparative Examples
(Cassette 1(B), 19'45 - 29'00")



Example 29 (continued)



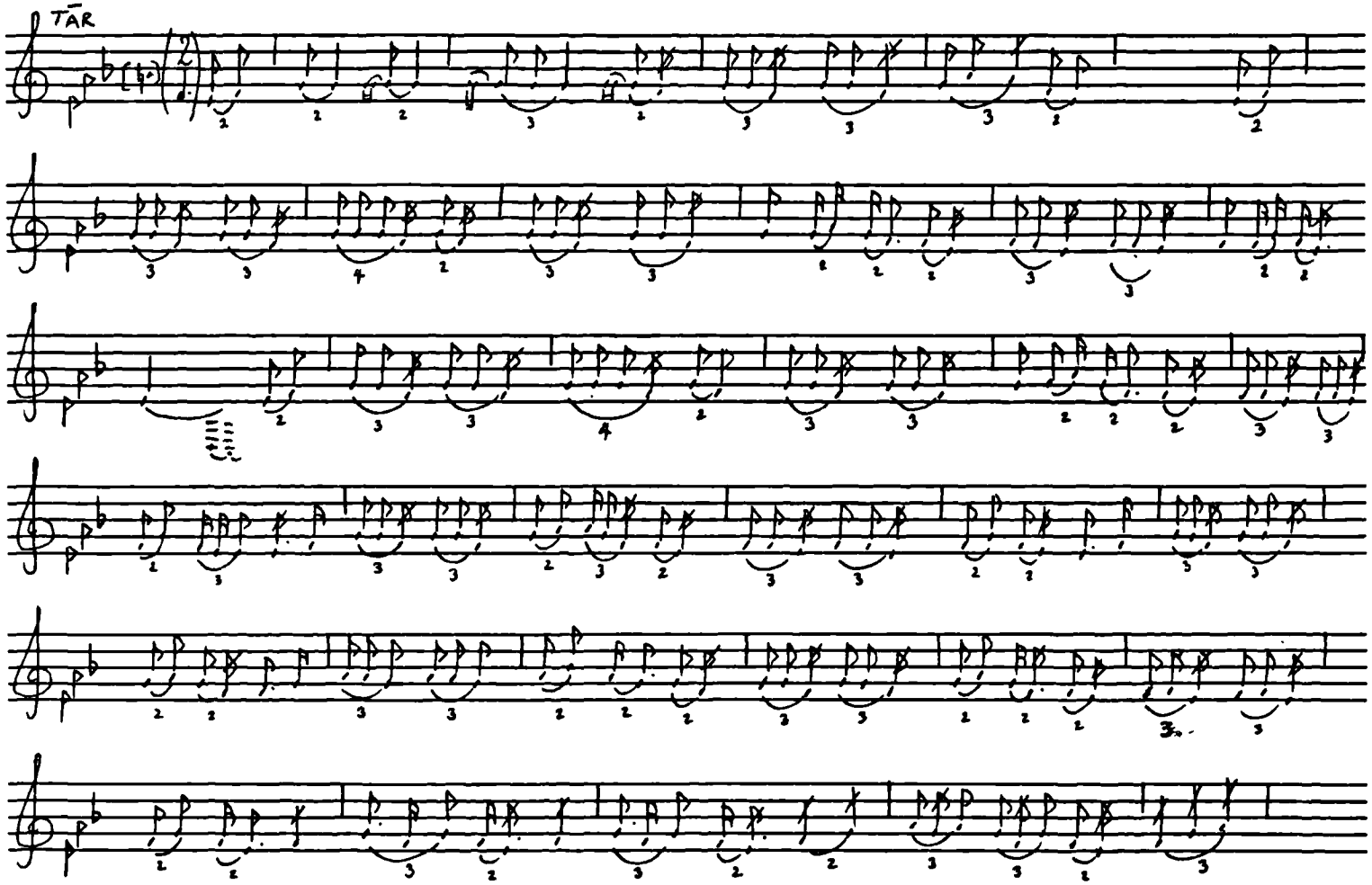
Appendix Five - Musical Examples Accompanying Chapter Seven

The transcriptions presented in Appendix Five follow the same notational conventions set out at the beginning of Appendix Four. However, the following should be noted:

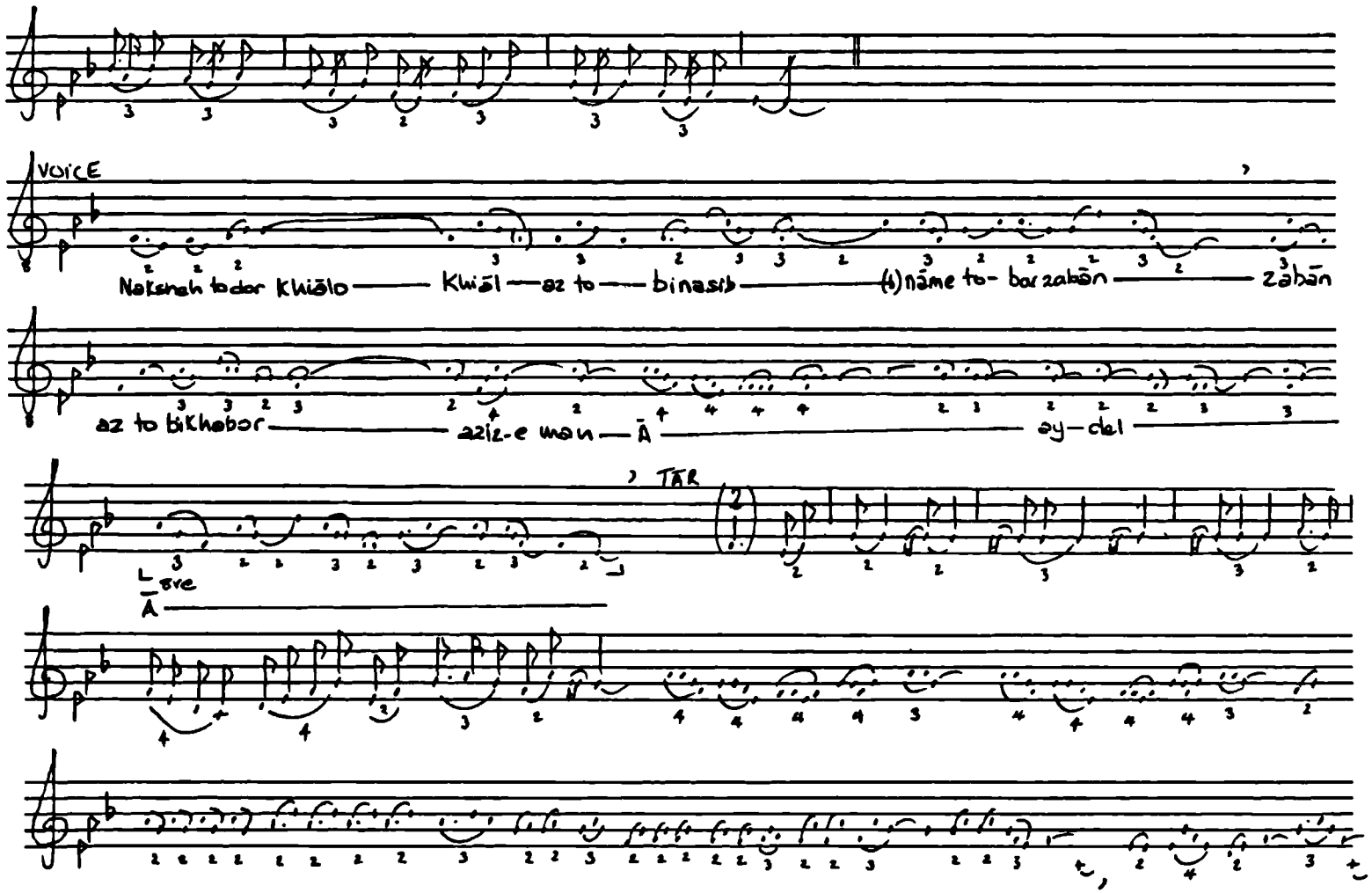
1. The transcriptions of Appendix Five accompany the analyses of Chapter Seven, and are presented in order to illustrate the process of identifying motivic patterns. As such, the transcriptions which follow use phrase makings to indicate the motivic patterns, and the number of notes in each pattern is indicated underneath or above the relevant motif. Many of the issues of motif identification are discussed at the beginning of Chapter Seven (Section 7.2), but it should be noted that occasionally two motifs "overlap", such that a particular pitch might form the end of one motif and the beginning of the next, for example:

2. In examples where a voice and accompanying instrument (or two solo instruments, as in performance 15) are heard, it is the most prominent melodic line at any one point in the music which has been analysed. This usually means the vocal line when it is heard, and the instrumental interludes between the vocal sections (i.e. the motifs of accompanying instruments while the singer is singing have not generally been included, since they are often obscured by the prominence of the voice). This should be clear in the notations, since all of the motivic patterns analysed in Chapter Seven have been numbered according to the size of the pattern.

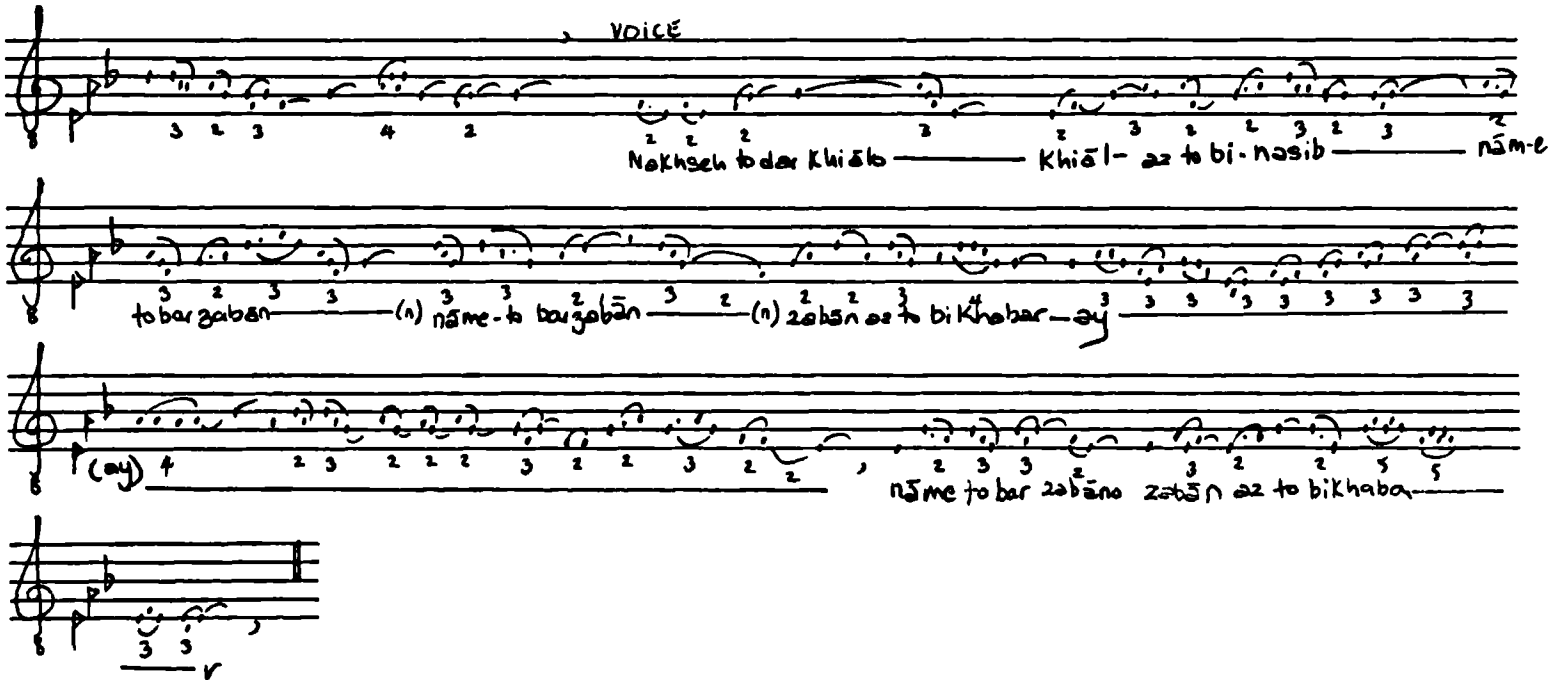
Zābol - **Performance 1** - Mohammad Rezā Lotfi (*tār*), Mohammad Rezā Shajariān (male voice) (Cassette 3(A), 0'19")



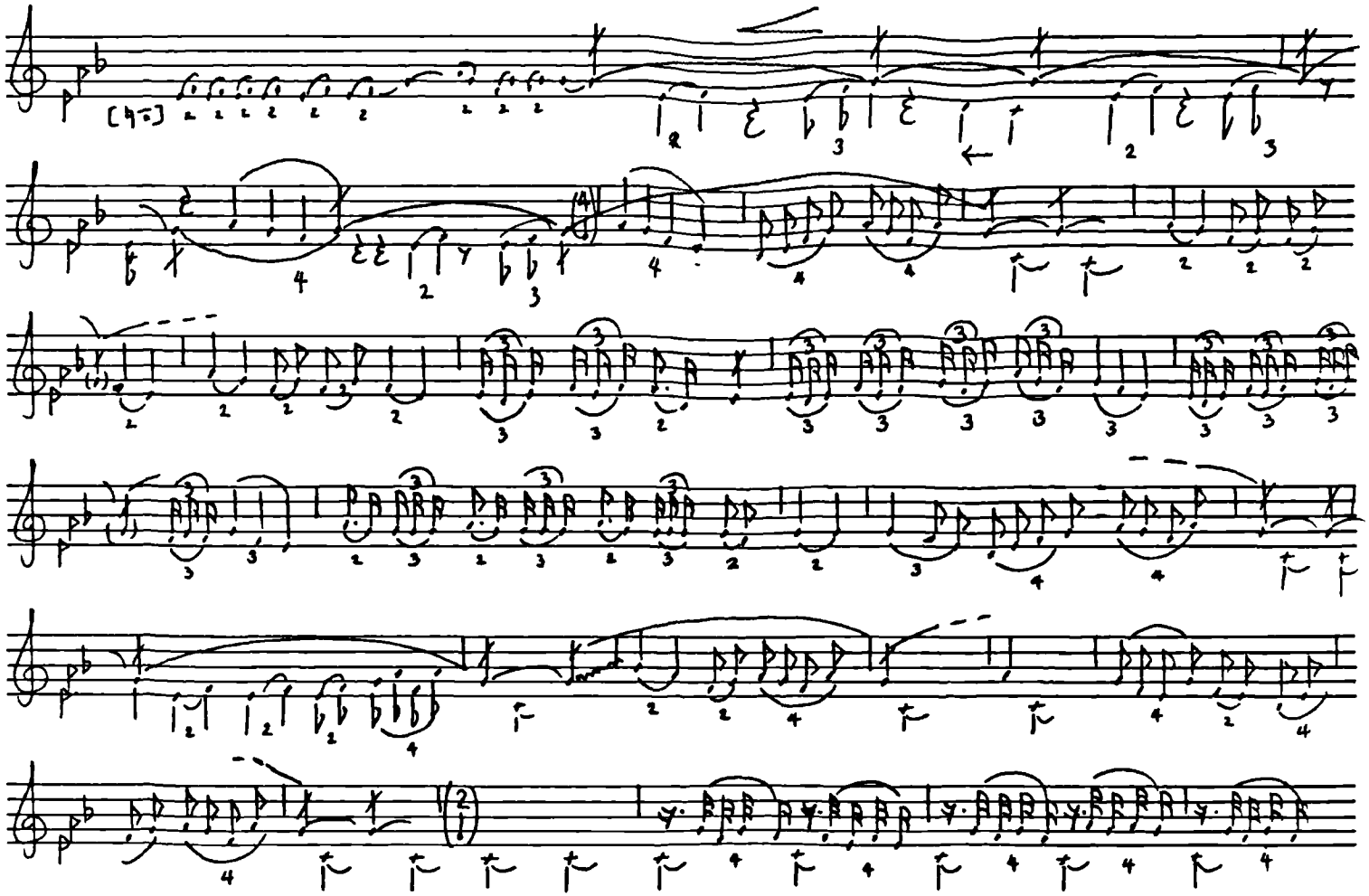
Zābol - Performance 1 (continued)

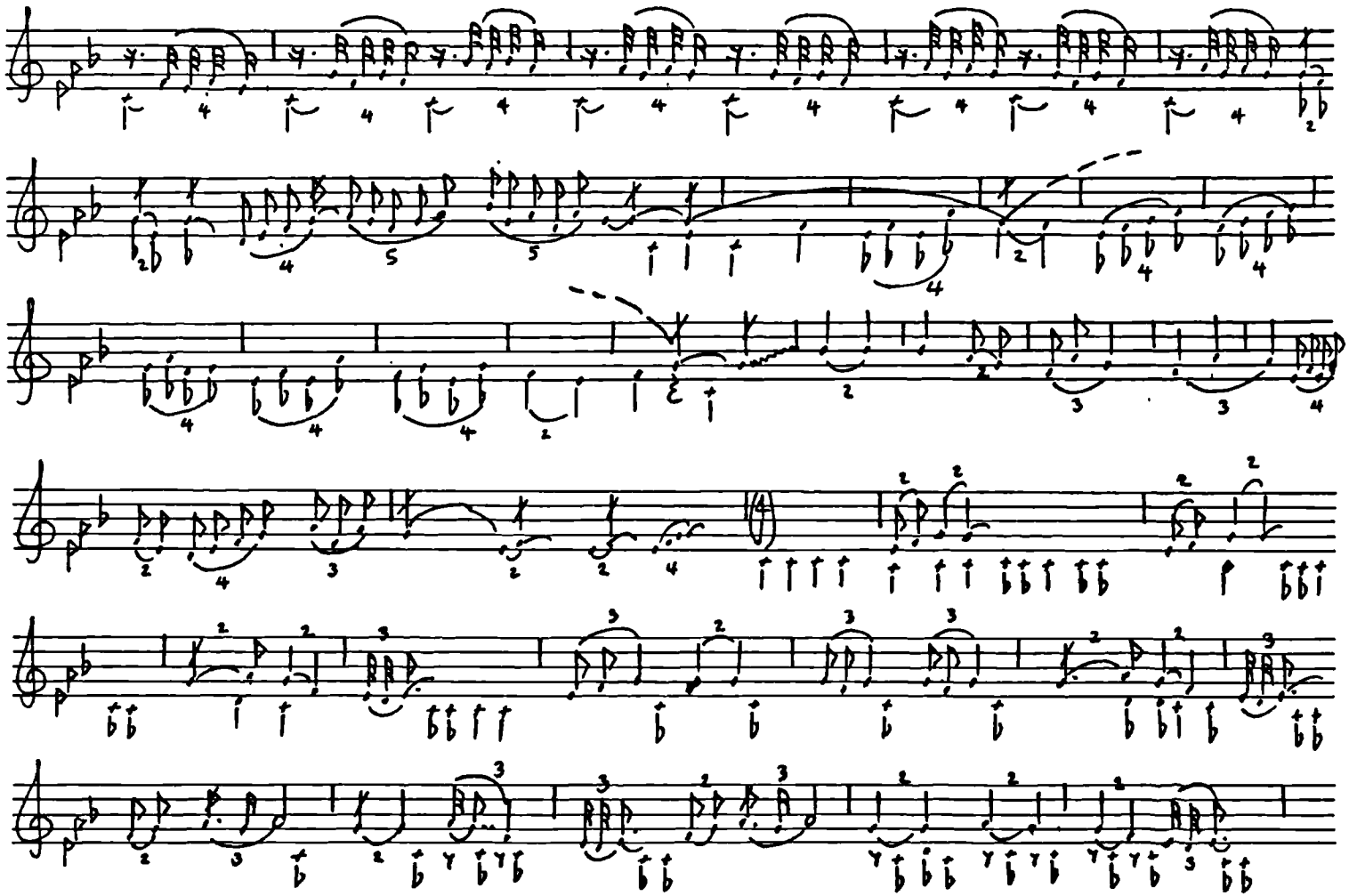


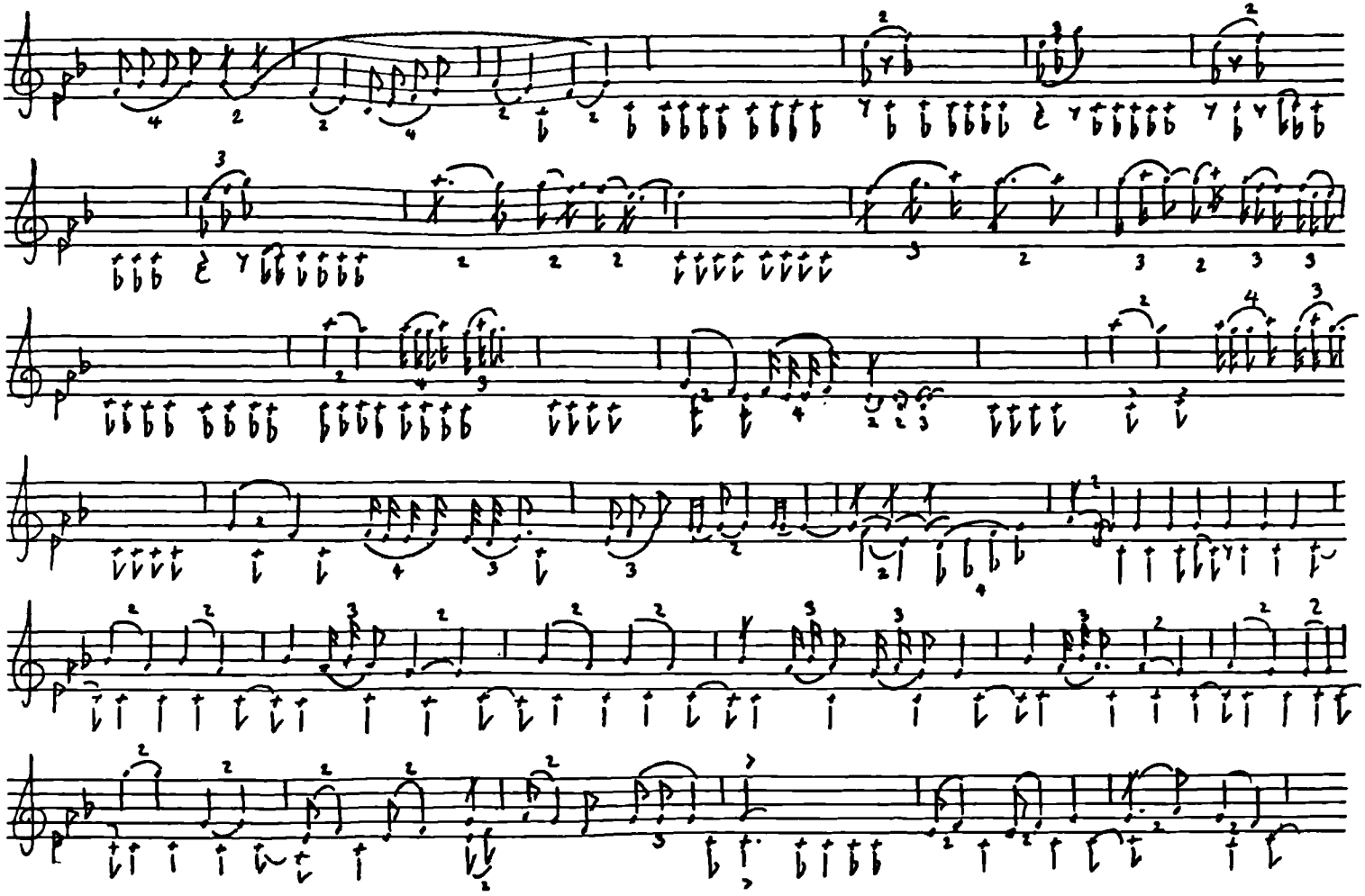
Zābol - Performance 1 (continued)

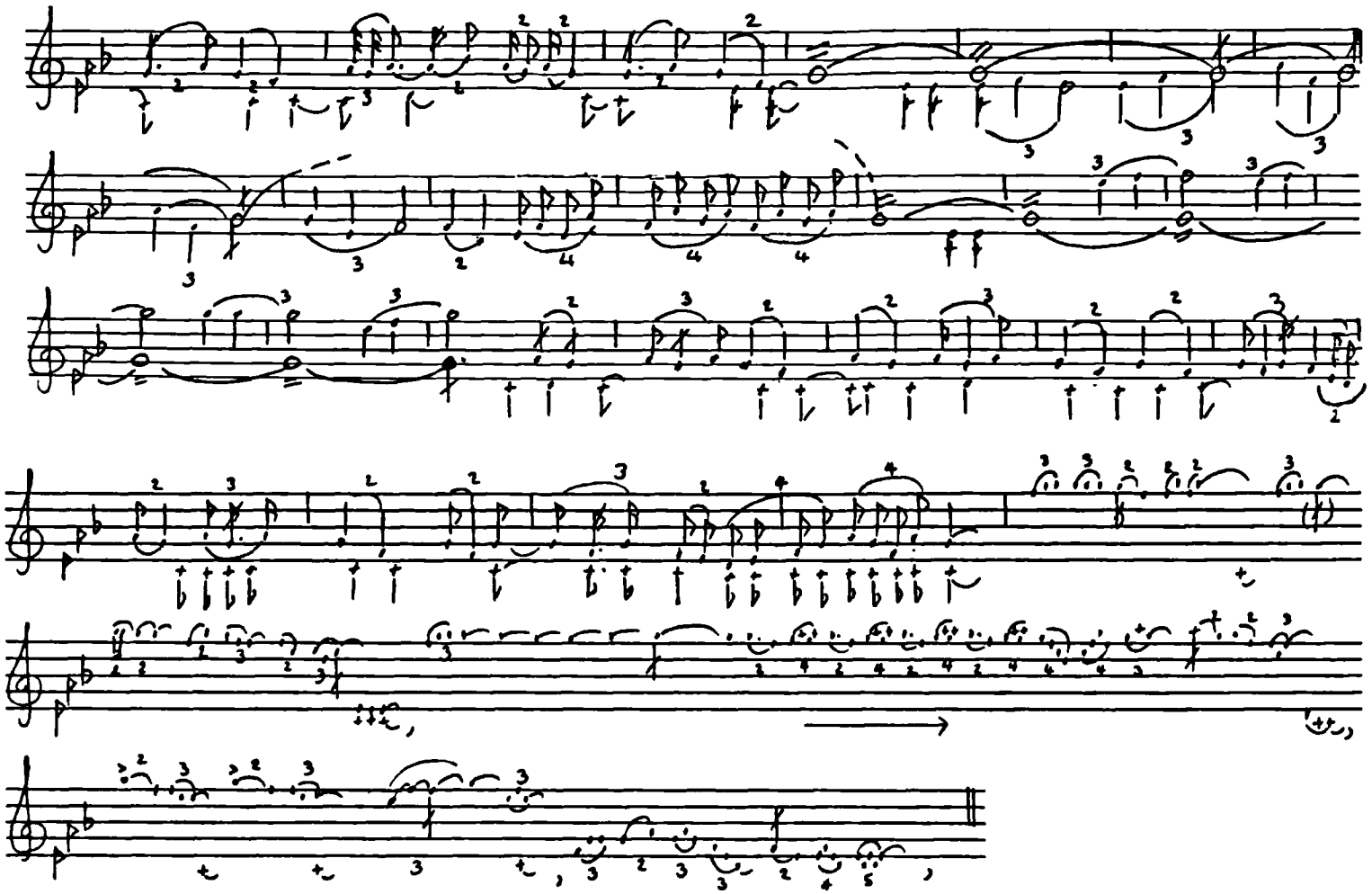


Zābol - **Performance 2** - Hossein Alizādeh (*tār*) (Cassette 3(A), 3'35")









Zābol - **Performance 3** - Abol Hassan Sabā (*setār*) (Cassette 3(A), 8'48")