

*Modern Tombak (Zarb)*  
*Compositions: A Comparative Study*

by

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## **ABSTRACT**

The early 20<sup>th</sup> century marks the beginning of an important new period in the history of the *tombak*, the main percussion instrument in Iranian Classical Music. This period is referred to as the ‘modern era’ of *tombak*. It is characterized by the development of Western based music notation for the *tombak*, the *tombak*’s rise in social status, and its increase in musical importance. The objective of this study is to better understand the new role and repertoire of the *tombak* in this era, fixed by notation and situated in the foreground of the concert stage. The research method centers on a close examination of compositions for *tombak* duet. Such works, composed starting around the middle of the 20<sup>th</sup> century, comprise an important representation of the modern *tombak* era. At the core of this thesis is the structural analysis of seven *tombak* duets, composed by four masters. The focus of the analyses is to determine the compositional approaches and techniques used to create these pieces. By identifying key compositional techniques, this analysis will shed light on the *tombak*’s new musical role in the modern era.

## **Preface**

This thesis is an original work by Kevin Johnson. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Pro0045894, November 3<sup>rd</sup> 2014.

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## **Note on Transliterations**

All the transliterated text found in this thesis is taken from oral and written sources. I will not be using my own system for transliteration. I will instead use the transliterations found in my written sources: Mohammad Reza Azadehfar, Jean During, Ella Zonis, and Dariush Zarbafian, as well as from my oral sources: Abtin Ghafari and Dariush Zarbafian.

This thesis is a comparative study of the music of four composers. These composers are all artistically linked to the musical tradition of Iranian Classical Music; formerly known by some as *musiqi-ye sonnati*.<sup>1</sup> The works I have chosen to study are all written for the *tombak*, the main percussion instrument from this tradition. To study and compare these works, I will perform a structural musical analysis of each piece. The analyses are contained in the main and final section of this study, Chapter 3. Before performing the analyses, brief historical and biographical information will be given in Chapter 2. In this chapter, I provide background information on the history of the *tombak* and on the artistic life of each composer. The first chapter of this study will examine preliminary issues concerning my research topic and the field of ethnomusicology.

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<sup>1</sup> Ameneh Youssefzadeh, "Iran's Regional Musical Traditions in the Twentieth Century: A Historical Overview," *Iranian Studies* 38/3 (2005): 419.

# CHAPTER 1: THESIS TOPIC AND PREVIOUS ACADEMIC SCHOLARSHIP

In the first chapter of this thesis, I contextualize my topic within previous ethnomusicological academic writings. A key feature of my research, somewhat unusual in ethnomusicology, is the focus on individual composers --creative individuals--and the use of written compositions as primary sources instead of oral sources. In this chapter, I frame these particularities within the field of ethnomusicology. Then, I summarize previous studies dealing with the rhythmic aspect of Iranian music before concluding with a more detailed description of the topic for this research.

## ***Creative Individuals as a Topic in Ethnomusicology***

The fields of ethnomusicology and musicology have been closely connected since their inception. Early ethnomusicological works were placed under the rubric ‘comparative musicology’.<sup>2</sup> The term ethnomusicology itself only became common usage during the mid-1950’s.<sup>3</sup> During the development of this field, ethnomusicology at times found itself in opposition to musicology. Among the various differences between the two fields was the attention given to the creative process of individuals.

According to scholar Laudan Nooshin, comparative musicologists (early ethnomusicologists) questioned the focus given to individual composers by Western musicology.<sup>4</sup> This divergence of research interests led ethnomusicologists’ attention towards social settings and contextual significance and away from individual creativity

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<sup>2</sup> Alan P. Merriam, “The Study of Ethnomusicology,” in *The Anthropology of Music* (Evanston, Ill.: Northwestern University Press, 1964), 5.

<sup>3</sup> Helen Myers, “Ethnomusicology,” in *Ethnomusicology: An Introduction* (New York: N.W. Norton and Company, 1992), 7.

<sup>4</sup> Laudan Nooshin, “The Process of Creation and Re-creation in Persian Classical Music,” PhD diss. University of London, Goldsmith’s College, 1996, 27.

until the 1970's.<sup>5</sup> But, during the 1980's, scholars such as Timothy Rice, John Blacking, and Klaus Wachsmann began to bring awareness to the issue of individual creativity and its place in ethnomusicological research.<sup>6</sup>

By acknowledging creative individuals in ethnomusicology, agency regarding musical creation (or generation)<sup>7</sup> is connected to specific individuals instead of collective social groups. This shift in the understanding of musical creation displaces creative genesis from inter-personal musical interaction to the intra-personal mind of individuals. In other words, musical creation occurs within the creative power of an individual mind instead of in the collaborative force of several minds.

At the foundation of this conceptual shift is the distinction between creativity within the individual's body and creativity outside the individual's body. Creativity within one individual's body acknowledges that individual as being uniquely gifted or talented and separates him/her from the rest of the community. Creativity outside individual's body is a type of creativity that is collaborative in nature and relies in part on the musical interaction of several people. Since this form of creation exists outside the body it can be seen as an external entity that exhibits its own characteristics that are independent from the participants' traits. It is my belief that these two forms of creativity should not be separate from each other but rather seen as interactive forces. From my

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<sup>5</sup> Ibid., 27-28.

<sup>6</sup> John Blacking, "Challenging the Myth of 'Ethnic' Music: First Performance of a New Song in An African Oral Tradition 1961," *Yearbook for Traditional Music* 21 (1989): 17-24.  
Timothy Rice, "Towards the Remodeling of Ethnomusicology," *Ethnomusicology* 31, no. 3 (1987): 469-488.  
Klaus Wachsmann, "The Changeability of Musical Experience," *Ethnomusicology* 26, no. 2 (1982): 187-215.

<sup>7</sup> There is rightfully a distinction to be made between musical creation and musical generation. However, I believe this topic to be outside the scope of the present study. Throughout this thesis, I will be using the term 'creation'. I do however acknowledge that the process to which I am referring can arguably be described as 'musical generation'.

view, internal and external forms of creativity feed from each other. External creativity is the combination of intra-personal experiences and other external factors (nature, metaphysical entities, etc.), it is the meeting point between several independent ‘participants’. Internal creativity finds inspiration from external creativity, synthesizes itself to the external influence and feeds the product back into the external sources. We therefore have a complex interaction between creative individuals and external creative forces. For a lack of better terms, these two creative sources will be labeled as ‘composer’ for internal creativity and ‘tradition’ for external creativity within this thesis. Both of these terms have complex definition, but I think that a general understanding of the terms can meet the needs of this thesis.

Ethnomusicological studies addressing Iranian music have also looked at the topic of composition and creative individuals.<sup>8</sup> An important aspect mentioned in these articles is the advent of Western notation in Iran.

### ***Western Music Notation in Iran***

Western music notation has been used in Iran since the mid-19<sup>th</sup> century<sup>9</sup>; several masters used it to transcribe the *radif*, the main repertoire for Classical Iranian Music, in particular Abol Hassan Saba<sup>10</sup>, d. 1957, and Moussa Ma’aroufi<sup>11</sup>, b.1889.<sup>12</sup> Western

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<sup>8</sup> Élina Djebbari, “Du trio de zarb au «créations transculturelles». La création musicale du percussionniste Keyvan Chemirani: une globalisation parallèle?” *Cahier d’ethnomusicology* 25 (2012): 111-137.

Hormoz Farhat in Bo Lawergren, et al. "Iran." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed March 25, 2016, <http://www.oxfordmusiconline.com/login.ezproxy.library.ualberta.ca/subscriber/article/grove/music/13895>.

Jean During, “La musique traditionnelle iranienne en 1983,” *Asian Music* 15, no. 2 (1984): 11-31.

<sup>9</sup> Nooshin, “The Process of Creation,” 120.

<sup>10</sup> Abol Hassan Saba, *Radif-e Santour* (The Santour Repertoire) (Teheran: Imprimerie Ferdowssi, 1982).

notation was also incorporated into the curriculum of universities.<sup>13</sup> According to ethnomusicologist Jean During, universities in Iran in the twentieth, apart from teaching Western music notation, also taught Western Art Music history, *solfège*, composition, harmony, and counterpoint.<sup>14</sup>

A study done by ethnomusicologist Bruno Nettl in 1969 showed that the majority of Iranian musicians accepted western music notation as a useful tool.<sup>15</sup> One of the reasons for the acceptance of Western music notation was because of a felt need among the Iranian musical community for fixed compositions.<sup>16</sup> This need was fueled by their interest in group performances, which is very difficult with Iranian traditional music because of its improvisatory nature.<sup>17</sup> According to scholar Hormoz Farhat, Iranian compositions fall into four categories *pishdaramad*, *reng*, *chaharmezrab*, and *tasnif*.<sup>18</sup> Although these four categories are probably the most common forms of compositions, today Classical Iranian compositions can take other forms. For instance, the pieces studied in this research do not fall within the categories mentioned by Farhat (I will address the structural form of the pieces in the analysis portion of this paper, Chapter 3). To better understand the role that *pishdaramad*, *reng*, *chaharmezrab*, and *tasnif* play in

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<sup>11</sup> Mehdi Barkekechli, Moussa Ma'aroufi, *La musique traditionnelle de l'Iran* (Tehran: Secretariat d'Etat aux Beaux-Arts, 1963).

<sup>12</sup> Ella Zonis, "Contemporary Art Music in Persia," *Musical Quarterly* 51, no. 4 (1965), 638-639.

<sup>13</sup> During, "La musique traditionnelle," 23.

Margaret Caton, "Performance Practice in Iran: Radif and Improvisation," in *Garland Encyclopedia of World Music* vol. 6, Middle East (New York: Routledge, 2002) 130.

<sup>14</sup> During, "La musique traditionnelle," 23.

<sup>15</sup> Bruno Nettl, "Attitudes Towards Persian Music in Tehran, 1969," *Musical Quarterly* 56, no. 2 (1970), 193.

<sup>16</sup> Hormoz Farhat, *The Dastgah Concept in Persian Music* (Cambridge: Cambridge University Press, 1990), 113.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

music performances, I will quickly look at the form of a Classical Iranian music performance.

### **Form of a Classical Iranian Music performance**

In a Classical Iranian Music performance, also referred to as a ‘suite’, the music is often presented in a series of movements. The numbers and types of movements comprised in a performance are not consistent throughout history and between performance groups. Caton and Zonis describe the most basic form I came across in scholarly literature. They write that a classical Iranian suite consists of four movements titled *pishdaramad*, *avaz*, *tasnif*, and *reng* <sup>19</sup> Each of these titles represent a specific musical form with unique musical features. The entire performance can be seen as a type of suite where each movement has a standardized title and a conventional form. Below, I will summarize some of the standard characteristics of each movement while focusing on rhythmic and metric aspects.

*Pishdaramad* is the first piece of a performance, it is commonly in 6/4 time signature, has long rhythmic phrases, and a grave or moderate tempo.<sup>20</sup> *Avaz* is a portion of the *radif* played or sang in a free-metered and improvisatory style.<sup>21</sup> *Tasnif* is a composed piece with a metered rhythm. The time signatures 2/4, 6/8, and occasionally 5/8 are the most common metric structures for *tasnif* compositions, however there is no

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<sup>19</sup> Caton, “Performance Practice,” 137.

Zonis, “Contemporary Art Music,” 646.

<sup>20</sup> Mohammad Reza Azadehfar, “Rhythmic Structure in Iranian Music,” PhD diss., University of Sheffield, 2004, ProQuest (AAT 898768038), 196-197.

<sup>21</sup> Caton, “Performance Practice,” 137.

Azadehfar, “Rhythmic Structures,” 195.

definitive metric standard for composing this type of piece.<sup>22</sup> Finally, a *reng* is traditionally played to accompany dances, however it is also used to conclude a performance.<sup>23</sup> A *reng* is typically in 6/8 and is characterized by a very particular rhythm, a dotted half note followed by a sixteenth note, see Figure 1. Audio for musical examples can be found in accompanying audio files.



**Figure 1: Tehrani method book exercise #80; fundamental rhythm in *reng* (6/8 dance).**<sup>24</sup>

To this basic structure for a classical Iranian suite, *pishdaramad*, *avaz*, *tasnif*, and *reng*, other scholars have mentioned possible variants. Azadehfar inserts *daramad* and *chaharmezrab* sections to the beginning of the performance. *Daramad* is a portion of the *radif* played in a free-metered and improvisation based style.<sup>25</sup> *Chaharmezrab* is rhythmically characterized by a recurring rhythmic motif in 3/8, 6/8, or 6/16.<sup>26</sup> According to Azadehfar, the form for a classical performance is *pishdaramad*, *daramad*, *charharmezrab*, *avaz*, *tasnif*, and *reng*. The exact placement of the *charharmezrab* or *charharmezrab-ha*, according to Farhat, is not consistent.<sup>27</sup> Farhat explains that a *charharmezrab* may be found at the begin or end of the performance and may act as a substitute for the *pishdaramad* or *reng*. Therefore, there is flexibility for the form of the performance and the placement and order of the movements.

<sup>22</sup> Ibid., 220.

<sup>23</sup> Ibid., 221.

<sup>24</sup> Hossein Tehrani, Hoshang Zarif, Mostafa Kamalportorab, Farhad Fakhrodini. *Amouzeshe-é Tombak*, revised by Hossein Dehlavi (Terhan: Moasseh Farhangi-Honary Mahor, 1385 (Hijri calendar)) 14.

<sup>25</sup> Azadehfar, “Rhythmic Structures,” 195.

<sup>26</sup> Ibid., 204.

<sup>27</sup> Farhat, *The Dastgah Concept*, 119.



## ***Academic Studies on Iranian Rhythms***

In this section, I will be looking at studies by Western scholars Margeret Caton, Ella Zonis, scholars native to Iranian culture Mohammad Reza Azadehfar, Dariush Zarbafian, and East Asian scholar Gne'ichi Tsuge. Note that, although the cultural and national background of these scholars are different, each has acquired in depth understanding of Iranian music and culture and Western academic research.

In 1965, scholar Ella Zonis wrote about how the subject of rhythm in Persian music hasn't received much attention from musicians and theorists.<sup>28</sup> She implies that this phenomenon could be due to the fact that the majority of the *radif* is non-metric and thus lacks a clearly defined rhythm.<sup>29</sup>

Zonis also wrote that the rhythmic features that are present in Persian music are entirely based on poetry.<sup>30</sup> In other words, the meter and rhythm of the poetry define and guide the music's meter and rhythm. Consequently, the majority of scholarly works dealing with Iranian music (sometimes referred to as Persian music) focus primarily on the music's relation to the poetry and poetic metric theories.<sup>31</sup>

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<sup>28</sup> Zonis, "Contemporary Art Music," 644.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid., 654.

Ella Zonis, *Classical Persian Music: An Introduction* (Cambridge, Mass.: Harvard University, 1973), 59.

<sup>31</sup> Mohammad Reza Azadehfar, "Rhythmic Structure in Iranian Music" (PhD diss., University of Sheffield, 2004), ProQuest (AAT 898768038).

Margaret Caton, "The Classical 'Tasnif': A Genre of Persian Vocal Music," vol. 1 and 2 (PhD diss., University of California, 1983), UMI.

Gen'ichi Tsuge, "'Avaz': A Study of the Rhythmic Aspects in Classical Iranian Music" (PhD diss., Wesleyan University, 1974), UMI.

Dariush Zarbafian, "La musique savante iranienne: contribution à l'analyse des systèmes modaux et de la métrique" (PhD diss., Université de Toulouse, 2008), Atelier National de Reproduction des Thèse.

Apart from correlating musical rhythms to poetry in Classical Iranian Music, researchers have also given much attention to ancient rhythmic cycles or modes.<sup>32</sup> These rhythmic cycles are documented and theorized in treatises by scholars writing from within the Islamic civilizations that ruled Iran, such as Al-Farabi<sup>33</sup> (d. circa 950), Safi Al-Din<sup>34</sup> (d. 1294), Abd Al-Rahman Jami<sup>35</sup> (1414-92), and other scholars from the same periods. Scholarly works dealing with the ancient rhythmic cycles often describe and analyze the cycles, addressing issues like how they were written, their construction, and their structures. Scholars writing on this topic all seem to agree that the ancient rhythmic cycles and terminologies have been forgotten (or drastically transformed) in Iran and are no longer used by 20<sup>th</sup> century musicians.<sup>36</sup>

The beginning of the 20<sup>th</sup> century marks a period of important development in regards to the rhythmic aspect in Classical Iranian Music. In Dariush Zarbafian's doctoral thesis, he writes that the rhythmic systems in Iran can be classified into two periods during which time they were subject to major external influences. There is the period of the onset of Islamic influence extending from the 7<sup>th</sup> century to the 9<sup>th</sup> century and the

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Zonis, *Classical Persian Music*.

<sup>32</sup> Azadehfar, "Rhythmic Structure."

Gen'ichi Tsuge, "Rhythmic Aspects of the Avaz in Persian Music," *Ethnomusicology* 14, no. 2 (1970).

Zarbafian, "La musique savante."

Zonis, *Classical Persian Music*.

<sup>33</sup> Abou Nasr Muhammad Ibn Tarkhan Farabi, *Kitab al-musiqua al-kabir*, ed. Ghattas 'Abd al-Malik Khashabah (Cairo: Dar al-kitab al-'arabi. 1967).

<sup>34</sup> 'Abd al-Mu'min ibn Yüsuf Safi al-Din Urmawi (d. 1294), *Kitäb al Adwär; wa, alRisäläh al-Sharafiyah fr al-nisab al-talifiyah*, ed. Sezgin, Fuat (Frankfurt: Institute for the History of Arabic-Islamic Science at the Johann Wolfgang Goethe University Frankfurt am Main, 1984).

<sup>35</sup> 'Abd al-Rahman Jami, *Risäleh Müsigi (Treatise of Music)*, 1489.

<sup>36</sup> Azabehfar, "Rhythmic Structure," 246-247.

Tsuge, "'Avaz': A Study," 4-5.

Zarbafian, "La musique savante," 275.

Zonis, *Classical Persian*, 59.

period of Iran's overture to the West beginning at the 20<sup>th</sup> century.<sup>37</sup> Zarbafian also writes the *tombak* in particular underwent drastic changes at the beginning of the 20<sup>th</sup> century.<sup>38</sup> In his view, Western influence on Iranian rhythms has had a detrimental outcome.<sup>39</sup>

However, my sources, including Zarbafian, indicate that the *tombak* benefited immensely from events occurring during the period of Western influence in terms of social status and musical prominence.<sup>40</sup> The *tombak* 'benefited' from this period in the sense that its musical vocabulary expanded, its role during musical performances grew, and its social status increased. The main factors that helped develop the *tombak's* social status, musical role, and repertoire were the social and political changes occurring in Iran at the beginning of the 20<sup>th</sup> century (i.e. the constitutional revolution), and the work of *tombak* master Hossein Tehrani (1912-1973).<sup>41</sup> We can therefore understand the *tombak's* development during the 20<sup>th</sup> century as twofold;<sup>42</sup> the first part is extra-musical, the *tombak's* rise in social status influenced among other factors by the constitutional revolution, and the second part is musical, the development of playing techniques and repertoire started by Tehrani and continued by later masters.

In his thesis, *Rhythmic Structure in Iranian Music*, Mohammad Reza Azadehfar's also singles out Hossein Tehrani's work as an important *tombak* master. Azadehfar lists twenty rhythms from Tehrani's *tombak* training book. He writes that those twenty

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<sup>37</sup> Zarbafian, "La musique savante," 247-276.

<sup>38</sup> Dariush Zarbafian, "Tombac et l'histoire du rythme en Iran" (DEA University of Toulouse, 1994), accessed December 4 2015, <http://avahang-music.com/>, 7.

<sup>39</sup> Zarbafian, "La musique savante," 276.

<sup>40</sup> Jean During, *La musique iranienne: Tradition et évolution* (Paris: Éditions recherches sure les civilisations, 1984) 90.

Abtin Gahfari, interviewed by author, January 20 and February 12, 2015.

Zarbafian, "Tombac et l'histoire," 7.

Zonis, *Classical Persian Music*, 172-175.

<sup>41</sup> Zarbafian, "Tombac et l'histoire." 7.

<sup>42</sup> Abtin, interview.

rhythmic examples best represent every meter currently played on *tombak*.<sup>43</sup> He also writes that the study of those rhythms would result in a general understanding of the rhythmic characteristics in *tombak* performance.<sup>44</sup> The importance of Tehrani's work in the history of the *tombak* has been made very clear by Zarbafian and Azadehfar's writings as well as the writings of a few other scholars.<sup>45</sup> For this reason, the research for this present study begins with the works of Tehrani.

### ***Thesis Research Topic***

I was first exposed to Classical Iranian Music in an undergraduate course taught by Dariush Zarbafian who is one of the composers addressed in this thesis as well as one of my two informants. After this course, I pursued private *tombak* studies with Zarbafian for several years. During this time, I learnt playing techniques, traditional rhythms and contemporary pieces for *tombak*. Another *tombak* teacher with whom I have studied is Abtin Gahfari who acted as the second informant for this research. It is important to note that my lessons with both these teachers involved an equal mixture of oral based transmission as well as written exercises and pieces from established pedagogical books.

Before the twentieth century, Iranian musical traditions was orally transmitted.<sup>46</sup> After the adaptation of Western based notation into Iranian Classical Music, two pedagogical approaches were developed. One school, defined by Zarbafian as “pure

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<sup>43</sup> Azadehfar, “Rhythmic Structure,” 238.

<sup>44</sup> Ibid.

<sup>45</sup> Djebbari, “Du trio de zarb,” 113.

Jean During, *La musique iranienne: Tradition et évolution* (Paris: Éditions recherches sure les civilisations, 1984), 90-91.

Farhat, “Iran classical.”

Zonis, *Classical Persian*, 175.

<sup>46</sup> Zarbafian, “La musique savant,” 25.

traditionalist”<sup>47</sup> refused to incorporate notation into their teaching and continued to rely solely on oral transmission. The other school, labelled as the “mixed school”<sup>48</sup>, use oral transmission supported by Western notation. In the mixed school, Western notation is seen as mnemonic. Notation is therefore only an aid for memory and does not substitute orality. Having been educated through the mixed school, I believe that as the practice and pedagogy of Iranian Classical Music continues to expand geographically, students who do not have easy access to qualified teachers will increasingly depend on written pedagogical books. This will bring about new discussions regarding the transmission of *tombak* rhythms, the view Western notation in Iranian Classical Music pedagogy, the capabilities and/or inadequacies of relying on notation to transmit Iranian musical repertoires, and the transformative effect notation based education may have on the content and character of the music itself.

During my *tombak* education with Zarbafian, I was exposed to traditional accompaniment rhythms, *tombak* training books written by Bahman Rajabi (1939-), and Zarbafian’s own *tombak* compositions. After some time of taking lessons and learning different aspects about the *tombak*, I decided to take a closer look at the music for *tombak* to broaden my understanding of this instrument and its musical tradition. This objective led to the present thesis.

The early 20<sup>th</sup> century marks an important divide in the *tombak*’s history. Ethnomusicologist Jean During describes this period as the beginning of the ‘modern *tombak* school,’<sup>49</sup> which, as we will see later, can be divided into smaller schools.

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<sup>47</sup> Zarbafian, “La musique savante,” 28.

<sup>48</sup> Ibid.

<sup>49</sup> During, *La musique iranienne*, 90.

Recognizing the creation of a new school implies that *tombak* playing in the 20<sup>th</sup> century was significantly different than in the 19<sup>th</sup> century and earlier. Such an observation correlates perfectly with Zarbafian's divisions in Iran's rhythmic history. Regarding the systems used in Iran to theorize and practice rhythms, Zarbafian defines the 20<sup>th</sup> century as the beginning of Iran's overture to the West.<sup>50</sup> I believe that by taking into consideration the divisions made by scholars During and Zarbafian, we can confidently describe the early 20<sup>th</sup> century as the beginning of the 'modern *tombak* era.'

Three fundamental features of the modern *tombak* era are the adoption of musical notation systems based on Western music notation, the *tombak*'s rise in social status,<sup>51</sup> and the *tombak*'s increase in popularity within musical contexts. In Iranian Classical Music, the *tombak* had always played the role of accompaniment. It was only in the 20<sup>th</sup> century that the instrument began to appear in solo roles.<sup>52</sup> In essence, the *tombak* was initially an accompaniment instrument that, due to the work of certain virtuoso masters, in particular Hossein Tehrani, gradually began to take more prominence socially and musically until it found itself at the forefront of the stage. The modern *tombak* era therefore witnesses the instrument's transition from oral to written and from the social and musical background to the social and musical foreground.

In the mid-20<sup>th</sup> century, as masters were developing a method for notating the *tombak*'s rhythms and exploring its potential as a solo instrument, Hossein Tehrani established and led the first *tombak* ensemble, around the year 1958.<sup>53</sup> This ensemble was

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<sup>50</sup> Zarbafian, "La musique savante", 247-276.

<sup>51</sup> Zarbafian, "Tombac et l'histoire," 14.

<sup>52</sup> Ibid. 15-16.

<sup>53</sup> Zarbafian, "Tombac et l'histoire," 16.

solely made up of *tombak-ha*<sup>54</sup>, which was a new and innovative idea at the time.

Performances of Tehrani's ensemble can be found on YouTube;<sup>55</sup> here the group consists of seven *tombak* players. Since Tehrani's ensemble, many other *tombak* groups that use written scores based on Western notation have been formed.

The music for *tombak* ensembles, more specifically written compositions for *tombak* duet, is the main topic of this thesis. I will focus on duets because it is the type of ensemble formation found in the most popular pedagogical *tombak* books.<sup>56</sup> The compositions for *tombak* duet are therefore very accessible, commonly known in *tombak* pedagogy, and are part of modern *tombak* education. To my knowledge, no research has been performed on *tombak* groups, the music they perform, or the individuals who compose the music. As I have mentioned, the majority of the studies relating to rhythms in Iranian music focus either on poetry or ancient music treatises. Therefore, very few studies look at aspects of 20<sup>th</sup> century *tombak* playing and none, to my knowledge, address compositions written for *tombak* duet.

I would like to highlight here that although I am addressing written compositions, the nature of this form of notation is arguably not the same as the concept of notation found in Western Art Music. My use of the term 'notation' in this thesis refers to a writing practice very closely related to oral tradition. The music addressed in this study has very strong roots in an oral based pedagogy. It can be argued that the notation system used to

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<sup>54</sup> In Farsi, the principal language in Iran, objects are made plural by adding the syllable 'ha' at the end of the word. In this thesis, a hyphenated 'ha' will be used when a plural word is transliterated from Farsi to English. In other words, '-ha' indicates that the word is plural.

<sup>55</sup> <https://www.youtube.com/watch?v=6KWyjJ1vbcc>

<sup>56</sup> Mohammad Esmâ'ili, *Course of Tombak*. Edited by Siâmak Banâi (Tehran: Mahoor Institute of Culture and Art, 1382 (Hijri calendar)).

Bahman Rajabi, *Tombak-Training: Advanced and High-Advanced Level*, 2<sup>nd</sup> ed. (Tehran: Sorood Publications, 2010).

Hosein Tehrani, Hoshang Zarif, Mostafa Kamalportorab, Farhad Fakhrodini, *Amouzeshe-é Tombak*, revised by Hosein Dehlavi (Tehran: Moasseh Farhangi-Honary Mahor, 1385 (Hijri calendar)).

write the music found in this study insufficiently represents the complexities and subtleties of the rhythms and timbres. From this perspective, the *tombak* ‘notation system’ is a form ‘transcription’. Meaning, it transforms a sonic musical work into a written representation of the work. The consequences of such a transformation is that the essential ‘life’ of the music, its sonic energy and intricate gestures, are lost and we are left with a visual mnemonic representation of the work. However, the benefit of dealing with a written score is that we can clearly see the content, the structure, and the development of the piece. Because the main interest of this thesis is musical content, structure, development, and not the performance of the piece, I would argue that studying written compositions is in this case justifiable. In the conclusion for this thesis, I will never the less return to this issue and address the benefits and disadvantages of studying written *tombak* works.

I believe that *tombak* ensembles provide a perfect case study to begin uncovering characteristics of the modern *tombak* era. *Tombak* groups were created at the outset of this new era and have continued into the 21<sup>st</sup> century. In this time span, several prominent masters have composed pieces for *tombak* ensemble. By studying these compositions, we can better understand how the *tombak* transitioned from an oral to a written repertoire and how it found a new place in center stage.

In this present study, I will try to determine some characteristics of the modern *tombak* era by undertaking structural analyses of a group of compositions for *tombak* duet. My focus will be on uncovering the approaches and techniques the composers used to write their pieces. I will also examine the motivic content of the pieces to see if they have a common source or if there was any musical borrowing. My hope is that, by



researching the composers' approaches for writing their music and by looking at the motivic sources, I can better understand how the *tombak* is treated in a written context and as the main instrument of a piece. This in turn can give insight into the *tombak's* musical role in its modern era.

## CHAPTER 2: HISTORICAL AND BIOGRAPHICAL OVERVIEW

During this section, I will be using interviews that I have conducted with Abtin Gahfari as a reference in combination in various written sources. Gahfari is a professional *tombak* player, he has performed in concerts in Iran and Turkey as well as in Turkish television and radio programs. Gahfari is currently a performer and teacher in Canada. He has studied the *tombak* with masters such as Dariush Zargari and Bahman Rajabi and has also performed research into the history of the *tombak*.

### ***Tombak - Historical Aspects and Description***

Percussion instruments in Iran can be traced back five thousand years through archeological discoveries.<sup>57</sup> However, the *tombak* itself is dated to the more recent past. During places the origin of the *tombak* within the *Qajar* period (1785-1925).<sup>58</sup> It is important to note that the *tombak* has been given several names with various pronunciations and spelling. Today the name ‘*tombak*’ is the most commonly used, however it is also commonly spelt ‘*tonbak*’ and another frequently used name is ‘*zarb*’. For a complete list of names used for the *tombak* see Zarbafian’s thesis *Tombac et l’histoire du rythme en Iran*.<sup>59</sup>

The *tombak* is a goblet shaped hand drum. Today the size of the drum can vary, a large *tombak* is approximately twelve inches in diameter and eighteen inches tall. The shell is carved from various types of tree trunks, commonly mulberry, and the head of the

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<sup>57</sup> Zarbafian, “Tombac et l’histoire,” 6.

<sup>58</sup> During, *La musique iranienne*, 89.

<sup>59</sup> *ibid*, 12.

drum is typically camel or goatskin, see Figure 1 below for pictures of a contemporary *tombak*.



**Figure 2: pictures of contemporary *tombak*.** <sup>60</sup>

Before the twentieth century, the *tombak* was primarily used to accompany melodic instruments, singers, and only rarely appeared in solo <sup>61</sup> during certain private celebrations, rhythmic songs, dances, and theater presentations.<sup>62</sup> It was only during the twentieth century that the *tombak* began to be commonly appear in solo performances.<sup>63</sup>

Another important development for the *tombak* during the twentieth century is its rise in social status. Before this period, the *tombak* was seen as a socially low

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<sup>60</sup> Pictures were taking by author.

<sup>61</sup> During, *La musique iranienne*, 168.

Zarbfian, “Tombac et l’histoire”, 14.

<sup>62</sup> Zarbfian, “Tombac et l’histoire,” 15.

Note that I did not include the “Zurkhaneh” in this list, where percussion plays an important role as a soloist. The reason for this omission is that the instrument used, called a ‘*Zarb-é Zurkhaneh*’ is much larger than a regular *tombak*, is made of clay instead of wood, and uses a different set of playing techniques. These differences, in my view, make the *Zarb-é Zurkhaneh* significantly different from the *tombak* that is the topic of this research.

<sup>62</sup> During, *La musique iranienne*, 90-91, 168.

Zarbfian, “Tombac et l’histoire,” 15.

<sup>62</sup> Abtin Gahfari, interview.

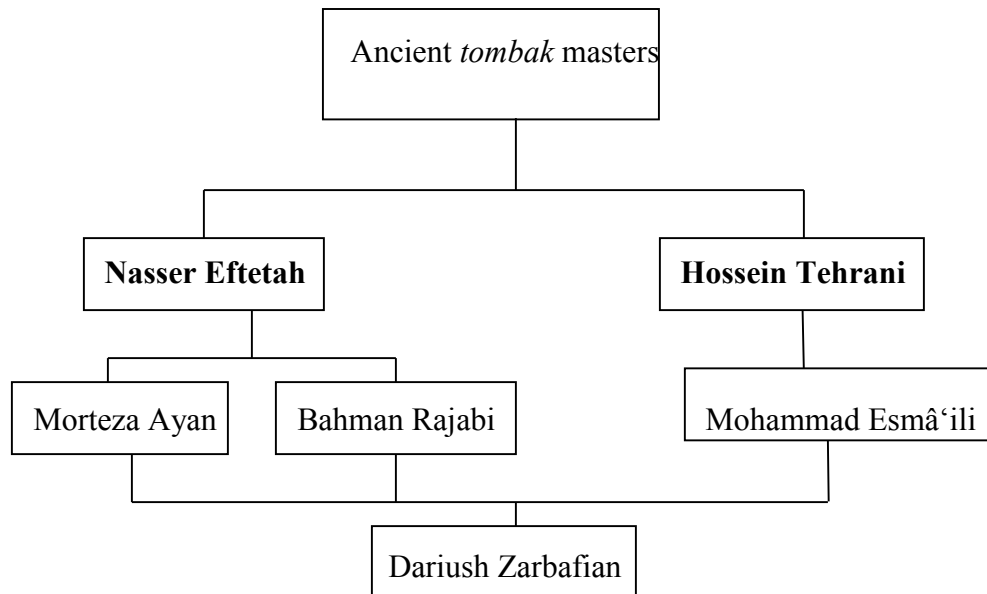
<sup>63</sup> During, *La musique iranienne*, 90-91, 168.

Zarbfian, “Tombac et l’histoire,” 15.

instrument.<sup>64</sup> It is only in the recent past that the *tombak* has become closer in social rank to the melodic instruments from Iran. The *tombak*'s change in social status as well as its increasing appearances as a solo instrument is due to the work of the *tombak* masters of the twentieth century.

### Modern Schools of *Tombak*

During the first half of the twentieth century, *tombak* masters Hossein Tehrani (1912-1973) and Nasser Eftetah (1925-1977) established the two main *tombak* schools.<sup>65</sup> Below, Figure 2 shows the two main schools. Notice that Zarbafian is connected to both schools since he studied with Ayan, Rajabi, and Esmâ'ili. To limit the figure, I have only included the names of *tombak* masters relevant to this study.



**Figure 3: Division of two main modern schools of *tombak*, Eftetah's school and Tehrani's school.**

<sup>64</sup> Abtin Gahfari, interview.

<sup>65</sup> Dariush Zarbafian, interviewed by author, December 27, 2015.

One important difference between these two schools is their method for transcribing *tombak* rhythms. Tehrani's school uses a musical writing system based on three lines while Eftetah's school uses a system based on a single line.<sup>66</sup>

Masters Hossein Dehlavi, Houshang Zarif, Mostafa Purtab, and Farhad Fakhreddini in collaboration with Tehrani developed a music writing system that divided the *tombak*'s playing surface into three zones.<sup>67</sup> Each zone was represented by a separate line on the staff resulting in a total of three lines. Symbols are then added on top of a note to specify which finger and technique to use for each note. Figure 3 is an example of three-line staff notation. Audio for Figures 3 and 4 can be found in accompanying audio files.



**Figure 4: Example of three-line staff notation.**

Eftetah's school developed a writing language based on a single line, which is the notation style most commonly used today. Single-line *tombak* notation relies solely on the symbols written above the notes to indicate, fingering, technique, and with area on the playing surface is used. Figure 4 is an example of a single-line staff notation.



**Figure 5: Example of one-line staff notation.**

<sup>66</sup> Zarbafian, "La musique savante," 29.

<sup>67</sup> Ibid.

<sup>68</sup> Hosein Tehrani, Hoshang Zarif, Mostafa Kamalportorab, Farhad Fakhroddini, *Amouzesheh-e Tombak*, revised by Hosein Dehlavi (Tehran: Moasseh Farhangi-Honary Mahor, 1385 (Hijri calendar)), 11.

<sup>69</sup> Bahman Rajabi, *Tombak Training: Preperatory and Intermediate Course*, School of Tombak-Playing, vol. 1 (Tehran: Sorood Publications, 1393 (Hijri calendar)), 7.

## **HOSSEIN TEHRANI – Overview of Artistic Life**



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**Figure 6: Hossein Tehrani playing *tombak*.**

Hossein Tehrani (1912-1973)<sup>71</sup> is known as one of the most important *tombak* players in the twentieth century.<sup>72</sup> His work as a musician is considered to be the foundation for the ‘modern *tombak* school,’<sup>73</sup>

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<sup>70</sup> Mohammad Esmâ'ili, *Course of Tombak*, ed. Siâmak Banâi (Tehran: Mahoor Institute of Culture and Art, 1382 (Hijri calendar) ), 6.

<sup>71</sup> the Tombak Network website, “Ostad Hosain Tehrani,” [http://www.tombak.talktalk.net/artists/ostad\\_hosain\\_tehrani.htm](http://www.tombak.talktalk.net/artists/ostad_hosain_tehrani.htm), visited December 26, 2015.

<sup>72</sup> During, *La musique iranienne*, 90.

Farhat, “Iran. Classical Traditions.”

Zarbfian, “Tombac et l’histoire,” 7.

Zonis, *Classical Persian*, 175.

<sup>73</sup> During, *La musique iranienne*, 90.

Tehrani is considered to be a *tombak* virtuoso who was un-matched during his time.<sup>74</sup> His greatest contributions, according to Gahfari, were to help specify the *tombak*'s playing techniques and to collect various rhythms for the *tombak*.<sup>75</sup> His collection of rhythms and his contributions to playing techniques are all found in one of the most important books for teaching the *tombak*, *Amouzeshe-é Tombak*. In collaboration with Hossein Dehlavi, Hoshang Zarif, Mostafa Kamal Purtorab, and Farhad Fakhroddini, Tehrani, wrote *Amouzeshe-é Tombak*, the first pedagogical *tombak* book of its kind. This book helped establish a methodology for teaching the *tombak* and for transcribing *tombak* rhythms using staff based notation.<sup>76</sup>

Apart from the publication of his *tombak* method book, Tehrani has played on several recordings<sup>77</sup> and performed in concert and on the radio with many masters as well as in solo. Tehrani was also the principal *tombak* teacher at the National Art School<sup>78</sup> (*Honarestan-é Musiri-é Melli*).<sup>79</sup>

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<sup>74</sup> During, *La musique iranienne*, 91.

Zonis, *Classical Persian*, 175.

<sup>75</sup> Gahfari, interview.

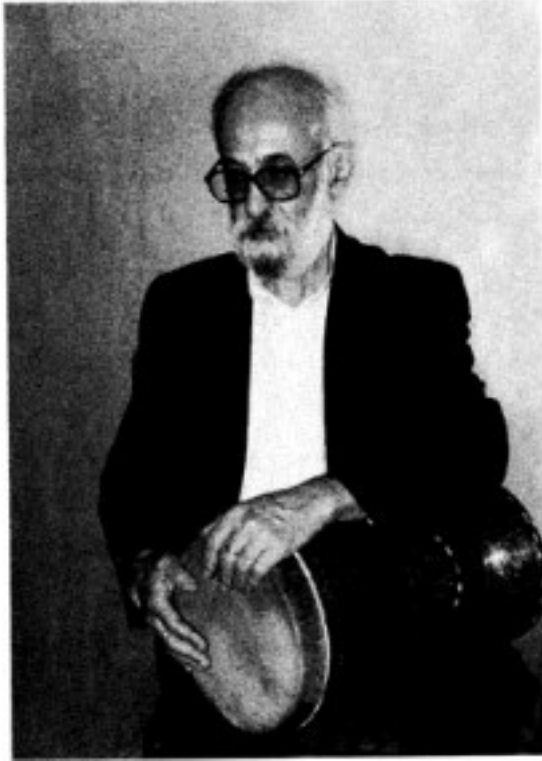
<sup>76</sup> Zarbafian, "Tombak et l'histoire," 16.

<sup>77</sup> See discography.

<sup>78</sup> Gahfari, interview.

<sup>79</sup> Formerly known as *Madress-é Ali Musiri*

## MOHAMMAD ESMÂ'ILI – Overview of Artistic Life



**Figure 7: Mohammad Esmâ'ili playing *tombak*.**

Mohammad Esmâ'ili (1934 - ) began to study the *tombak* with Tehrani at the High School of Music in 1951.<sup>81</sup> Later, Esmâ'ili would teach at this same school. After completing his education, Esmâ'ili was appointed by Tehrani as his successor. In other words, he was entrusted to continue Tehrani's school. In 1966, he also became the head of the *tombak* department of the Ministry of Culture and Art.<sup>82</sup>

Esmâ'ili has contributed to the *tombak's* heritage through his recordings<sup>83</sup> and with his book *Course of Tombak (Amouzesh-é Tombak)*. This book is meant to be a

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<sup>80</sup> Esmâ'ili, *Course of Tombak*, 10.

<sup>81</sup> Tombak Network website, "Ostad Mohammad Esmaili," [http://www.tombak.talktalk.net/artists/esmaili\\_mohammad.htm](http://www.tombak.talktalk.net/artists/esmaili_mohammad.htm), visited December 26, 2015.

<sup>82</sup> Tombak Network website, "Ostad Mohammad Esmâ'ili."

<sup>83</sup> See discography for list of recordings.



continuation of Tehrani's book. It contains new exercises as well as a *tombak* duet piece composed by Esmâ'ili. The duet piece will be analyzed in section three of this paper.

### ***BAHMAN RAJABI – Overview of Artistic Life***



**Figure 8: Bahman Rajabi playing *tombak*.**

Bahman Rajabi (1939 - )<sup>85</sup> is today considered one of the most influential authorities on the *tombak*. By helping to shape current *tombak* playing practices, a large number of contemporary *tombak* players find inspiration in Rajabi's work.<sup>86</sup> Jean During has highlighted Rajabi as potentially being the next Tehrani and mentions how Rajabi raised *tombak* virtuosity to a new level.<sup>87</sup>

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<sup>84</sup> Bahman Rajabi, *Tombak Training; Preperatory and Intermediate Course, School of Tonbak-Playing*, vol. 1 (Iran: Sorood Publications, 1999), 18.

<sup>85</sup> Tombak Network website, "Ostad Bahman Rajabi," [http://www.tombak.talktalk.net/artists/rajabi\\_bahman.htm](http://www.tombak.talktalk.net/artists/rajabi_bahman.htm), visited December 27, 2015.

<sup>86</sup> Gahfari, interview.

<sup>87</sup> During, *La musique iranienne*, 91.

Rajabi studied with several masters of his time, however he considers Nasser Eftetah as being his most influential teacher.<sup>88</sup> Rajabi became a sought out teacher for many students. He has also given several lecture/recitals in schools and universities. Rajabi's lectures raised issues about the *tombak's* social status, an important topic for Rajabi.<sup>89</sup> As a *tombak* player, he was preoccupied with the social reputation of this instrument. He focused his work on demonstrating the musical value of the *tombak* both as an accompaniment and solo instrument.<sup>90</sup>

One of his most important contributions to the *tombak* tradition is the writing of four pedagogical books published into two volumes. These books are comprised of a series of studies, each one addressing a particular *tombak* playing technique. His fourth book also presents new playing techniques, specifically different types of roles each with unique fingering. Rajabi's studies also present some of his key compositional ideas. Throughout the studies, Rajabi places an emphasis on motivic development and structure.<sup>91</sup> These compositional issues will be addressed in the musical analysis portion of this paper.

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<sup>88</sup> Tombak Network, "Ostad Bahman Rajabi."

<sup>89</sup> Gahfari, interview.

<sup>90</sup> Ibid.

<sup>91</sup> Ibid.

## ***DARIUSH ZARBAFIAN – Overview of Artistic Life***



**Figure 9: Dariush Zarbafian playing *tombak*.<sup>92</sup>**

Dariush Zarbafian (1951) began practicing music informally on the *darbuka* (Arabic hand drum) at a young age. He performed at a few events while studying economics at university. His career in economy led him to France where he performed at his first festival concert. This experience motivated him to return to Iran to study with the *tombak* masters.

When Zarbafian returned to Iran, he began his formal musical training with Mohammad Esmâ‘ili, Bahaman Rajabi, and Morteza Ayan. His studies with these masters allowed him to acquire an understanding of different *tombak* schools. He studied for several years until Iran underwent the Islamic Revolution of 1979, when he was forced to flee Iran and return to France.

Once returned to France, Zarbafian began his career as a professional musician and composer. He performed in concerts throughout Europe, on the radio, and on

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<sup>92</sup> Picture taken by Shahram Aslani, 2003, Toulouse France.

television. Critics revered him as a virtuoso and an important authority on traditional Iranian music. During this period, he also taught many students, recorded CDs and one DVD.<sup>93</sup>

While in France, Zarbafian also studied musicology at the University of Toulouse. His research focus was on the Iranian modal system and the ancient Iranian rhythmic system. In 2008, he completed his doctorate in musicology with his thesis *La musique savante iranienne: contribution à l'analyse des systèmes modeaux et de la métrique*<sup>94</sup> (*Iranian Art Music: Contributions to the Analysis of the Modal and Rhythmic Systems*). His research into Iran's ancient rhythmic cycles gave him an in depth understanding of traditional Iranian music. The insights he gained from the ancient rhythmic treatises gave him tools for his compositions. As we will see in the analysis section, Zarbafian used the information he acquired through his research to compose the piece addressed in the analysis portion of this thesis.

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<sup>93</sup> See discography for list.

<sup>94</sup> Dariush Zarbafian, "La musique savante iranienne: contribution à l'analyse des systèmes modaux et de la métrique," PhD diss., Université de Toulouse, 2008, Atelier National de Reproduction des Thèse.

## CHAPTER 3: ANALYSIS

In this section I will undertake a comparative analysis addressing compositions for two-part *tombak* pieces written during the 20<sup>th</sup> century. Hossein Tehrani, Mohammad Esmâ‘ili, Bahman Rajabi, and Dariush Zarbaifan composed the pieces that will be analyzed. The musical works are limited to written compositions for two *tombak* parts. For the most part these are duets. Note that during the performance of certain of these pieces, more than two *tombak-ha* may be required (e.g. *tombak* quartet or *tombak* ensemble) by having several musicians play the same line in the score. However, the score itself is only for two *tombak-ha* therefore I will be describing the pieces as duets.

### ***Analytical Framework***

#### **Reference**

The analytical method and techniques I will use in my analyses are influenced by the theories presented in Simha Arom’s book *African Polyphony and Polyrhythm: Musical Structure and Methodology*.<sup>95</sup> Scholar Jean-Jaques Nattiez has described Arom’s book *African Polyphony and Polyrhythm* as a seminal ethnomusicological work.<sup>96</sup> Nattiez explains how ethnomusicology, since the 1960’s, was focused more and more on the anthropological aspects of music,<sup>97</sup> thus pushing aside research aimed towards music analysis. Nattiez credits Arom’s publication for “reasserting the validity of

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<sup>95</sup> Simha Arom, *African Polyphony and Polyrhythm: Musical Structure and Methodology*, trans. Martin Thom, Barbara Tuckett, and Raymond Boyd (Cambridge: Cambridge University Press, 2004).

<sup>96</sup> Jean-Jaques Nattiez, “Simha Arom and the Return of Analysis to Ethnomusicology,” trans. Catherine Dale, *Music Analysis* 12, no. 2 (1993).

<sup>97</sup> *Ibid.*, 241-242.

music analysis for ethnomusicological study.”<sup>98</sup> He writes that *African Polyphony and Polyrhythm* not only contributes to Central African musical scholarship but also acts as a “methodological treatise which applies an extended and modified form of paradigmatic analysis.”<sup>99</sup> Nattiez credits the paradigmatic analysis method to Nicolas Ruwet and his work, *Méthode d’analyse en musicologie*.<sup>100</sup>

### **Analytical aim**

In *African Polyphony and Polyrhythm*, Arom describes the aim of analysis as defining the object’s individuality, which he articulates as the identity and distinctive properties of the object in relation to others.<sup>101</sup> I have tried to maintain this aim within my analyses of *tombak* duets. My first step is to describe what I believe to be the defining characteristics of each individual piece, the elements that make them unique. My second step is to compare the results of each piece to further demonstrate how they are unique or similar in relation to each other.

### **Code: elements and operational rules**

An important element to Arom’s method of analysis is the notion of a ‘code’. A code in a piece of music is comprised of elements and rules.<sup>102</sup> To my understanding, elements are the musical content, the musical sounds themselves, and the rules are what

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<sup>98</sup> Ibid., 242.

<sup>99</sup> Ibid., 255.

<sup>100</sup> Nattiez, “Simha Arom and,” 241.

Nicolas Ruwet, “Méthodes d’analyse en musicologie,” *Revue belge de musicologie* 20, no. 1 (1966).

<sup>101</sup> Arom, *African Polyphony*, 159.

<sup>102</sup> Arom, *African Polyphony*, 157.

guide how the elements operate. The rules are what link the sounds together, giving them form and structure.

To conduct an analysis with Arom's analytical method, the presence of a code within the piece of music must be taken for granted. In other words, I must assume that the pieces I will analyze are made up of separate elements that operate and are connected based on a set of rules. To follow Arom's method as much as possible, one of my objectives in each analysis will be to define the piece's elements and overarching rules.

## **Segmentation**

Arom's analytical approach requires that a musical work be continuously divided until the 'ultimate indivisible elements'<sup>103</sup> are defined. Note that, in Arom's view, segmentation can stop at various stages:

We may, however remark that we are not always required to reach these 'ultimate indivisible elements'. There are times when we are forced to stop at a much earlier stage. When segmentation is carried beyond a certain limit, it may no longer have meaning for the participants in the musical tradition under study, and this lose its relevance.<sup>104</sup>

In this present study, the smallest elements will be labeled 'motives' (this term will be defined more clearly later). The motives can be of various lengths, but they will all be, in my opinion, the smallest subdivision possible before losing part of the elements meaning or transforming it into something not conventionally found in the musical tradition studied.

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<sup>103</sup> Ruwet, "Méthode d'analyse," quoted by Arom, *African Polyphony*, 161.

<sup>104</sup> Arom, *African Polyphony*, 161.

Arom puts forth a technique for segmentation based on ‘the principle of repetition.’<sup>105</sup> The presence or absence of repetition can help with the identification of elements. When a musical passage (or element) is repeated it creates a reference that allows analysts to identify the repeated element, group it with similar elements, and differentiate it from others. In my analyses, the division of elements (which I will identify as motives) will be primarily based on the principle of repetition. I will identify which musical passages are repeated. Then, based on that information, I will divide the piece into brief motives.

### **Large subdivisions**

Once all the motives in a piece have been determined, I will begin to identify each motive’s variants. When two or more passages are very similar in content with only slight differences, the first passage will be identified as the motive and following similar passages as variants. After the motives and variants have been linked, I will group together different motives to create larger divisions within the piece. These larger divisions will also be based in part on the principle of repetition, but in this case on a macro level. Another factor that will determine the larger divisions is the similarities between the musical content of different motives. Examples of relevant similarities are time signature (or metric structure) and tempo.

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<sup>105</sup> Arom, *African Polyphony*, 161-163



## **Analytical results**

This type of analysis should result in the establishment of a model for the piece as well highlight any connections the piece has to preexisting material. A model, according to Arom, is the skeleton of the piece.<sup>106</sup> It is the reduction of the piece's substance in order to reveal only its most pertinent features and underlying pattern.<sup>107</sup> The final step of the analysis is to test the model to see if it can be used to create a new piece similar to the one analyzed.<sup>108</sup> If the model can be used to create new yet similar pieces, then the analysis is valid.

In this study, the final model will not be a graph or template. Rather, it will be a set of compositional guidelines. One of the focuses during the analysis will be to determine the compositional techniques used to create the pieces. I propose that the compositional techniques could be used as guidelines to create new pieces similar to the ones analyzed. In this sense, the compositional techniques act as a model. Given the time restrictions for this study however, I will not test the compositional guidelines' ability to create new works within this thesis.

A secondary goal in this research is to determine musical connections between the pieces and preexisting material. The intention here is not to propose a definitive origin for the musical content, but simply to show any connections a piece has or lack thereof with preexisting musical material. Given the resources at my disposal, these connections will be traced using solely written material.

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<sup>106</sup> Arom, *African Polyphony*, 168.

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

## **Methodology**

In order to place each piece analyzed in this study within the analytical framework proposed by Arom, I will frame each piece by addressing ten key topics. I have chosen these topics in hopes that they will connect each piece to Arom's theories. The topics for each point are designed to highlight the piece's motives (the 'indivisible elements'), the relationship between the motives, which gives rise to macro divisions in the piece, and finally the compositional techniques, which are the piece's model. I will now briefly describe each topic.

### 1) Motivic material

This topic tries to determine the piece's main 'indivisible elements'.

### 2) Connections between motives and preexisting material

This topic is meant to highlight any musical content that is shared between pieces or other written sources. In this question, I will try to determine if there are any connections in the motivic material between the pieces as well as between the pieces and educational *tombak* method books. The written sources I will be using are; the compositions analyzed in this thesis, Tehrani's *tombak* training book<sup>109</sup>, and Esmâ'ili's *tombak* training book<sup>110</sup>.

### 3) Accompaniment material

This topic seeks to determine the piece's secondary 'indivisible elements.'

### 4) Cadences

This topic tries to highlight any clear pauses or concluding stops within the piece. These stops will contribute to determining the piece's macro structure. The term cadence as it is used in this thesis is slightly different than the definition in Western Art Music theory.

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<sup>109</sup> Tehrani, *Amouzesesh*.

<sup>110</sup> Esmâ'ili, *Course of Tombak*.

Here, it solely refers to a musical formula, whose content is determined by the syntax of the given work, used as a punctuation or closure.

#### 5) Transitional material

This topic is meant to highlight any passages that do not fall within the categories of motive, accompaniment, or cadence. They are usually isolated passages that are sporadically repeated if at all.

#### 6) Relationship between *tombak 1* and *tombak 2*

This topic is meant to clarify the different roles each *tombak* can have within the compositions. It also looks at how the *tombak-ha* use different roles to interact with each other. Note that in the scores *tombak 1* is always in the top staff and *tombak 2* on the bottom one.

#### 7) Development of the motives and accompaniment

This topic addresses the differences and similarities between a motive or accompaniment and its variants. It is meant to show the compositional techniques used at a micro level.

#### 8) Compositional techniques used to develop the materials

This topic is used to clearly define and state the micro level compositional techniques. The compositional techniques in turn act as the piece's model.

#### 9) Development of the piece as a whole

This topic addresses the relationship between the different motives. It is meant to highlight the piece's macro structure and the compositional techniques used to create it.

#### 10) Structuring of the piece

This topic is used to clearly define and state the compositional techniques used for macro structure. The compositional techniques in turn act as the piece's model.

## Terminology

Embedded in my guiding questions are certain key words that are crucial to my analysis. During the analysis, every musical passage will be categorized either as a motive, a variant, an accompaniment, a cadence, or as transitional material. Each term has a specific meaning listed below.

- *Motive*: an independent musical entity with unique features that differentiate it from other materials and motives. It is the main musical idea of a passage. A motive can be played by a single *tombak* or it can incorporate both *tombak-ha*. In this second case, the motive can be in unison or a polyrhythmic passage.
- *Variant*: passage that resembles a motive but with slight differences. To resemble a motive, the passage must possess one or more of the unique features that characterize the initial motive. The differences can be found in various musical components: rhythm, pitch, orchestration, etc.
- *Motivic development*: throughout my analyses, the concept of developing a motive specifically means to transform a motive into one or several variants.
- *Accompaniment*: a musical entity with unique features whose role is secondary to a motive. An accompaniment's role is to support, contrast, or complement a motive, thus making it dependant on that motive. It is the secondary musical idea of a passage. By definition, it can only be played by a single *tombak* since a motive (played by the other *tombak*) must be present.

- *Cadence*: a passage whose only function is to conclude a section of the piece or the piece as a whole. A cadence can be similar to another passage from the piece, but it must also have unique properties that make it a concluding passage.
- *Transitional material*: a brief passage whose function is to connect the material that precedes it to the material that follows it. It creates a link between two different musical ideas.
- *Phrase*: a musical phrase is a single musical idea, usually a few measures long, normally comprised of a single motive, one or several variants, any number of accompaniments, and a cadence in some cases.
- *Cell*: this is the fundamental unit in a periodic rhythm. Cells are comprised of articulated and unarticulated isochronous rhythmic values. Meaning, a cell is described using a single rhythmic value (quarter note, eighth notes, sixteenth notes, etc.). The choice of rhythmic value can vary from one analysis to another or within an analysis depending on the musical passages. Cells can vary in length; usually between two to five rhythmic values. When cells are combined together they create the periodic rhythm.
- *Stress point*: these are the natural accents that occur within a given meter or rhythm. Stress point equivalent to the terms “strong beat” or “strong pulse” used in Western Art Music theory. All these terms designate the notes that should be emphasized or accentuated when playing a rhythm. The reason I will use the term “stress point” instead of “strong beat”, is because I want to avoid referencing the conventions used in Western Art Music for articulating rhythms. Since this thesis deals with Iranian music, it is important to have in consideration the conventions

for articulating rhythms in Iranian Classical Music while doing musical analyses. An example of the differences between Western Art Music rhythmic articulation and Iranian Classical Music rhythmic articulation is the standard used to perform a rhythm in a 6/8 meter. In Western Art Music, rhythms in a 6/8 meter are played with a strong beat on the first and fourth count (1 2 3 4 5 6), however, in Iranian Classical music rhythms in a 6/8 meter are played with stress point in the first, second, fourth and fifth count (1 2 3 4 5 6) or on the first, third, and fifth count (1 2 3 4 5 6).

- *Pitch*: this term is used in relation to high versus low sounds. It does not imply that the instruments have definite pitches (A to G), the *tombak* is an unpitched instrument; my use of the word 'pitch' in the analyses is in reference to 'unpitched' high and low sounds.

- *Tom*: refers to the bass tone on the *tombak*. *Tom* is a playing technique where the tip of the finger hit the center of the drum to create the lowest possible sound.

- *Bak*: refers to the high tone on the *tombak*. This sound is created by hitting the edge of the drum with the upper section of the ring finger.

- *Paleng*: refers to another type of high tone played on the *tombak*. This sound is created with a finger snap motion on the edge of the drum.

Note that the pieces in this section will be analyzed in general chronological order; starting with Tehrani, pieces 1 to 4, followed by Esmâ'ili, then Rajabi, and concluding with Zarbafian. I say 'general chronological order' because although the composers are placed in chronological order, and the publication of the pieces are also in

order, it is unclear whether or not certain pieces were composed long before its publication. Therefore, it is possible that some pieces were composed before others in an unpublished form. Since the chronology of the pieces is not the central topic of this research, I believe that relying on ‘general chronological order’ will give sufficient information.

### ***HOSSEIN TEHRANI: A Piece for Tombak Ensemble, No. 1***

This analysis will be looking at four of Tehrani’s compositions. These pieces were taken from Tehrani’s *tombak* training book, *Amouzesh-é Tombak*.<sup>111</sup> Note that Tehrani is credited as the composer of these four pieces but he did not write them on his own. As previously mentioned, his *tombak* training book was created through Tehrani’s collaboration with four other masters: Hossein Dehlavi, Hoshang Zarif, Mostafa Kamal Purtorab, and Farhad Fakhroddini. The contribution of these four masters was in part the development of a written Western based notation for the *tombak* and the transcription of the exercises and pieces.<sup>112</sup> Therefore, the pieces collected from Tehrani’s book were composed by him but transcribed with the help of his colleagues.

The audio for all musical examples can be found in the accompanying audio files.

#### 1) Motivic material

There are four motives in Tehrani’s first piece. Each motive is in 2/4 time and is two measures long. Every motive begins with *tombak 1*, who presents the main motivic idea, and ends with *tombak 2*’s response. The *tombak-ha* always play in alternation and

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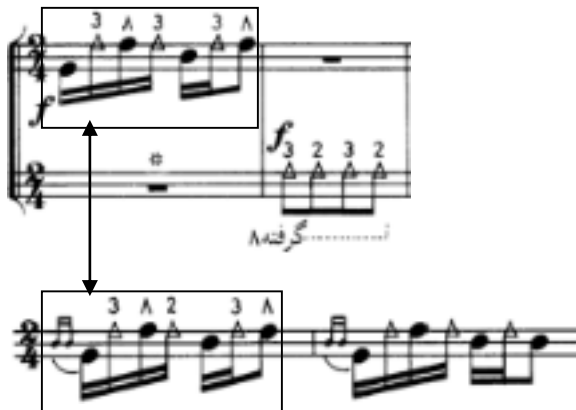
<sup>111</sup> Tehrani, *Amouzesh*, 29-39.

<sup>112</sup> Zarbafian, interview.

never simultaneously, see Appendix 1-A for list of motives. Note, in the musical examples, when two staves are connected together they will always represent *tombak* 1 on the first line and *tombak* 2 on the second line.

2) Connections between motives and preexisting material

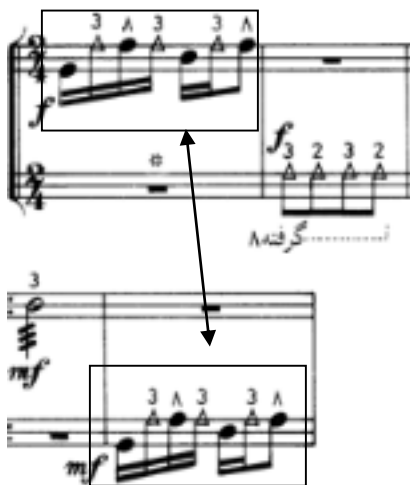
Motive 1: Based on exercise from Tehrani's *tombak* method book, see Figure 9.



**Figure 10: Similarity between Tehrani's piece 1, motive 1 (measures 1-2) upper line and his method book exercise #54 lower line.** <sup>113</sup>

Motive 2 and 3: No connections found.

Motive 4: Material used for motive 1, see Figure 10.



<sup>113</sup> Tehrani, *Amouzesheh-e Tombak*, 29. – upper musical example  
Ibid, 11. – lower musical example



**Figure 11: Tehrani piece 1, similarity between motive 1 (measure 1-2) upper line and motive 4 (measures 18-19) lower line.<sup>114</sup>**

3) Accompaniment material

There is no accompaniment material in this piece.

4) Cadences

There are no cadences in this piece.

5) Transitional material

There are no transitional materials in this piece.

6) Relationship between *tombak* 1 and *tombak* 2

*Tombak* 1 and *tombak* 2 are in dialogue throughout this piece, never playing simultaneously: when one *tombak* plays the other is silent. The *tombak-ha* alternate every measure. The resulting effect is a dialogue where *tombak* 1 presents an idea to which *tombak* 2 responds. This type of relationship may be for pedagogical reasons. Although each *tombak* plays the same number of measure in total, I would argue that *tombak* 1 is predominant since it presents, in my view, the principal ideas of the motives. *Tombak* 2 is responsible for replying with complementary material. Since *tombak* 1 presents the main ideas and *tombak* 2 the responses, I believe a hierarchy is created in which *tombak* 1 dominates.

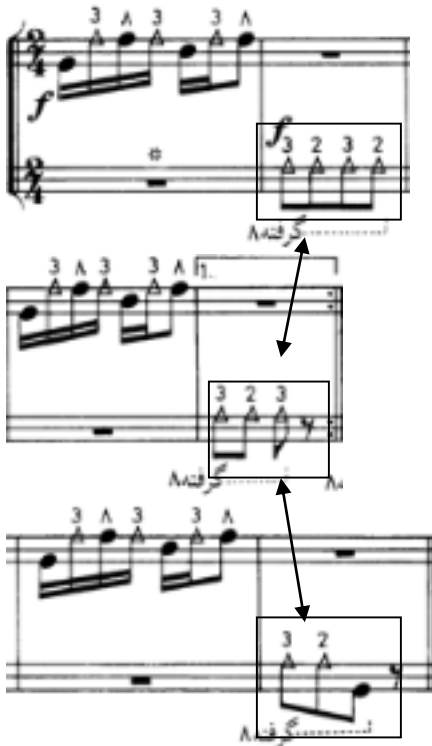
7) Development of the motives and accompaniments

Each motive in this piece has two variants. These variants are achieved through systematic alterations of the motive. The alteration process is the same for every motive. In other words, every motive undergoes the same series of changes in order to obtain its

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<sup>114</sup> Ibid, 29.

variants. These changes are all found in the second half of each motive, played by *tombak* 2. The first half of the motive, played by *tombak* 1, is not developed. The first alteration is to shorten *tombak* 2's response. The second alteration is to substitute the last high tone for a bass tone; see Figure 11.



**Figure 12: Tehrani piece 1, alterations process for *tombak* 2 between motive 1 (measures 1-2) top line, motive 1 variant A (measures 3-4) middle line, and motive 1 variant B (measures 3 and 5) bottom line; omission of note and substitution of high tone for low tone.<sup>115</sup>**

The alteration process demonstrated above is the only means of motivic development present in Tehrani's first piece.

<sup>115</sup> Tehrani, *Amouzesesh*, 29.

#### 8) Compositional techniques used to develop the materials

In this piece, only the second half of each motive is developed. The alteration of the motive occurs through the use of two techniques. The first technique is to change the rhythm, in this case removing a note at the end, and the second technique is to change the pitch of the last note from high to low.

#### 9) Development of the piece as a whole

The structure of this piece is based on five phrases. A phrase is a complete musical idea that can be differentiated from preceding and succeeding musical ideas. The techniques used to differentiate phrases can vary depending on the musical content. In this case, each phrase only contains one motive; phrase 1 (motive 1) – phrase 2 (motive 2) – phrase 3 (motive 3) – phrase 4 (motive 4) – phrase 5 (motive 1). In the first four phrases, Tehrani goes through motives 1 to 4. The piece is then concluded with phrase 5, which is a repetition of the first motive. The structure for each phrase is: motive – variant A – motive – variant B. It begins with the initial presentation of the motive followed by its variant A. The motive is then repeated followed by its variant B. After the second variant, the piece continues with the following motive.

#### 10) Structuring of the piece

The main compositional technique for structuring this piece is consistency in form for the motives and phrases. As mentioned above, each phrase has an identical form (motive – variant A – motive – variant B). Similarly, the motives and variants all have the

same structure. They are composed of two measures, the first measure is played by *tombak* 1 and the second is played by *tombak* 2. This consistency in form allows readers to easily see where motives, variants, and phrase begin and end, thus creating a clear structure for the piece as a whole.

## ***HOSSEIN TEHRANI: A Piece for Tombak Ensemble, No. 2***

### 1) Motivic material

Tehrani's second piece is composed of three motives with a 6/8 time signature. Similarly to Tehrani's first piece, *tombak* 1 presents the main motivic ideas to which *tombak* 2 adds a response. In this second piece, the *tombak-ha* are also playing in alteration and never simultaneously, see appendix 2-A for the list of motives.

### 2) Connections between motives and preexisting material

Motive 1, 2, and 3: No connections found.

### 3) Accompaniment material

There are no accompaniment rhythms in this piece.

### 4) Cadences

There is one cadence in this piece and it is found in the last two measures. This cadence concludes the entire pieces and is a variant of the motive that precedes it. The key features of this cadence are that the *tombak-ha* are in unison and that it ends with the bass tones, see Figure 12.



**Figure 13: Tehrani, piece 2, cadence; *tombak* unison and concludes with bass tones.<sup>116</sup>**

### 5) Transitional material

There are no transitional materials in this piece.

### 6) Relationship between *tombak* 1 and *tombak* 2

The relationship between *tombak* 1 and *tombak* 2 in this piece is the same as was described in Tehrani's first piece. In short, both *tombak-ha* are in dialogue, never playing simultaneously. A passage always begins with solo *tombak* 1 and ends with solo *tombak* 2 creating a relationship where *tombak* 1 predominates. The only exceptions are during the cadence at the end of the piece and during one variant of the third motive, where *tombak-ha* 1 and 2 play in unison.

### 7) Development of the motives and accompaniments

The first motive of this piece is developed into four variants. The changes occurring to the motive are found in the first and third measures. These measures correspond to the beginning of *tombak* 1's passage and the beginning of *tombak* 2's passage. *Tombak* 1 varies in three ways, adding a note (see circled note in variant A,

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<sup>116</sup> Tehrani, *Amouzesesh*, 30.

Figure 13), changing playing techniques (see boxed notes in variant A, Figure 13), and substituting notes for a roll (see boxed roll in variant B, Figure 13). *Tombak 2* on the other hand only varies by changing playing techniques (see boxed notes in variants A and B, Figure 13).

Tehrani, piece 2 motive 1, measures 1-4.

Tehrani, piece 2, motive 1 variant A, measures 5-8.

Tehrani, piece 2 motive 1 variant B, measures 9-12.

**Figure 14: Tehrani piece 2, *tombak-ha* development process between motive 1 top line, motive 1 variant A middle line, and motive 1 variant B bottom line; change in playing techniques, insertion of notes, and substitution of individual notes for a roll.**  
117

The development of motives 2 and 3 is based on removing or adding notes. The only difference between motive 2 and its variants A is the addition of one note and the absence of another, see arrows in Figure 14.

<sup>117</sup> Tehrani, *Amouzesh*, 30.

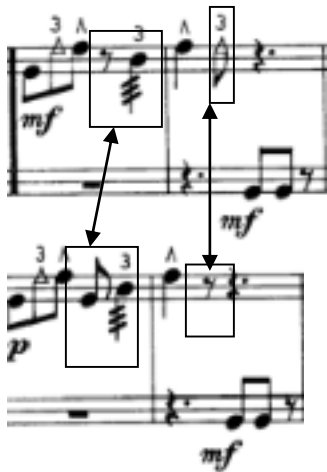


Figure 15: Tehrani piece 2, development process from motive 2 (measures 21-22) top line to motive 2 variant A (measures 25-26) bottom line; addition and omission of notes.<sup>118</sup>

To vary motive 3, bass notes were inserted in front of the muffled *pelangs* (finger snaps) and the *tombak-ha* play in unison instead of in alteration, see Figure 15.

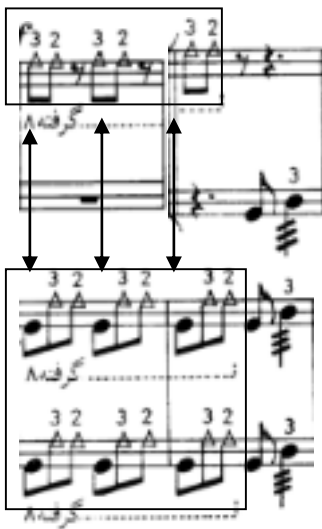


Figure 16: Tehrani piece 2, development process from motive 3 (measures 29-30) top line to motive 3 variant A (measures 37-38) bottom line; insertion of notes and alteration to unison.<sup>119</sup>

<sup>118</sup> Ibid.

<sup>119</sup> Tehrani, *Amouzesesh*, 30.

#### 8) Compositional techniques used to develop the materials

In this piece, Tehrani uses four techniques for varying motivic material. The first technique is to alter the pitch of the notes by changing the playing technique. The second technique is to either remove or add notes to the motive. Third, is to substitute notes for a roll. Finally, the fourth technique is to have the passage played in unison instead of in alteration.

#### 9) Development of the piece as a whole

Tehrani develops this piece in a linear fashion. It starts with motive 1, goes through all of its variants, then moves to motive 2 with its variants and so on. The piece also concludes with a cadence. The form can be summarized as the following; motive 1 (with variants) – motive 2 (with variants) – motive 3 (with variants) – cadence.

#### 10) Structuring of the piece

The main compositional technique for structuring the piece is the consistency in form for each motive and variant. All of the motives and variants are either two or four measures long, with *tombak* 1 playing the beginning and *tombak* 2 playing the ending. Also, each motive and variant is played two or four times consecutively.

Another important structural element is the cadence, which is used to conclude the piece. The only difference between the cadence and what precedes it, a variant of motive 3, is the last note. For the cadence, the last note is lowered to a bass (tom). As in Tehrani's first piece, the lowering of a note to a bass (tom) note indicates the end of a section or of the entire piece.



## ***HOSSEIN TEHRANI: A Piece for Tombak Ensemble, No. 3***

### 1) Motivic material

I have identified a total of four motives from Tehrani's third piece. Each motive is two measures long and in 4/4 time. Similar to the two previous pieces, the *tombak-ha* play in alteration, not simultaneously. Also, the motives begin with the main materials played by *tombak 1* and followed by *tombak 2*'s response, see appendix 3-A for the list of motives.

### 2) Connections between motives and preexisting material

Motive 1: Material from Tehrani's piece 1, motive 3, see Figure 16.

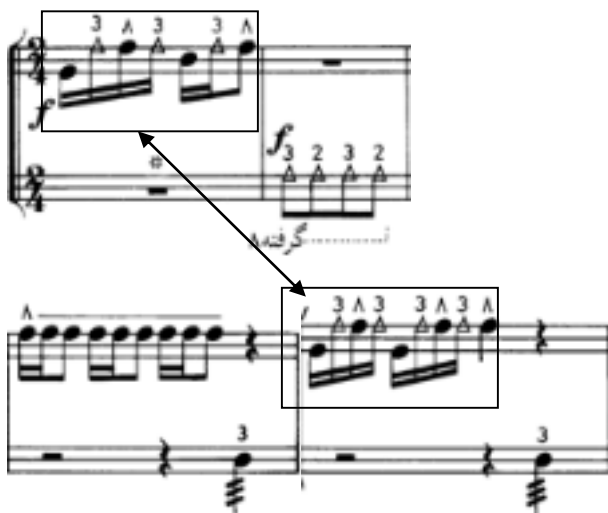


**Figure 17: Similarities between Tehrani's piece 3 motive 1 (measures 1-2) top line and his piece 1 motive 3 (measures 11-12) bottom line.<sup>120</sup>**

Motive 2: Material from Tehrani's piece 1, motive 1, see Figure 17.

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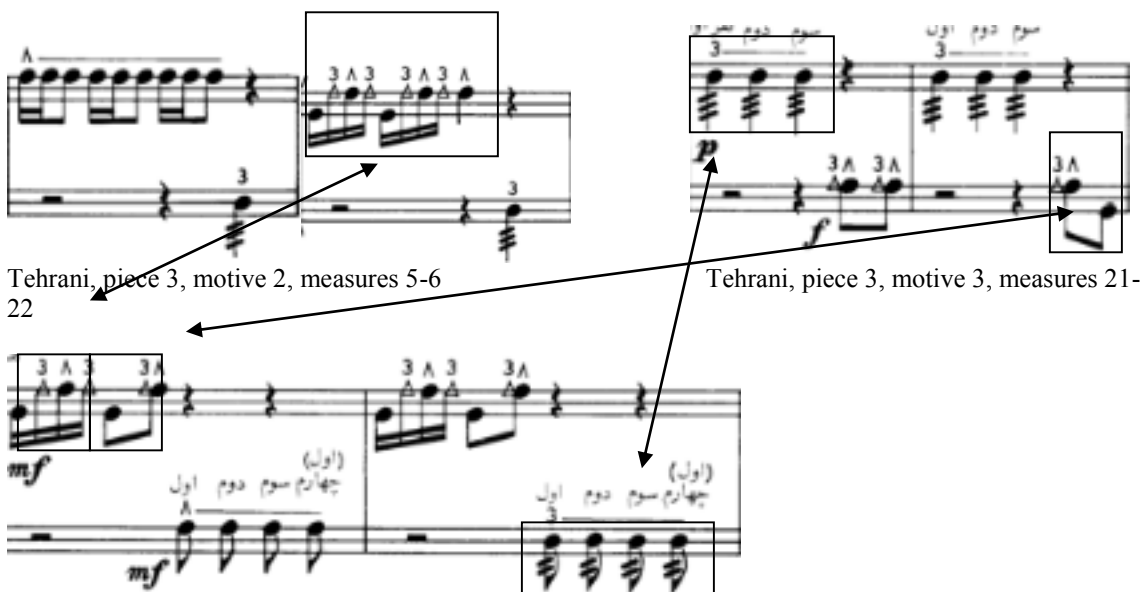
<sup>120</sup> Tehrani, *Amouzesht*, 31. – top musical example  
Ibid, 29. – bottom musical example



**Figure 18: Similarity between Tehrani's piece 1 motive 1 (measures 1-2) top line and his piece 3 motive 2 (measures 5-6) bottom line.**<sup>121</sup>

Motive 3: No connections found.

Motive 4: Mixture of motive 2 and motive 3 from Tehrani's third piece, see Figure 18.



Tehrani, piece 3, motive 2, measures 5-6  
22

Tehrani, piece 3, motive 3, measures 21-22

Tehrani, piece 3, motive 4, measures 25-26.

**Figure 19: Tehrani piece 3, similarities between motive 2 top left, motive 3 top right, and motive 4 bottom line.**<sup>122</sup>

<sup>121</sup> Ibid. – top musical example  
Ibid, 31. – bottom musical example

<sup>122</sup> Tehrani, *Amouzesht*, 31.

### 3) Accompaniment material

There are no accompaniment materials in this piece.

### 4) Cadences

There is one cadence in this composition and it is used to conclude the entire piece. This cadence is four measures long and is a continuation of the motive that precedes it, motive 4. The eighth note roles at the end of motive 4 continue throughout the beginning of the cadence, see Figure 19.



**Figure 20: Tehrani piece 3; continuation of roll from motive 4 (measures 25-26) top line to cadence (measures 29-32) bottom line.**<sup>123</sup>

The three key characteristics of this cadence are the unison between the *tombak-ha*, the roll in the middle register that begins the cadence, and the bass notes that conclude the cadence.

### 5) Transitional material

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<sup>123</sup> Tehrani, *Amouzesesh*, 31. - top musical example  
Ibid, 32. – bottom musical example

There are no transitional materials in this piece.

#### 6) Relationship between *tombak* 1 and *tombak* 2

The relationship between both *tombak-ha* is the same as in Tehrani's pieces 1 and 2.

#### 7) Development of the motives and accompaniments

In this piece, only motive 2 is developed into variants. This motive is varied through alterations that occur to the first measure. For the first variant, the rhythm is simplified and divided between the two *tombak-ha*, see Figure 20.

The image displays two staves of musical notation. The top staff shows measures 5-6 with a rapid eighth-note pattern. The bottom staff shows measures 9-10 with a simplified rhythm. An arrow points from the top line to the bottom line, indicating the development process. The notation includes various rhythmic markings such as '3', 'A', and 'p'.

**Figure 21: Tehrani piece 3, development process from motive 2 (measures 5-6) top line to motive 2 variant A (measures 9-10) bottom line; simplification of rhythm and orchestration of rhythm between both *tombak-ha*.<sup>124</sup>**

Variants B and C maintain this rapid alteration between *tombak* 1 and 2. The difference between these three variants is the pitch used and the change of the eighth notes to sixteenth notes or short rolls, see Figure 21.

<sup>124</sup> Tehrani, *Amouzesht*, 31.



Tehrani, piece 3, motive 2 variant A, measures 9-10.



Tehrani, piece 3, motive 2 variant B, measures 13-14.



Tehrani, piece 3, motive 2 variant C, measures 17-18.

**Figure 22: Tehrani piece 3, development process from motive 2 variant A top line, to motive 2 variant B middle line, to motive 2 variant C bottom line; changes in pitch and rhythm alteration from eighth notes to sixteenth notes and rolls.<sup>125</sup>**

#### 8) Compositional techniques used to develop the materials

There are four compositional techniques used for developing motivic material in this piece. First is the division and distribution of a solo rhythm into a rhythm for two voices. In other words, instead of having one *tombak* play a rhythm, two *tombak-ha* play the same or a similar rhythm in alternation. The second technique is to vary the pitches by altering the playing techniques. The third technique is to make the rhythm simpler or more complex by adding or removing rhythmic subdivisions. In this case, this is done by replacing eighth notes with sixteenth notes or vice-versa. The last technique is to substitute an individual note with a roll.

<sup>125</sup> Tehrani, *Amouzesh*, 31.

### 9) Development of the piece as a whole

Similar to Tehrani's pieces 1 and 2, this piece develops by means of a linear progression through its motives and variants and concludes with a cadence. The form can be summarized as; motive 1-motive 2 (with variants)-motive 3-motive 4-cadence.

Unique to this piece is the continuation of musical ideas between the motives. A musical idea found at the end of one motive is altered and transferred to the beginning of the next motive, see boxed notes in Figure 22.

The image displays a musical score for Tehrani, piece 3, illustrating the development of four motives. The score is written on two staves, with the upper staff in treble clef and the lower staff in bass clef. The music is in 3/4 time and features a variety of rhythmic patterns and dynamics.

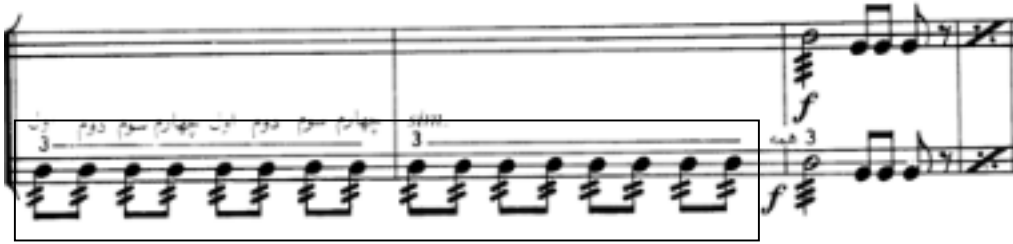
**Motive 1 (measures 1-2):** The first motive is shown in measures 1 and 2. A box highlights the final notes of measure 2, which are a quarter note G4 and an eighth note F#4. An arrow points from this box to the first measure of Motive 2.

**Motive 2 (measures 5-6):** The second motive is shown in measures 5 and 6. A box highlights the first notes of measure 5, which are a quarter note G4 and an eighth note F#4, identical to the boxed notes of Motive 1. An arrow points from this box to the first measure of Motive 3.

**Motive 3 (measures 21-22):** The third motive is shown in measures 21 and 22. A box highlights the final notes of measure 22, which are a quarter note G4 and an eighth note F#4. An arrow points from this box to the first measure of Motive 4.

**Motive 4 (measures 25-26):** The fourth motive is shown in measures 25 and 26. A box highlights the first notes of measure 25, which are a quarter note G4 and an eighth note F#4, identical to the boxed notes of Motive 1. An arrow points from this box to the first measure of Motive 2, completing the cycle.

The score includes various musical notations such as dynamics (f, mf), articulation (accents), and performance instructions (e.g., "اول", "دوم", "سوم").



Tehrani, piece 3, cadence, measures 29-32.

**Figure 23: Tehrani piece 3; continuation of musical ideas throughout the piece.** <sup>126</sup>

This technique of transferring musical ideas from one motive to the next allows one motive to seamlessly flow to the next.

#### 10) Structuring of the piece

As with Tehrani's pieces 1 and 2, the structure of this piece is based on the consistency of form of the motives and variants. Each motive and variants is exactly two measures long and is played twice consecutively. Another important composition technique is the use of unison for the cadence. This is the only moment in the piece where the *tombak-ha* play simultaneously which helps to differentiate the cadence for other passages. This in turn strengthens its function, which is to conclude the piece. The bass notes in the cadence, similar to pieces 1 and 2, also mark the end of the piece.

A compositional technique unique to this piece is the continuation of musical ideas from one motive to the next. This technique is shown above.

<sup>126</sup> Tehrani, *Amouzesht*, 31. – first, second, third, and fourth musical examples  
Ibid, 32. – fifth musical example

## ***HOSSEIN TEHRANI: A Piece for Tombak Ensemble, No. 4***

### 1) Motivic material

There are nine motives in Tehrani's fourth piece. Motive 1 is the only motive where both *tombak-ha* play in pitch and rhythmic unison. Motives 5 and 9 are played solo by *tombak* 1. For motives 2, 3, 4, 6, 7, and the reply to motive 5, the *tombak-ha* play in dialogue. The dialogue between the *tombak-ha* has the same characteristics as in pieces 1, 2, and 3. The only exceptions are motive 2 and the reply to motive 5 where the *tombak-ha* have equal importance instead of a hierarchy where *tombak* 1 dominates. Note that, the reply to motive 5 is a passage that appears in conjunction with motive 5 but is inconsistent in its appearances. When motive 5 is played, it is not always followed by its reply. For this reason I separated the two in my analysis. Finally, motive 8 is the only motive where both *tombak-ha* play simultaneously without being in unison of pitch. For the last two notes of the motive, both *tombak-ha* play the same rhythm, however *tombak* 1 plays in the high register while *tombak* 2 plays in the mid register, see Figure 23.



**Figure 24: Tehrani piece 4, motive 8 (measures 145-146, rehearsal number 14); *tombak-ha* in rhythmic unison.<sup>127</sup>**

Regarding time signatures, the previous pieces had a single time signature for the entire piece, Tehrani's fourth piece however has multiple time signatures. The table

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<sup>127</sup> Tehrani, *Amouzesh*, 36.



below shows all the time signatures with their corresponding motive. The time signatures are presented in the table in the same order as they appear in the piece.

Motive	Time Signature
1	4/4
2	4/4
3	4/4
4	3/4
5	3/8
6	6/16
7	6/8
8	6/16
9	2/4

**Table 1: Tehrani piece 4, list of motives and corresponding time signatures.**

2) Connections between motives and preexisting material

Motive 1 and 4: No connections found.

Motive 2: Material from Tehrani's piece 3, motive 2-variant A, see Figure 24.



**Figure 25: Similarity between Tehrani piece 4, motive 2 (measure 8, rehearsal number 1) top line, and piece 3, motive 2 variant A (measures 9-10) bottom line.** <sup>128</sup>

Motive 3: Material from Tehrani's piece 1, motive 1, see Figure 25.



**Figure 26: Similarity between Tehrani piece 4, motive 3 (measures 12-13) top line, and piece 1, motive 1 (measures 1-2) bottom line.** <sup>129</sup>

Motive 5: Based on exercise from Tehrani's *tombak* method book, see Figure 26.



**Figure 27: Similarity between Tehrani piece 4, motive 5 (measures 52-53, rehearsal number 6) top line and his method book exercise #108 bottom line.** <sup>130</sup>

<sup>128</sup> Tehrani, *Amouzesht*, 33. – top musical example

Ibid, 31. – bottom musical example

<sup>129</sup> Ibid, 33. – top musical example

Ibid, 29. - bottom musical example

<sup>130</sup> Ibid, 34. – top musical example

Ibid, 18. – bottom musical example

Motive 6: Based on exercise from Tehrani's *tombak* method book, see Figure 27.

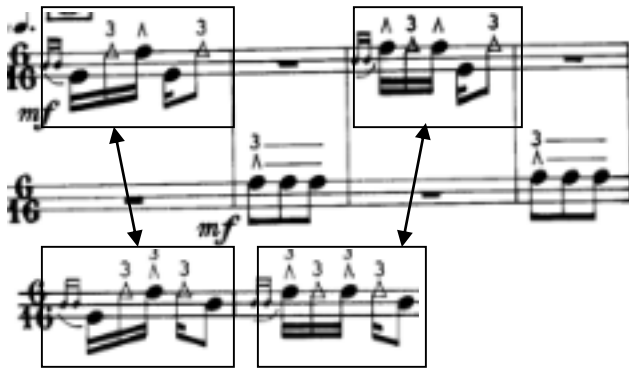


Figure 28: Similarities between Tehrani piece 4, motive 6 (measures 76-69, rehearsal number 8) top line , and his method book exercise #126 bottom line.<sup>131</sup>

Motive 7: Based on exercise from Tehrani's *tombak* method book, see Figure 28.

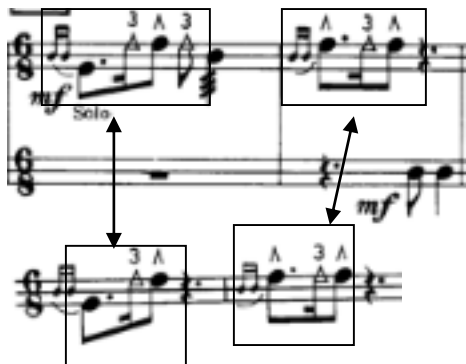


Figure 29: Similarities between Tehrani piece 4, motive 7 (measures 105-106, rehearsal number 12) top line and his method book exercise #80 bottom line.<sup>132</sup>

Motive 8: Based on exercise from Tehrani's *tombak* method book, se Figure 29.

<sup>131</sup> Ibid, 34. – top musical example

Ibid, 20. – bottom musical example

<sup>132</sup> Tehrani, *Amouzesht*, 35. – top musical example

Ibid, 14. – bottom musical example



**Figure 30: Similarities between Tehrani piece 4, motive 8 (measures 145-146, rehearsal number 14) top line and his method book exercise #131 bottom line.** <sup>133</sup>

Motive 9: Based on exercise from Tehrani's *tombak* method book, see Figure 30.



**Figure 31: Similarities between Tehrani piece 4m motive 9 (measures 209-210, rehearsal number 19) top line and his method book exercise #185 bottom line.** <sup>134</sup>

### 3) Accompaniment material

There is one accompaniment rhythm in this piece. It appears in one of the last sections of the piece, immediately after motive 9. This accompaniment is a series of muffled *pelang* (finger snaps), see Figure 31.



**Figure 32: Tehrani piece 4, accompaniment rhythm (measures 213-214, eighth measures before rehearsal number 20).** <sup>135</sup>

<sup>133</sup> Ibid, 36. – top musical example

Ibid, 20. – bottom musical example

<sup>134</sup> Ibid, 37. – top musical example

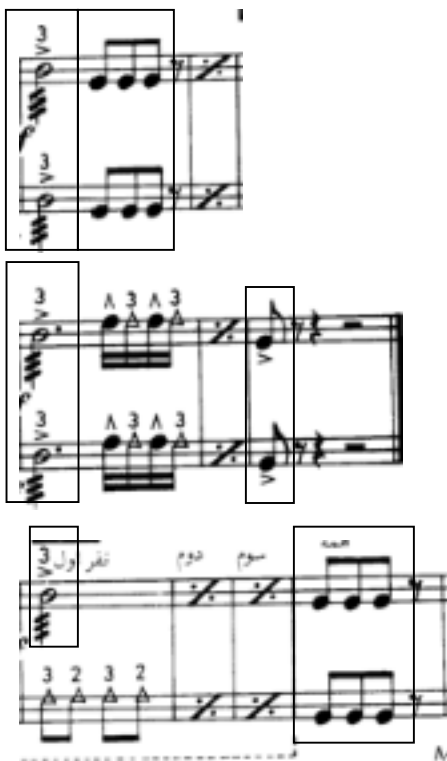
Ibid, 27. – bottom musical example

<sup>135</sup> Tehrani, *Amouzesesh*, 38.

*Tombak 2* repeats accompaniment 1 continuously for several measures while *tombak 1* plays a series of variants.

#### 4) Cadences

There are seven cadences in this piece. None of motive are entirely identical, however they all share common characteristics. Each cadence begins with a roll in the middle register and ends with bass tones that conclude the cadence. Also, each cadence ends with both *tombak-ha* in rhythmic and pitch unison. Figure 32 shows a few examples of cadences. In each example, I have boxed the characteristics just mentioned. For the entire list of cadences, see appendix 4-B.



**Figure 33: Tehrani piece 4, cadence 1 (measures 22-23, one measure before rehearsal number 3) top line, cadence 2 (measures 30-32, one measure before rehearsal number 4) middle line, and cadence 7 (measures 259-262, rehearsal**

**number 24) bottom line; all begin with roll in mid-register and conclude with bass tones.** <sup>136</sup>

#### 5) Transitional material

There are no transitional materials in this piece.

#### 6) Relationship between *tombak 1* and *tombak 2*

There are four types of relationships between *tombak 1* and *tombak 2* in this piece. The first relationship is the same as in pieces 1, 2, and 3 where both *tombak-ha* are in dialogue with each other. The second relationship is a rhythmic and pitch unison between the *tombak-ha*. This relationship is seen in motive 1, measures 2-3, and in all of the cadences. The third relationship is when *tombak 2* accentuates what is played by *tombak 1*. This is seen in motive 8, measure 145-146 (rehearsal number 14), where *tombak 2* plays the last two notes of the motive in rhythmic unison with *tombak 1*. The fourth relationship between *tombak 1* and 2 can be described as principal line with accompaniment. This occurs towards the last section of the piece, eight measures before rehearsal marks 20 to rehearsal mark 28. *Tombak 2* repeats the accompaniment rhythm (shown in question 3) while *tombak 1* plays a series of different passages.

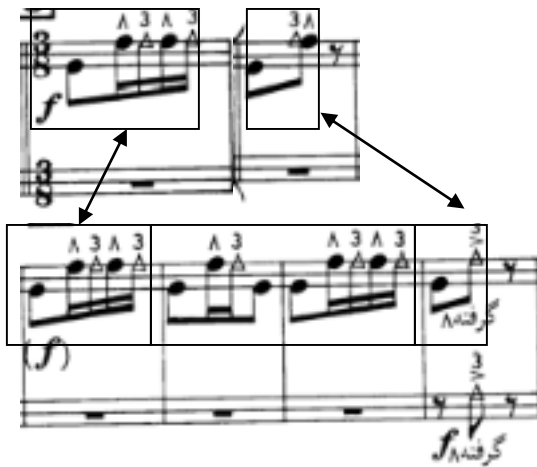
Looking at these four relationships, I have concluded that the role of *tombak 2* in this piece is secondary to *tombak 1*. *Tombak 1*'s role is to present the main ideas in the motives and the variants and to play the principal lines of certain passages. In contrast, *tombak 2*'s main role is to duplicate, complete, accentuate, or accompany the ideas presented by *tombak 1*.

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<sup>136</sup> Tehrani, *Amouzesht*, 33. – first and second musical examples  
Ibid, 38. – third musical example

## 7) Development of the motives and accompaniments

Regarding the development of the motives, I will address two ideas found in this piece. The other methods for developing motives have been raised in my analysis of Tehrani's other pieces. The first idea is found in the variants of motive 5. Tehrani develops motive 5 by introducing new materials to it, as a way of extending the motive, see Figure 33.



**Figure 34: Tehrani piece 4, development process from motive 5 (measures 52-53, rehearsal number 6) top line to motive 5 variant A (measures 64-67, rehearsal number 7) bottom line; insertion of new material.<sup>137</sup>**

The second idea for motivic development is used for motive 7. This motive is based on a 6/8 dance rhythm whose key characteristic is the dotted eighth note followed by a sixteenth note rhythm., see Figure 34.



<sup>137</sup> Tehrani, *Amouzesht*, 34.

**Figure 35: Tehrani piece 4, motive 7 (measures 105-106, rehearsal number 12); 6/8 dance rhythm, dotted eighth notes followed by sixteenth note.<sup>138</sup>**

Interestingly, in motive 7 one's attention is not on the variants but rather on the consistencies. Because much of the motive changes in an inconsistent manner, it is more important here to highlight what has not changed, which is what gives us reason to interpret these passages as variants of motive 7 and not as new motives. The dotted eighth note followed by a sixteenth notes and the rhythm played by *tombak 2* are the elements that connect motive 7 to its variants. There are a few examples of motive 7's variants in Figure 35.

The image shows a musical score with three staves. The top staff is marked 'Solo' and 'mf'. The middle and bottom staves are marked 'mf'. Arrows point from boxes highlighting specific rhythmic patterns in the top staff to corresponding patterns in the middle and bottom staves, illustrating the development process of motive 7.

**Figure 36: Tehrani piece 4, development process from motive 7 (measure 105-106, rehearsal number 12) top line, to motive 7 variant A (measures 109-110, four measures after rehearsal number 12) middle line, to motive 7 variant E (measures 125-126, four measures before rehearsal number 13) bottom line; consistency in 6/8 dance rhythm and *tombak 2*'s rhythm.<sup>139</sup>**

<sup>138</sup> Ibid, 35.

<sup>139</sup> Tehrani, *Amouzesh*, 35. – first musical example  
Ibid, 36. – second and third musical examples



When there are several changes between a motive and its variant, it is debatable whether or not to include it as a variant or label it as a new motive. The reason I have grouped these passages as motive and variant despite numerous inconsistent changes is because of the context in which they are presented. Looking at the previous motives and variants in this piece, a pattern is established that a motive is commonly followed immediately by one or several variants. Since the passages in Figure 35 are present one after the other (with only a few variants missing between A and E, which were omitted to facilitate the comparison) and shared important similarities, I believe that grouping these motives together respected the development pattern established by the piece's earlier motives.

#### 8) Compositional techniques used to develop the materials

The interest in the development of motives 5 and 7 is not only what is varied but also what is left unchanged. In each case, an important element of the motive is kept in each variant. In the variants of motive 5, the entire motive is kept and to it is added new material. For motive 7, the dotted eighth note with sixteenth note rhythm as well as *tombak 2*'s rhythm is kept consistent throughout the variants.

#### 9) Development of the piece as a whole

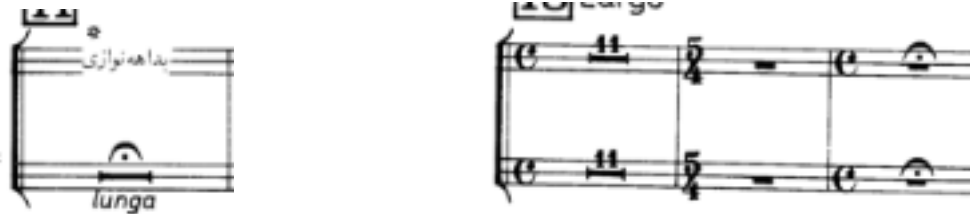
This piece can be organized into six large sections. In each section there are a series of motives and variants belonging to it. The table below summarizes the sections and their content.

Sections	Content
1	Motive 1 (with variants) Motive 2 (with variants) Motive 3 (with variants) Cadence 1 Motive 3 variants Motive 1 variants Cadence 2
2	Motive 4 (with variants) Cadence 3 Motive 5 (with variants) Cadence 4 Motive 6 (with variants) Cadence 5
3	Improvisation
4	Motive 7 (with variants) Motive 8 (with variants) Cadence 6
5	Improvisation
6	Motive 9 Accompaniment 1 Motive 3 (with variants, over accompaniment 1) Motive 9 variants over accompaniment 1 Cadence 7
Coda	Motive 3 variants over accompaniment 1 Cadence 7 Extended cadence

**Table 2: Tehrani piece 4, macro structure.**

The table above shows that the piece progresses through the motives in an orderly fashion. Each section possesses its own set of motives. There are no motivic connections or exchanges between the sections except for section 6 and the coda. During these two sections, motive 3 is reused. It is also important to mention that each section concludes with a cadence. The frequent use of cadences is a characteristic unique to this composition. In Tehrani's other three pieces, cadences, if present at all, were only used once to conclude the entire piece. Another interesting feature in this piece is the

designation of two sections for improvisations, section 3 and 5. In the music, these sections are represented by blank measures, see Figure 36.



Section 3 (rehearsal number 11)

Section 5 (rehearsal number 18)

**Figure 37: Tehrani piece 4, improvised sections.**<sup>140</sup>

### 10) Structuring of the piece

The main technique for structuring this piece is the use of cadences and silence. Each section is concluded with a cadence. Incorporated into the end of these cadences are rests and sometimes fermatas. The combination of a cadence followed by silence gives a clear indication that the section has concluded and that a new section is beginning.

Another technique for structuring this piece is the linear and orderly progression through the motives.

### ***HOSSEIN TERHANI: Compositions, Conclusions***

In my analysis of Tehrani's four compositions, I have noticed certain characteristics that were shared by every piece. I will list below the features that I believe to be the most prevalent in Tehrani's works. I will reuse the series of topics from the analysis to structure the list of characteristics. Topics seven and nine have been removed from the conclusions to avoid repetition.

<sup>140</sup> Tehrani, *Amouzesh*, 35. – musical example on left  
Ibid, 37. – musical example on right

### 1) Motivic material

The majority of Tehrani's motives are two measures long and in either 2/4, 4/4, or 6/8 time signature. The other motives are in time signatures closely resembling 6/8 (e.g. 6/16, 3/4, and 3/8). Motive 1 from the first piece is one of the only motives that is reused in later pieces either in its original form or in a varied form (e.g. piece 1 motive 4, piece 3 motive 2, piece 3 motive 4, and piece 4 motive 3). This motive is therefore the most used motive in Tehrani's compositions.

### 2) Connections between motives and preexisting material

Several of the motives in these compositions are similar to preexisting materials. To demonstrate these connections in my analysis, I compared several motives from Tehrani's pieces to exercises from his *tombak* method book. I also highlighted when a motive from one of Tehrani's earlier pieces was used in a later piece.

### 3) Accompaniment material

As seen in the analyses, Tehrani rarely composed accompaniment rhythms. He only wrote an accompaniment rhythm in his fourth piece for a brief section towards the end of the piece. The accompaniment rhythm itself is a series of isochronous muffled *pelang* notes (finger snaps).

#### 4) Cadences

Tehrani didn't use any cadences in his first composition. The use of cadences only appeared in his later works, particularly in his fourth composition where each section is concluded with a cadence. The main characteristics I found in Tehrani's cadences are the unison between both *tombak-ha*, a mid register roll at the beginning of the passage, and the bass notes at the end. These three elements can be seen in almost every cadence.

#### 5) Transitional material

Tehrani did not use transitional materials in any of his compositions.

#### 6) Relationship between *tombak 1* and *tombak 2*

Throughout Tehrani's four compositions, the main relationship between *tombak 1* and *2* is a type of dialogue. The *tombak-ha* alternate between each other and never play simultaneously. *Tombak 1* always initiates the dialogue with the main motivic idea to which *tombak 2* responds with complementary materials. The other relationships are far less frequent. Among them is the unison, which is usually found during cadences, and a principal line with accompaniment relationship.

An important aspect regarding the relationship between both *tombak-ha* is the hierarchy between the two. In all four pieces, *tombak 1* is the principal instrument, playing all the main motivic materials, and *tombak 2* is secondary, playing the accompaniment, complementary, and supporting materials.

#### 8) Compositional techniques used to develop the materials

In my analysis, I have noticed three main techniques that Tehrani used for developing materials. First is rhythmic variant, more specifically, removing or inserting notes by altering the rhythmic subdivisions, making a rhythm more complex by substituting eighth notes with sixteenth notes or short rolls, or simplifying a rhythm by substituting sixteenth notes with eighth notes. The second technique is pitch variant, accomplished by changing the playing techniques, in particular, changing a *bak* (high tone) for a *tom* (low tone) at the end of a passage. The third technique is the orchestration of passages between both *tombak-ha*. For example, having the *tombak-ha* play in unison instead of in alteration or to transform a solo passage into a duo passage by dividing the rhythm between the two *tombak-ha*.

#### 10) Structuring of the piece

In this analysis, I have found three main compositional techniques with which Tehrani has structured his pieces. These techniques are the form of the motives and variants, the use of cadences, and the linear and orderly progression through the motives.

In all four pieces, the majority of the motives and variants are two or four measures long. They are also played two or four times consecutively. The motives' consistent length helps create a regular rhythm for the progression of the piece. The use of cadences helps mark the end of a section or of the entire piece. The cadences act as markers for the end of a large musical idea. Their function in the music is to divide and organize the pieces musical ideas. Finally, the last structural technique is to organize the motives of each piece in an orderly manner. All of Tehrani's pieces generally develop

in a linear progression through the motives and variants. Rarely does a motive or its variant reappear after the succeeding motive has been presented. There are only a few exceptions to this organization (e.g. piece 1's first motive, which reappears at the end of the piece and piece 4's third motive, which also reappears towards the end of the piece).

### **MOHAMMAD ESMÂ'ILI: *Tombak Ensemble***

This piece was taken from Esmâ'ili's *tombak* training book, *Course of Tombak*.<sup>141</sup>

Before analyzing the piece by Esmâ'ili, I would like to mention that this piece is in reality composed of a percussion trio. The instrumentation is two *tombak-ha* and one tambourine. The rhythms played by the tambourine are simplified versions of the *tombak-ha*'s rhythms and are always played in unison with a *tombak*. In other words, the tambourine is always doubling one of the *tombak-ha*. The tambourine's main function is to add a new timbre to the music. It does not play an important role in the piece's structure or motivic content. Because my main interest in this analysis is motivic development, structure, and compositional techniques, I have chosen to omit the tambourine from the analysis and only focus on the two *tombak-ha*.

#### 1) Motivic material

In this piece, I have identified fifteen motives, see Appendix 5-A for full list. All of the motives vary between one and four measure in length. Also, almost every motive is played by a single *tombak*. The only exceptions are motive 7, which begins in *tombak 2* and ends in *tombak 1* (see Figure 37) and motive 8, which is a polyrhythmic motive.

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<sup>141</sup> Esmâ'ili, *Course*, 68-79.

Motive 8 in this analysis is divided into two parts, motive 8 line A, played by *tombak* 1, and motive 8 line B, played by *tombak* 2 (see Figure 38).



**Figure 38: Esmâ'ili motive 7 (measures 33-36); begins in *tombak* 2 ends in *tombak* 1.**<sup>142</sup>



Esmâ'ili, motive 8-line A, measures 67-68.



Esmâ'ili, motive 8-line B, measures 67-69.

**Figure 39: Esmâ'ili motive 8 line A and line B; polyrhythmic motive.**<sup>143</sup>

Regarding motivic materials, the most important aspect of this piece is the diversity of motives. Each motive has its own musical idea and content. When comparing the motives together, there are no characteristics common to all or even the majority of them. I would therefore suggest that the motives' main feature is their diversity.

## 2) Connections between motives and preexisting material

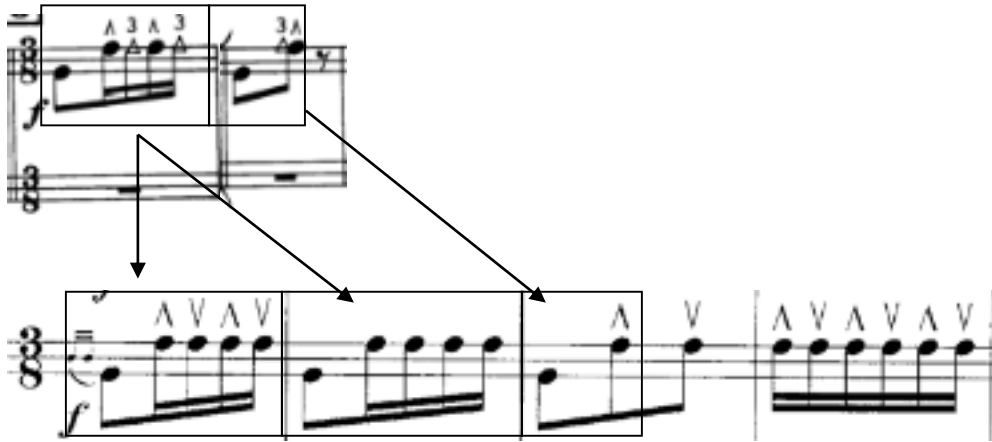
<sup>142</sup> Esmâ'ili, *Couse*, 70-71.

<sup>143</sup> *Ibid*, 72.



Motives 1, 2, 3, 6, 8 line A, 9, 10, 11, 12, 13, 14: No connections found.

Motive 4: Tehrani's motive 5 from piece 4, see Figure 39.



**Figure 40: Similarities between Tehrani piece 4, motive 5 (rehearsal number 6) top line, and Esmâ'ili motive 4 (measures 15-18) bottom line.**<sup>144</sup>

Motive 5: Tehrani's method book, p. 17 #104 and #105, see Figure 40.

<sup>144</sup> Tehrani, *Amouzesh*, 34. – top musical example  
Esmâ'ili, *Course*, 69. – bottom musical example

Tehrani, method book, p.17 #104

Esmâ'ili, motive 5, measures 25-26.

Tehrani, method book, p.17 #105

**Figure 41: Similarities between Esmâ'ili motive 5 (measures 25-26) middle line, Tehrani method book exercise #104 top line and #105 bottom line.<sup>145</sup>**

Motive 7- Tehrani's motive 3 variant A from piece 2, see Figure 41.

<sup>145</sup> Therani, *Amouzesht*, 17. – top musical example  
Esmâ'ili, *Course*, 69-70. – middle and bottom musical examples



Esmâ'ili, motive 7, measures 33-36.

**Figure 42: Similarity between Tehrani piece 2, motive 3 variant A top line, and Esmâ'ili motive 7 (measures 33-36) bottom line.**<sup>146</sup>

Motive 8, line B- Tehrani's method book, p. 21 #140, see Figure 42.

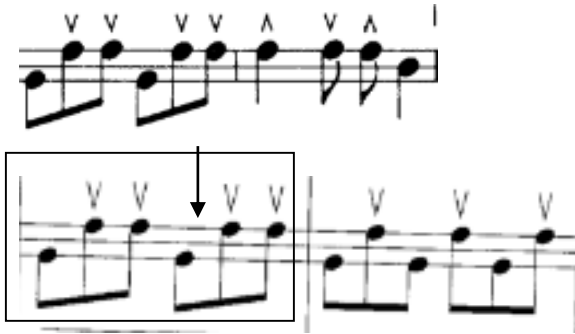


**Figure 43: Similarity between Tehrani method book exercise #140 top line and Esmâ'ili motive 8 line B (measures 59-61) bottom line.**<sup>147</sup>

Motive 15- Tehrani's method book, p.13 #75, see Figure 43.

<sup>146</sup> Tehrani, *Amouzesesh*, 30. – top musical example  
Esmâ'ili, *Course*, 70-71. – bottom musical example

<sup>147</sup> Tehrani, *Amouzesesh*, 21. – top line musical example  
Esmâ'ili, *Course*, 72. – bottom line musical example



**Figure 44: Similarity between Tehrani method book exercise #75 top line and Esmâ‘ili motive 15 (measures 192-193) bottom line.<sup>148</sup>**

### 3) Accompaniment material

There are eleven accompaniment rhythms in this piece. The majority of these accompaniments can be categorized into two groups. The accompaniment rhythms belonging to the first group are essentially individual tones that emphasize certain stress points in the meter, accompaniments 1, 4, 6, and 9 (see appendix 5-B for full list). These rhythms provide support by outlining the metric structure of the passage to which they belong. The arrows in Figure 44 indicate the notes in accompaniment 1 (played by *tombak* 2) that are marking the meter’s stress points.



**Figure 45: Esmâ‘ili motive 1 over accompaniment 1 (measures 1); accompaniment made up of individual tones that emphasize the meter’s stress points.<sup>149</sup>**

The main characteristic for the accompaniment rhythms belonging to the second group is a roll in the middle register. These rhythms create a drone like layer of sound as a support for the primary rhythm. The second group is comprised of accompaniments 2, 3, and 7

<sup>148</sup> Tehrani, *Amouzesh*, 13. – top line musical example  
Esmâ‘ili, *Course*, 78. – bottom line musical example

<sup>149</sup> *Ibid*, 68.

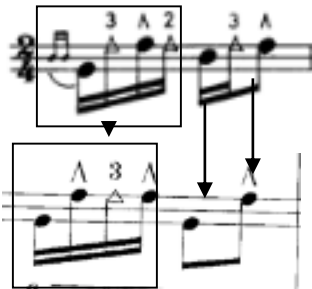
(see Appendix 5-B for full list). Figure 45 shows this type of accompaniment in *tombak* 1.



**Figure 46: Esmâ‘ili accompaniment 2 over motive 2 (measure 9); accompaniment comprised of drone like mid-register rolls.<sup>150</sup>**

Other accompaniment rhythms are based on preexisting materials.

Accompaniment 8 is similar to exercise #54 in Tehrani’s *tombak* method book (see Figure 46) and accompaniment 11 is similar to exercise #137 in Tehrani’s book (see Figure 47).<sup>151</sup>

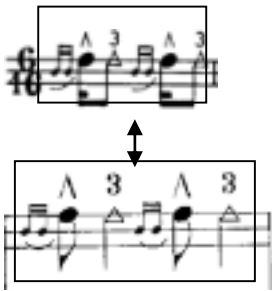


**Figure 47: Similarity between Tehrani method book exercise #54 top line and Esmâ‘ili accompaniment 8 (measure 96) bottom line.<sup>152</sup>**

<sup>150</sup> Esmâ‘ili, *Course*, 68.

<sup>151</sup> Note that, these two rhythms are commonly used by *tombak* players when accompanying melodic instruments.

<sup>152</sup> Tehrani, *Amouzesesh*, 11. – top musical example  
Esmâ‘ili, *Course*, 74. – bottom musical example



**Figure 48: Similarity between Tehrani method book exercise #137 top line and Esmâ'ili accompaniment 11 (measure 153) bottom line.**<sup>153</sup>

The last three accompaniment rhythms are 5, 9, and 12. Accompaniments 5 and 9 are single notes that accentuate the ending of the motives they are paired with; see Figure 48.

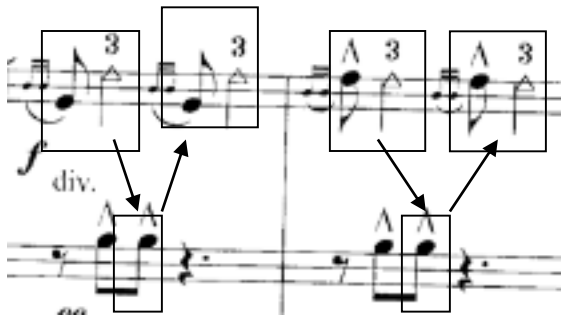


**Figure 49: Esmâ'ili motive 5 over accompaniment 5 (measure 25); accompaniment comprised of a single note accentuating the end of the motive.**<sup>154</sup>

Accompaniment 12 is unique because it is the only rhythm that gives a sense of syncopation. In the last section of the piece, it is played with a variant of accompaniment 11. Because of the syncopation in accompaniment 12, accompaniments 11 (played by *tombak* 1) and 12 (played by *tombak* 2) complete each other resulting in a series of five uninterrupted eighth notes, see Figure 49.

<sup>153</sup> Tehrani, *Amouzesh*, 21. – top musical example  
Esmâ'ili, *Course*, 76. – bottom musical example

<sup>154</sup> Esmâ'ili, *Course*, 69.



**Figure 50: Esmâ‘ili variant of accompaniment 11 over accompaniment 12 (measure 180-181); syncopation in accompaniment 12 creating a series of uninterrupted eighth notes.<sup>155</sup>**

#### 4) Cadences

There are two cadences in this piece. The first is situated towards the beginning of section 4, directly before the introduction to motive 12. This cadence does not conclude a major section of the piece, but rather creates a momentary pause before motive 12 is undertaken. The characteristics of this cadence are the unison between both *tombak-ha*, a roll in the middle register, and a single bass tone at the end of the passage, see Figure 50.



**Figure 51: Esmâ‘ili cadence 1 (measures 144-145); mid-register roll, unison between *tombak-ha*, and concludes with bass tones.**

The second cadence is found at the end of the piece, it concludes the entire work. Its characteristics are the unison between the two *tombak-ha*, single notes emphasizing the stress points in the meter, and a bass tone as the last note of the cadence, see Figure 51.

<sup>155</sup> Ibid, 78.

<sup>156</sup> Esmâ‘ili, *Course*, 76.



**Figure 52: Esmâ‘ili cadence 2 (measures 216-217); unison between *tombak-ha*, single notes emphasizing stress points, concludes with bass tones.**

### 5) Transitional material

There is one transitional passage in this piece. It is found in the first section and acts as a link between motive 2 and the reprise of motive 1. The content of this transition is a roll played in unison by both *tombak-ha*. The end of the transition is a bass tone, which also acts as the beginning of the following motive, see Figure 52.



**Figure 53: Esmâ‘ili transitional passage (measure 5-6); mid-register roll, unison between *tombak-ha*, concludes with bass tones.<sup>158</sup>**

### 6) Relationship between *tombak 1* and *tombak 2*

Let us now look at the relationship between *tombak-ha 1* and 2. For the majority of the piece, both *tombak-ha* play simultaneously. There are only a few brief instances of solo music. In general, I believe that both *tombak-ha* are given equal importance. Each *tombak* plays approximately the same number of motives throughout the piece. Because

<sup>157</sup> Ibid, 79.

<sup>158</sup> Esmâ‘ili, *Course*, 68.



each *tombak* is responsible for the presentation of an equal number of motives, I see their relationship as equal and not hierarchic.

During passages where one *tombak* plays a motive, the second *tombak* will most often be playing an accompaniment rhythm. In these situations, the accompaniment rhythm is secondary to the motive and its main role is to support primary line. In other instances, the second *tombak* will play another independent motive. This superimposition of motives creates a polyrhythmic passage. For example, at measure 80, motive 10 is seen superimposed with a variant of motive 9, see Figure 53.



**Figure 54: Esmâ‘ili motive 9 variant A over motive 10 (measure 80); superimposition of motives creating a polyrhythmic passage.<sup>159</sup>**

The result of combining motives 9 and 10 is a polyrhythmic passage that juxtaposes a ternary rhythmic subdivision to a binary rhythmic subdivision.

This piece also presents dialogues between both *tombak-ha*. In measures 120 to 127, we can see the principal line or the motives, moving from *tombak* 1 to *tombak* 2, see Figure 54 for example.

<sup>159</sup> Esmâ‘ili, *Course*, 73.



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**Figure 55: Esmâ'ili measure 120-124; movement of principal line from *tombak 1* to *tombak 2*.**

Similarly, motive 7 is also a dialogue between both *tombak-ha*. The motive begins in *tombak 2* and ends in *tombak 1*, see Figure 55.



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**Figure 56: Esmâ'ili motive 7 (measures 33-36); motive moves from *tombak 2* to *tombak 1*.**

The last relationship I will highlight in this analysis is the unison. Unison between both *tombak-ha* is only found during cadences and the transitional passage. The only exception is measures 70-71 and measures 208-215. Note, that even though these two passages are not cadences because their content is identical to motives previously seen, they do act as the concluding statement of a section. In other words, the function of these two passages is similar to that of a cadence. With this in consideration, I propose that the use of unison in this piece is primarily meant to indicate and reinforce a concluding

<sup>160</sup> Ibid, 75.

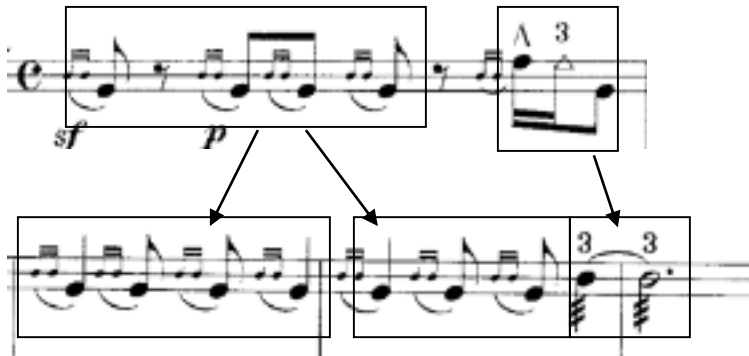
<sup>161</sup> Esmâ'ili, *Course*, 70-71.

statement. By only using unison at specific moments, a contrast is created which highlights the unison passages thus given it more prominence and strengthening its function as a closing statement.

### 7) Development of the motives and accompaniments

In this piece, I have identified 15 motives. Of them, five are developed into variants, motive 1, 7, 8 line B, 9, and 12. The variants for each motive occur in two different manners, either immediately after the presentation of the motive or much further into the piece. Regarding the second manner, the motive is separated from its variants by one or several other motives. I will now look at each motive individually and describe how it is developed in the piece.

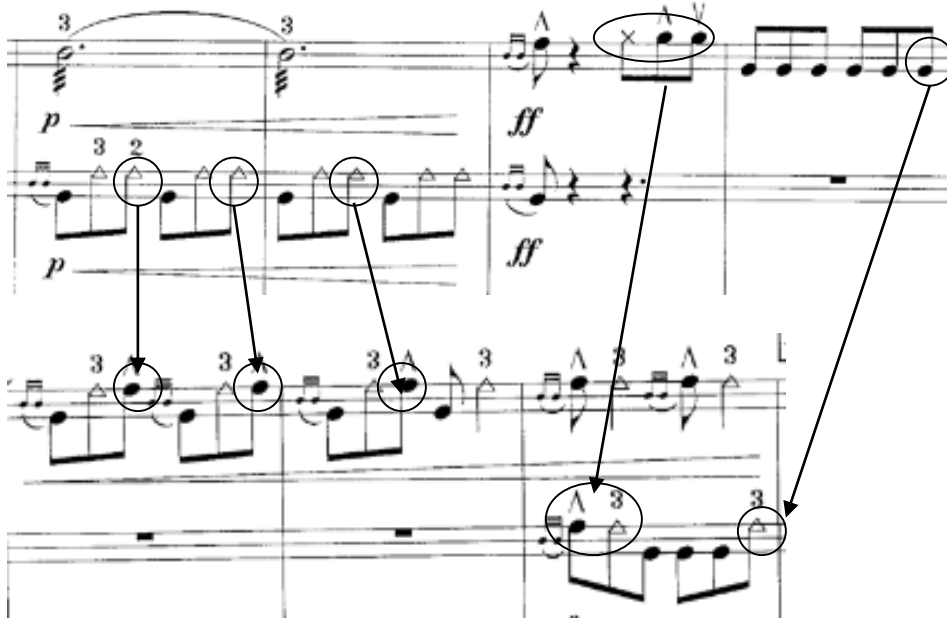
Motive 1's development occurs through a change in time signature from 4/4 to 6/8. Also, the beginning of the motive is played twice consecutively and a roll at the end replaces the original sixteenth notes, see Figure 56.



**Figure 57: Esmâ'ili, development process from motive 1 (measure 1) top line to motive 1 variant A (measure 53) bottom line; change 4/4 to 6/8 time signature, repetition of beginning, and substitute last notes for a roll.<sup>162</sup>**

<sup>162</sup> Esmâ'ili, *Course*, 1. – top musical example  
Ibid, 71-72. – bottom musical example

Motive 7 is developed into three variants. The first variant maintains motive 7's general rhythm, pitch contour, and the exchange between the *tombak-ha*. What differentiates the two passages is the slight change in playing techniques (substitution of *pelangs* for *baks* or *baks* for *toms*) and the length of the passages, see Figure 57.



**Figure 58: Esmâ'ili development process from motive 7 (measures 33-36) top line to motive 7 variant A (measures 128-130) bottom line; changes in playing techniques, length of the passages, and different *tombak* begin and end passages.<sup>163</sup>**

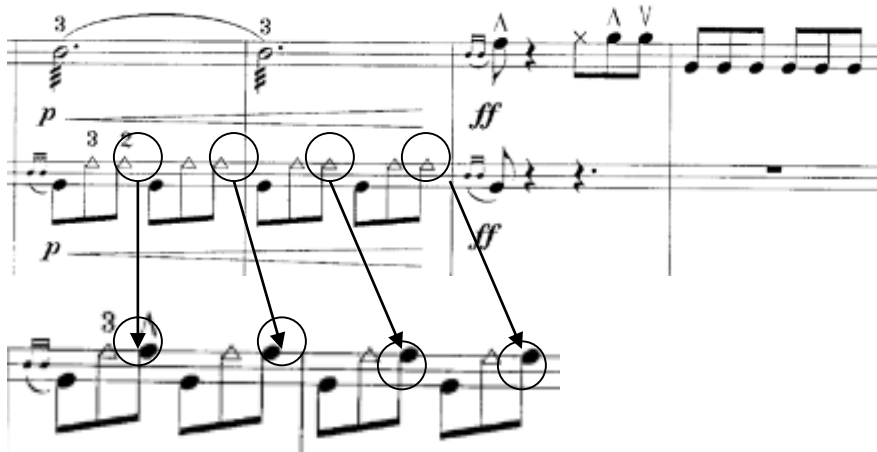
Motive 7's second variant is a repetition of variant A's ending with an additional three notes at the end, see Figure 58.

<sup>163</sup> Esmâ'ili, *Course*, 70-71. – top musical example  
Ibid, 75. – bottom musical example



**Figure 59: Esmâ ‘ili development process from motive 7 variant A (measures 128-130) top line to motive 7 variant B (measures 138-139) bottom line; repeat last few notes with three extra notes at the end.<sup>164</sup>**

The third and final variant for motive 7 is the two first measures of motive 7 with certain *palengs* substituted for *baks*, see Figure 59.



**Figure 60: Esmâ ‘ili development process from motive 7 (measures 33-36) top line to motive 7 variant C (measures 170-171) bottom line; first section with altered playing techniques.<sup>165</sup>**

For motive 8, which is divided into line A and line B, only line B is developed. This line has three variants. The first variant keeps the same general rhythm and pitch

<sup>164</sup> Ibid. – top musical example

Ibid. – bottom musical example

<sup>165</sup> Ibid, 70-71. – top musical example

Ibid, 77. – bottom musical example

contour but moves the roll from the end of the phrase to the middle. Also, the second *tom* is replaced with a *bak*, see Figure 60.



**Figure 61: Esmâ‘ili development process from motive 8 line B (measures 59-61) top line to motive 8 line B variant A (measures 120-121) bottom line; change in playing technique and displacement of roll. <sup>166</sup>**

The second variant is the same as the first but with two altered notes. The first *tom* is substituted for a *bak* and one *bak* is substituted for a *tom*, see Figure 61.



**Figure 62: Esmâ‘ili development process from motive 8 line B variant A (measures 120-121) top line to motive 8 line B variant B (measures 122-123) bottom line; changes in playing techniques. <sup>167</sup>**

The last variant is the same as the original motive, except the roll has been moved; see Figure 62.

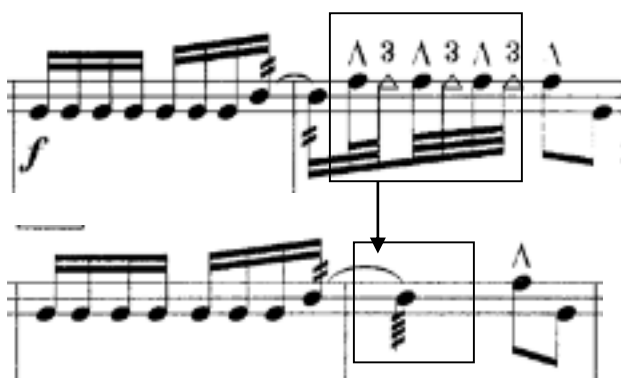
<sup>166</sup> Ibid, 72. – top musical example  
Esmâ‘ili, *Course*, 75. – bottom musical example

<sup>167</sup> Ibid. – top musical example  
Ibid. – bottom musical example



**Figure 63: Esmâ‘ili development process from motive 8 line B (measures 59-61) top line to motive 8 line B variant C (measures 138-139) bottom line; displacement of roll.<sup>168</sup>**

Motive 9 has two variants. The first variant extends the roll, replacing the thirty-second notes, see Figure 63.

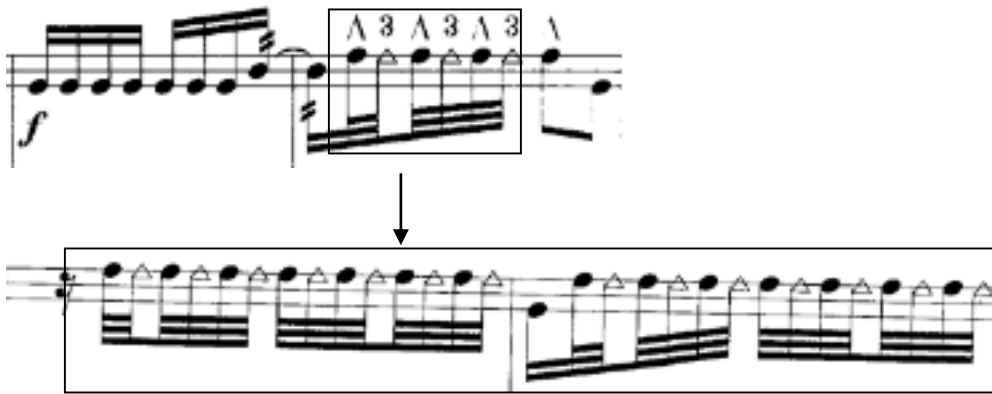


**Figure 64: Esmâ‘ili development process from motive 9 (measures 76-77) top line to motive 9 variant A (measures 80-81) bottom line; substitution of thirty-second notes with a roll.<sup>169</sup>**

The second variant is an extension of the thirty-second note idea initially found in motive 9, see Figure 64.

<sup>168</sup> Ibid, 72. – top musical example  
Ibid, 75. – bottom musical example

<sup>169</sup> Esmâ‘ili, *Course*, 73.- top musical example  
Ibid. – bottom musical example



**Figure 65: Esmâ‘ili development process from motive 9 (measures 76-77) top line to motive 9 variant B (measures 100-101) bottom line; extension of thirty-second note idea.<sup>170</sup>**

The last motive that is developed in this piece, motive 12, has five variants. The first variant is simply the first measure of the motive without the first note, see Figure 65.



**Figure 66: Esmâ ‘ili development process from motive 12 (measure 149-150) top line to motive 12 variant A (measure 154) bottom line; maintains first measure, omits the first note of the measure.<sup>171</sup>**

The second variant is based on the second measure of the motive. Here, the rhythm is changed from quarter notes to eighth notes and the first note is omitted, see Figure 66.



<sup>170</sup> Ibid. – top musical example  
Esmâ‘ili, *Course*, 74. – bottom musical example

<sup>171</sup> Ibid, 76. – top musical example  
Ibid. – bottom musical example



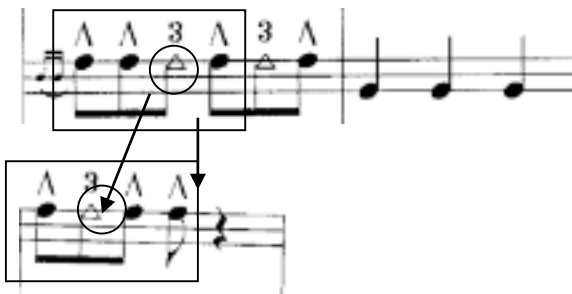


**Figure 67: Esmâ‘ili development process from motive 12 (measures 149-150) top line to motive 12 variant B (measure 156) bottom line; second measure of initial motive with altered rhythm.**<sup>172</sup>

The third variant, variant C, uses the rhythm and pitches of motive 12’s first measure.

However, it omits the last two notes and displaces the *paleng* by one eighth note, see

Figure 67.



**Figure 68: Esmâ‘ili development process from motive 12 (measures 149-150) top line to motive 12 variant C (measure 187) bottom line; omission of last section and displacement of *paleng*.**<sup>173</sup>

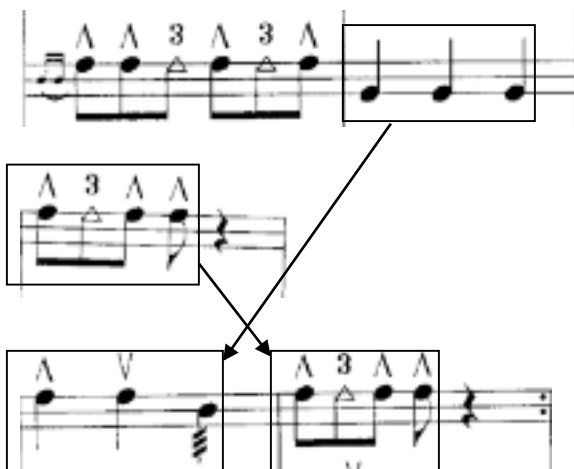
The fourth variant combines motive 12-variant C with the second measure of the initial motive. It begins with the quarter note rhythm from the original motive and continues with the exact content of variant C, see Figure 68.

<sup>172</sup> Ibid. – top musical example

Ibid. – bottom musical example

<sup>173</sup> Esmâ‘ili, *Course*, 76. – top musical example

Ibid, 78. – bottom musical example



**Figure 69: Esmâ‘ili development process from motive 12 (measures 149-150) top line, motive 12 variant C (measures 187) middle line, and motive 12 variant D (measures 202-203) bottom line; combination of ending of original motive with variant C to form variant D.**<sup>174</sup>

The final variant is the same as variant C with two added notes that replace the rest, see Figure 69.



**Figure 70: Esmâ‘ili development process from motive 12 variant C (measure 187) top line to motive 21 variant E (measure 210) bottom line; substitute rest for eighth notes.**<sup>175</sup>

I will now address the development of the accompaniment rhythms. There are three accompaniments that are developed into variants, accompaniments 3, 8, and 11.

The first accompaniment, accompaniment 3, has only one variant. This variant simply omits the roll in the second measure, see Figure 70.

<sup>174</sup> Ibid, 76. – top musical example

Ibid, 78. – middle musical example

Ibid, 79. – bottom musical example

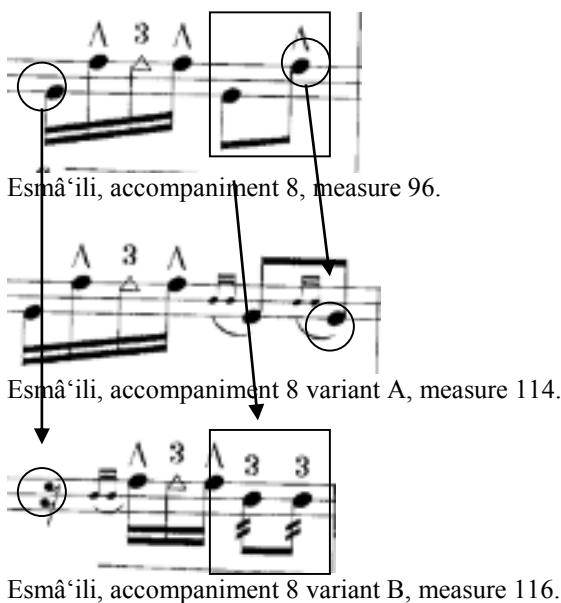
<sup>175</sup> Esmâ‘ili, *Course*, 78. – top musical example

Ibid, 79. – bottom musical example



**Figure 71: Esmâ‘ili development process from accompaniment 3 (measures 11-12) top line to accompaniment 3 variant A (measures 23-24) bottom line; omission of roll.<sup>176</sup>**

Accompaniment 8 is developed into two variants. The first variant changes the last *bak* with a *tom*. The second variant omits the first note of the accompaniment and substitutes the last two notes with rolls, see Figure 71.



**Figure 72: Esmâ‘ili development process from accompaniment 8 top line, accompaniment 8 variant A middle line, to accompaniment 8 variant B bottom line; change in playing techniques, omission of note, substitution of individual notes for rolls.<sup>177</sup>**

<sup>176</sup> Ibid, 68-69. – top musical example

Ibid, 69. – bottom musical example

<sup>177</sup> Esmâ‘ili, *Course*, 74.

Finally accompaniment 11 is developed into three variants. Essentially, the variants are substitutions between *baks* and *toms*. Initially the accompaniment is played solely with *baks*. The first variant replaces the first *bak* with a *tom*, the second variant substitutes both *baks* with *toms*, and the last variant substitutes the last *bak* for a *tom*, see Figure 72.



Esmâ'ili, accompaniment 11, measure 153.



Esmâ'ili, accompaniment 11 variant A, measure 159.



Esmâ'ili, accompaniment 11 variant B, measure 161.



Esmâ'ili, accompaniment 11 variant C, measure 163.

**Figure 73: Esmâ'ili development process from accompaniment 11 to all its variants; change in playing techniques.**<sup>178</sup>

#### 8) Compositional techniques used to develop the materials

Based on the information from topic 7 from this analysis, Esmâ'ili used seven compositional techniques for developing the motives and accompaniments in this piece.

The two most frequently used compositional techniques are the substitution tones and the omission of notes. Substituting tones occurs when the rhythm and pitch contour

<sup>178</sup> Ibid, 76. – first musical example

Ibid, 77. – second, third, and fourth musical examples

of a variant is the same as the initial motive but one or a few notes are altered. This alteration is done by substituting one playing technique with another from the following list: *paleng*, *bak*, *tom*, and roll. Omitting notes occurs when one or several notes are replaced with rests.

Other compositional techniques that are less frequently used consist of displacement of tones, extension of musical idea, and addition of notes. A displacement of playing tones occurs when a playing technique or a specific pitch is moved within the passage itself. For example, a roll found at the end of a passage is moved to the middle of the passage (see motive 8 line B, and motive 8 line B variant A in question 7). An extension of a musical idea is when a segment of a motive or accompaniment is played for a longer length of time than in the original motive (see motive 9 and motive 9 variant B in question 7). Addition of notes is when sounding notes are added at the end of the motive variant or replace rests within the motive variant.

The last two compositional techniques are only used once. They are time signature change and rhythm alteration. Time signature change is when the same motive is initially played in one time signature and is repeated later on using a different time signature (see motive 1 and motive 1 variant A in questions 7). Rhythm alteration is when the pitches and playing techniques of a passage are kept but the rhythmic value of the notes is different. For example, using eighth notes instead of quarter notes (see motive 12 and motive 12 variant B in questions 7).

### 9) Development of the piece as a whole

To visually understand the development of Esmâ'ili's piece, I present a graph summarizing some of the piece's most important elements, see Figure 73. The graph is divided into four sections. For each section, I have indicated the respective time signature, the general tempo, as well as the motives, accompaniments, transitions, and cadences. In sections with several motives or accompaniments, the list of motives and accompaniments is not organized in order of appearance, but rather in regular numerical order to facilitate reading.

Esmâ'ili

Th = theme  
 acc = accompaniment  
 Tr = transition  
 Sect. = Section  
 v = Variation

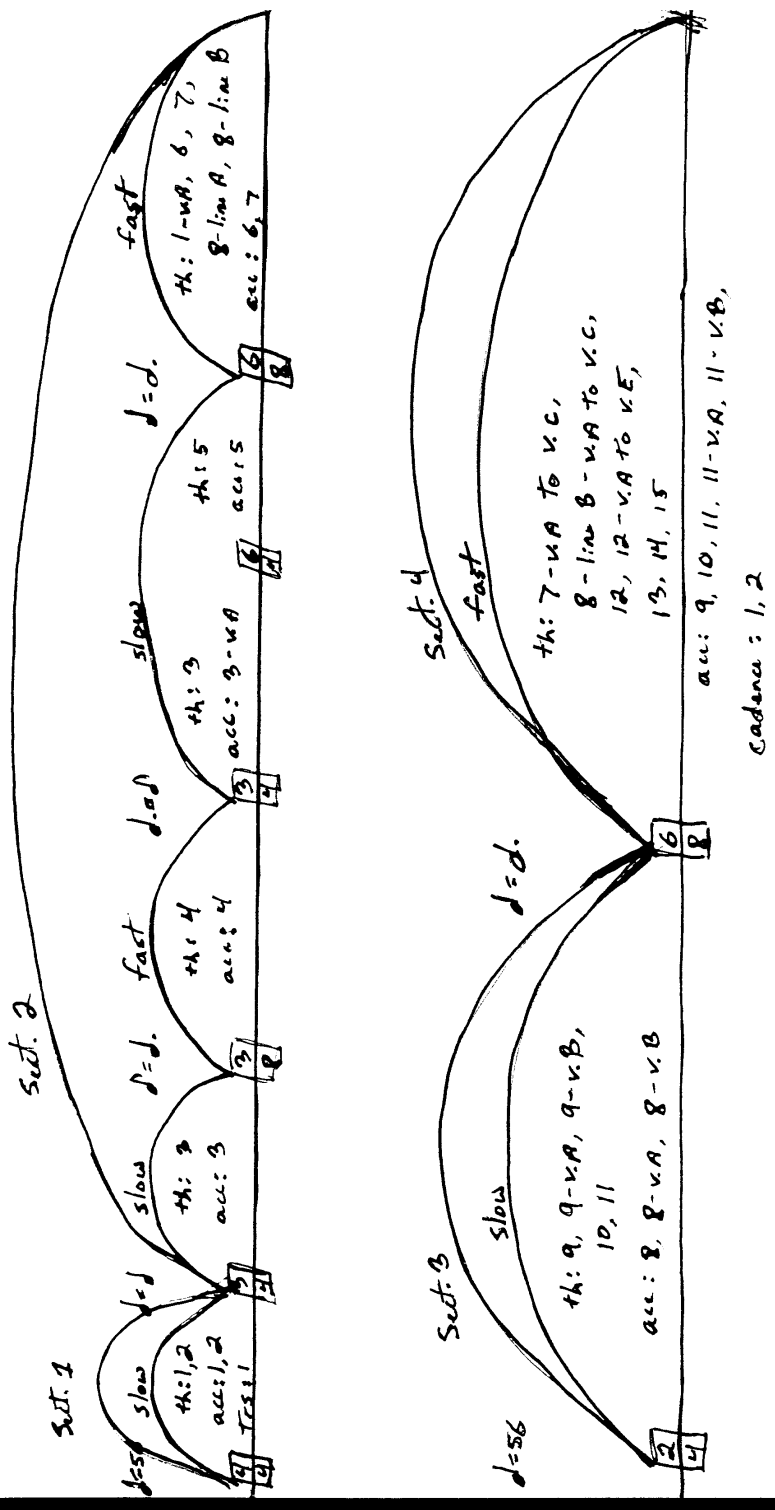


Figure 74: Esmâ'ili, macro structure of piece.

The divisions for this piece are primarily based on tempo and meter changes. Section 1 is in a slow tempo binary meter (4/4). Section 2 is entirely in ternary meters (3/4, 3/8, 6/4, and 6/8) and alternates between slow and fast tempos. The third section returns to the piece's initial slow tempo and binary meter. The piece concludes with another shift to ternary meter, yet this time entirely at a fast tempo. To summarize, the sections are organized as follows: slow binary meter, slow and fast ternary meters, slow binary meter, fast ternary meter.

Within these meter and tempo changes, the motives and accompaniments are presented in a linear progression. In other words, motives and accompaniments from one section will rarely appear in a later section, they are almost all restricted to a single section. The only exceptions are motive 1, motive 3, and motive 8 line B. These three motives reappear later in the piece after their initial presentation. As a result, the piece is always introducing new motives in each new section. The piece's form can therefore be seen as large set of motives and accompaniments that are presented in a linear order.

The last feature I would like to highlight regarding this piece's development is the relationship between the motives and accompaniments, and the placement of the variants. In the first two sections, there is only one motive and accompaniment per time signature change, with the exception of section 1 and the end of section 2. In contrast, the last two sections possess several motives and accompaniments for each time signature. I would argue that this characteristic indicates that the piece begins with very contrasting motives since they all have different time signatures, and as the piece progresses, the motives become more similar in terms of content since they share time signatures. Regarding the placement of the variants, they are almost all found in sections 3 and 4. This indicates



that the beginning of the pieces is more focused on repetition and the presentation of different motives while the middle and end of the piece explores more motivic development.

#### 10) Structuring of the piece

I would argue that the two primary techniques Esmâ'ili used to structure this piece are time signature changes, and tempo changes. These two techniques are found throughout the piece and act as clear indicators for the introduction of new motives.

### ***BAHMAN RAJABI: Tombak Duet***

This piece was taken from Rajabi's *tombak* training book, *Tombak-Training: Advanced and High-Advanced Levels*.<sup>179</sup>

#### 1) Motivic material

In this piece, I have identified twenty-eight motives, see Appendix 6-A for list. The content of these motives is very diverse. The only commonality is that they are each played by a single *tombak*. In other words, none of the motives incorporate both *tombak-ha* as was seen in Tehrani's pieces.

Regarding time signature, the majority of the motives are in 6/8 and the second most used meter is 2/4. The table below shows the number of motives per time signature.

<b>Time Signature</b>	<b>Number of Motives</b>
6/8	14
2/4	8

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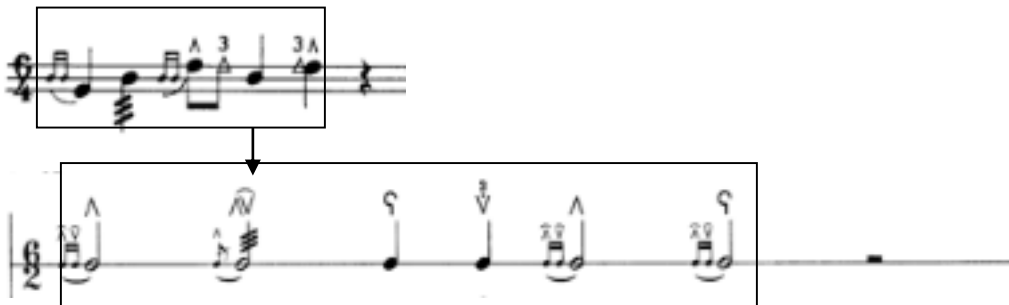
<sup>179</sup> Rajabi, *Tombak-Training: Advanced*, 43-77.

5/4	3
7/8	2
6/2	1

**Table 3: Rajabi, list of time signatures with the number of motives for each.**

2) Connections between motives and preexisting material

Motive 1: Tehrani's method book, p.17 #97

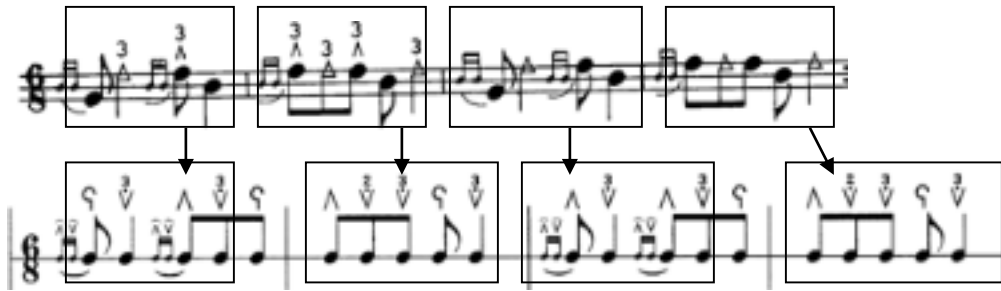


**Figure 75: Similarities between Tehrani method book exercise #97 top line and Rajabi motive 1 (measure 1) bottom line.**<sup>180</sup>

The main commonality between the two passages in Figure 74 is the rhythm. Note that the time signature is different in each passage resulting in the use of different rhythmic values. However the rhythmic relationship between the notes in each example is the same. Also note that, in the example above, all of the pitches in Tehrani's passage are inverted in Rajabi's passage; the high notes become low and the low notes become high.

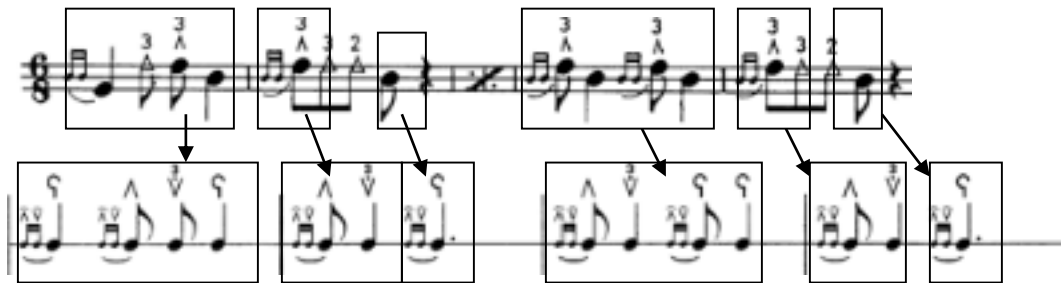
<sup>180</sup> Tehrani, *Amouzesht*, 17. – top musical example  
Rajabi, *Tonbak-Training: Advanced*, 43. – bottom musical example

Motive 2: Tehrani's method book, p.14 #78, see Figure 75.



**Figure 76: Similarities between Tehrani method book exercise #78 top line and Rajabi motive 2 (measures 11-14) bottom line.** <sup>181</sup>

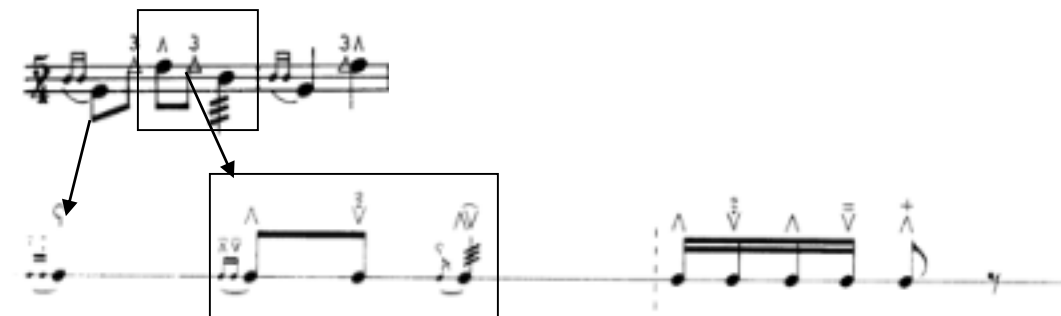
Motive 3: Tehrani's method book, p.15 #86, see Figure 76.



**Figure 77: Similarities between Tehrani method book exercise #86 top line and Rajabi motive 3 (measures 23-26) bottom line.** <sup>182</sup>

Motives 4, 5, 7, 8, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27: No connections found

Motive 6: Tehrani's method book p. 25 #169, see Figure 77.



<sup>181</sup> Tehrani, *Amouzesht*, 14.

Rajabi, *Tonbak-Training: Advanced*, 45. – bottom musical example

<sup>182</sup> Tehrani, *Amouzesht*, 15. – top musical example

Rajabi, *Tonbak-Training: Advanced*, 45. – bottom musical example

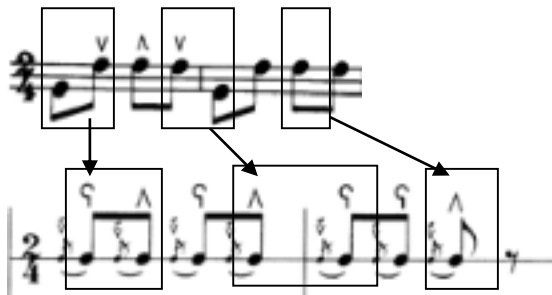
**Figure 78: Similarities between Tehrani method book exercise # 169 top line and Rajabi motive 6 (measure 47) bottom line.** <sup>183</sup>

Motive 9: Tehrani's method book p.7 #23, see Figure 78.



**Figure 79: Similarity between Tehrani method book exercise #23 top line and Rajabi motive 9 (measures 69-72) middle and bottom line.** <sup>184</sup>

Motive 10: Tehrani's method book p.7 #25, see Figure 79.



**Figure 80: Similarities between Tehrani method book exercise #25 top line and Rajabi motive 10 (measures 93-94) bottom line.** <sup>185</sup>

<sup>183</sup> Tehrani, *Amouzesht*, 25. – top musical example

Rajabi, *Tonbak-Training: Advanced*, 47. – bottom musical example

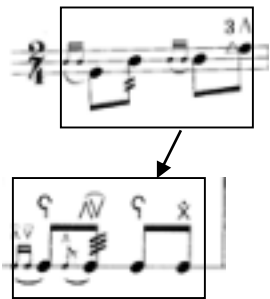
<sup>184</sup> Tehrani, *Amouzesht*, 7. – first musical example

Rajabi, *Tonak-Trainin: Advanced*, 51. – second musical example

<sup>185</sup> Tehrani, *Amouzesht*, 7. – top musical example

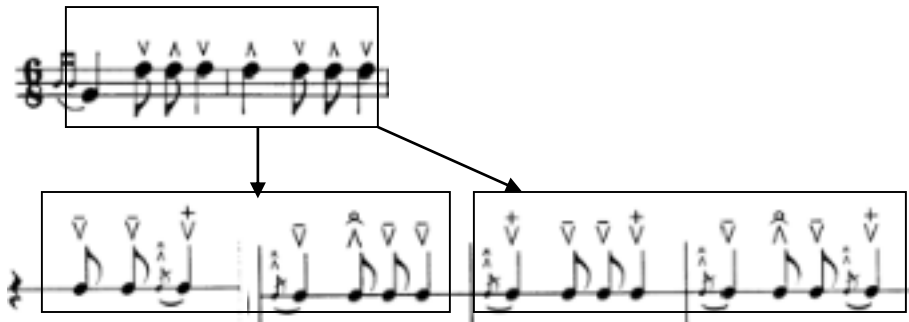
Rajabi, *Tonbak-Training: Advanced*, 52. – bottom musical example

Motive 12: Esmâ'ili's method book, p.28 #11, see Figure 80.



**Figure 81: Similarity between Esmâ'ili method book exercise #11 top line and Rajabi motive 12 (measure 129) bottom line.** <sup>186</sup>

Motive 25: Tehrani's method book, p.13 #75



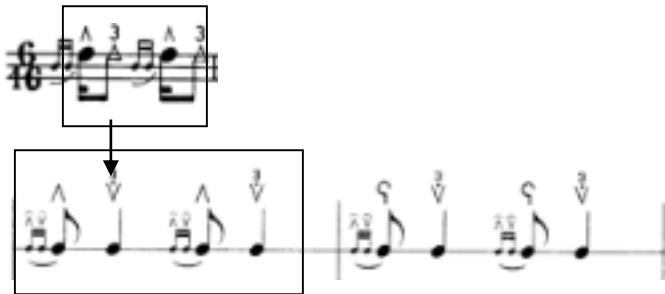
**Figure 82: Similarity between Tehrani method book exercise #75 top line and Rajabi motive 25 (measures 515-518) bottom line.** <sup>187</sup>

In the comparison above, note that the first bass tone from Tehrani's passage is omitted in Rajabi's motive. Also, Rajabi uses slightly different playing techniques in his motive.

<sup>186</sup> Esmâ'ili, *Course*, 28. – top musical example  
Rajabi, *Tonbak-Training: Advanced*, 54. – bottom musical example

<sup>187</sup> Tehrani, *Amouzesht*, 13. – top musical example  
Rajabi, *Tonbak-Training: Advanced*, 74. – bottom musical example

Motive 28: Therani's method book, p.21 #137, see Figure 82

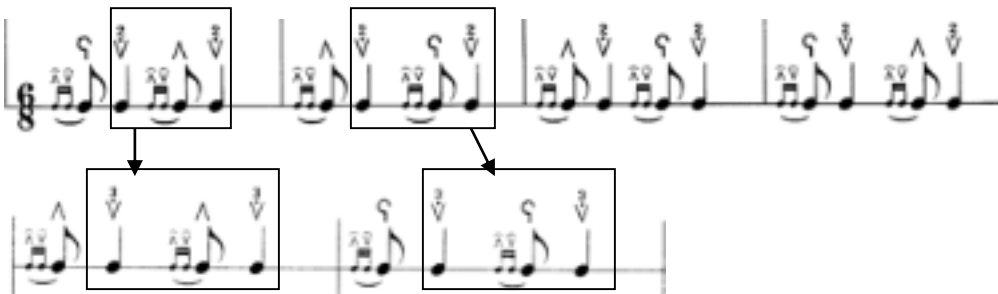


**Figure 83: Similarity between Tehrani method book exercise #137 top line and Rajabi motive 28 (measures 576-577) bottom line.**<sup>188</sup>

Similarly as with motive 1, the rhythmic values between Tehrani's exercise and Rajabi's motive are different. However, the relationship between the rhythmic values within each passage is the same. In other words, these two passages should sound the same to listeners.

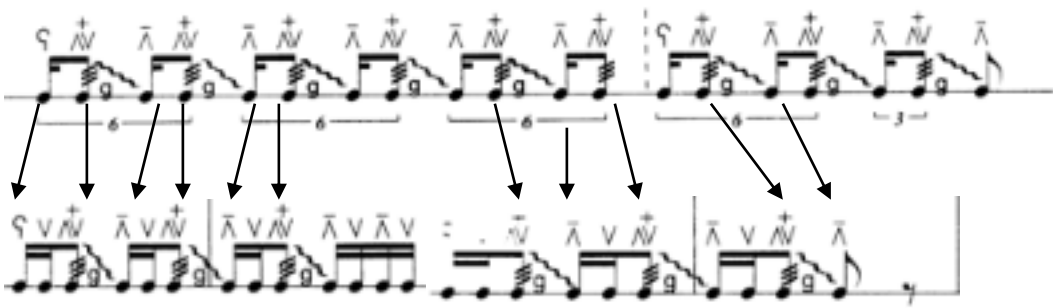
### 3) Accompaniment material

In this piece, I found seven accompaniments. Looking at their content, I noticed that certain accompaniments resemble some of Rajabi's motives. Below, accompaniments 2, 3, and 6 are compared to motives 28, 14, and 22 respectively, see Figure 83 to 85.

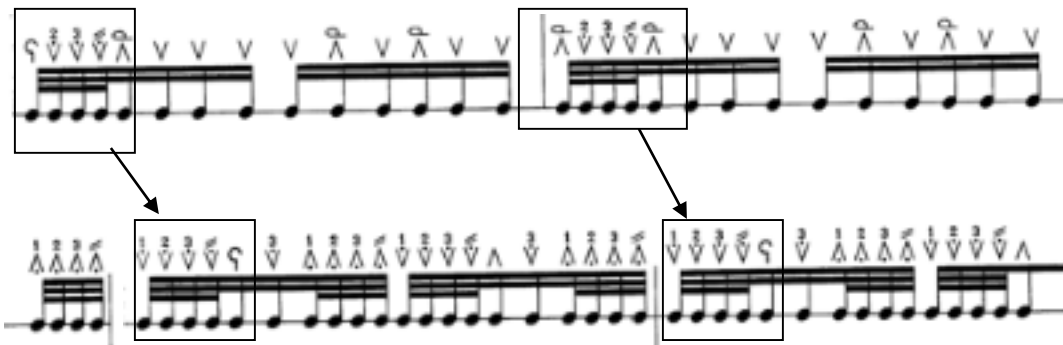


**Figure 84: Similarities between Rajabi accompaniment 2 (measures 11-14) top line and motive 28 (measures 576-577) bottom line.**<sup>189</sup>

<sup>188</sup> Tehrani, *Amouzesht*, 21. – top musical example  
Rajabi, *Tonbak-Training: Advanced*, 76. – bottom musical example



**Figure 85: Similarities between Rajabi accompaniment 3 (measure 47) top line and motive 14 (measures 227-230) bottom line.<sup>190</sup>**



**Figure 86: Similarities between Rajabi accompaniment 6 (measures 433-434) top line and motive 22 (measures 436-438) bottom line.<sup>191</sup>**

The content of the other accompaniments have no common features between themselves or with any motives.

In regards to the accompaniments' function, I have noticed three basic functions. The first is found in accompaniments 1 and 3. Their function is to support the motive by creating continuous sound. This is done through the use of rolls which move from the low to the high register or from the high to the low register; see Figure 86.

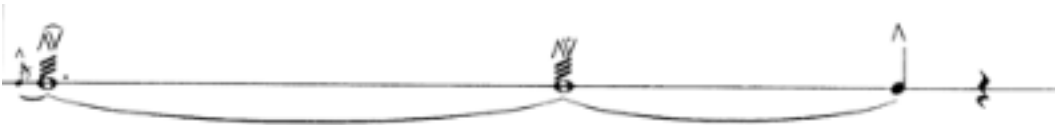
<sup>189</sup> Ibid, 45.- top musical example

Ibid, 76. – bottom musical example

<sup>190</sup> Rajabi, *Tonbak-Training: Advanced*, 47. – top musical example

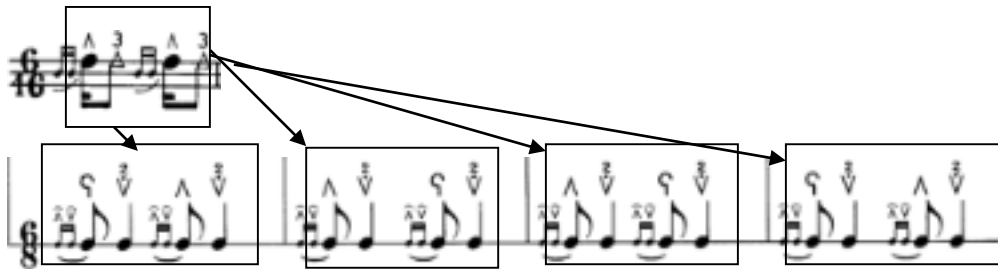
Ibid, 59. – bottom musical example

<sup>191</sup> Ibid, 69.



**Figure 87: Rajabi accompaniment 1 (measure 5); roll moving from low to high register, creating continuous sound to support the motive.<sup>192</sup>**

The second function, found in accompaniments 2 and 4, is to outline the motives' metric structure. For example, accompaniment 2 is a basic rhythm outlining a 6/8 meter. This rhythm can be found in Terhani's *tombak* method book. Note that in Tehrani's book the rhythm is written in 6/16, however these two rhythms are audibly the same. Also, the pitches vary between low and high in Rajabi's motive, see Figure 87.



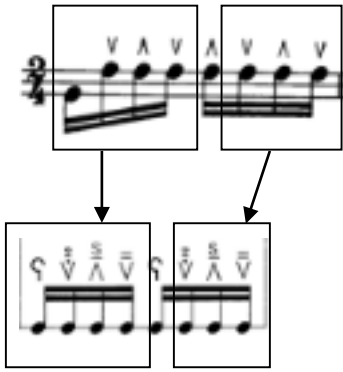
**Figure 88: Similarity between Tehrani method book exercise #137 top line and Rajabi accompaniment 2 (measures 11-14) bottom line; basic 6/8 accompaniment rhythm, outlines 6/8 metric structure.<sup>193</sup>**

Accompaniment 4 is a basic rhythm that outline a 2/4 meter that can also be found in Tehrani's *tombak* method book, see Figure 88.

<sup>192</sup> Rajabi, *Tombak-Training: Advanced*, 43.

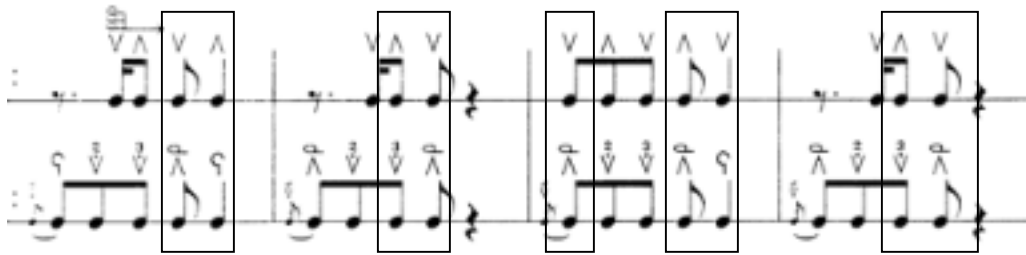
<sup>193</sup> Tehrani, *Amouzesht*, 21. – top musical example  
Rajabi, *Tombak-Training: Advanced*, 45. – bottom musical example





**Figure 89: Similarity between Tehrani method book exercise #21 top line and Rajabi accompaniment 4 (measure 171) bottom line; basic 2/4 accompaniment rhythmic pattern.<sup>194</sup>**

The third function of Rajabi’s accompaniments is to reinforce the motives’ rhythm (e.g. accompaniments 5 and 6). In this situation, reinforcing the rhythm means to emphasize the rhythm’s internal stress points. In the piece, this means that the accompaniment’s stress points must match those of the motive, see Figure 89.

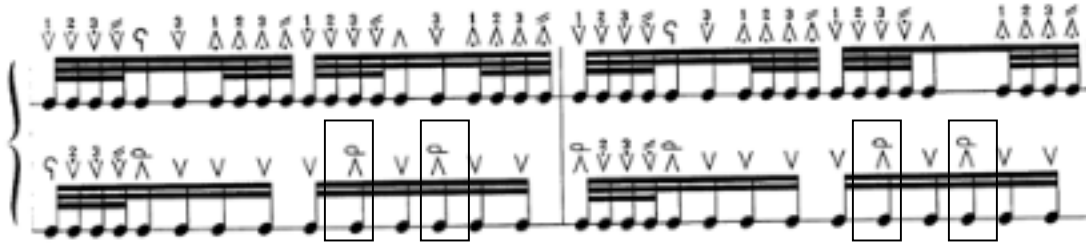


**Figure 90: Rajabi motive 18 over accompaniment 5 (measures 309-312); alignment of the accompaniment’s and the motive’s stress points. Accompaniment reinforces motive’s stress points.<sup>195</sup>**

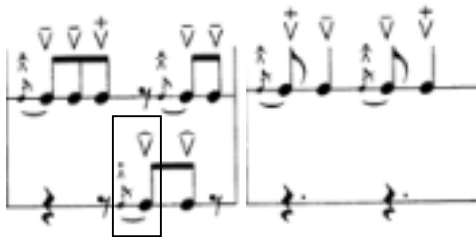
The final aspect I would like to highlight regarding Rajabi’s accompaniments is the presence of syncopations. Accompaniments 6 and 7 both create syncopations with their designated motive. The reason I highlight this characteristic is because syncopations are rarely found in this piece making its use very particular. In Figure 90 and 91, I have boxed where the syncopations occur.

<sup>194</sup> Tehrani, *Amouzesht*, 7. – top musical line  
Rajabi, *Tonbak-Training: Advanced*, 56. – bottom musical line

<sup>195</sup> *Ibid*, 63.



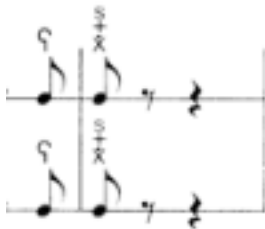
**Figure 91: Rajabi, section of motive 22 over accompaniment 6 (measures 439-440); syncopations in accompaniment 6.<sup>196</sup>**



**Figure 92: Rajabi motive 25 variant 4 over accompaniment 7 (measures 540-541); syncopation in accompaniment 7.<sup>197</sup>**

#### 4) Cadences

There are three cadences in this piece. The first one is two notes played by both *tombak-ha* in rhythmic and pitch unison.



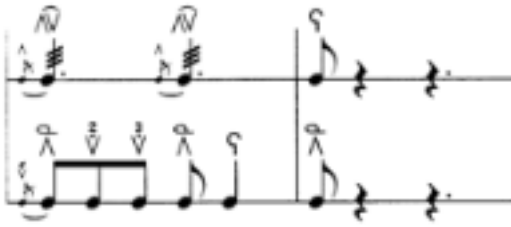
**Figure 93: Rajabi cadence 1 (measures 299-300); rhythmic and pitch unison.<sup>198</sup>**

The second cadence is an extension of the passage preceding it, in this case motive 3 variant 5. This cadence is concluded with a single note in each *tombak*, one high tone and one low tone. The last notes are played simultaneously, see Figure 93.

<sup>196</sup> Rajabi, *Tombak-Training: Advanced*, 69.

<sup>197</sup> *Ibid.*, 75.

<sup>198</sup> *Ibid.*, 62.



**Figure 94: Rajabi cadence 2 (measures 358-359); extension of previous motive with rhythmic unison ending.<sup>199</sup>**

The third and last cadence is a short roll played by both *tombak-ha* which ends with a single note in each *tombak*. Similarly as with cadence two, *tombak* 1 plays a low tone and *tombak* two plays a high tone, see Figure 94.



**Figure 95: Rajabi cadence 3 (measures 596-597); roll in unison.<sup>200</sup>**

After analyzing the content of each cadence, I would argue that the main feature in Rajabi's cadences is not the articulated notes but rather the rests. Because the cadences are brief and similar in content to the passages preceding them, I don't believe that the articulated notes possess any unique characteristics that would define the cadences.

However, the rests at the end of each passage are, in my opinion, defining characteristics. Through out this piece, there are only a few instances of silence. Given the scarcity of pauses in this piece, the rests at the end of each cadence become more prominent. These rests give the listener brief moments of pause before undertaking the following motive. I would therefore describe Rajabi's cadences as slightly elongated pauses in the music,

<sup>199</sup> Ibid, 65.

<sup>200</sup> Ibid, 77.

which act as a preparation for the next section. In this sense, Rajabi's cadences are pauses in the music, not articulated notes.

The placement of the cadences is also important to note. Cadences 1 and 2 come immediately before motive 17 is played and cadence 3 concludes the entire piece.

#### 5) Transitional material

There are three transitional passages in this piece. They do not resemble each other in their content. These transitions are grouped together because of their relationship to their surrounding passages. Each transition is a very brief segment that differs in content from what precedes and follows it. It acts as a bridge, connecting different passages.

The first transition occurs towards the beginning of the piece, measures 19-22, and it connects motive 2 to motive 3 as well as motive 3 to the reprise of motive 1, measures 31-34. The second and third transition occurs towards the end of the piece. Transition 2 connects motive 25 with motive 27. Finally, transition 3 is found immediately before cadence 3, which concludes the piece. Transition 3 acts as a preparation for the final cadence.

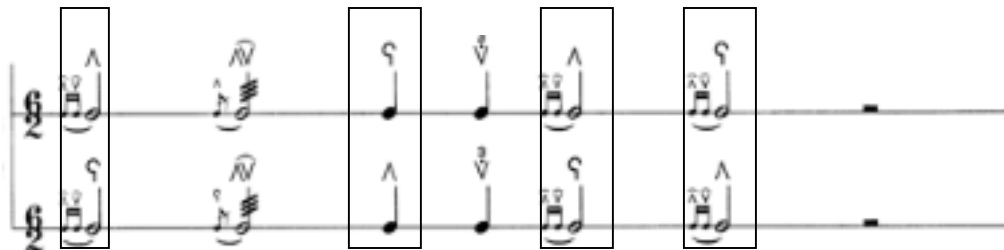
#### 6) Relationship between *tombak* 1 and *tombak* 2

In this piece, there are four types of relationships between *tombak* 1 and 2. I have identified these relationships as solo, unison, motive over accompaniment, and motive over motive.

The majority of the motives in this piece are written for solo *tombak*, meaning one *tombak* is silent while the other plays the motive. In these situations, the motive will

either be played by *tombak* 1 or *tombak* 2 and in one occasion, motive 27, the motive alternates between both *tombak-ha*.

The second type of relationship is unison. In this piece there are two types of unison. The first is “exact unison”, where both *tombak-ha* play the exact same rhythms and pitches. This relationship is used for a few motives (e.g. motive 17 measures 305-308 and motive 23 variant 5 measures 494-495) but occurs much less frequently than the second type of unison. I will call the second type of unison found in the piece “pitch inverted unison.” It is one of the most frequently seen relationships between the *tombak-ha*. In reality, this relationship is not unison. However, I have grouped “pitch inverted unison” and “exact unison” under the same type of relationship because I believe they are too similar to separate. In “pitch inverted unison” passages, both *tombak-ha* play the same rhythm but the pitches are consistently different: all of the *toms* (low tones) in *tombak* 1 are aligned with *baks* (high tones) in *tombak* 2 and all of the *baks* in *tombak* 1 are aligned with *toms* in *tombak* 2. To indicate this relationship, I have used an apostrophe ( ‘ ) symbol in the annotated score. When an apostrophe appears next to a motive number or variant number (e.g. motive 1’, motive 1 variant 8’) it indicates that the *toms* have been substituted with *baks* and vice versa; see Figure 95.



**Figure 96: Rajabi motive 1 over motive 1’ (measure 1); pairing of *tom* and *bak* tones.<sup>201</sup>**

<sup>201</sup> Rajabi, *Tombak-Training: Advance*, 43.

The *tombak-ha* in the example above are in a “pitch inverted unison” relationship, which is found throughout Rajabi’s piece. In *tombak 2* all the *toms* and *baks* are inverted in relation to *tombak 1*. The boxes in the example show these inversions.

The third type of relationship between the *tombak-ha* is motive over accompaniment. In these instances, *tombak 1* plays a motive while *tombak 2* plays an accompaniment. As the motive is developed into variants, the accompaniment will either vary at the same time as the motive (e.g. motive 18 over accompaniment 5 measures 309-336) or it will continuously repeat the same passage unchanged (e.g. motive 1 variant 5 over accompaniment 1 measures 6-8).

The last *tombak* relationship is motive over motive. Here, two motives or one of their variants are played at the same time. One motive is played by *tombak 1* and the other by *tombak 2* (e.g. motive 8 over motive 7’ measure 57, see Figure 96).



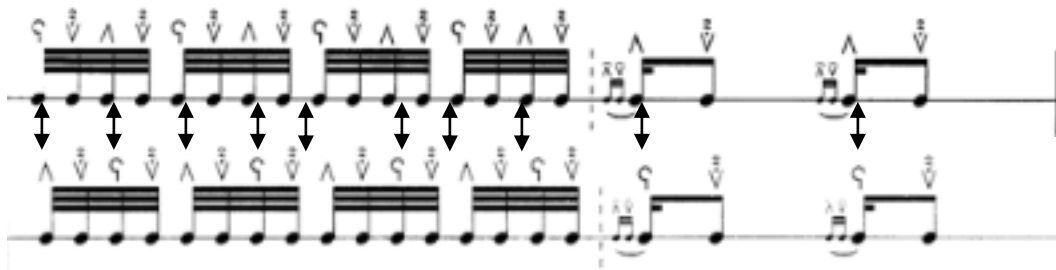
**Figure 97: Rajabi motive 8 over motive 7’ (measure 57); motive over motive *tombak* relationship.<sup>202</sup>**

### 7) Development of the motives and accompaniments

Throughout the piece, the motives and accompaniments are developed in many different ways. I will briefly describe the five most frequently used methods for developing the motives.

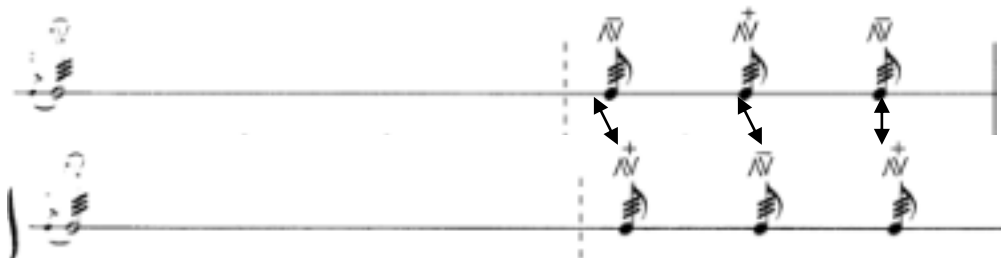
<sup>202</sup> Rajabi, *Tombak-Training*, 49.

The first and most predominant method is the substitution of low tones with high tones and vice versa. The *toms* and *bak-ha* create the stress points in the motives. In the motivic variants, the notes found on the stress points are often altered. The *toms* are substituted with *bak-ha* and the *bak-ha* are substituted with *toms*. This development method is found in the majority of the motives and variants of this piece. In the annotated score, I have indicated this type of development with an apostrophe symbol ( ' ). The meaning of the apostrophe in the analysis is the same as was described earlier in topic 6. Figure 97 is an example of the substitution of *tom-ha* and *bak-ha* on the stress points.



**Figure 98: Rajabi, development process from motive 7 variant 2 (measure 63) top line to motive 7 variants 2' (measure 64) bottom line; substitution of *tom-ha* and *bak-ha* on rhtyhm's stress points.<sup>203</sup>**

Apart from the substitution of *tom-ha* and *bak-ha* on the stress points, there is also substitution of high and low tones using different techniques; see Figure 98.

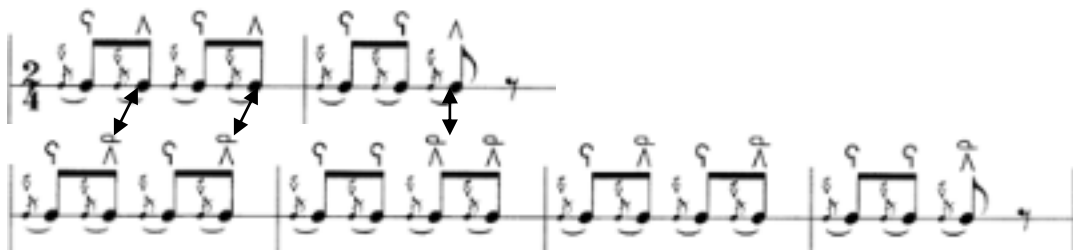


**Figure 99: Rajabi, development process from motive 8 (measure 57) top line to motive 8' (measure 59) bottom line; substitution of high and low tones using different playing techniques.<sup>204</sup>**

<sup>203</sup> Rajabi, *Tonbak-Training: Advanced*, 50.

Despite the difference in playing techniques, the two examples above demonstrate essentially the same development technique. Given its frequent use, the substitution between high and low tones is the most important development method in this piece.

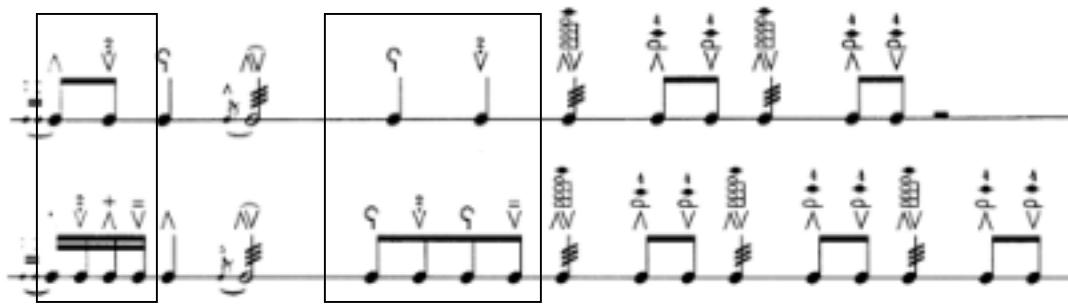
The second most common method for motivic development is to change the playing technique. This is done by either altering one or several playing techniques or by inserting entirely new ones; see Figure 99.



**Figure 100: Rajabi, development process from motive 10 (measures 93-94) top line to motive 10 variant 1 (measures 97-100) bottom line; playing technique alterations.<sup>205</sup>**

In Figure 99, motive 10 initially uses *bak-ha*, which are replaced with finger nail snaps in the variant (note that the variant is double the length of the initial motive).

The third motivic development method is to subdivide the rhythm: to change quarter notes, into eighth notes, eighth notes into sixteenth notes, or sixteenth notes into thirty-second notes, see Figure 100.



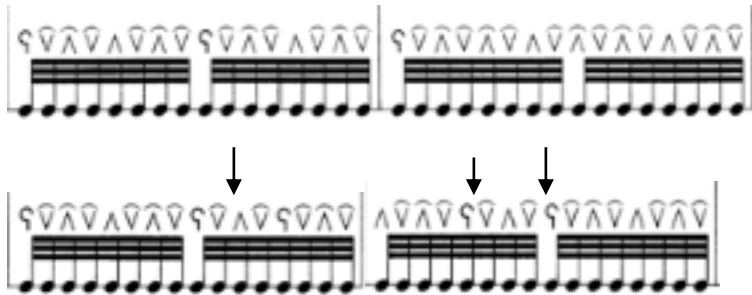
<sup>204</sup> Rajabi, *Tonbak-Training: Advanced*, 49.

<sup>205</sup> *Ibid*, 52.



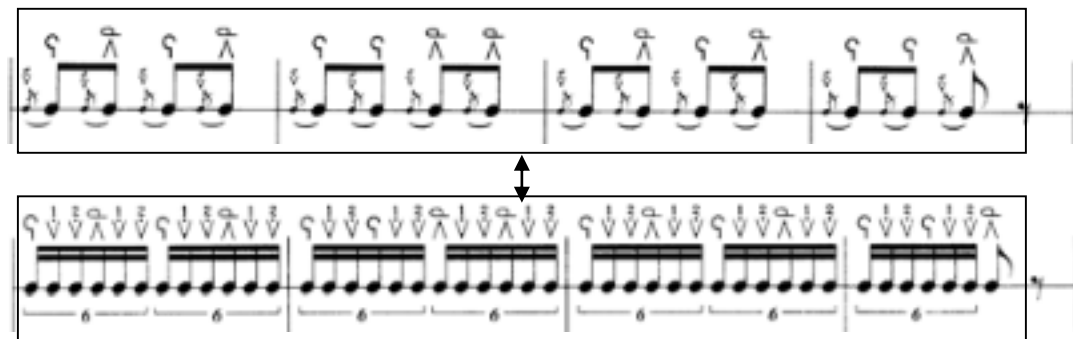
**Figure 101: Rajabi, development process from motive 1 variant 2 (measure 3) top line to motive 1 variant 3 (measure 4) bottom line; subdivision of rhythm, from larger rhythmic values to smaller rhythmic values.<sup>206</sup>**

The last two motivic development methods occur less frequently than the others just mentioned. There is the displacement of stress points, which includes added or removing stress points. This happens when the natural accents in the rhythm are removed, moved or new accents are added in the variant. In Figure 101, the arrows indicate accents that have been added.



**Figure 102: Rajabi, development process from motive 12 variant 5 (measures 155-156) top line to motive 12 variant 6 (measures 159-160) bottom line; addition of new stress points to the rhythm.<sup>207</sup>**

The last development technique is the change from a duplet rhythm to a triplet rhythm, see Figure 102.



<sup>206</sup> Rajabi, *Tonbak-Training: Advanced*, 43.

<sup>207</sup> *Ibid*, 55. – top musical example  
*Ibid*, 56. – bottom musical example

**Figure 103: Rajabi, development process from motive 10 variant 1 (measures 97-100) top line to motive 10 variant 2 (measures 105-108) bottom line; rhythmic change from duplet to triplet subdivisions.<sup>208</sup>**

The example above highlights the change from a duplet based rhythm (eighth notes) in motive 10 variant 1 to a triplet based rhythm (sextuplets) in motive 10 variant 2.

#### 8) Compositional techniques used to develop the materials

Taking into consideration the information raised in topic 7, I would summarize by stating that the main compositional techniques Rajabi uses to develop the materials are the substitution of low and high notes, the alteration of playing techniques, and rhythmic changes that occur through the subdivision of the rhythm and the change from duplet to triplet rhythms.

Apart from the development techniques addressed in question 7, it is also useful to look at what is maintained from the motives in the variants. I believe it is important to look at the characteristics that remain consistent and create continuity between motive and variants.

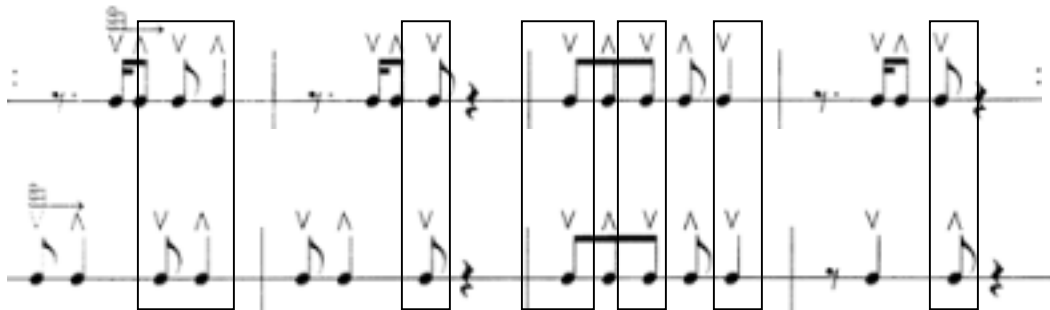
The first characteristic that is almost always maintained in the variants is the number of measures. Almost every motive in this piece has the same number of measures as its variants. The only exceptions are, motive 10 and 12, whose variants have double the number of measures and motives 23 and 24 who either remove or add one measure in the variants.

Another technique for creating continuity between motive and variants is through the playing techniques and the stress points. When a variant is rhythmically very different

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<sup>208</sup> Ibid, 52. – top musical example  
Ibid, 53. – bottom musical example

from its motive, Rajabi tends to maintain the playing techniques and/or stress points to give a sense of continuity, see Figure 103.



**Figure 104: Rajabi, development process from motive 18 (measures 309-312) top line to motive 18 variant 1 (measures 313-316) bottom line; continuity in playing techniques and rhythmic stress points.<sup>209</sup>**

In Figure 103, the rhythm used in the variant is very different from the initial motive.

However, the playing techniques are the same, and several of the stress points have been kept. Stress points that are maintained from one passage to the next are boxed together in Figure 103.

By maintaining a motive's number of measure, playing techniques, and stress points in its variants, Rajabi ensures that the two passages be understood as a motive and variant and not as two independent motives. Maintaining these elements also allows Rajabi to vary the rhythmic aspect of the variants without creating too much difference between it and its motive.

### 9) Development of the piece as a whole

This piece presents several motives in different time signatures and tempi. To better understand the unfolding of this piece, I propose structuring it into three sections, A, B, and C. The first section, measures 1-68, is the slowest and has several time

<sup>209</sup> Rajabi, *Tonbak-Training: Advanced*, 63.

signatures. Section B goes from measures 69-300. Its time signature is 2/4 time and it has medium tempi. The last section, measures 301-597, has the quickest tempi and has a 6/8 time signature. As a whole, this piece gradually accelerates; each section has a faster general tempo than the previous section. Also each section is longer than the one before it, section A has 68 measures, section B has 232 measures, and section C has 297 measures. Therefore, this piece develops through a process of expansion and acceleration. Now, we will look at the development of each individual section. Figure 104 is a summary of this piece's form.

# Bahman Rajabi

th. = theme  
 acc. = accompaniment  
 trans. = transition  
 v. = variation  
 m. = measure number

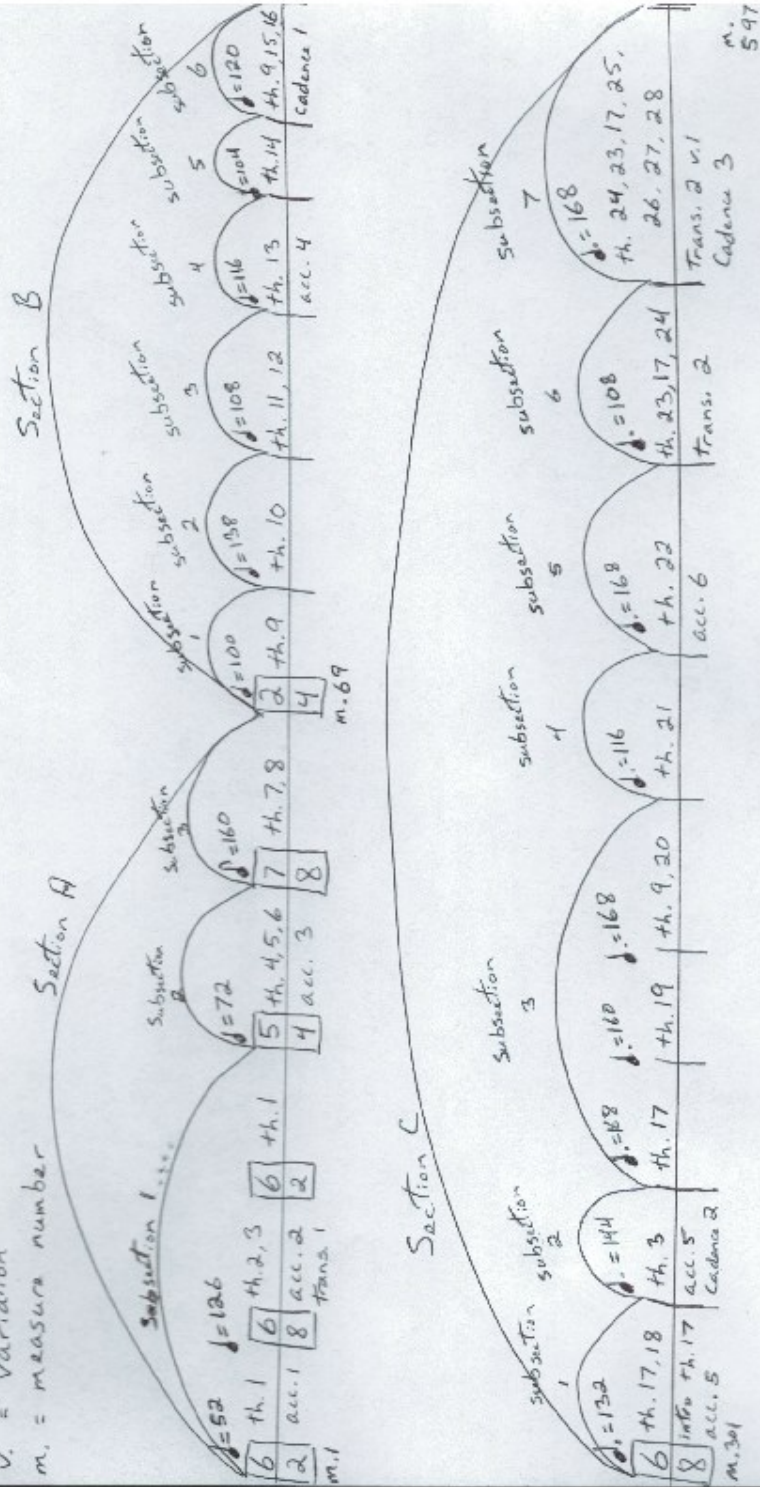


Figure 105: Rajabi, macro structure of the piece.

## Section A

Section A can be divided into three subsections, 1, 2, and 3. The first subsection, measures 1-36, begins with a very slow motive in a 6/2 time signature. In Iranian Classical Music, this type of slow motive is used for *pishdaramad*. The term *pishdaramad* can be translated to “pre-introduction”. These are composed pieces that are normally used to begin a concert. In the middle of the first subsection there is a fast 6/8 section, which can be seen as foreshadowing the end of the piece. This subsection concludes itself with its initial motive.

Subsection 2, measures 37-52, is faster than the first subsection and it is in a 5/4 meter. The last subsection, measures 53-68, is the fastest of the three and is in a 7/8 meter. Subsections 2 and 3 end with the return of their initial motive. It is not very common, but some *pishdaramad-ha* are being composed in meters such as 5/8 and 7/8.<sup>210</sup> It therefore seemed logical to group the 6/4, 5/4, and 7/8 passages all under one section.

Overall, section A develops as a gradual accelerando. It is organized into three subsections, each with its own time signature and motives. Also, each subsection concludes with the return of its initial motive.

## Section B

The second section of this piece, section B measures 69-300, comprises six subsections. They are grouped together since they are all composed with a 2/4 time signature, and the first and last subsections both present motive 9. This motivic repetition reinforces the sense of beginning and ending for this section. Section B also concludes with the first cadence of the piece.

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<sup>210</sup> Azadhefar, “Rhythmic Structures”, 196-197.

The subsections of section B are different in regards to their tempi and motivic content. The subsections are continuously alternating between medium slow and medium fast tempi. The first (measures 69-92), third (measures 113-170), and fifth (measures 227-250) subsections have a medium slow speed, and the second (measures 93-112), fourth (measures 171-226), and sixth (measures 251-300) subsections have a medium fast speed. The result of these tempo changes gives the following progression: mid-slow, mid-fast, mid-slow, mid-fast, mid-slow, and mid-fast.

Each subsection, along with having a unique tempo, presents a single unique motive, with the exception of the third and sixth subsection. Subsection 3 presents two motives, motive 11 (measures 113-116) and 12 (measure 129), and subsection 6 contains motive 9 superimposed by motive 15 (measures 259-266) and 16 (measures 283-286). With the exception of these two subsections, section B progresses with the presentation and development of a single motive with a unique tempo followed by a new motive and development at a new tempo, and so on. Although the subsections are related, the frequent tempo changes give a sense of separation between the subsections. The subsections can be seen as individual fragments, connected to each other yet also distinct from one another. I would describe this style of writing as a “fragmented” style of composition. The term “fragmented” style of composition is meant to highlight the several contrasts occurring due to tempo changes throughout this piece.

### Section C

The final section of this piece, section C (measures 301-597), can be divided into seven subsections. As with section B, these subsections are primarily based on tempo

changes. Each subsection has either a faster or slower tempo than the preceding or following subsection. The tempi are not organized in any systematic order.

Subsections 1 (measures 301-341), 2 (measures 342-359), 4 (measures 417-432), and 5 (measures 433-452) each contain a single motive with its variants. Note that, subsection 1 does begin with motive 17 (measures 305-308) before continuing with motive 18. However, motive 17 is a very brief passage that resembles more a transition than a motive. I've labeled it a motive since it is restated sporadically throughout section C.

Subsection 3 (measures 360-416) is slightly more complex as it contains several motives. Its main motive is motive 20 (measures 384-415), which is superimposed over motive 9. Here motive 9 acts as a secondary motive. Before motive 20 is presented, subsection 3 begins with motive 17 (measures 360-363) and the motive 19 (measures 364-383) in a very brief passage. Motive 19 has a slightly slower tempo than motive 17 and 20, however this tempo change is too brief to be considered its own subsection, therefore I have grouped motive 17, 19, and 20 all under subsection 3.

Subsection 6 (measures 454-491) is the slowest subsection. It acts as a preparation for the ending. Motivically it contains motives 23 (measures 454-455) and 24 (measures 474-476) played solo *tombak* 1. This solo texture creates a drop in overall volume. The drop in tempo and in sound allow for momentum to build before beginning the piece's finale.

Subsection 7 (measures 492-597) begins with the same motives as subsection 6, motives 23 and 24 (measures 492-506), but now at a very fast tempo. It follows with moments of solo passages, motives 25, 26, and 27 (measures 515-575). Again, the solo



passages are similar to subsection 6 but with a faster tempo. Finally, section C and the piece concludes with both *tombak-ha* together playing motive 28 and the final cadence.

### Summary

Looking at the development of this piece as a whole, I argue that sections A, B, and C each have their own structural features. Section A can be organized through the repetition of motives. Each of section A's subsections repeats its initial motive as a conclusion, thus creating the sense of a completed idea. Section B can be structured through the alteration of medium slow and medium fast subsections. Section C can be seen as a gradual and progressive movement towards the finale, which has one of the fastest tempi of the entire piece.

I further argue that the unifying structural feature of this piece is the fragmented composition style. Throughout each section, I have raised several different motives. In the majority of the cases when the motive changes the tempo also changes. As a result, this creates several contrasting passages. Because there are so many contrasting segments in the piece's progression, I argue that this piece is composed with a fragmented composition style. In this sense, the main aspect that guides and pushes the development of this piece is the contrasts created by juxtaposing different motives and tempi.

### 10) Structuring of the piece

I would argue that the form for Rajabi's piece follows in a general sense the form of a Classical Iranian Music performance, a multi-movement form sometimes referred to as a 'suite'.<sup>211</sup> Because there is no melody or text in Rajabi's piece, I cannot argue that

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<sup>211</sup> Caton, "Performance Practice," 137.

Rajabi’s piece is entirely based on a classical Iranian suite form. Several of the movements from the suite are defined by the text and melody. Therefore, without these elements it would be impossible to connect the suite’s movements with Rajabi’s piece with absolute certainty. However, I believe that I will be able to demonstrate sufficient similarities between the form of Rajabi’s piece and the form of a classical Iranian suite to support the claim that they share the same general development. The similarities I will raise between the two forms will focus on metric structure and tempo. The form of a Classical Iranian Music performance was explained in Chapter 1.

Form for Rajabi’s piece

I will now compare the form of Rajabi’s piece to the form of a classical Iranian suite, see Table 4. For the suite, I will use the simplest version of the suite, described by Caton and Zonis, as a primary reference and I will include in parenthesis the variants proposed by Azadehfar and Farhat.

Classical Iranian suite	Rajabi’s piece
<p><b>Pishdaramad:</b>            - composed            - slow tempo            - 6/4 time signature            (<del>5/8 and 7/8 time signatures are used in exceptional cases</del>)            (can be substituted for <i>chaharmezrab</i>.            - medium to fast tempo            - 3/8, 6/16, or 6/8 time signature)</p>	<p><b>Section A:</b>            - slow to medium tempi            - 6/4 time signature            6/8 time signature            - 5/4 time signature<sup>212</sup>            - 7/8 time signature</p>
<p><b>Avaz:</b>            - based on <i>radif</i></p>	<p><b>Section B:</b></p>

<sup>212</sup> Note that 5/8 and 5/4 are not exactly the same time signature. However, in this musical tradition the denominator in a time signature is not as important as the numerator. From this perspective, I would argue that 5/8 and 5/4 time signatures are similar enough to view as equivalent since they both are five beat metric structures.

<ul style="list-style-type: none"> <li>- non-metered</li> <li>- improvisation based</li> </ul> <p>(<i>darammad</i> and/or <i>chaharmezrab</i> can come before <i>avaz</i>)</p>	<ul style="list-style-type: none"> <li>- various medium tempi</li> </ul>
<p><b>Tasnif:</b></p> <ul style="list-style-type: none"> <li>- composed</li> <li>- 2/4, 6/8, or 5/8 time signature</li> </ul>	<ul style="list-style-type: none"> <li>- 2/4 time signature</li> </ul>
<p><b>Reng:</b></p> <ul style="list-style-type: none"> <li>- composed</li> <li>- medium to fast tempo</li> <li>- 6/8 time signature</li> </ul> <p>(can be substituted for <i>chaharmezrab</i>:</p> <ul style="list-style-type: none"> <li>- medium to fast tempo</li> <li>- 3/8, 6/16, or 6/8 time signature)</li> </ul>	<p><b>Section C:</b></p> <ul style="list-style-type: none"> <li>- various fast tempi</li> <li>- 6/8 time signature</li> </ul>

**Table 4: Comparison between musical form of Classical Iranian suite and Rajabi's piece.**

In Table 4, I have shown the multiple similarities that exist between the musical form of a classical Iranian suite and Rajabi's piece. I believe that, the resemblances raised in the graph between the two forms sufficiently support the argument that Rajabi's piece is composed using a similar macro structure as a classical Iranian suite. As demonstrated in the table, the similarities between the two musical forms are based on metric structures and tempo.

### ***DARIUSH ZARBAFIAN: Fariba***

This piece is not yet published; it was collected from Zarbafian's private library.<sup>213</sup>

Zarbafian's piece, titled *Fariba*, is divided into five movements. The fourth movement contains two large distinct sections, which allow it to be divided into two parts, movement 4 part 1 and movement 4 part 2. With the division of Movement 4, there is a total of six separate sections in this piece. With the exception of Movement 3, each of these sections possesses unique motivic materials. The most important feature for the

<sup>213</sup> Dariush Zarbafian, *Fariba*, private library.

motives in this piece is their metric structure. To understand the metric structures in this piece it is important to look at Zarbafian's academic research. His research on the history of Iranian rhythms focused on the period of Islamic rule over Iran; more specifically on treatises from the 9<sup>th</sup> to the beginning of the 15<sup>th</sup> century.<sup>214</sup> Through his studies of Iranian rhythmic cycles, or periodic rhythms, from this period, Zarbafian found the inspiration for *Fariba*.

### Periodic rhythms in Iran

For his doctoral thesis, Zarbafian has studied ancient Islamic rhythmic systems dating back to the 9<sup>th</sup> century<sup>215</sup>; in particular from theorists Abu Ali Ibn Sina (980-1037), Safiyoddin Abdolmomen Armavi (13<sup>th</sup> century), and Abu Nasr Farabi (873-950)<sup>216</sup>. The rhythmic system Zarbafian focused on is referred to as *advâr-é ighâi*, *ozân ighâi*,<sup>217</sup> and *atanin*.<sup>218</sup> The English equivalent for *advâr-é ighâi*, and the term that will be used in this thesis, is 'periodic rhythm'.

The periodic rhythms from Zarbafian's research are based on two fundamental principals, *naghareh* and *josgh*.<sup>219</sup> The term *naghareh* refers to the shortest rhythmic values in a periodic rhythm.<sup>220</sup> Any articulated note must be comprised of a minimum of two *naghareh*, one that is sounded and a second that is silent. The silent *naghareh* separates the articulated note from the next articulated note. If I were to translate this notion into Western musical notation, imagine a rhythm written entirely with eighth

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<sup>214</sup> Zarbafian, *La musique*, 252.

<sup>215</sup> Ibid.

<sup>216</sup> Abu Nasr Farabi, *Almousighi-ol Kabir* (Teheran: Part, 1996).

<sup>217</sup> Zarbafian, *La musique savante*, 254.

<sup>218</sup> Azidefar, *Rhythmic Structure*,

<sup>219</sup> Zarbafian, *La musique*, 247-248.

<sup>220</sup> Ibid., 247.

notes. Each *naghareh* in this case would be equal to a sixteenth note. The first sixteenth note would be an articulated *naghareh*, the second sixteenth note an unarticulated or silent sixteenth note.

When two *naghareh* are combined (one sounded the second silent) they form the basic unit for periodic rhythms, which is called *josgh*. Adding articulated or unarticulated *naghareh* can lengthen basic rhythmic units, *josgh*. These basic units of various lengths will be referred to as ‘cells’ throughout this analysis.

For the analysis of Zarbafian’s piece, the length and construction of each cell will be based on the number of eighth notes it possesses, which will also be referred to as ‘counts’. Although eighth notes are not the shortest rhythmic value found in this piece, they are the most frequently used note value making them an ideal reference. Using longer note values to determine the construction of cells would not produce sufficient information to analyze, and using shorter note values would give an excessive amount of information making the analysis too laborious.

To understand the structure of the periodic rhythms used in this piece, the piece will first be deconstructed into motives (similar to the previous analyses) then the motives will be segmented into cells (cells are combinations of two or more *naghareh*, which are articulated or silent percussive rhythmic values). The segmentation of motives will be based on the written divisions in the rhythm (how the notes are grouped together) and the rhythm’s stress points. The construction of each cell and the combination of cells will determine the structure of the motives. Figure 106 illustrates what cells are and how the number of counts is indicated. In this figure, I’ve boxed each cell and indicated above the cell the number counts or eighth notes it possesses.



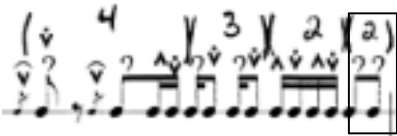
**Figure 106: Zarbafian movement 1, motive 1 (measure 1); division of cells and number of counts (eighth notes) belonging to each cell.**

1) Motivic material

There are eighteen motives in this piece; see Appendix 7-A for complete list.

Each motive is one measure long. The first movement contains five motives all of which are comprised of eleven eighth notes. Each motive has four cells, the first cell is made up of four counts, the second has three counts, and the last two cells have two counts each.

There are two main features for these motives. First, the majority of the motives emphasize the last cell with two prominent bass tones; see Figure 107.



**Figure 107: Zarbafian, movement 1, motive 2 (measure 9); prominent bass tones in the last cell, found in the majority of motives in movement 1.**

Second, the cell of three counts is usually divided into two groups. Each one is the equivalent of three sixteenth notes, see Figure 108.

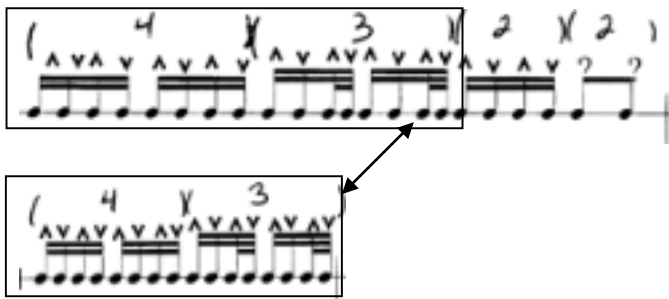


**Figure 108: Zarbafian, movement 1, motive 1 (measure 1); division of three count cell into two equal groups, each group is equal to three sixteenth notes.**

<sup>221</sup> Zarbafian's piece, *Fariba*, has not been published. All the musical examples from *Fariba* are from Zarbafian's private library.

The second movement has five motives, all made up of seven counts. The structure for the motives is three cells, the first two cells have two counts each and the last cell has three counts. Regarding these motives, I would like to mention the similarity between the second motive and the first motive from movement 1, and the subdivision of the cell of three counts.

The second motive from movement 2 is the exact same as the beginning of the first motive from movement 1; see Figure 109.



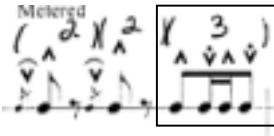
**Figure 109: Zarbafian, similarities between movement 1, motive 1 (measure 1) and movement 2, motive 2 (measure 28).**

The subdivision of the three-count cell is also the same as in the first movement. The three eighth notes are divided into two groups, each one is equivalent to three sixteenth notes, see Figure 110.



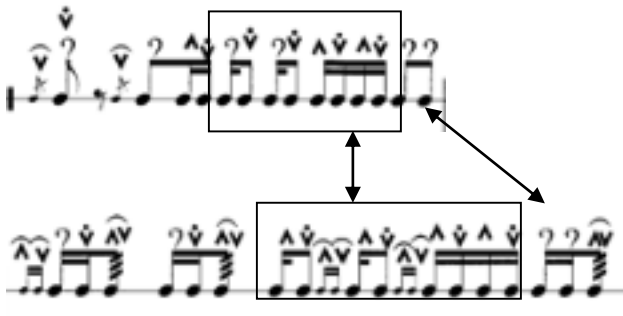
**Figure 110: Zarbafian, movement 2, motive 5 (measure 53); division on three count cell into two equal group of three sixteenth notes.**

Motive 1 of the second movement is a little different however. Its three-count cell is organized into a particular rhythm that is used throughout the entire piece, see Figure 111.



**Figure 111: Zarbafian, movement 2, motive 1 (measure 6); three count cell is organized into a particular rhythm found throughout the entire piece.**

The third movement is very brief and has two motives. The motivic material for this movement is taken from the first movement of the piece. Motive 1 from the third movement is exactly the same as the motive 1 from the first movement. The second motive from movement 3 is a variant of motive 2 from the first movement. In the comparison below, Figure 112, I've boxed the cells that are rhythmically the same and I used an arrow to link the last cell of each passage to highlight the similar use of bass notes.



**Figure 112: Zarbafian, similarities between movement 1, motive 2 (measure 9) top line and movement 3, motive 2 (measure 13) bottom line.**

Movement 4 part 1 contains three motives. Each motive has a total of fifteen eighth notes or counts. They are all slightly different from each other in terms of the construction of their cells. Table 5 compares the motives by showing the number of counts for each cell.

Motive	Number of counts per cell	Total number of counts
1	4 - 2 - 2 - 3 - 2 - 2	15



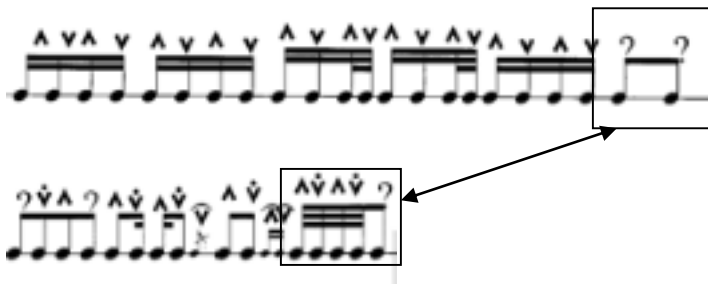
2	4-4-3-2-2	15
3	2-2-2-2-3-2-2	15

**Table 5: Zarbafian, cell construction for the three motives from Movement 4 part 1.**

Table 5 shows that in motive 1 the second and third cell of two counts each are combined to form a single cell of four counts in motive 2. Also, motive 2's second and third cells are each divided into two equal parts in the third motive.

The second part of movement 4 has two motives that share the same structure. Both motives contain seven cells. The number of counts per cell is as follows; 2, 2, 3, 2, 3, 2, and 3 giving a total of seventeen counts.

The fifth and final movement possesses a single motive. This motive has the same structure as the motives in movement one and three. The motive's structure is four cells with the following counts; 4, 3, 2, and 2, which have a sum of eleven counts. The biggest difference between movement 5's motive and the motives from movement 1 is the rhythm for their last cells. In movement 1, the majority of the motives' last cell is two bass tones played with eighth notes. In the fifth movement, the motive ends with a very noticeable rhythm using thirty-second notes, see Figure



**Figure 113: Zarbafian, comparison between movement 1, motive 1 (measure 1) and movement 5, motive 1 (measure 1); key difference is the last cell, two eighth notes versus thirty-second note rhythmic motif.**

## 2) Connections between motives and preexisting material

All of the motives in this piece are not known to have connections to previously composed materials.

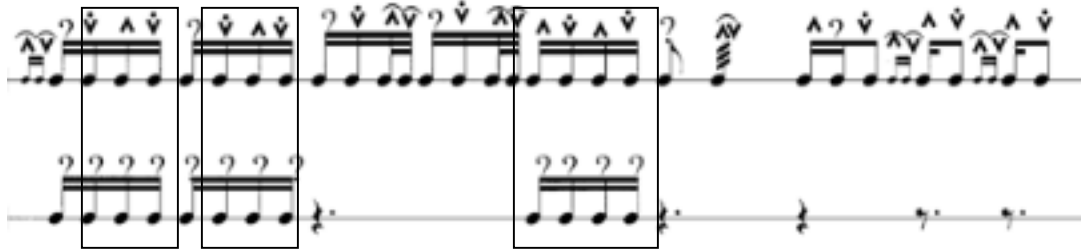
## 3) Accompaniment material

The accompaniments in this piece play various roles in relation to the motive, see appendix 7-B for list of accompaniments. One role is to help emphasize certain cells from the motive. This can be done two ways. First, the accompaniment can have the same rhythm and tones as the motive. This supports the motive by adding more volume to specific notes or cells, see Figure 114.



**Figure 114: Zarbafian, movement 4 part 1, motive 1 variant 1 over accompaniment 2 (measure 2); accompaniment mainly plays same rhythm and tones as motive.**

In Figure 114, the boxed section shows that the first cell for the accompaniment and motive are identical. The arrows indicate specific notes that are identical in both motive and accompaniment. The second way the accompaniment can help emphasize the motive's cells is by adding new contrasting sounds. The combination different sounds from the motive and accompaniment help highlight certain cells or parts of a cell; see Figure 115.



**Figure 115: Zarbafian, movement 4 part 2, motive 1 variant 12 over accompaniment 2 (measure 13); accompaniment adds new sounds to contrast with motive.**

In the example above, the boxed sections show where the accompaniment adds sounds that contrast with the motive. As a result, those notes and the cell they belong to are emphasized.

Another important role accompaniments can play is to create syncopations; see Figure 116.



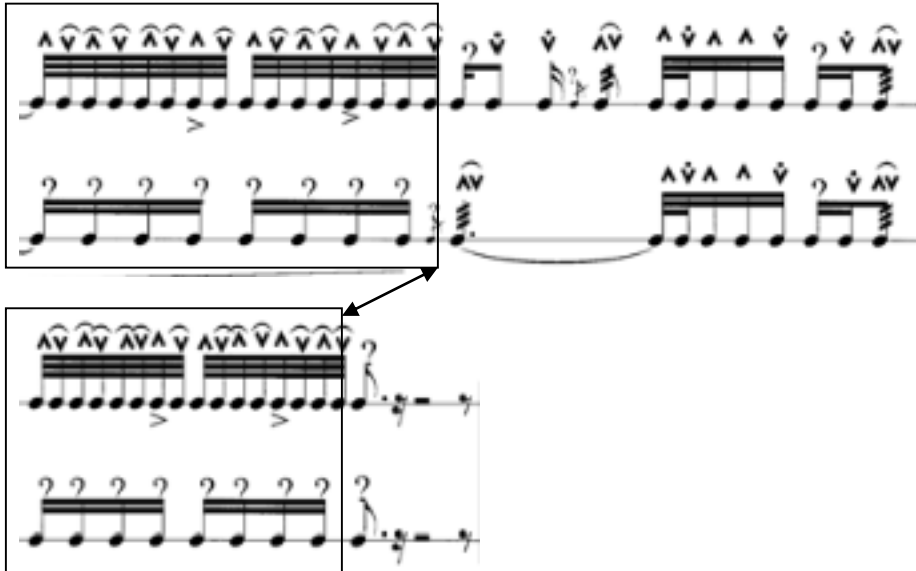
**Figure 116: Zarbafian, movement 2, motive 3 over accompaniment 1 (measure 36); syncopation created by accompanying rhythm.**

The boxed note in the passage above is an example of syncopation created by the accompaniment. The 'X' above the note indicates a playing technique where both hands play the *tombak* creating a relatively loud sound. Since this note appears on the second eighth note of a cell of two counts, it creates a syncopation in relation to the motive.

The last role accompaniments have in this piece is to add a continuous stream of sound to support the motive. This occurs when the accompaniment plays a long roll, see Figure 117.



The third commonality between the cadences is that several of them have the same beginning as the measure that precedes them. It is only the ending of the preceding measure that is changed or omitted in the cadence, see Figure 119.



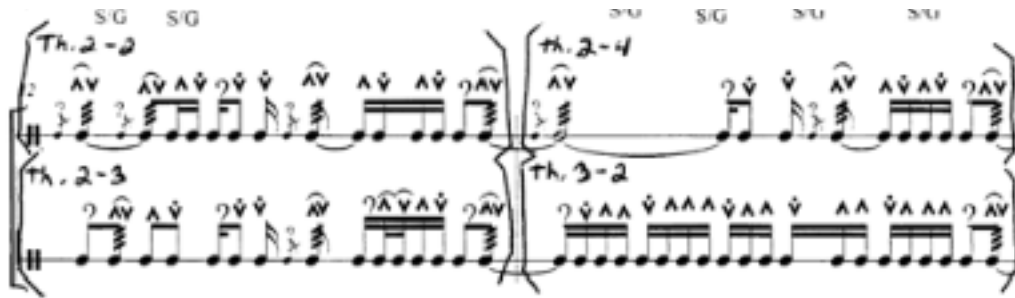
**Figure 119: Zarbafian, movement 1, measure 35 and cadence 1 measure 36; cadence begins with the same material as the previous measure.**

#### 5) Transitional material

There are no transitional materials in this piece.

#### 6) Relationship between *tombak 1* and *tombak 2*

The most common relationship between both *tombak-ha* is when they each play a motive simultaneously. In other words, when there are two motives of equal importance superimposed, one played by each *tombak*. This relationship creates a dense polyrhythm. Although both *tombak* lines complement each other throughout the piece, they develop independently from one another. In the example below, the first *tombak* plays two variants of motive 2 while the second *tombak* plays a different variant of motive 2 followed by a variant of motive 3, see Figure 120.



**Figure 120: Zarbafian, movement 1, motive 2 variant 2 and 4 over motive 2 variant 3 and motive 3 variant 2 (measure 12-13); superimposition of motives and each *tombak* has independent development process.**

The polyrhythm shown in Figure 120 is the most frequent type of relation between *tombak* 1 and 2 in this piece. Its main features are both *tombak-ha* play different motives and having different development processes.

Another type of relation between the *tombak-ha* is having a motive in *tombak* 1 and an accompaniment in *tombak* 2. This relation is particularly seen in the second movement. In this situation, *tombak* 1 plays the motives while *tombak* 2 supports the motive with one or several accompaniments. Similar to the first type of relation, both *tombak-ha* develop their musical content, whether motive or accompaniment, independently from the other line; see Figure 121.



**Figure 121: Zarbafian, movement 2, motive 3 and motive 3 variant 3 over accompaniment 1 and accompaniment 1 variant 2 (measures 43-44); motive over accompaniment *tombak* relationship, each *tombak* has independent development process.**

Figure 121, is an example of a motive in *tombak* 1 layered over an accompaniment in *tombak* 2. This type of polyrhythm is similar to the first *tombak* relation where each line continues with a development that is both relevant yet also autonomous from the other.

The last two relations are solo and unison. Solos only occur in *tombak* 1. They are primarily found at the beginning of a movement or section and act as introductions to a new metric structure or motive. The *tombak-ha* are only in unison during two sections, this excludes brief passages like cadences or sporadic individual cells. Movement five is entirely unison except for the cadence at the end and a section in the middle of the first movement is also unison.

#### 7) Development of the motives and accompaniments

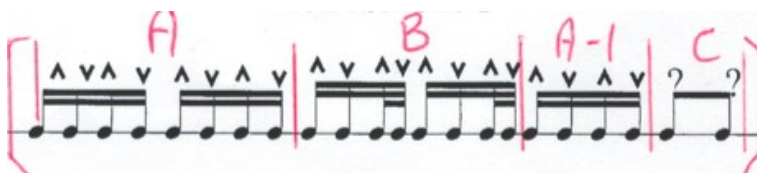
Regarding the development of materials, I will only be dealing with the motives of the piece since the accompaniments do not offer any new insights into how the materials are developed.

As previously mentioned, this composition is based on a periodic rhythmic system that divides a rhythmic phrase or motive into small cells. To properly analyze this piece, it is important to define all the cells within the motives and its variants. To facilitate the analysis of the motives' development, I will use an alphanumeric system to summarize the cells' musical content. Within a movement, letters will be used to label each unique cell. The letters are use based on the appearance of the cell, starting with the letter A and continuing in alphabetical order. In other words, the first unique cell will be labeled A, the second unique cell will be labeled B, and so on, see Figure 122.



**Figure 122: Zarbafian, movement 2, motive 1 (measure 6); division and labeling of cells.**

Figure 122 shows that the first unique cell, A, is repeated before the second unique cell, B, is presented. When two or more cells are very similar in content with only slight variants, they will be labeled with the same letter followed by a hyphenated number to indicate that the cell is a variant of the original. The numbers will also be used based on order of appearance, see Figure 123.



**Figure 123: Zarbafian, movement 1, motive 1 (measure 1); hyphenated numbers used to indicate cell variants.**

Figure 123 shows that the first and third cells are very similar in content with the only difference being the length of the cell. As a result, both cells are labeled as A and the third cell is hyphenated with a number to indicate that it is a variant.

To understand how the motivic materials are developed in this piece, I will look at three aspects. I will compare each motive to its variants, then I will group all the cells that are labeled with the same letter to compare them, and finally I will see if the different cells within a motive develop in the same manner.

#### Motive and variant comparison

To undertake the analysis of the motives' development, each motive will be compared to all of its variants. This comparison will be based on the individual cells.

Each motive will be aligned with its variants in a table; see Appendix 7-D. The columns



will separate the motives' cells to facilitate the comparison. Once the table is complete, I will look at the progression that occurs in each column. I will look at the number of different cells present in each column and their frequency of appearance. This will tell me the amount of musical material used in the development of the motives and if there are any prominent cells. To simplify the analysis, the musical materials in the table will be replaced by the alphanumeric system described above. Instead of addressing the musical content, this analysis will look at the letters that represent the musical content.

In Appendix 7-D, the summary of each column is written at the bottom of each table. These summaries indicate that the last cell of each motive remains very consistent throughout the variants. The last cell will often maintain the same letter in all its variants, see Table 6 for an example. Note, in Table 6, cells 1 and 2 are also consistent, however I only highlight the last cell because it remains consistent outside this small example, as we will see in Table 7.

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>
4	M	M	J-1
4-1	M-1	M-1	J
4-2	M	M	J
4-3	M-1	M-1	J-4
4-4	M-2	M-1	J-4
4-5	M-1	M-1	J-5
Total number of different letters	1	1	1
Prominent Letters	M	M	J

**Table 6: Zarbafian, movement 2 motive 4 and variant; consistency in last cell throughout one motive and variants.**

In some cases, movements 1, 3, 4 part 1, and 5, the last cell will remain constant throughout the entire movement, see table 7.

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
1	A	B	B	C	D	E
1-1	A-1	E	E	C	D	E
1-2	A-1	B-1	B-1	C	D	E

Table 3, *Fariba*, movement 4 part 1, motive 1.

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
2	N	N	J	G-4	E-1
2-1	N-1	-	M	L	E-1
2-2	N	N-2	J	O	E-1
2-3	N-1	L	M	O-1	E-1

Table 4, *Fariba*, movement 4 part 1, motive 2.

**Table 7: Zarbafian, movement 4 part 1, motive 1 and motive 2; consistency in the last cell between different motives.**

The tables in Appendix 7-D also show that the first and middle cells of the motive have on average of three letters. The only exceptions are motive 2 from movement 1 and motive 1 from movement 4 part 2. These motives have a much larger amount of variants resulting in the first and middle columns possessing around nine letters each. Excluding, these two exceptions, the small number of different letters indicates that the motives are developed using a very restricted amount of new material. Since the development of the motives does not occur through the presentation of new material, it is the variant of the cells grouped under the same letter that is the most important feature in the development of the motives.

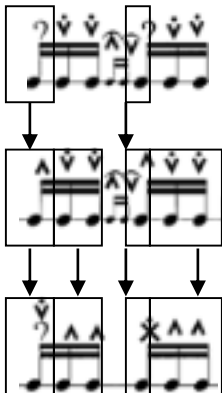
Note, grouping cells together under a same letter versus separating motive under different letters requires some level of subjective judgment and is debatable. I believe that my groupings of cells, which was based on the musical content of the cells and the musical context in which they were found, adequately represent the piece’s micro structures. To see the cells grouped together under each letter, please see Appendix 7-E, ‘Dariush Zarbafian, cells and variants’. Although a few cells could arguably be placed

under a different letter, I do not believe that these few changes would greatly effect my conclusions or results since these are based on the piece's main structural tendencies and compositional approaches and not on small unique variants.

Comparison of cells labeled under same letter

Regarding the development of the cells grouped under the same letter, there are four types of developments that are most frequently found; change in playing technique, substitution between separate notes and a roll, insertion of notes, and doubling or reducing by half the length of the cell.

Changes in playing technique occur when one *tombak* stroke is replaced with another. To demonstrate this, the example below, from movement 4 part 2 cell P, shows several changes that can be found between variants of a single cell, see Figure 124.



**Figure 124: Zarbafian, development process for movement 4 part 2, cell P variant 3, 4, and 5; changes in playing technique.**

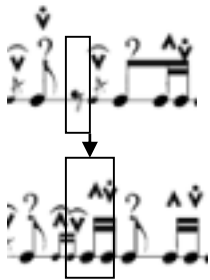
In Figure 124, the boxed playing techniques are replaced with new ones in the succeeding variant.

The substitution between separate notes and a roll is when one or several notes of a cell are replaced with a roll in a variant or vice versa. The boxed notes in the example below demonstrate this type of development, see Figure 125.



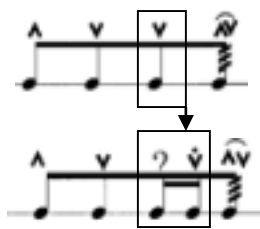
**Figure 125: Zarbafian, development process, movement 1 cell C, original cell and variant 1; substitution of individual note for roll.**

The insertion of notes can occur two ways. First, the note or notes can replace a rest and take the space that was silent before, see Figure 126.



**Figure 126: Zarbafian, development process, movement 1, cell I, original and variant 1; inserting notes by replacing a rest.**

A second possibility is when the rhythm is subdivided into smaller rhythmic values, which allow one or more notes to be inserted, see Figure 127.



**Figure 127: Zarbafian, movement 4 part 1, cell A, variant 2 and 4; inserting a note through rhythmic subdivision.**

Note that the last three types of cell development include within them rhythmic changes. Although rhythmic alterations are not explicitly mentioned as a type of cell

development, it is found throughout this piece embedded in the other types of cell development.

Lastly, I will comment on the relationship between the cells of each separate motive. For the majority, the cells of a motive develop independently from each other. In only a few instances do the first and third or two other middle cells have correlated developments. In Appendix 7-D, this type of correlation would be seen in the tables if both cells change letter (or variant of a letter) at the same time, see table 8.

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
1	A	B	B	C	D	E
1-1	A-1	E	E	C	D	E
1-2	A-1	B-1	B-1	C	D	E
1-3	A-1	E-1	E-1	K	D	E
1-4	A-1	E	E	J	D	E
1-5	A-1	B-1	B-1	K	D	E
1-6	A-1	E-1	E-1	J	D	E

**Table 8: Zarbafian, movement 4 part 1, motive 1, variants 1 to 6; correlation between cell 2 and cell 3 regarding letter changes.**

In Table 8, the boxed letters show that cells 2 and 3 have the same development process in the first six motive variants since they change letter at the same time and they also present the same letters. This type of relationship between cells is found briefly and sporadically in this piece. The cells will more commonly develop independently.

### 8) Compositional techniques used to develop the materials

The main composition techniques for this piece can be divided into two categories, the techniques for varying individual cells and the techniques for varying the entire motive.

There are four main compositional techniques used to vary individual cells in this piece, changing playing techniques, substituting between separate notes and a roll, inserting notes, and doubling or reducing by half the length of the cell. These techniques were described in the previous questions and the full list of cells categorized by letter can be found in Appendix 7-E.

Continuity and change are the key factors for the development of entire motives. When motives are developed into variants, continuity and change are mainly influenced by which cells change letter (musical content) and which cells keep the same letter. When a motive is developed there is at least one cell that does not change; most often it is the last cell of the motive. In addition, one or more of the other cells will often remain the same as well, see Table 9.

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4
2	I	J	A-2	C
2-1	I-1	K	A-2	C
2-2	I-2	K	A-2	C-1
2-3	L	K	B-1	C-1
2-4	D	K	A-2	C-1
2-5	I-3	K	A-2	C-1
2-6	M	K	A-3	C-1
2-7	I-5	K-1	A-4	C-1
2-8	I-6	K	A-3	C-1
2-9	P	K	A-3	C-1
2-10	P-1	J-1	A-3	C-1
2-11	P-3	J-1	Q	C-2
2-12	M-1	K	Q	C-2
2-13	I-9	K	F-1	C-3
2-14	O-1	J-3	Q	C-3

Table 6: *Fariba*, movement 1, motive 2, motive and variants.

**Table 9: Zarbafian, development process movement 1, motive 2, motive and variants; circled cells change letter from one variant to the next, unmarked cell maintain the same letter.**

Table 9 shows the four most common compositional techniques for varying the motives. Of these techniques, the first three are more frequent. The first is to have only one cell change letter, see circled letters in variants 1, 5, 6, 7, 9, 10, and 11. The second technique is to have two cells change letter at the same time, see circled letters in variants 3, 4, 12, 13. The third technique is to have no letters change as in variants 2 and 8. Lastly, the least frequent technique is to have three or more cells change letters at the same time, see variant 14. Having only a few cells change letter at a time indicates that motivic materials in this piece mainly develop very gradually. When moving from one motive variant to the next, there will usually be only one or two cells that change musical content. The other cells either maintain the same content or only slightly vary through the four development techniques described earlier regarding individual cell variant. The resulting effect is of starting with a single entity that slowly develops by only having a small number of parts change at the same time until eventually the entire entity is different from its original state.

#### 9) Development of the piece as a whole

This piece is organized into five movements. The first, second, and fourth movement possesses unique structures while movements three and five share a similar form; see Figure 128 for a summary of the piece's form.

Darius Zarbafian, Fariba

th. = theme  
 acc. = accompaniment  
 mut. = movement

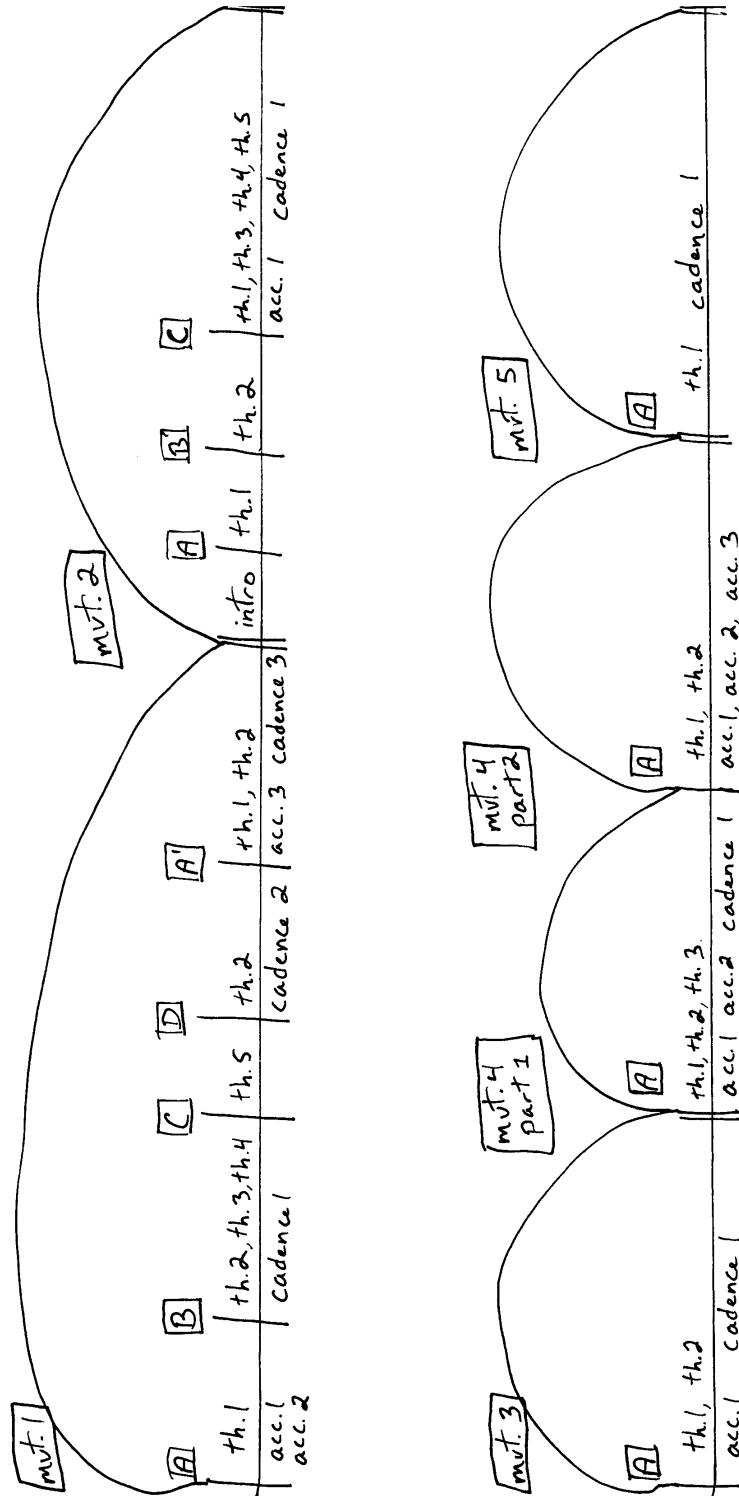


Figure 128: Zarbafian, macro structure of piece.



Movement 1 presents five motives based on an eleven-count metric structure. This movement is divided into five subsections. The first two subsections each present unique motivic and accompaniment material. The second subsection ends with the first cadence. The third subsection, subsection C, is a brief intermediate passage with its own motive. Subsection four continues developing the material from subsection two. The movement concludes with a re-exposition of the first motive followed by the second motive and new variants for both motives. Everything is then concluded with the third cadence.

The second movement presents a seven count metric structure. The movement begins with an introduction followed by three subsections. The first two subsections each present a single motive with variants. The last subsection contains three new motives and one accompaniment. The movement concludes with a cadence.

The third movement returns to an eleven-count meter structure and restates the motivic material from movement one. It is a brief interlude that reintroduces motives one and two from the first movement with different variants.

Movement four is divided into two main parts. The first part is based on a fifteen count rhythmic meter. It only has one section that presents three motives and two accompaniments. This part ends with a cadence. The second part of movement four is composed with a meter of seventeen counts. It also only has one section, in this case with two motives and three accompaniments.

The last movement returns to the eleven count metric structure found in movements one and three. It presents one new motive and ends with a cadence.

## 10) Structuring of the piece

One of the most important compositional techniques for structuring the piece as a whole is the change in metric structure. Each movement has a metric structure that is different from the movement preceding it. In other words, the movements are clearly distinct from each other because of the meter changes.

Another important structural compositional technique is the reuse of previously exposed content. On the macro level, movements 1, 3, and 5 all share the same eleven count meter structure. This eleven-count meter cycle becomes the primary meter for the whole piece since it introduces, concludes, and is found in the middle of the piece. On a micro level, movement 1 re-exposes its first motive during the last subsection of the piece. On both the micro and macro levels, the reuse of previous musical content gives the movement or whole piece a sense of completion, a return to its initial point of departure.

A third compositional technique for structuring the piece is the use of cadences. Every movement, except for movement 4 part 2, ends with a cadence. This compositional technique gives the movements a clear point of rest before undertaking the next movement.

The last compositional technique I will mention is the use of short interludes in the middle of a larger whole. In the first movement, the middle subsection (C) is a short interlude that differs from the rest of the movement in terms of musical content. Looking at the entire piece, the middle movement, movement 3, is very brief and differs from its surrounding movements in that it restates the motives from the beginning of the piece. In

both these cases, the middle section is used as a brief interlude meant to contrast with its surrounding musical content. It acts as a momentary escape from the momentum built up before it and prepares the music for what follows it.

## COMPARISON

### *Similarities*

The motives composed by Tehrani, Esmâ'ili, and Rajabi, although very diverse in content, were primarily written with 2/4, 4/4, and 6/8 time signatures. Many other time signatures were also used but far less frequently. Each of these three composers based some of their motives and accompaniments on content that could be traced back to Tehrani's *tombak* method book, *Amouzeshe-é Tombak*. Note that Tehrani's book is primarily a collection of traditional *tombak* rhythms. As mentioned in the introduction of this thesis, scholar Mohammad Reza Azadehfar describes the rhythms from Tehrani's *Amouzeshe-é Tombak* as a general representation of current *tombak* characteristics and meters.<sup>222</sup> This indicates that Tehrani, Esmâ'ili, and Rajabi incorporated into their motives and accompaniments musical elements from the *tombak*'s recent tradition. By 'recent tradition', I mean rhythms commonly used during the 19<sup>th</sup>, 20<sup>th</sup>, and 21<sup>st</sup> centuries.

Each composer used traditional *tombak* playing techniques in their pieces. For a complete list of traditional playing techniques, as well as a few innovative techniques, see Tehrani or Rajabi's *tombak* training books.<sup>223</sup> The compositions analyzed also used a few

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<sup>222</sup> Azadehfar, "Rhythmic Structure," 238.

<sup>223</sup> Tehrani, *Amouzeshe*, 71-90.

innovative techniques, in particular Rajabi's piece, however the vast majority of each piece focused on traditional playing techniques.

Every composer used accompaniments in his piece, with the exception of Tehrani's first three pieces. The most common function of the accompaniments is to create a drone like stream of sound over which one or many motives are played. For Tehrani this drone was created by a series of muffled *pelang-ha* (finger snaps) played with eighth notes. For the other three composers, drones were created with rolls using various playing techniques. Another common function in some of Esmâ'ili, Rajabi, and Zarbafian's accompaniments is to have the accompaniments outline a motive's metric or rhythmic structure.

The composers all used cadences during their piece. The vast majority of the cadences, with the exception of those in Rajabi's piece, have in common the presence of a roll (in Zarbafian's piece the roll is actually thirty-second notes), unison between the *tombak-ha*, and bass tones at the end of the cadence. These three characteristics are the fundamental features found in almost every cadence.

The use of transitional material is almost negligible in regards to the works analyzed. Only two composers use transitional materials in their piece, Esmâ'ili and Rajabi. Esmâ'ili composed one transition and Rajabi wrote three transitions. All of them are between one and four measures long making their presence in the music very scarce. Given their limited presence, the use of transitional materials is not a noticeable feature in these compositions.

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Bahman Rajabi, *Tombak Training: Preperatory and Intermediate Course, School of Tombak-Playing*, vol. 1 (Tehran: Sorood Publications, 1393 (Hijri calendar)), 18-92.

These musical works present several different types of relationships between the *tombak-ha*. Esmâ'ili, Rajabi, and Zarbafian use a mixture of four types of relations; motive over motive, motive over accompaniment, solo, and unison. All of these *tombak* relationships can be found in Esmâ'ili, Rajabi, and Zarbafian's pieces, however only one or two of the relationships are usually prioritized in each piece.

The most popular development technique in all the compositions analyzed is the alteration of pitches or playing techniques. All of the composers develop the piece's motives by changing the playing techniques of individual notes. When doing this, the rhythm and general pitch contour of the motive would stay the same. The most frequent alteration found in all the compositions is to change a *bak* (high tone) for a *tom* (low tone) and vice-versa. Other common development techniques are the substitution of individual notes for rolls and the insertion or omission of notes. Inserting or omitting notes occurs through rhythmic subdivisions or simplifications. In other words, changing eighth notes into two sixteenth notes allows notes to be added and inverting this process removes notes.

Another important aspect in the development of the motives is to have unchanged parts. To maintain a connection between the motives and its variants, each composer would only vary one part of the motive at a time. This ensured that there is always some musical content that remains the same from variant to variant.

In a general sense, the macro structures for Tehrani, Esmâ'ili, and Rajabi's pieces are based on a linear presentation of new motives, with the exception of Tehrani's first piece. In other words, the piece continuously presents new motives as it progresses. Motives are often restricted to one section of the piece; once they are presented they are

usually not reused. This view of the pieces' progression is to be taken in a general sense; each piece does have a small number of motives that are reused throughout the work. However, the reuse of motivic materials in Tehrani, Esmâ'ili, and Rajabi's pieces does not contribute significantly to the pieces' macro structures. I therefore find the general understanding of a linear motivic enfoldment more apt to describe the pieces' macro structures.

A more important aspect regarding the pieces' macro structures is the use of metric and tempo changes. All the compositions use metric changes to indicate important divisions in the music. Changes in time signature or period structure are used as clear markers for the pieces' different sections. In other words, a change in meter would normally indicate that a new section has begun. Tehrani, Esmâ'ili, and Rajabi also use tempo changes in conjunction with the metric changes. Tempo changes are therefore another key element in the pieces' macro structure for those three composers.

## **Differences**

Regarding motivic content, Zarbafian is the only composer to explicitly<sup>224</sup> find inspiration in ancient Iranian rhythmic cycles. The construction of his motives is based on ancient musical treatises describing periodic or cyclical rhythms.<sup>225</sup> As a result,

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<sup>224</sup> I am aware that Zarbafian was inspired by ancient rhythmic concepts because of the interviews I've conducted with him and because of his academic writing on this topic. It is possible that the other composers had also been inspired by ancient rhythmic concepts but I didn't find any evidence of this in the music or from any of my sources.

<sup>225</sup> Abou Nasr Farabi, *Kitab al-musiqua*.

Zarbfian's motives are analyzed in terms of cells and periodic cycles instead of time signatures.<sup>226</sup>

As previously mentioned, the content of some of Tehrani, Esmâ'ili, and Rajabi's motives can be traced back to Tehrani's *Amouzeshe-é Tombak*, his *tombak* training book. However, two fifths of Tehrani's motives, two thirds of Esmâ'ili and Rajabi's motives, and the entirety of Zarbfian's motives are made up of content that can't be traced back to Tehrani, Esmâ'ili, or Rajabi's *tombak* training books. In other words, the majority of musical content composed by Esmâ'ili, Rajabi, and Zarbfian is unique to each of them. Their musical content could potentially be linked to traditional rhythms; but proving this would require further study focusing on this issue. Regardless if their musical content can or cannot be linked to tradition, the important aspect is that the compositions are all different from each other. This suggests that the composers had different visions on how to compose a *tombak* duet. With this in mind, I argue that although the composers share the same musical tradition, they are all very distinct from each other in terms of compositional approach. I believe that each composer was simultaneously influenced by Classical Iranian musical tradition and their individual artistic ideas. Each composer chose to create unique pieces inspired to a certain degree by his own personal artistic identity.

Looking at the relationship between the *tombak-ha*, each composer emphasized a different type of interaction. Tehrani is the only composer to have the *tombak-ha* in constant dialogue. His pieces are the only ones where the instruments seldom play

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<sup>226</sup> The other compositions can also be analyzed in terms of cells and periodic cycles; however, I felt that looking at these pieces in terms of motives and variants to be more informative. I believe that analyzing Tehrani, Esmâ'ili, and Rajabi's pieces in terms of motives and variants led me to find key information relating to musical structure and compositional approaches.

simultaneously, the *tombak-ha* contentiously playing in alternation, possibly for pedagogical reasons. Esmâ'ili is the only composer to have given equal importance to both *tombak-ha*. In his piece, each *tombak* presents approximately the same number of motives. Esmâ'ili is also the only composer to predominantly use a motive over accompaniment relationship between the *tombak-ha*. This means that one *tombak* is presenting a motive while the other *tombak* supports the motive with an accompaniment. Rajabi mainly used a *tombak* relationship that is unique to his piece, which I have labeled 'pitch inverted unison'. In this type of relationship, the *tombak-ha* play the same rhythm and overall pitches, however all the *tom-ha* (technique used to create low tones) in *tombak 1* are aligned with *bak-ha* (technique used to create high tones) in *tombak 2* and vice versa. In other words, they are in rhythmic and pitch unison except all of their *tom-ha* and *bak-ha* are inverted. Lastly, Zarbafian predominantly used a motive over motive relationship in his piece. One *tombak* plays a motive while the other plays a variant of the same or of a different motive. The result of this type of interaction is a very dense polyrhythmic texture.

Regarding musical development, Zarbafian has a unique process to vary the motives and accompaniments. A motive or accompaniment changes very gradually from measure to measure. Usually, only a few parts of the passage would vary while the rest remain the same. This process is repeated for the next measure using different parts of the passage. This type of development process creates a passage that slowly changes its content across several measures until it gradually becomes something new. Another unique feature in the musical development of Zarbafian's piece is the independence



between the *tombak-ha*. At any given point in the piece, each *tombak-ha* develops its motives and accompaniments at different rates and in different manners.

The macro structures of certain pieces also possess unique features. Tehrani's third piece is the only piece to connect the motives through musical content. Each new motive develops a musical idea presented in the previous motive. The motives are therefore all connected in terms of content to the motives preceding and succeeding them. This creates a more seamless transition from one motive to the next. Tehrani is also the only composer to incorporate improvisation sections into his piece (see piece 4). The macro structure of Rajabi's piece is unique since it is the only piece to follow the same macro development of a Classical Iranian Music performance (a.k.a. Classical Iranian Suite). As demonstrated in my analyses, the development of Rajabi's piece shares several important features with the sequence of pieces in a Classical Suite. The macro structure of Zarbafian's piece is unique because it is the only one that uses the re-exposition of musical content as an important structural element. The motivic content presented in Zarbafian's first movement is reused in the middle and concluding movements. Using the same musical material at the beginning, middle, and end of the piece creates clear reference points for the beginning and ending of macro sections. Zarbafian is also the only composer to have divided his composition using movement markings. In other words, the movements were indicated in the score by the composer and were not added in for the sake of the analysis.

The similarities and differences listed above show that these composers are rooted in the same musical tradition yet have unique ways of expressing themselves within the tradition. The works of each master shows how they were able to push the boundaries of

their musical tradition. It is important to note that, although these pieces are unique, the composers do not place themselves or their music outside of tradition. As Zarbafian expresses it: “*we must not go against tradition. We continue tradition by innovating it... Those who claim to go against tradition have not fully understood tradition.*”<sup>227</sup> (translated by author). They used the heritage of Classical Iranian Music, its orally transmitted rhythms and musical concepts, and with it formed pieces unique to each of them.

## CONCLUSION

Music for *tombak* duet began in the mid-20<sup>th</sup> century, which places its inception in the ‘modern *tombak* era.’ The creation of groups composed solely of *tombak-ha* is an important feature of this era. Compositions for *tombak* duet also share other characteristics of this modern era: the use of Western based music notation and the placement of the *tombak* in the musical foreground. Given all these connections, I proposed that an in-depth look at compositions for *tombak* duet could serve as a useful case study to better understand the modern *tombak* era. In particular, this research could shed light on how the *tombak* is used as a foreground instrument in a written work. This type of context differs from the *tombak*’s traditional setting, where it serves as an accompaniment instrument performing a flexible orally transmitted repertoire.

During the 20<sup>th</sup> century, Western music notation and the Western concept of composition were incorporated into Iranian university curriculums.<sup>228</sup> This introduction, coupled with the advent of *tombak* groups is what I believe led to the creation of pieces

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<sup>227</sup> Zarbafian, interview 2014.

<sup>228</sup> During, “La musique traditionnelle,” 23.

written solely for *tombak-ha*. So far, academic scholarship dealing with Iranian rhythms have focused primarily on poetic structures and its relation to musical rhythms as well as ancient Iranian rhythmic concepts. As a result, compositions for *tombak* duet have, to my knowledge, not been studied systematically. This thesis has tried to bring this musical phenomenon into the world of academic research.

My main focus in this research was to better understand the approaches and methods taken by each composer to create their piece or pieces. I attempted to obtain this insight through musical structural analyses. During these analyses, I paid particular attention to compositional techniques for structuring the music. At the end of the analyses, after having described and listed what I believed to be the pertinent details about each piece and the composers' compositional techniques, I compared the results of each analysis to establish a more general sense of how music for *tombak* duet has been composed.

By determining the composers' approaches and methods for writing their music, I believe to have shed light on two aspects of the modern *tombak* era. First, this research provides details on how the *tombak* is treated in the context of a fixed written piece. Second, it describes ways the *tombak* is treated as a foreground instrument.

As mentioned in the introduction of this thesis, analyzing music for *tombak* on a purely written level has certain disadvantages. The most significant disadvantage is that it ignores the performance aspect of the written pieces. As a consequence, the analyses undertaken in this study could not address the intricate rhythms and timbers of the actual sonic realization of the pieces. It also could not address how the piece unfolds in real time and how it is experienced by performers and listeners. In turn, what this analytical

approach offers are precise characteristics that exist outside or behind the pieces' sonic actualizations. When taken as such, these characteristics can help us better understand the musical framework within which or over which performances inhabit. This study therefore offers some information that can be expand on or reevaluated in future studies. The next step in this research could be to undertake a performance study of the pieces and compare its results with the results of this study to see how they correlate.

Another feature of this analysis that can raise objections is the use of paradigmatic musical analysis. Viewing the pieces in terms of segmentation, motives and variants, push the analysis away from a more transformative and gestural view of the music. I believe that further study analyzing these compositions from a different analytical perspective could offer important insights on the inner workings of the pieces. It could potentially connect the pieces to the oral tradition within which they are rooted, it can also offer a more experiential view of the music. For the moment, I think that the analysis done in this study offers at least one reference point for understanding this music. I believe that the analysis was able to raise some important characteristics of each piece and was particularly successful in describing the macro and micro structures of the pieces. How these structures are to be understood and transformed into musical performances can of course be determined and reevaluated in future studies.

Given the extensive developments the *tombak* has gone through during its modern era and the limited scholarship on this topic, I believe there is still much research that can be done to further our understanding of *tombak* compositions. For instance, analyzing *tombak* duets by other composers; analyzing pieces written for other types of *tombak* ensemble (trio, quartet, etc); studying how composers for *tombak* ensemble relate

themselves and their music to the concepts of ‘tradition’ and ‘innovation’ in Iranian and non-Iranian music; looking more closely at the similarities and differences between ‘traditional’ *tombak* playing and *tombak* playing in the ‘modern era’; comparing the different musical contexts in which *tombak* playing has been found: *tombak* duet pieces, solo pieces, pre-modern era accompaniment style, and modern accompaniment style; understanding how compositional styles relate to social and extra-musical factors as well as artistic identity; and looking at how gender plays a role in the performance and the composition of *tombak* ensemble pieces (note that there are female *tombak* players but I did not come across female composers while doing this research), connecting *tombak* compositions to its oral musical roots, and approaching the study of this music from a more experiential point of view. The present research was simply a first look at a much larger topic that may be more fully addressed in future studies.

## Bibliography

- Arom, Simha. *African Polyphony and Polyrhythm: Musical Structure and Methodology*. Translated by Martin Thom, Barbara Tuckett, and Raymond Boyd. Cambridge: Cambridge University Press, 2004.
- Azadehfar, Mohammad Reza. "Rhythmic Structure in Iranian Music." PhD diss., University of Sheffield, 2004. ProQuest (AAT 898768038).
- Barkekechli, Mehdi, Moussa Ma'aroufi. *La musique traditionnelle de l'Iran*. Tehran: Secretariat d'Etat aux Beaux-Arts, 1963.
- Blacking, John. "Challenging the Myth of 'Ethnic' Music: First Performance of a New Song in An African Oral Tradition 1961." *Yearbook for Traditional Music* 21 (1989): 17-24.
- Caton, Margaret. "Performance Practice in Iran: Radif and Improvisation," in *Garland Encyclopedia of World Music* vol. 6, Middle East, 129-143. New York: Routledge, 2002.
- \_\_\_\_\_. "The Classical 'Tasnif': A Genre of Persian Vocal Music." Vol. 1 and 2. PhD diss., University of California, 1983. UMI.
- Djebbari, Élina. "Du trio de zarb au «créations transculturelles». La création musicale du percussionniste Keyvan Chemirani: une globalisation parallèle?" *Cahier d'ethnomusicology* 25 (2012): 111-137.
- During, Jean. *La musique iranienne: Tradition et évolution*. Paris: Éditions recherches sur les civilisations, 1984.
- \_\_\_\_\_. "La musique traditionnelle iranienne en 1983." *Asian Music* 15, no. 2 (1984): 11-31.
- Esmâ'ili, Mohammad. *Course of Tombak*. Edited by Siâmak Banâi. Tehran: Mahoor Institute of Culture and Art, 1382 (Hijri calendar).
- Farabi, Abou Nasr Muhammad Ibn Tarkhan. *Kitab al-musiqua al-kabir*. Edited by Ghattas 'Abd al-Malik Khashabah. Cairo: Dar al-kitab al-'arabi. 1967.
- \_\_\_\_\_. *Almousighi-ol Kabir*. Teheran: Part, 1996.
- Farhat, Hormoz in Bo Lawergren, et al. "Iran." *Grove Music Online*. Oxford Music Online. Oxford University Press. Web. 3 Apr. 2016.  
<<http://www.oxfordmusiconline.com.login.ezproxy.library.ualberta.ca/subscriber/article/grove/music/13895>>.
- \_\_\_\_\_. *The Dastgah Concept in Persian Music*. Cambridge: Cambridge University Press, 1990.
- Gahfari, Abtin. Interviews by author, January 20 and February 12, 2015.
- Jami, `Abd al-Rahman. *Risâleh Müsîgi (Treatise of Music)*. There are two manuscripts available in Tehran, one in The Library of Ostad Minuvi and the other one in The Library of Saltanati (royal). 1489.
- Merriam, Alan P. "The Study of Ethnomusicology." In *The Anthropology of Music*. Evanston, Ill.: Northwestern University Press, 1964.
- Myers, Helen. "Ethnomusicology." In *Ethnomusicology: An Introduction*, 3-18. New York: N.W. Norton and Company, 1992.
- Nattiez, Jean-Jaques. "Simha Arom and the Return of Analysis to Ethnomusicology." Translated by Catherine Dale. *Music Analysis* 12, no. 2 (1993): 241-265.
- Nettl, Bruno. "Attitudes Towards Persian Music in Tehran, 1969," *Musical Quarterly* 56, no. 2 (1970), 183-197.

- Nooshin, Laudan. "The Process of Creation and Re-creation in Persian Classical Music." PhD diss., University of London, Goldsmith's College, 1996.
- Rajabi, Bahman. *Tombak Training: Preperatory and Intermediate Course, School of Tombak-Playing*. Vol. 1. Tehran: Sorood Publications, 1393 (Hijri calendar).  
 \_\_\_\_\_ . *Tombak-Training: Advanced and High-Advanced Levels*. 2<sup>nd</sup> ed. Tehran: Sorood Publications, 2010.
- Rice, Timothy. "Towards the Remodeling of Ethnomusicology." *Ethnomusicology* 31, no. 3 (1987): 469-488.
- Ruwet, Nicolas. "Méthodes d'analyse en musicologie." *Revue belge de musicologie* 20, no. 1 (1966): 65-90.
- Saba, Abol Hassan. *Radif-e Santour* (The Santour Repertoire). Teheran: Imprimerie Ferdowssi, 1982.
- Safi al-Din Urmawi, `Abd al-Mu'min ibn Yüsuf (d. 1294). *Kitäb al Adwär; wa, alRisälah al-Sharafiyyah fr al-nisab al-ta'lifyah*. Edited by Sezgin, Fuat, *Reproduced from MSNuruosmaniye 3653 Istanbul and MS 3460 Ahmet III Collection, Topkapi Sarayt Library Istanbul*. Frankfurt: Institute for the History of Arabic-Islamic Science at the Johann Wolfgang Goethe University Frankfurt am Main. 1984.
- Tehrani, Hossein, Hoshang Zarif, Mostafa Kamalportorab, Farhad Fakhrodini. *Amouzesh-e Tombak*. Revised by Hossein Dehlavi. Terhan: Moasseh Farhangi-Honary Mahor, 1385 (Hijri calendar).
- Tombak Network. "Artists." Visited December 28, 2015.  
<http://www.tombak.talktalk.net/artists/artists.htm>
- Tsuge, Gen'ichi. "'Avaz': A Study of the Rhythmic Aspects in Classical Iranian Music." PhD diss., Wesleyan University, 1974. UMI.  
 \_\_\_\_\_ . "Rhythmic Aspects of the Avaz in Persian Music." *Ethnomusicology* 14, no. 2 (1970): 205-227.
- Wachsmann, Klaus. "The Changeability of Musical Experience." *Ethnomusicology* 26, no. 2 (1982): 187-215.
- Youssefzadeh, Ameneh. "Iran's Regional Musical Traditions in the Twentieth Century: A Historical Overview." *Iranian Studies* 38/3 (2005): 417-439.
- Zarbfian, Dariush. "La musique savante iranienne: contribution à l'analyse des systèmes modaux et de la métrique." PhD diss., Université de Toulouse, 2008. Atelier National de Reproduction des Thèse.  
 \_\_\_\_\_ . *Fariba*, private library.  
 \_\_\_\_\_ . "Tombac et l'histoire du rythme en Iran." DEA University of Toulouse, 1994, Accessed December 4 2015. <http://avahang-music.com/>.  
 \_\_\_\_\_ . Interviews by author, 2015.
- Zonis, Ella. *Classical Persian Music: An Introduction*. Cambridge, Mass.: Harvard University, 1973.  
 \_\_\_\_\_ . "Contemporary Art Music in Persia," *Musical Quarterly* 51, no. 4 (1965), 636-648.

## DISCOGRAPHY

HOSSEIN TEHRANI

*Zarbahang*

*Iran Musique Persane*

*Delnavaz*

*Shahrnez*

*The Masters of Persian Traditional Music*

*Master Hossain Terhani Tonbak Solo*

MOHAMMAD ESMA'ILI

*Amouzesesh Tombak,*

*Dele Sheydar,*

*Iranian Musicians Concert*

*Dastgahe Homayon*

*Arghavan*

*Asari az Hosein Dehlavi*

DARIUSH ZARBAFIAN

*Mile Image (1989)*

*Assemaneh (1996)*

*À Fleur de Peau (2005)*



# Appendices

## Appendix 1 – Hossein Tehrani piece 1, annotated score

*th* = theme  
*v.* = variation  
*P.* = phrase

Tehrani,  
piece 1

گروه نوازی نمیک شماره 1

29

*P.1* *th.1* *th.1-v.a* *th.1-v.b*

گروه اول

*P.2* *th.2* *th.2-v.a* *th.2-v.b* *th.3* *P.3*

گروه دوم

*th.3-v.a* *th.3-v.b* *th.4* *P.4*

*th.4-v.a* *th.4-v.b* *th.1* *th.1-v.a* *P.5*

*th.1* *th.1-v.b*

rit.

معنوی سکوت گرد (بدون نواجا، تعداد ضرب ها و عدد کسر میزان) معترف سکوت یک میزان کامل نیز می باشد.

## Appendix 1-A. Hossein Tehrani, piece 1, motives

Motive 1, measures 1-2

Musical notation for Motive 1, measures 1-2. The piece is in 2/4 time. The first measure features a treble clef with a forte (*f*) dynamic and a triplet of eighth notes (G4, A4, B4) with an accent (^) over the second note. The bass clef has a whole note G3. The second measure features a forte (*f*) dynamic and a triplet of eighth notes (B3, A3, G3) with an accent (^) over the second note. The bass clef has a whole note G3. A Persian text annotation "آهسته" is written below the bass staff.

Motive 2, measures 5-6

Musical notation for Motive 2, measures 5-6. The piece is in 2/4 time. The first measure features a piano (*p*) dynamic and a triplet of eighth notes (G4, A4, B4) with an accent (^) over the second note. The bass clef has a whole rest. The second measure features a piano (*p*) dynamic and a triplet of eighth notes (B3, A3, G3) with an accent (^) over the second note. The bass clef has a whole note G3. A Persian text annotation "آهسته" is written below the bass staff.

Motive 3, measures 9-10

Musical notation for Motive 3, measures 9-10. The piece is in 2/4 time. The first measure features a mezzo-forte (*mf*) dynamic and a quarter note G4. The bass clef has a whole rest. The second measure features a mezzo-forte (*mf*) dynamic and a quarter note A4. The bass clef has a whole rest.

Motive 4, measures 13-14

Musical notation for Motive 4, measures 13-14. The piece is in 2/4 time. The first measure features a mezzo-forte (*mf*) dynamic and a triplet of eighth notes (G4, A4, B4) with an accent (^) over the second note. The bass clef has a whole rest. The second measure features a mezzo-forte (*mf*) dynamic and a triplet of eighth notes (B3, A3, G3) with an accent (^) over the second note. The bass clef has a whole note G3.

## Appendix 2 – Hossein Tehrani piece 2, annotated score

th. = theme  
v. = variation

Tehrani  
piece 2

311

گروه نوازی تمبک شماره ۲

♩ = 100

th.1

th.1-v.a

th.1-v.b

th.1-v.c

Solo 1 2 3 Tutti

th.2

th.2-v.a

th.3

th.3-v.a

Fin. Cadence

## Appendix 2-A, Hossein Tehrani piece 2, motives

Motive 1, measure 1-4

Musical notation for Motive 1, measures 1-4. The notation is in 2/4 time and consists of two staves. The upper staff begins with a forte (*f*) dynamic and contains a melodic line with eighth and sixteenth notes, including accents and slurs. The lower staff has a forte (*f*) dynamic and features a rhythmic accompaniment of eighth notes, with Persian text 'گرفتار' written below it. The piece concludes with a double bar line.

Motive 2, measures 21-22

Musical notation for Motive 2, measures 21-22. The notation is in 2/4 time and consists of two staves. The upper staff features a melodic line with triplets and accents, marked with a mezzo-forte (*mf*) dynamic. The lower staff provides a rhythmic accompaniment with a mezzo-forte (*mf*) dynamic. The piece concludes with a double bar line.

Motive 3, measures 29-30

Musical notation for Motive 3, measures 29-30. The notation is in 2/4 time and consists of two staves. The upper staff contains a melodic line with triplets and accents, marked with a forte (*f*) dynamic. The lower staff features a rhythmic accompaniment with a forte (*f*) dynamic. Persian text 'گرفتار' is written below the lower staff. The piece concludes with a double bar line.

# Appendix 3 – Hossein Therani piece 3, annotated score

Th. = theme  
v. = variation

Tehrani piece 3  
p. 1-2

31

گروه نوازی نمیک شماره ۳

♩ = 84-95

گروه اول

گروه دوم

th. 1

th. 2

th. 2-v.a

th. 2-v.b

th. 2-v.c

th. 3

th. 3

th. 4



h.o. Thema  
+ variation

Tehrani piece 3  
P.2-2

32

Cadence

یادآوری (۳) در سال ۱۳۳۷ بر اساس ریتم های گروه نوازی شماره ۴، توسط حسین دهلوی اثری تصنیف گردید که نوت کامل آن به طور جداگانه به نام «فالنتزی برای گروه تمبک و ارکستر» چاپ و منتشر شده است. بنابراین در میراث های این گروه نوازی که هر دو بخش تمبک با هم سکوت دارند، اجرا فقط به عهده ی ارکستر است. این قطعه را می توان بدون همراهی ارکستر نیز اجرا کرد؛ در این صورت نیازی به رعایت سکوت های پیشگفته نخواهد بود.

یادآوری (۴) CH (کا) به مفهوم «در حدود» است و اگر قبل از عدد متروم به کار برده شود، اجرا کننده می تواند در محدوده ی عدد داده شده، قطعه را کمی کندتر و یا تندتر اجرا کند.

یادآوری (۵) چون در اجرای قطعات جمعی موسیقایی، هریک از سازها و با گروه های نوازندگان معمولاً نقش جداگانه ای را به عهده دارند، بدین جهت برای ایجاد ارتباط بین اجرا کنندگان در نمرس ها از حروف الفبای لاتینی و با عدد استفاده می شود تا همه نوازندگان بتوانند قطعه را از آغاز جمله و یا میراث مورد نظر به طور هماهنگ اجرا کنند. در گروه نوازی شماره ۴ (که به وسای ارکستر همراهی می شود) به همین منظور از شماره هایی در داخل چهارگوش استفاده شده است.

### Appendix 3-A, Hossein Tehrani, piece 3, motives

Motive 1, measure 1-2

Musical notation for Motive 1, measures 1-2. The notation is in 2/4 time. The upper staff contains a melody of eighth notes, starting with a forte (*f*) dynamic. The lower staff contains a bass line with a triplet of eighth notes in the first measure and a quarter note in the second measure, also marked with a forte (*f*) dynamic.

Motive 2, measure 5-6

Musical notation for Motive 2, measures 5-6. The notation is in 2/4 time. The upper staff contains a melody of eighth notes, starting with a forte (*f*) dynamic. The lower staff contains a bass line with a triplet of eighth notes in the first measure and a quarter note in the second measure, also marked with a forte (*f*) dynamic. There are accents (*Λ*) over the notes in the upper staff.

Motive 3, measures 21-22

Musical notation for Motive 3, measures 21-22. The notation is in 2/4 time. The upper staff contains a melody of eighth notes, starting with a piano (*p*) dynamic. The lower staff contains a bass line with a triplet of eighth notes in the first measure and a quarter note in the second measure, marked with a forte (*f*) dynamic. There are accents (*Λ*) over the notes in the upper staff.

Motive 4, measure 25-26

Musical notation for Motive 4, measures 25-26. The notation is in 2/4 time. The upper staff contains a melody of eighth notes, starting with a mezzo-forte (*mf*) dynamic. The lower staff contains a bass line with a triplet of eighth notes in the first measure and a quarter note in the second measure, marked with a mezzo-forte (*mf*) dynamic. There are accents (*Λ*) over the notes in the upper staff. Persian lyrics are written below the bass line: "جهانم سوم دوم اول" (Jahanam som dom avl) and "(اول) جهانم سوم دوم اول" ((avl) Jahanam som dom avl).







Th. G-v.a

9 Th. 6

Th. G-v.a

10 Cadena 5

Cadena 5

Section 3 11 تک‌نواز

Section 4 12 Un poco Andante ca 72 Solo

گروه اول و دوم

lunga

mf

The image shows a handwritten musical score for guitar, consisting of five systems of music. The first system is labeled 'Th. G-v.a' and contains measures 8 and 9. The second system is also labeled 'Th. G-v.a' and contains measures 10 and 11. The third system is labeled 'Th. G-v.b' and contains measures 12 and 13. The fourth system is labeled 'Cadena 5' and contains measures 14 and 15. The fifth system is divided into two parts: 'Section 3' (measures 16 and 17) and 'Section 4' (measures 18 and 19). Section 4 is marked 'Un poco Andante ca 72' and 'Solo'. The score includes various musical notations such as triplets, slurs, and dynamic markings like 'mf' and 'lunga'. There are also handwritten annotations in red ink throughout the score.

در ابتدای این قسمت، تک‌نواز تمک، آزاد است که رشم‌هایی را به شکل‌های مختلف، بنا به ذوق و سابقه و مهارت خود اجرا کند.

th. 7-v.a                      th. 7-v.b

(mf)

th. 7-v.c                      th. 7-v.d

th. 7-v.e                      **13** th. 7-v.f

Vacc.                      Vacc.

th. 7-v.g                      th. 7-v.h

poco a poco accel. e cresc.

Vacc.                      Vacc.

th. 7-v.h'                      **14** Più mosso th. 8

f

2 3 4



th. 8 - v.a

th. 8

poco a poco rit. e dim.

15 meno mosso th. 7 - v.i

mf poco a poco rit. e dim.

p

Presto ♩ = 152

16 th. 8 in unison

Tutti

f

17 Cadenza 6

Cadanza 6

18 Largo Section 5

19 Allegretto ♩ ca 100 Th. 9

mf

Handwritten musical score for a string quartet, measures 20-24. The score is written on a single staff with various annotations in red ink. Measure 20 is marked "Th. 9" and "mf acc. 1". Measure 21 is marked "Th. 3" and "mf". Measure 22 is marked "Th. 3-v.d" and "mf acc. 1". Measure 23 is marked "Th. 3-v.e" and "mf". Measure 24 is marked "Cadena 7" and "mf acc. 1". The score includes rhythmic markings like "3 2 3 2" and "3 A 3 3 A 3 3 A", and dynamic markings like "mf" and "acc. 1". There are also some handwritten notes in Persian, such as "نظر اول" and "سوم دوم".

برای جلوگیری از خشکی نوازندگان، می توان اجرای مبرای های متوالی بخش نمیک دوم را این اجرا کنندگان تقسیم کرد.

Coda

25 Poco più mosso (subito) *cat12* *th. 3-v. d*

26 *th. 3-v. e*

27 *Cadence 7*

28 *extended cadence*

29 *ff* *Fine*

# Appendix 4-A, Hossein Tehrani piece 4, motives

Motive 1



Motive 2



Motive 3



Motive 4



Motive 5



Motive 5 replay



Motive 6

Musical notation for Motive 6, consisting of two staves in 6/16 time. The upper staff features a melodic line with eighth-note triplets and accents, marked *mf*. The lower staff provides a bass line with eighth-note triplets, also marked *mf*.

Motive 7

Musical notation for Motive 7, consisting of two staves in 6/8 time. The upper staff features a melodic line with eighth-note triplets and accents, marked *mf* and labeled "Solo". The lower staff provides a bass line with eighth-note triplets, marked *mf*.

Motive 8

Musical notation for Motive 8, consisting of two staves in 6/16 time. The upper staff features a melodic line with eighth-note triplets and accents, marked *f*. The lower staff provides a bass line with eighth-note triplets, marked *f*.

Motive 9

Musical notation for Motive 9, consisting of a single staff in 2/4 time. The melody consists of eighth notes with accents, marked *f*.



## Appendix 4-B, Hossein Tehrani piece 4, cadences

Cadence 1



Musical notation for Cadence 1, consisting of two staves. The top staff contains a melodic line with eighth notes and a final cadence. The bottom staff contains a bass line with eighth notes and a final cadence.

Cadence 2



Musical notation for Cadence 2, consisting of two staves. The top staff features a melodic line with triplets and a final cadence. The bottom staff features a bass line with triplets and a final cadence.

Cadence 3



Musical notation for Cadence 3, consisting of two staves. The top staff features a melodic line with a triplet and a final cadence. The bottom staff features a bass line with a triplet and a final cadence. Persian lyrics are written below the top staff: سوم، سوم، نقر اول، گرافتی.

Cadence 4



Musical notation for Cadence 4, consisting of two staves. The top staff features a melodic line with a final cadence. The bottom staff features a bass line with a final cadence.

Cadence 5



Musical notation for Cadence 5, consisting of two staves. The top staff features a melodic line with triplets and a final cadence. The bottom staff features a bass line with triplets and a final cadence.

Cadence 6



# Appendix 5 – Mohammad Esmâ'ili, annotated score

th. = theme  
 v. = variation  
 acc. = accompaniment  
 trs. = transition

Mohammad Esmâ'ili

گروه نوازی نسبک  
 محمد اسماعیلی

**Section 1**

گروه نسبک اول  
 گروه نسبک دوم  
 ناله زنگی

acc. 1  
 acc. 2  
 th. 1  
 th. 2  
 Trs. 1  
 acc. 3  
 th. 3

پنجم  
 چهارم  
 سوم  
 دوم  
 نوازل

11

The score is written for three string groups (گروه نسبک اول, گروه نسبک دوم, ناله زنگی) and a wind player (ناله زنگی). It is divided into Section 1 and Section 2. Section 1 includes measures 1-10, and Section 2 starts at measure 11. The score is annotated with red markings for themes (th.), variations (v.), accompaniments (acc.), and transitions (trs.). The lyrics are in Persian and include the words 'پنجم', 'چهارم', 'سوم', 'دوم', and 'نوازل'. The score is numbered '11' at the beginning of Section 2.

Handwritten musical score system 1. It consists of two staves. The top staff has a treble clef and contains a series of eighth notes. The bottom staff has a bass clef and contains a few notes. Red handwritten annotations include "th. 3" above the top staff and "acc. 3" above the bottom staff. There are also some small Persian characters at the beginning of the top staff.

Handwritten musical score system 2, starting at measure 15. It consists of two staves. The top staff has a treble clef and contains eighth notes with "AVAV" markings below them. The bottom staff has a bass clef. Red handwritten annotations include "15 acc. 4" above the top staff and "th. 4" above the top staff. There are also some small Persian characters.

Handwritten musical score system 3, starting at measure 23. It consists of two staves. The top staff has a treble clef and contains eighth notes with "AAA" markings below them. The bottom staff has a bass clef. Red handwritten annotations include "23 acc. 3-A" above the top staff and "th. 3" above the top staff. There are also some small Persian characters.

Handwritten musical score system 4, starting at measure 25. It consists of two staves. The top staff has a treble clef and contains eighth notes with "AAA" markings below them. The bottom staff has a bass clef. Red handwritten annotations include "25 th. 5" above the top staff and "acc. 5" above the bottom staff. There are also some small Persian characters.

Handwritten musical score system 1. It consists of three staves. The top staff has a treble clef and contains a melodic line with several triplets marked with '3' and 'A'. A red bracket on the left side groups the first two staves and is labeled 'acc. 5'. The bottom staff has a bass clef and contains a bass line. The system concludes with a double bar line and dynamic markings 'ff' on both the top and bottom staves.

Handwritten musical score system 2. It consists of three staves. The top staff has a treble clef and contains a melodic line with triplets marked with '3' and 'A'. A red bracket on the left side groups the first two staves and is labeled 'th. 5' and 'acc. 5'. The bottom staff has a bass clef and contains a bass line. The system concludes with a double bar line and dynamic markings 'ff' on both the top and bottom staves.

Handwritten musical score system 3. It consists of three staves. The top staff has a treble clef and contains a melodic line with triplets marked with '3' and 'A'. A red bracket on the left side groups the first two staves and is labeled 'acc. 5'. The bottom staff has a bass clef and contains a bass line. The system concludes with a double bar line and dynamic markings 'ff' on both the top and bottom staves.

Handwritten musical score system 4, starting at measure 29. It consists of three staves. The top staff has a treble clef and contains a melodic line with triplets marked with '3' and 'A'. A red bracket on the left side groups the first two staves and is labeled 'acc. 6' and 'th. 6'. The system is divided into three measures by red double bar lines. The first measure is labeled 'acc. 6' and 'th. 6'. The second measure is labeled 'acc. 6' and 'th. 6'. The third measure is labeled 'acc. 7' and 'th. 7'. The bottom staff has a bass clef and contains a bass line. The system concludes with a double bar line and dynamic markings 'p' on both the top and bottom staves.

85

th. 7 (continued)

acc. 7

th. 7

A musical score system with three staves. The top staff has a treble clef and contains a melodic line with slurs and accents. The middle staff has a treble clef and contains a similar melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. Handwritten red annotations include "th. 7 (continued)" above the first staff, "acc. 7" above the second staff, and "th. 7" above the third staff. The number "85" is in a box at the beginning.

th. 7 (continued)

41 acc. 6

th. 6

acc. 6

th. 6

A musical score system with three staves. The top staff has a treble clef and contains a melodic line with slurs and accents. The middle staff has a treble clef and contains a similar melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. Handwritten red annotations include "th. 7 (continued)" above the first staff, "acc. 6" above the second staff, "th. 6" above the third staff, and "th. 6" above the fourth staff. The number "41" is in a box at the beginning.

acc. 7

th. 7

th. 7 (continued)

A musical score system with three staves. The top staff has a treble clef and contains a melodic line with slurs and accents. The middle staff has a treble clef and contains a similar melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. Handwritten red annotations include "acc. 7" above the first staff, "th. 7" above the second staff, and "th. 7 (continued)" above the third staff.

acc. 7

th. 7

th. 7 (continued)

53 th. 1 - v. A

A musical score system with three staves. The top staff has a treble clef and contains a melodic line with slurs and accents. The middle staff has a treble clef and contains a similar melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. Handwritten red annotations include "acc. 7" above the first staff, "th. 7" above the second staff, "th. 7 (continued)" above the third staff, and "53 th. 1 - v. A" above the fourth staff. The number "53" is in a box at the beginning.



Handwritten musical score with four systems of staves. Red annotations include:

- System 1: *th. 1-v. A* (above first measure), *th. 8-lim A* and *th. 8-lim B* (above and below second measure).
- System 2: *beginning of th. 1-v. A* (above first measure), *beginning of th. 1-v. A* (above second measure), *th. 8-lim A* (above third measure), *th. 8-lim B* (below second measure).
- System 3: *beginning of th. 1-v. A* (above first measure), *beginning of th. 1-v. A* (above second measure), *th. 8-lim A* (above third measure), *th. 8-lim B* (below second measure). Measure number **65** is written in the first measure.
- System 4: *beginning of th. 1-v. A* (above first measure), *th. 8-lim A* (above second measure), *th. 8-lim A* (below second measure).

Section 3

Introduction to th. 9

78

50



96

تغز اول و دوم fh. 9 - v.B

تغز سوم و چهارم

106 fh. 11

تغز سوم و چهارم

تغز اول و دوم fh. 11

تغز اول و دوم fh. 9 - v.B

acc. 8 - v.A

acc. 8 - v.B

Section 4

120 th. 8 line B-v. A acc. 9

128 th. 7-v. A acc. 10

134 th. 7-v. A acc. 10

135 th. 8 line B-v. C th. 8 line B-v. C

Cadence I 146 introduction to tk.12

153 acc. 10

tk.12 tk.12 tk.12

tk.12-v.A acc. 10 tk.12-v.B acc. 10 ending of tk.12

acc. 10-v.A      acc. 10-v.B      162 acc. 10      acc. 10-v.C

ending th. 12      ending th. 12      ending th. 12      ending th. 12

th. 13      th. 13

mf      f

acc. 10-v.A      acc. 10-v.C      acc. 10

ending th. 12      ending th. 12      ending th. 12      ending th. 12

th. 13      th. 13

mf      f

acc. 10-v.A      th. 7-v. III

ending th. 12      ending th. 12      th. 14      th. 14

p      mf



178

acc. 10- v. B

acc. 10

acc. 10- v. B

th. 12 - v. C

th. 14

p

acc. 10- v. B

acc. 10

ending of th. 12

th. 12 - v. C

acc. 12

acc. 12

acc. 12

acc. 12

th. 14

th. 14

pp

192

th. 15

pp

200

acc. 10- v. B

acc. 10- v. A

th. 12- v. D

acc. 10- v. B

th. 15

th. 14

th. 15

th. 14

mf

ff

208

acc. 10- v. A

th. 12- v. D

th. 12- v. C

th. 12- v. E

acc. 10- v. A

th. 12- v. D

th. 12- v. C

th. 12- v. E

mf

ff

th. 12- v. C

th. 12- v. E

th. 12- v. C

Cadencia 2

th. 12- v. C

th. 12- v. E

th. 12- v. C

ppp

fff

ppp

fff

## Appendix 5-A, Mohammad Esmâ'ili, Motives

1)



2)



3)



4)



5)



6)



7)

Musical score for exercise 7, consisting of two staves. The top staff begins with a triplet of eighth notes marked *p* (piano). This is followed by a triplet of quarter notes marked *ff* (fortissimo). The bottom staff begins with a triplet of eighth notes marked *p*, followed by a triplet of quarter notes marked *ff*. A circled section in the top staff shows a sequence of notes with accents and slurs, with an arrow pointing to a similar sequence in the bottom staff.

8, line A)

Musical score for exercise 8, line A, showing a sequence of notes with accents and slurs.

8, line B)

Musical score for exercise 8, line B, showing a sequence of notes with triplets and accents.

9)

Musical score for exercise 9, showing a sequence of notes with triplets and accents.

10)

Musical score for exercise 10, showing a sequence of notes with triplets and accents.

11)

Musical score for exercise 11, showing a sequence of notes with triplets and accents.



12)



13)



14)



15)



## Appendix 5-B, Mohammad Esmâ'ili, accompaniments

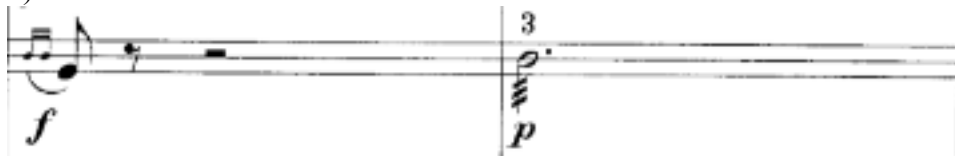
1)



2)



3)



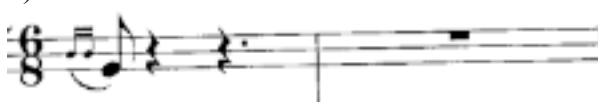
4)



5)



6)



7)



8)



9)



10)



11)



12)



## Appendix 5-C, Mohammad Esmâ'ili, cadences

1)



2)



## Appendix 5-D, Mohammad Esmâ'ili, transitions

1)

The image shows a musical score for a transition. It consists of two staves, each with a treble clef and a key signature of one flat (B-flat). The top staff begins with a triplet of eighth notes, indicated by a '3' above the notes. The bottom staff also begins with a triplet of eighth notes, indicated by a '3' above the notes. A dynamic marking of *pp* (pianissimo) is placed between the two staves on the left, and a dynamic marking of *sf* (sforzando) is placed between the two staves on the right. A wedge-shaped hairpin connects the *pp* and *sf* markings, indicating a crescendo. The music concludes with a double bar line and repeat dots.

# Appendix 6, Bahman Rajabi, annotated score

**Th** = theme **variation**  
**acc.** = accompaniment  
**trans.** = transition  
**Sect.** = section

Bahman Rajabi  
آموزش تنبک • ۲۲

**Sect. A**      **Subsection 1**

The score consists of five systems of staves, each representing a variation of the theme. The first system is labeled 'th.1' and includes a measure number '32'. The second system is labeled 'th.1 v.1'. The third system is labeled 'th.1 v.2'. The fourth system is labeled 'th.1 v.3'. The fifth system is labeled 'th.1 v.4' and includes an 'acc.1' (accompaniment) line. The notation includes various rhythmic values, accidentals, and dynamic markings. Red brackets and lines are used to group and separate the different parts of the score.

th.1 v.5

acc.1

th.1 v.6

acc.1

th.1 v.7

acc.1

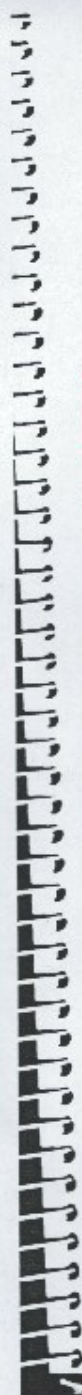
th.1 v.8

th.1 v.8'

th.1 v.8

th.1 v.8'





11 *th. 2*  
*acc. 2*

15 *th. 2*  
*acc. 2*

19 *trans. 1*  
*acc. 2 m. 1*

23 *th. 3*  
*acc. 2*

27 *th. 3 u. 1*  
*acc. 2*



Handwritten musical score with five systems, each containing two staves. The score includes various musical notations such as notes, rests, and dynamic markings. Red handwritten annotations are present throughout the score.

- System 1:** Labeled "Trans. 1" in red. It covers measures 32, 33, and 34. The first staff has a wavy line above it. The second staff has "acc. 2 v. 1" written in red.
- System 2:** Labeled "th. 1 v. 8" in red. It covers measures 35 and 36. The second staff has "th. 1 v. 8'" written in red.
- System 3:** Labeled "th. 1 v. 8" in red. It covers measures 37 and 38. The second staff has "th. 1 v. 8'" written in red.
- System 4:** Labeled "th. 4 subsection 2" in red. It covers measures 39, 40, and 41. The first staff has "th. 4'" written in red. Measures 39, 40, and 41 are marked with a double slash (/) in the second staff.
- System 5:** Labeled "th. 5" in red. It covers measures 42 and 43. The first staff has "th. 4'" written in red.

42 *+h.5'*

43 *+h.5 v.1*

44 *+h.5 v.1'*

45 *+h.4*

46 *+h.4'*

47 *+h.6*

*acc. 3*

The image shows a page of handwritten musical notation for the tabla. It consists of six systems, each with two staves. The notation includes rhythmic patterns, accidentals, and dynamic markings. Red ink is used for annotations: *+h.5'* above system 42, *+h.5 v.1* above system 43, *+h.5 v.1'* above system 44, *+h.4* above system 45, *+h.4'* above system 46, and *+h.6* above system 47. The annotation *acc. 3* is written below the first staff of system 47. The page is numbered 27 in the top right corner, with the title 'آموزش تنبک' (Tabla Instruction) next to it.



48 *th. 6'*  
*acc. 3*

49 *th. 6 v. 1*  
*acc. 3'*

50 *th. 6 v. 1'*  
*acc. 3'*

51 *th. 4*  
*th. 4'*

52 *th. 4*  
*th. 4'*

Subsection 3

Handwritten musical score for Subsection 3, featuring a tempo marking of 160 and a key signature of one sharp (F#). The score is divided into six systems, each with a measure number and a red annotation:

- System 1: Measure 53, annotation *+h.7*. Includes a treble clef staff and a bass clef staff.
- System 2: Measure 54, annotation *+h.7'*. Includes a treble clef staff and a bass clef staff.
- System 3: Measure 55, annotation *+h.8'*. Includes a treble clef staff and a bass clef staff.
- System 4: Measure 56, annotation *+h.7 v.1*. Includes a treble clef staff and a bass clef staff.
- System 5: Measure 57, annotation *+h.7 v.1*. Includes a treble clef staff and a bass clef staff.
- System 6: Measure 58, annotation *+h.7 v.2* and *+h.8 v.1*. Includes a treble clef staff and a bass clef staff.

Each system contains musical notation with notes, rests, and dynamic markings. A dashed vertical line is present in each system, and a red bracket groups the staves of each system. The score concludes with measure numbers 54, 55, and 56 at the end of the first system, and 58, 59, and 62 at the end of the subsequent systems.



64 *th 7 v.2*  
*th 8 v.1*

65 *th 7 v.2*  
*th 8 v.1*

66 *th 7 v.2*  
*th 8 v.1*

67 *th 7*  
*th 7*

68 *th 7 v.1*  
*th 7*

Sect. B  
subsection 1

• 100 - 104 *th. 9*

69 70 71

*th. 9'*

72 73 74

*th. 9'*

75 76 77

*th. 9'*

78 79 80

81 82 83

*th. 9 vi'*



84 *th. 9 v. 2* 85 86

87 *th. 9 v. 2'* 88 89

90 91 92

*subsection 2*

93 *th. 10* 94 95 *th. 10'* 96

97 *th. 10 v. 1* 98 99 100

th.10 v.1'

Musical notation for th.10 v.1'. It consists of a single staff with a treble clef and a 2/4 time signature. The melody starts at measure 101 and ends at measure 104. The notes are quarter notes and eighth notes, with some beamed eighth notes. There are red brackets on the left and right sides of the staff.

th.10 v.2

Musical notation for th.10 v.2. It consists of a single staff with a treble clef and a 2/4 time signature. The melody starts at measure 105 and ends at measure 108. The notes are quarter notes and eighth notes, with some beamed eighth notes. There are red brackets on the left and right sides of the staff.

th.10 v.2'

Musical notation for th.10 v.2'. It consists of a single staff with a treble clef and a 2/4 time signature. The melody starts at measure 109 and ends at measure 112. The notes are quarter notes and eighth notes, with some beamed eighth notes. There are red brackets on the left and right sides of the staff.

Subsection 3

th.11

Musical notation for th.11. It consists of a single staff with a treble clef and a 2/4 time signature. The melody starts at measure 113 and ends at measure 116. The notes are quarter notes and eighth notes, with some beamed eighth notes. There are red brackets on the left and right sides of the staff.

th.11 v.1

Musical notation for th.11 v.1. It consists of a single staff with a treble clef and a 2/4 time signature. The melody starts at measure 117 and ends at measure 120. The notes are quarter notes and eighth notes, with some beamed eighth notes. There are red brackets on the left and right sides of the staff.



121 *th. 11'* 122 123 124

125 *th. 11 v. 1'* 126 127 128

129 = 108 130 131 132 133 134

135 136 137 138

139 140 141

142 143 144

Handwritten musical notation for measures 142, 143, and 144. Measure 143 includes a red handwritten note: *+h. 12 v. 3*. The notation consists of a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The notes are primarily eighth and sixteenth notes with various accidentals.

145 146 147

Handwritten musical notation for measures 145, 146, and 147. Measure 147 includes a red handwritten note: *+h. 12 v. 4*. The notation consists of a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The notes are primarily eighth and sixteenth notes with various accidentals.

148 149 150

Handwritten musical notation for measures 148, 149, and 150. Measure 150 includes a red handwritten note: *+h. 12 v. 4*. The notation consists of a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The notes are primarily eighth and sixteenth notes with various accidentals.

151 152 153

Handwritten musical notation for measures 151, 152, and 153. Measure 151 includes a red handwritten note: *+h. 12 v. 4*. The notation consists of a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The notes are primarily eighth and sixteenth notes with various accidentals.

154 155 156

Handwritten musical notation for measures 154, 155, and 156. Measure 155 includes a red handwritten note: *+h. 12 v. 5*. The notation consists of a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The notes are primarily eighth and sixteenth notes with various accidentals.





Handwritten musical score for guitar, measures 172-191. The score is written on a grand staff with a treble clef and a 2/4 time signature. The music consists of a sequence of chords and melodic lines. Red annotations are present throughout the score, including:

- Measure 175: *acc. 4*
- Measure 179: *+h. 13* and *acc. 4*
- Measure 184: *+h. 13* and *acc. 4*
- Measure 187: *+h. 13 v. 1* and *acc. 4*
- Measure 191: *+h. 13 v. 2* and *acc. 4*

The score is divided into five systems, each containing two staves. The measures are numbered 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, and 191. The music features a variety of chord voicings and melodic patterns, with some measures containing accidentals and dynamic markings.



Handwritten musical score for piano, measures 192-211. The score is written on five systems, each with a grand staff (treble and bass clefs). The measures are numbered 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, and 211. Red annotations are present throughout the score, including:

- Measure 195: *fh. 13 v. 2* and *acc. 4*
- Measure 199: *fh. 13 v. 3* and *acc. 4*
- Measure 203: *fh. 13 v. 3* and *acc. 4*
- Measure 207: *fh. 13 v. 4* and *acc. 4*
- Measure 211: *fh. 13 v. 4* and *acc. 4*

The score includes various musical notations such as notes, rests, and dynamic markings. The right margin of the page features a decorative vertical border consisting of a series of repeating, stylized, interlocking shapes.

Handwritten musical score for tabla, measures 212-232. The score is written on a grand staff with two staves per system. The upper staff contains melodic lines with fretting diagrams (circles with numbers) and the lower staff contains rhythmic patterns with vertical strokes. Red handwritten annotations include:

- Measures 212-215: *fh. 13 v. 5*
- Measure 215: *acc. 4*
- Measures 216-219: *fh. 13 v. 6*
- Measure 219: *acc. 4*
- Measures 220-223: *fh. 13 v. 1*
- Measure 223: *acc. 4*
- Measures 224-227: *Subsection 5*
- Measure 227: *fh. 14*
- Measures 230-232: *fh. 14'*

Vertical red brackets group measures 212-215, 216-219, 220-223, and 230-232. A measure rest of 104 is indicated above measure 227.



233 234 235 236

237 238 239 240

241 242 243 244

245 246 247 248

249 250

+h. 14 v. 1

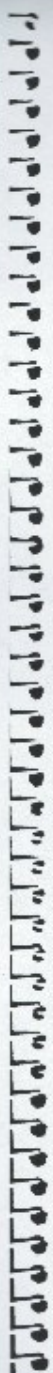
+h. 14 v. 1'

+h. 14 v. 2

+h. 14 v. 2'

+h. 9 v. 3

Subsection 6



Handwritten musical notation for a tenor drum (Tambek) piece, consisting of five systems of staves. Each system contains two staves: a top staff with rhythmic notation and a bottom staff with fretted notes. The notation includes various rhythmic symbols, rests, and dynamic markings. Red handwritten annotations are present throughout the score, including tempo and articulation instructions.

Measures 253-256: *th. q v. 3'*

Measures 257-261: *th. 15*, *th. q v. 4*

Measures 262-266: *th. 15'*, *th. q v. 4'*

Measures 267-272: *th. 15'*, *th. q v. 4'*

Measures 273-276: *th. 15 v. 1*, *th. q v. 5*



277 278 279 280

281 282 283 *h. 16* 284 285

286 287 *h. 16'* 288 289 290

291 *h. 16* 292 293 294

295 *h. 16'* 296 297 298 299 *Cadence 1* 300

Sect. C

Subsection 1

Introduction to  
th.17

301 - 112 302 303 304

305 th.17 306 307 308 309

310 th.18 311 312

acc. f

313 th.18 v.1 314 315 316

acc. f

317 th.18 v.2 318 319 320

acc. f v.1



321 *th.18 v.3* 322 323 324

325 *th.18 v.4* 326 327 328

329 *th.18 v.5* 330 331 332

333 *th.18 v.6* 334 335 336

337 338 339 340 341

subsection 2

th. 3 v. 2

♩ = 144

342 acc. 5 343 344 345

th. 3 v. 3

346 acc. 5 v. 4 347 348 349

th. 3 v. 4

350 acc. 5 v. 5 351 352 353

th. 3 v. 5

354 acc. 5 v. 6 355 356 357

Extension/Cadence 2

th. 17 subsection 3

358 359 360 361



دورهی فوق عالی - ۶۶

Handwritten musical score for piano, measures 362-395. The score is written on five systems of two staves each. It includes various musical notations such as notes, rests, and dynamic markings. Red handwritten annotations are present, including "th. 19", "th. 19 v. 1", "th. 19 v. 2", "th. 9 v. 7", and "th. 9 v. 8". Measure numbers 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, and 384 are clearly visible. There are also some markings like "p. = 160" and "p. = 168".

384 *th 20* 385 386 387

*+h. 9 v. 8*

388 *th 20'* 389 390 391

*+h. 9 v. 8*

392 *th 20 v. 1* 393 394 395

*+h. 9 v. 8*

396 *th 20 v. 1'* 397 398 399

*+h. 9 v. 8*

400 *th 20 v. 2* 401 402 403

*+h. 9 v. 8*



Handwritten musical score for piano, consisting of five systems of staves. The notation includes treble and bass clefs, notes, rests, and dynamic markings. Red ink annotations are present throughout the score.

**System 1:** Measures 404-407. Annotations: *th. 20 v. 2'* (above the staff), *th. 9 v. 8* (below the staff).

**System 2:** Measures 408-411. Annotations: *th. 20 v. 2* (above the staff), *th. 9 v. 8* (below the staff).

**System 3:** Measures 412-416. Annotations: *th. 20 v. 3* (above the staff), *th. 9 v. 8* (below the staff).

**System 4:** Measures 417-420. Annotation: *Subsection 4* (above the staff), *th. 21* (below the staff).

**System 5:** Measures 421-424. Annotation: *th. 21* (below the staff).





439 *acc. 6* *th. 22*

441 *acc. 6* *th. 22 v. 2*

443 *acc. 6 v. 1* *th. 22*

446 *th. 22 v. 1*

448 *th. 22*

450 *th. 22 v. 2* 452

*subsection 6*  
453 *th. 23* 455 *th. 23 v. 1* 457

458 *th. 23* 459 *th. 23 v. 2* 461

462 *th. 23 v. 3* 464 465

466 *th. 23 v. 4* 467 468 *beginning of th. 23 v. 1* 469



Handwritten musical score for violin and piano, measures 470-489. The score is written in black ink on a white background, with some red annotations. The music is in 4/4 time and features a variety of rhythmic patterns and dynamics. The score is divided into five systems, each with a red bracket on the right side. The first system (measures 470-473) is marked "th.17 v.1" in red. The second system (measures 474-477) is marked "th.24" in red. The third system (measures 478-481) is marked "th.24 v.2" in red. The fourth system (measures 482-485) is marked "th.17 v.1" in red. The fifth system (measures 486-489) is marked "th.17 v.1" in red. The score includes various musical notations such as notes, rests, and dynamic markings.

subsection 7

۷۳ + آموزش تنبک

Handwritten musical notation for a section of a book, featuring various measures and variations of a theme.

Measures and Variations shown:

- 490 *trans 2*
- 491
- 492 *th. 24 v. 3*
- 493
- 494 *th. 23 v. 5*
- 495
- 496 *th. 23 v. 6*
- 497
- 498 *th. 23 v. 7*
- 499
- 500 *th. 23 v. 8*
- 501
- 502 *th. 23 v. 7*
- 503
- 504 *th. 23 v. 8*
- 505
- 506 *beginning of th. 23 v. 1*
- 507 *th. 17 v. 1*
- 508
- 509
- 510

The notation includes treble and bass clefs, notes, rests, and dynamic markings. Red ink is used for measure numbers and variation labels. Some measures contain a double bar line with repeat dots.



Handwritten musical score for violin parts, measures 511-535. The score is written on five systems of two staves each. The notation includes various musical symbols such as notes, rests, and dynamic markings. Red ink is used for measure numbers and some annotations.

Measures and annotations:

- 511 th. 17 v.1
- 512
- 513
- 514
- 515 th. 25
- 516
- 517
- 518
- 519 th. 25 v.1
- 520
- 521
- 522
- 523 th. 26
- 524
- 525
- 526
- 527 th. 26'
- 528
- 529
- 530
- 531 th. 25 v.2
- 532
- 533
- 534 th. 25 v.2
- 535

536 537 +h.25 v.3 538 539 540 +h.25 v.4

541 542 +h.17 v.1 543 544 545

546 +h.25 v.5 547 548 549 550 +h.25 v.6

551 552 553 554 +h.25 v.7 555

556 557 558 +h.25 v.8 559 560



Handwritten musical score for two voices (v.1 and v.2) across five systems. The score includes measures 561 through 585. Red annotations indicate specific performance instructions such as "Trans. 2 v.1", "+h. 28", and "+h. 28 v.1".

System 1: Measures 561-565. Measure 561 is marked "Trans. 2 v.1". Measure 564 has a red annotation "+h. 28".

System 2: Measures 566-570. Measure 567 has a red annotation "+h. 28'". Measure 570 has a red annotation "+h. 28 v.1".

System 3: Measures 571-575. Measure 573 has a red annotation "+h. 28 v.1'".

System 4: Measures 576-580. Measure 576 has a red annotation "+h. 28". Measure 579 has a red annotation "+h. 28'".

System 5: Measures 581-585. Measure 583 has a red annotation "+h. 28 v.1".

۱. شکل ساده‌ی این دوتوازی - که ساختن و پرداختن آن به اوایل سال ۱۳۵۰ بار می‌گردد - برای اولین بار در مهرماه سال ۱۳۵۰ در انجمن فرهنگی ایران و آمریکا اجرا گردید که تنبک‌نواز دوم آن، زنده‌یاد ناصر فرهنگفر بود. اجرای دوباره او البته اضافه شده‌ی آن با همکاری آقای مرتضی اعیان، در زمستان سال ۱۳۵۶، در تالار درویش مرکز حفظ و اشاعه‌ی موسیقی، به علاقه‌مندان، معرفی شد. پس از انجام تغییرات اساسی، به مدت سه شب متوالی، در سالن رودکی تالار وحدت، در زمستان سال ۱۳۶۹، با تنبک آقای محمود فرهنگد باقی اجرا گردید تا این که صورت تکمیل یافته‌تر آن - که همین شکل نوشته شده باشد - همراه با تنبک مزدک، رجسی در بهار ۱۳۷۲، به مدت دو شب در سالن رودکی تالار وحدت اجرا گردید تا این که شکل دیگر آن، با همراهی تنبک پندرام خاوری‌زمینی در دو شب متوالی - ۱۶ و ۱۷ آذر ۷۶ - در تالار وحدت به اجرا درآمد و نیز همراه با تنبک فریدیدلته‌ی در تاریخ ۴ و ۵ اسفند ۸۰ در تالار فرای دانشگاه هنر اجرا گردید. و سرانجام آخرین اجرای آن در زمستان سال ۱۳۸۷ در دانشگاه دولتی شهرکرد و سالن رودکی تالار وحدت تهران (۲۲ اسفند ماه) همراه با تنبک رضا خراشادی‌زاده اجرا گردید. توضیح این که نواز کاست و فیلم ویدئویی اجراهای فوق موجود است.



**Appendix 6-A, Bahman Rajabi, motives**

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9)

Musical notation for exercise 9, featuring a 2/4 time signature and a series of sixteenth-note runs with various accents and slurs.

10)

Musical notation for exercise 10, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

11)

Musical notation for exercise 11, featuring a 2/4 time signature and sixteenth-note runs with accents and slurs.

12)

Musical notation for exercise 12, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

13)

Musical notation for exercise 13, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

14)

Musical notation for exercise 14, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

15)

Musical notation for exercise 15, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

16)

Musical notation for exercise 16, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

16)

Musical notation for exercise 16, featuring a 2/4 time signature and eighth-note patterns with accents and slurs.

17)

18)

19)

20)

21)


22)

23)

24)

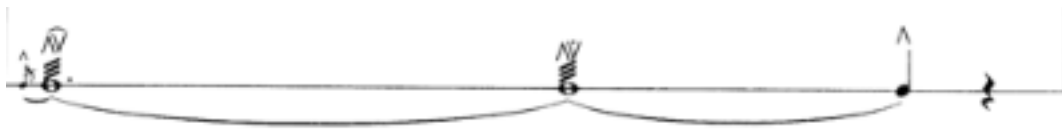
25)


26)


27)  Musical notation for exercise 27, consisting of a single staff with a treble clef. The piece is in 3/4 time and contains three measures. The first measure has a quarter note with a fermata, followed by a quarter note with a fermata, and a quarter note with a fermata. The second measure has a quarter note with a fermata, followed by a quarter note with a fermata, and a quarter note with a fermata. The third measure has a quarter note with a fermata, followed by a quarter note with a fermata, and a quarter note with a fermata.


28)  Musical notation for exercise 28, consisting of a single staff with a treble clef. The piece is in 3/4 time and contains two measures. The first measure has a quarter note with a fermata, followed by a quarter note with a fermata, and a quarter note with a fermata. The second measure has a quarter note with a fermata, followed by a quarter note with a fermata, and a quarter note with a fermata.


## Appendix 6-B, Bahman Rajabi, accompaniments


1) 


2) 

3) 


4) 

5) 

6) 

7) 

### Appendix 6-C, Bahman Rajabi, cadences

1)  Musical notation for cadence 1, consisting of two staves. The top staff has a treble clef and a key signature of one sharp (F#). The bottom staff has a bass clef and a key signature of one sharp (F#). The notation includes quarter notes, eighth notes, and rests, with a double bar line at the end.

2)  Musical notation for cadence 2, consisting of two staves. The top staff has a treble clef and a key signature of one sharp (F#). The bottom staff has a bass clef and a key signature of one sharp (F#). The notation includes quarter notes, eighth notes, and rests, with a double bar line at the end.

3)  Musical notation for cadence 3, consisting of two staves. The top staff has a treble clef and a key signature of one sharp (F#). The bottom staff has a bass clef and a key signature of one sharp (F#). The notation includes quarter notes, eighth notes, and rests, with a double bar line at the end.

## Appendix 6-D, Bahman Rajabi, transitions

1)

2)

3)

**Appendix 7, Dariush Zarbafian, annotated score.**

Th. = theme  
acc. = accompaniment

Score

### Fariba

Mouvement 1 Dariush Zarbafian

A

*th.1*

Tombak 1 4/8 + 3/8 + 4/8

Tombak 2 4/8 + 3/8 + 4/8

*th.1* A B A-1 C

*acc.1* D D-1 A-2 C

*th.1* A B A-1 C

*acc.1* D D-1 E C

*th.1* A B A-1 C

*acc.2* F G H C

S&G



**B**

2

th.2 I J A-2 C

th.3 H-1 H

S/G S/G

Fariba

th.2-1 I-1 K A-2 C

th.3-1 H-1 H-2 H

S/G S/G S/G S/G

th.2-2 I-2 K A-2 C-1 th.2-4 D K A-2 C-1

th.2-3 L K B-1 C-1 th.3-2 H-3 H-4 H-5 C-1

th.2-5 I-3 K A-2 C-1 th.2-6 M K A-3 C-1

th.3-2 H-3 H-4 H-5 C-1 th.4 I-4 N F-1 C-1

th.2-7 I-5 K-1 A-4 C-1 th.2-8 I-6 K A-3 C-1

th.4-1 O N F-1 C-1 th.4-2 I-7 N F-1 C-1

th.2-9 P K A-3 C-1 th.2-10 R-1 J-1 A-3 C-1

th.4-3 I-8 N F-1 C-1 th.4-4 R-2 N H C-1

S/C

Handwritten musical notation for a drum set, featuring various patterns and labels. The notation is organized into pairs of staves (top and bottom) for each section, with red handwritten labels and annotations.

**Section 1:**

- Top staff: *th.2-11* (P-3), *th.2-12* (J-1, Q, M-1, K, Q, C-2)
- Bottom staff: *th.4-5* (P-4, D-2, H, C-1), *th.4-6* (P-5, D-2, H, C-1)
- Annotations: *Fariba*, *S/G*

**Section 2:**

- Top staff: *th.2-13* (I-9, K, F-1, C-3), *th.2-14* (O-1, J-3, Q, C-3)
- Bottom staff: *th.4-7* (F, J-2, H, C-4), *th.4-8* (F-2, J-4, Q-1, C-4)

**Section 3:**

- Top staff: *th.2-15* (R, K, R-1, C-4), *th.2-16* (T, K, T-1, C-4)
- Bottom staff: *th.4-9* (P-6, K-1, P-7), *th.4-10* (S, K-1, P-1)

**Section 4:**

- Top staff: *th.2-17* (T-2, K-1, T-3, C-4), *th.2-18* (T-2, J-1, T-3, C-4)
- Bottom staff: *th.4-11* (F-3, K, P-1), *th.4-11* (F-3, K, P-1)

**Section 5:**

- Top staff: *th.2-19* (B-2, J-4, B-3, C-2), *th.2-20* (B-2, N-1, B-3, C-2)
- Bottom staff: *th.3-3* (H-6, H-7, H-8, C), *th.3-3* (H-6, H-7, H-8, C)

Handwritten musical score with various annotations and system labels:

- System 1:**
  - Staff 1: *th. 2-19* (4), *B-2*, *J-4*, *B-3*, *Fariba*, *B-4*, *J-1*, *B-3*, *C-2*
  - Staff 2: *th. 3-4*, *Q-2*, *Q*, *th. 3-4*, *Q-2*, *Q*
- System 2:**
  - Staff 1: *th. 2-22*, *B-4*, *K*, *B-5*, *C-4*, *th. 2-23*, *B-6*, *K-1*, *B-5*, *C-4*
  - Staff 2: *th. 3-5*, *Q-2*, *D-1*, *Q*, *C-4*, *th. 3-6*, *Q-2*, *D-1*, *Q*, *C-4*
- System 3:**
  - Staff 1: *th. 2-24*, *u*, *K*, *B-5*, *C-4*
  - Staff 2: *th. 4-12*, *F-3*, *D-1*, *B-5*, *C-4*
- System 4:**
  - Staff 1: *Cadence 1*, *u*, *th. 5*, *2 3 4*, *2 3*, *2 3 4*
  - Staff 2: *F-3*
- System 5:**
  - Staff 1: *38*, *38*
  - Staff 2: *38*



**DI**

54 *Th. 2-25* *u* Fariba *K* *B-7* *C-4* 5

55 *Th. 2-26* *u* *D-1* *E* *C-1*

56 *Th. 2-27* *u-1* *K* *B-7* *C-4*

57 *Th. 2-28* *u-1* *D-2* *B-7* *C-4*

58 *Cadence 2* *u-1* *D-2*

6

**A'** *th.1* *Fariba*

*th.1* *A B A-1 C*

*th.1* *A B A-1 C*

*acc.3* *C-5 C-5 acc.3 C-5 C-5*

*th.1* *A B A-1 C*

*th.1-1* *A D-1 A-4 C*

*th.1-2* *A B A-1 C-1*

*th.1-1* *A D-1 A-4 C*

*th.1-2* *A B A-1 C-1*

*th.2-29* *u-1 H-9 A-2 C*

Detailed description of the musical score: The score is written on six systems of two staves each. The first system is labeled '6' and 'A'' in a red box. The first staff of each system is marked with a red bracket and contains rhythmic notation with 'v' marks above the notes. The second staff contains similar notation with 'v' marks below. Red handwritten labels 'A', 'B', 'A-1', and 'C' are placed above the first staff of each system, indicating different sections of the piece. The word 'Fariba' is written in red above the first system. The second system includes an 'acc.3' part on the second staff with 'C-5' labels. The third system includes a 'th.1-1' part on the second staff with 'D-1 A-4 C' labels. The fourth system includes 'th.1-2' and 'th.1-1' parts on the second staff with 'A B A-1 C-1' and 'A D-1 A-4 C' labels. The fifth system includes 'th.1-2' and 'th.2-29' parts on the second staff with 'u-1 H-9 A-2 C' labels. The notation consists of rhythmic patterns of eighth and sixteenth notes, often grouped with slurs and 'v' marks.

Handwritten musical score for guitar, featuring six systems of two staves each. The notation includes rhythmic patterns, chord symbols, and fingerings. Red ink is used for annotations and system labels.

**System 1:**

- Staff 1 (top): *th. 2-30* (left), *th. 2-30* (right), *Fariba* (center), *I-10 K-1 Q C-3* (above), *I-10 K-1 Q C-3* (above)
- Staff 2 (bottom): *th. 2-31* (left), *th. 2-31* (right), *P-8 J-5 E C* (above), *A-2-31 P-8 J-5 E C* (above)

**System 2:**

- Staff 1 (top): *th. 2-30* (left), *th. 2-32* (right), *I-10 K-1 Q C-3* (above), *I-10 Q-3 A-2 C-4* (above)
- Staff 2 (bottom): *th. 2-31* (left), *th. 2-33* (right), *P-8 J-5 E C* (above), *H-3 Q-4 A-2 C-4* (above)

**System 3:**

- Staff 1 (top): *th. 2-32* (left), *th. 2-32* (right), *I-10 Q-3 A-2 C-4* (above), *I-10 Q-3 A-2 C-4* (above)
- Staff 2 (bottom): *th. 2-33* (left), *th. 2-33* (right), *H-3 Q-4 A-2 C-4* (above), *H-3 Q-4 A-2 C-4* (above)

**System 4:**

- Staff 1 (top): *th. 2-32* (left), *Cadena 3* (center), *I-10 Q-3 A-2 C-4* (above), *I-10 K Q-5* (above)
- Staff 2 (bottom): *th. 2-33* (left), *H-3 Q-1 Q-5* (above), *H-3 Q-4 A-2 C-4* (above), *H-3 Q-1 Q-5* (above)

th. = theme  
acc. = accompaniment

**Introduction**

**Fariba**  
Mouvement 2

Compositeur et Arrangeur  
Dariush Zarbafian

Unmetered, freely

The musical score is written for two Tombak parts. Tombak 1 has a melodic line with rhythmic markings (up-bow and down-bow strokes) and rests. Tombak 2 provides a rhythmic accompaniment. The score is divided into sections:

- Introduction (Unmetered, freely):** Measures 1-8. Tombak 1 plays a melodic theme with rhythmic markings. Tombak 2 has rests.
- Metered Section:** Starts at measure 9. The time signature changes to 3/8. The section is divided into measures 9-14. Handwritten annotations include:
  - Measure 9: **th. 1** (circled in red), **A** (circled in red)
  - Measure 10: **A** (circled in red)
  - Measure 11: **B** (circled in red)
  - Measure 12: **th. 1-1** (circled in red), **C** (circled in red), **D** (circled in red), **B** (circled in red)
  - Measure 13: **th. 1-2** (circled in red), **C-1** (circled in red), **D** (circled in red), **B** (circled in red)
  - Measure 14: **th. 1-3** (circled in red), **C** (circled in red), **D-1** (circled in red), **B** (circled in red)
- Final Section:** Measures 15-17. Handwritten annotations include:
  - Measure 15: **th. 1-4** (circled in red), **C** (circled in red), **D-1** (circled in red), **B** (circled in red)
  - Measure 16: **th. 1-5** (circled in red), **C** (circled in red), **D** (circled in red), **E** (circled in red)
  - Measure 17: **C** (circled in red), **D** (circled in red), **E** (circled in red)



2  
 Th.1-6 C-1 D E th.1-7 Fariba D-1 E-1 th.1-8 C-1 D-1 E-1

Th.1-9 C-1 F E-1 th.1-10 C F E-1 th.1-3 C D-1 B

Th.1-4 C-1 D-1 B th.1-11 C-2 C-3 B th.1-12 C-4 C-3 B th.1-1 C D repeat 3 times

**B**

Th.2 G G H Trombac 2

Th.3 D-2 I J Th.3-1 D-1 I J

©Socim



Fariba

3

40

th.3-2 D-1 I J-1 th.3-3 D-1 I-1 J-1 th.3-4 L I-1 J

acc.1 C K - acc.1 C K - acc.1-1 I-2

43

th.3 D-2 I J th.3-3 D-1 I-1 J-1

acc.1 C K acc.1-2 C I-2 acc.1 C K -

46

th.4 M M J-1 th.4-1 M-1 M-1 J

acc.1-3 C K-1 N acc.1-4 C-1 K-1 N acc.1-3 C K-1 N

49

th.3-6 D-2 M-1 J-2 th.3-7 D-1 D-1 J th.3-8 I-3 I-4 J-2

acc.1-4 C-1 K-1 N acc.1-3 C K-1 N acc.1-4 C-1 K-1 N

52

th.3-9 I-4 I-4 J-2 th.5 O O J-2

acc.1-3 C K-1 N acc.1-5 C D -

©Secun

4 Fariba

Th. 5-1  
acc. 1-6

Th. 3-10  
P  
I-1 J-1

Th. 1-13  
C-1 D  
C-5 C-1 B  
C-6 C-1 B  
C-5 C-1 B

Th. 3-11  
Th. 3-12  
Th. 3-13

Th. 1-14  
C-6 C-1 B  
P  
P-1 I-5 J  
I-4 I-5 J  
D-2 I-5 J

Th. 3-14  
Th. 4-2  
Th. 4-1

D-2 D-2 J  
M M J  
M-1 M-1 J

acc. 1-7  
C D  
J-3  
acc. 1-8  
C-1 D  
J-3  
acc. 1-9  
C K-1

Th. 3-7  
Th. 5-2  
Th. 5-2

D-1 D-1 J  
O O J  
O O J

acc. 1-7  
C D  
J-3  
acc. 1-8  
C-1 D  
J-3  
acc. 1-9  
C K-1

Th. 4-3  
Th. 3-15

M-1 M-1 J-4  
D-1 D-1 J-4

acc. 1-10  
C-1 K-1  
C D  
acc. 1-5  
C D  
acc. 1-6  
C-1 D

©Soean

Fariba

5

71 *th4-4* *M-2 M-1 J-4* *th4-3* *M-1 M-1 J-4* *th5-3* *O O-1 J-5*

*acc.1*

74 *th5-4* *O-1 O J-6* *th3-16* *I-3 I-4 J-5* *th3-17* *I-6 I-4 J-5*

*acc.1-13*

77 *th3-18* *D-3 D-4 J-5* *th4-5* *M-1 M-1 J-5* *th3-19* *D-2 D-2 J-5*

*acc.1-12*

*Cadence 1* *D-5* *D-5* *J-5*

th. = theme

Score  
acc. = accompaniment

# Fariba

Mouvement 3

Dariush Zarfafian

th. 1 A

Tombak 1

Tombak 2

2

acc. 1

w

x

x-1

C

4

6

th. 1-1

th. 1-2

A

B-9

A-1

C-1

A-5

D-1

A-4e



2

Fariba

th.2 I-10 J-6 A-2 C-3

th.2-1 F-3 J-2 F-1 C-1

th.2-2 I-10 Q-6 A-1 C-3

th.2-3 F-3 A-2 C-1

Cadence 2 I-10 Q-6 Q-7

F-3 Q-7



2 Fariba

th.1-6

acc.2-5

th.1-7

th.1-8

th.1-9

th.1-10

th.1-11

th.1-12

th.1-13

th.1-14

Handwritten musical score for Fariba, measures 2-14. The score is written on ten systems, each with two staves. Red handwritten annotations above the notes indicate fingerings and techniques such as A-1, E-1, H-1, L, J, C-1, G-1, M, and G-4. The notation includes various rhythmic values, slurs, and dynamic markings.

Fariba 3

Handwritten musical score for Fariba, measures 12-17. The score is organized into systems of two staves each, with various annotations in red ink.

**System 1 (Measures 12-13):**

- Staff 1 (labeled *th. 2*): Measure 12 has notes with '+' signs and 'N' above. Measure 13 has notes with '-' signs and 'N' above.
- Staff 2 (labeled *th. 2-1*): Measure 12 has notes with '+' signs and 'N-1' above. Measure 13 has a whole rest and notes with 'M' and 'L' above.
- Staff 2 includes the annotation *S:G1*.

**System 2 (Measures 13-14):**

- Staff 1 (labeled *th. 2-2*): Measure 13 has notes with '+' signs and 'N' above. Measure 14 has notes with '+' signs and 'N-2' above.
- Staff 2 (labeled *th. 2-3*): Measure 13 has notes with '+' signs and 'N-1' above. Measure 14 has notes with 'L' and 'M' above.
- Staff 2 includes the annotation *S:G1*.

**System 3 (Measures 14-15):**

- Staff 1 (labeled *th. 3*): Measure 14 has notes with 'O' and 'L-2' above. Measure 15 has notes with 'J' and 'O' above.
- Staff 2 (labeled *th. 3-1*): Measure 14 has notes with 'O-2' and 'L' above. Measure 15 has notes with 'M' and 'O-1' above.

**System 4 (Measures 15-16):**

- Staff 1 (labeled *th. 2-4*): Measure 15 has notes with '+' signs and 'N-2' above. Measure 16 has notes with '+' signs and 'N-3' above.
- Staff 2 (labeled *th. 2-5*): Measure 15 has notes with '+' signs and 'N-2' above. Measure 16 has notes with '+' signs and 'N-3' above.
- Staff 2 includes the annotation *S:G1*.

**System 5 (Measures 16-17):**

- Staff 1 (labeled *th. 2-6*): Measure 16 has notes with '+' signs and 'N-2' above. Measure 17 has notes with '+' signs and 'N-3' above.
- Staff 2 (labeled *th. 2-7*): Measure 16 has notes with '+' signs and 'N-2' above. Measure 17 has notes with '+' signs and 'N-3' above.
- Staff 2 includes the annotation *S:G1*.

Additional annotations in red ink include 'E-1', 'E-2', 'L-3', 'L-4', 'O-3', and 'O-4' scattered across the staves.



4

rh.2-8

rh.2-9

rh.2-10

rh.2-11

Cadena 2

Fariba

P P-1 N-2 J O E-1

P-2 s P-2 G-2 S:G L M O-4 E-2

P P-1 P P-1 J O E-1

P-2 s P-3 P-2 s P-3 m O-4 E-2

A-6 L E-1 J-1 P-2 E-3

A-7 L E-1 M P-2 E-3



Th.1-4 <sup>2</sup> A-1 C B C D E F Fariba

Th.1-5 C-1 D-1 E C D E F

Th.1-6 H D-1 E H D E F

Th.1-7 G I E G-1 I-1 E F

Th.1-8 A I-1 E A-2 I E F

Handwritten musical score for guitar, featuring five systems of notation. Each system includes a treble clef staff (Th.) and an acoustic guitar staff (acc.).

**System 1 (Measures 9-10):**  
 Treble clef: Th.1-9 (Measures 9-10). Chords: A-2, E-1, F-1, Fariba G, I-2, E, F.  
 Acoustic staff: acc.1 (Measures 9-10). Chords: A-3, J.

**System 2 (Measures 11-12):**  
 Treble clef: Th.1-10 (Measures 11-12). Chords: K, G, F, G, I-2, E, F.  
 Acoustic staff: acc.1-1 (Measures 11-12). Chords: J, J.

**System 3 (Measures 13-14):**  
 Treble clef: Th.1-11 (Measures 13-14). Chords: G-2, G, F, G, I-2, E, F.  
 Acoustic staff: acc.1-1 (Measures 13-14). Chords: J, J.

**System 4 (Measures 15-16):**  
 Treble clef: Th.1-12 (Measures 15-16). Chords: G-1, G-1, L, G, I-2, E, F.  
 Acoustic staff: acc.2 (Measures 15-16). Chords: M, M, M.

**System 5 (Measures 17-18):**  
 Treble clef: Th.1-13 (Measures 17-18). Chords: G-2, G, L, G-2, I-2, N, F.  
 Treble clef: Th.1-14 (Measures 17-18). Chords: A-1, H-1, F-1, E-1, I-2, E-2, F-2.



4 Fariha

Th.1-15  
 E-2 E-2 L C I-2 N F

Th.1-16  
 E-3 E-4 F-3 C-2 I-2 E-2 F-2

Th.1-17  
 E-2 E-2 L C-1 I-3 N F

Th.1-18  
 E-5 E-2 L-1 C-3 I-3 E-2 F-2

Th.1-19  
 G-2 G-2 L O I-3 N-1 F-4

Th.1-20  
 J-1 J-1 P A-3 I-3 E-1 F-2

Th.1-21  
 A-2 E-6 L G-3 I-2 N-1 F-4

Th.1-22  
 A-4 A-5 P M-1 I-2 E-1 F-2

Th.1-23  
 G A-1 F G-3 I-2 N-1 F-4

Th.1-24  
 M-1 A-3 F-5 M-1 I-2 E-1 F-2

5

Th.1-25 *G-4 A-1 P-1 G-4 I-3 N P-1*  
*Fariba*

Th.1-26 *J-2 A-6 P-2 J-1 I-4 E-2 P-1*

Th.1-27 *E-7 E-2 P-3 Q I-3 N P-4*

Th.1-28 *E-3 E-4 P-5 E-4 I-3 E-2 P-6*

Th.2 *A A-7 F-6 A I-2 A-7 F-6*  
*acc. 3* *H-2*

Th.1-29 *G-4 E-2 P-3 Q I-3 N P-4*

Th.1-30 *J-2 A-6 P-5 E-5 I-3 A-6 P-7*

Th.1-31 *E-8 E-8 R G-4 I-3 N-1 P-6*

Th.1-32 *E-9 E-9 R-1 J-1 I-4 A-6 P-7*

6

Fariba

th.1-33

E-8 E-8 R G-4 I-3 Q P-4

th.1-34

E-9 E-9 R-1 J-1 I-4 A-6 P-7

th.1-35

C C R Q I-3 N P-4

th.1-36

A-8 A-8 R-1 E-10 I-4 A-6 P-7

th.1-37

G-3 G-3 F-7 N I-3 N-1 P-8

th.1-38

M M F-7 N-2 I-3 A-6 P

th.1-39

H-3 H-3 S G I-3 N P-1

th.1-40

O-1 O-1 F-8 J I-3 A-9 P

th.1-41

H-3 H-3 S G-1 I-3 N-3 P-8

th.1-42

O-1 O-1 F-8 J I-3 A-8 P-9



Handwritten musical score for Fariba, featuring guitar and double bass parts with various fretting and fingering annotations.

**Fariba**

**th.1-43** (Guitar): G-2 G L Q I-5 N P-4

**th.1-44** (Double Bass): T T-1 L Q I-5 A-8 P-5

**th.2** (Guitar): A A-7 F-6 A I-2 A-7 F-6  
acc. 3 H-2

**th.1-45** (Guitar): G-3 G-1 L Q I-5 Q P-4

**th.1-46** (Double Bass): J-2 J-2 R-2 A-5 I-5 A-8 P-5

**th.1-47** (Guitar): E-7 E-2 L Q I-5 Q P-4

**th.1-48** (Double Bass): E-3 E-4 P-10 A-8 I-5 A-8 P-5

**th.1-49** (Guitar): E-2 E-2 L Q I-5 Q P-4

**th.1-50** (Double Bass): E-3 E-4 P-10 A-8 I-5 A-8 P-5



8 H-4 H-4 L Furiba H-4 I-5 G-5 P-11

Th. 1-51

Th. 1-52 H-4 H-4 P-10 H-4 I-5 A-8 P-5

Th. 1-53 C-4 C-5 L U I-5 G-5 V

Th. 1-54 J-2 M-2 P-5 U I-5 G-6 V

Th. 1-55 M M L U I-5 G-7 V

Th. 1-56 J-2 M-2 P-5 U I-5 G-6 V

Th. 1-57 G-8 G-3 L U I-5 G-5 V

Th. 1-58 M-1 M P-5 U I-5 G-6 V

Th. 1-59 Q Q-1 P-3 U Q-2 W P-3

Th. 1-60 E-9 E-11 P-5 U E-12 W P-12

Handwritten musical notation for four systems, each consisting of a treble clef staff and a bass clef staff. The notation includes rhythmic markings (Q, P, W) and fingerings (A, E, B, U) above the treble staff, and fret numbers (e.g., 9, 11, 5, 1, 13, 3, 5) above the bass staff. A 'Fariba' marking is present above the first system. A bracket on the right side of the first system is labeled with the number '9'.

**System 1:**  
 Treble staff: Q, Q-1, P-3, Fariba, Q-1, Q-2, W, P-3  
 Bass staff: E-9, E-11, P-5, B-1, E-13, Q-3, P-5

**System 2:**  
 Treble staff: Q-4, Q-5, P-3, Q-5, Q-2, W, P-3  
 Bass staff: A-5, A-10, P-5, A-6, B-2, Q-6, P-5

**System 3:**  
 Treble staff: Q-4, Q-5, P-3, Q-5, Q-2, W, P-13  
 Bass staff: A-5, A-10, P-5, A-6, B-3, U-1, P-13

th. = theme  
acc. = accompaniment  
Score

# Fariba

## Mouvement 5

Dariusz Zarbafian

**A**

th.1

Tombak 1

th.1

Tombak 2

th.1-2

th.1-2

th.1-4

th.1-4

th.1-6

th.1-6



2

th.1-8

th.1-8

th.1-9

Fariba

A-2 B C D A-3 B C D

th.1-10

th.1-10

A-4 H C-1 D

A-4 H C-1 D

th.1-11

th.1-11

A-2 H-1 C-2 D

A-2 H-1 C-2 D

th.1-12

th.1-12

A-5 H-1 C-3 D

A-5 H-1 C-3 D

th.1-13

th.1-13

A-6 H-1 C-4 D

A-6 H-1 C-4 D

th1-14 A-7 H-1 Furiba C-4 D

th1-15 A-8 H-1 C-5 D

th1-16 E-4 H-1 D D

Pro-Cadence I J K D

Cadence 1 I-1 I J K D





5)

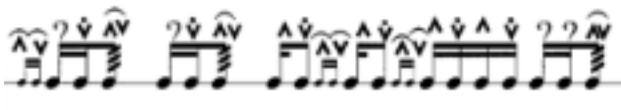


### Mouvement 3

1)

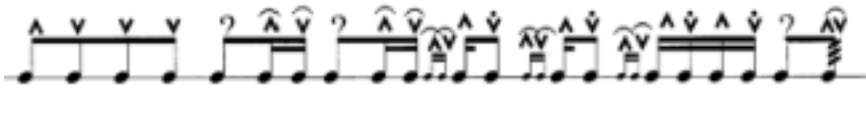


2)



### Mouvement 4 part 1

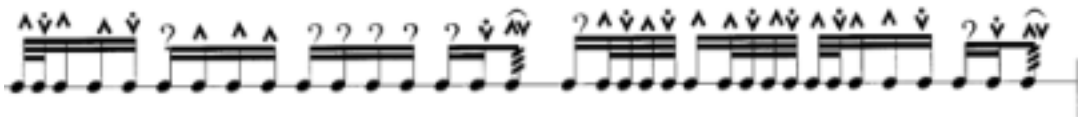
1)



2)

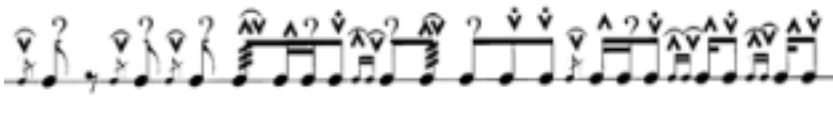


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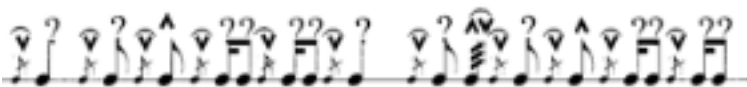


### Mouvement 4 part 2

1)



2)



Mouvement 5

1)





## Appendix 7-B, Dariush Zarbafian, accompaniments

### Mouvement 1

1)

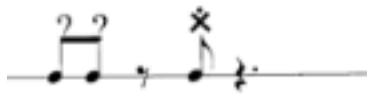


2)



### Mouvement 2

1)



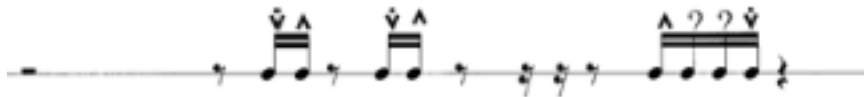
### Mouvement 3

1)

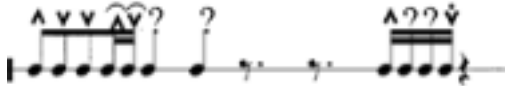


### Mouvement 4 part 1

1)



2)



### Mouvement 4 part 2

1)



2)



3)



# Appendix 7-C, Dariush Zarbafian, cadences

## Mouvement 1

1)

Two staves of musical notation. The upper staff contains a sequence of notes with various accents and slurs, ending with a question mark. The lower staff contains a sequence of notes with question marks above them, also ending with a question mark.

2)

Two staves of musical notation. The upper staff contains a sequence of notes with various accents and slurs, ending with a question mark. The lower staff contains a sequence of notes with question marks above them, also ending with a question mark.

3)

Two staves of musical notation. The upper staff contains a sequence of notes with various accents and slurs, ending with a question mark. The lower staff contains a sequence of notes with question marks above them, also ending with a question mark.

## Mouvement 2

1)

Two staves of musical notation. The upper staff contains a sequence of notes with various accents and slurs, ending with a question mark. The lower staff contains a sequence of notes with question marks above them, also ending with a question mark.

Mouvement 3

1)



Mouvement 4 part 1

1)



Mouvement 5

1)



## Appendix 7-D, Dariush Zarbafian, motives and variants

(Only includes motives with variants)

### *Fariba* Mouvement 1, Motives and variants

Motive 1

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4
1	A	B	A-1	C
1-1	A	D-1	A-4	C
1-2	A	B	A-1	C-1
Total number of different letters	1	2	1	1
Prominent Letters	A	B,D	A	C

Motive 2

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4
2	I	J	A-2	C
2-1	I-1	K	A-2	C
2-2	I-2	K	A-2	C-1
2-3	L	K	B-1	C-1
2-4	D	K	A-2	C-1
2-5	I-3	K	A-2	C-1
2-6	M	K	A-3	C-1
2-7	I-5	K-1	A-4	C-1
2-8	I-6	K	A-3	C-1
2-9	P	K	A-3	C-1
2-10	P-1	J-1	A-3	C-1
2-11	P-3	J-1	Q	C-2
2-12	M-1	K	Q	C-2
2-13	I-9	K	F-1	C-3
2-14	O-1	J-3	Q	C-3
2-15	R	K	R-1	C-4
2-16	T	K	T-1	C-4
2-17	T-2	K-1	T-3	C-4
2-18	T-2	J-1	T-3	C-4
2-19	B-2	J-4	B-3	C-2
2-20	B-2	N-1	B-3	C-2
2-21	B-4	J-1	B-3	C-2
2-22	B-4	K	B-5	C-4
2-23	B-6	K-1	B-5	C-4

2-24	U	K	B-5	C-4
2-25	U	K	B-7	C-4
2-26	U	D-1	E	C-1
2-27	U-1	K	B-7	C-4
2-28	U-1	D-2	B-7	C-4
2-29	U-1	H-9	A-2	C
2-30	I-11	K-1	Q	C-3
2-31	P-8	J-5	E	C
2-32	I-11	Q-3	A-2	C-4
2-33	H-3	Q-4	A-2	C-4
<b>Total number of different letters</b>	11	6	7	1
<b>Prominent letters</b>	I,U,B,P	K	A,B	C

### Motive 3

<b>Them and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>	<b>Cell 4</b>
3	H-1	-	H	-
3-1	H-1	H-2	H	-
3-2	H-3	H-4	H-5	C-1
3-3	H-6	H-7	H-8	C
3-4	Q-2	-	Q	-
3-5	Q-2	D-1	Q	C-4
3-6	Q-2	D-1	Q	C-4
<b>Total number of different letters</b>	2	2	2	1
<b>Prominent letters</b>	H,Q	H,D	H,Q	C

### Motive 4

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>	<b>Cell 4</b>
4	I-4	N	F-1	C-1
4-1	O	N	F-1	C-1
4-2	O-7	N	F-1	C-1
4-3	I-8	N	F-1	C-1
4-4	P-2	N	H	C-1
4-5	P-4	D-2	H	C-1
4-6	P-5	D-2	H	C-1
4-7	F	J-2	H	C-4
4-8	F-2	J-4	Q-1	C-4
4-9	P-6	K-1	P-7	
4-10	S	K-1	P-1	
4-11	F-3	K	P-1	
4-12	F-3	D-1	B-5	C-4
<b>Total number of different letters</b>	5	4	5	1

Prominent letters	P.F.I	N.D.K	F,H,P	C
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## ***Fariba* Mouvement 2 motives and variants**

### Motive 1

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>
1	A	A	B
1-1	C	D	B
1-2	C-1	D	B
1-3	C	D-1	B
1-4	C-1	D-1	B
1-5	C	D	E
1-6	C-1	D	E
1-7	C	D-1	E-1
1-8	C-1	D-1	E-1
1-9	C-1	F	E-1
1-10	C	F	E-1
1-11	C-2	C-3	B
1-12	C-4	C-3	B
1-13	C-5	C-1	B
1-14	C-6	C-1	B
Total number of letters	2	4	2
Prominent letters	C	D,C	B,E

### Motive 3

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>
3	D-2	I	J
3-1	D-1	I	J
3-2	D-1	I	J-1
3-3	D-1	I-1	J-1
3-4	L	I-1	J
3-6	D-2	M-1	J-2
3-7	D-1	D-1	J
3-8	I-3	I-4	J-2
3-9	I-4	I-4	J-2
3-10	P	I-1	J-1
3-11	P-1	I-5	J
3-12	I-4	I-5	J
3-13	D-2	I-5	J
3-14	D-2	D-2	J
3-15	D-1	D-1	J-4
3-16	I-3	I-4	J-5
3-17	I-6	I-4	J-5



3-18	D-3	D-4	J-5
3-19	D-2	D-2	J-5
Total number of different letters	4	3	1
Prominent letters	D	I	J

Motive 4

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>
4	M	M	J-1
4-1	M-1	M-1	J
4-2	M	M	J
4-3	M-1	M-1	J-4
4-4	M-2	M-1	J-4
4-5	M-1	M-1	J-5
Total number of different letters	1	1	1
Prominent Letters	M	M	J

Motive 5

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>
5	O	O	J-2
5-1	D-2	O	J-2
5-2	O	O	J
5-3	O	O-1	J-5
5-4	O-1	O	J-6
Total number of different letters	2	1	1
Prominent letters	O	O	J

### ***Fariba* Mouvement 3, motives and variants**

#### Motive 1

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>	<b>Cell 4</b>
1	A	B	A-1	C
1-1	A	B-9	A-1	C-1
1-2	A-5	D-1	A-4	C
Total number of different letters	1	2	1	1
Prominent letters	A	B	A	C

#### Motive 2

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>	<b>Cell 4</b>
2	I-10	J-6	A-2	C-3
2-1	F-3	J-2	F-1	C-1
2-2	I-10	Q-6	A-1	C-3
2-3	F-3	-	A-2	C-1
Total number of different letters	2	2	2	1
Prominent letters	F	J	A	C

## Fariba Mouvement 4 part 1, motives and variants

### Motive 1

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
1	A	B	B	C	D	E
1-1	A-1	E	E	C	D	E
1-2	A-1	B-1	B-1	C	D	E
1-3	A-1	E-1	E-1	K	D	E
1-4	A-1	E	E	J	D	E
1-5	A-1	B-1	B-1	K	D	E
1-6	A-1	E-1	E-1	J	D	E
1-7	A-1	L	E-1	C-1	G-1	E-1
1-8	A-2	L	E-1	C-2	G-2	E-1
1-9	A-1	L	E-1	J	G-1	E-1
1-10	A-3	L	E-1	M	L	E-1
1-11	A-4	G-1	E-1	J	G-3	E-1
1-12	A-5	L	E-1	M	L	E-1
1-13	G-4/ E-1	G-5	E-1	J	G-4	E-1
1-14	G/ E-1	L-1	E-1	M	L-1	E-1
Total number of different letters	2	4	2	4	3	1
Prominent letters	A	L, E, B	E	C, J, M	D, G	E

### Motive 2

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
2	N	N	J	G-4	E-1
2-1	N-1	-	M	L	E-1
2-2	N	N-2	J	O	E-1
2-3	N-1	L	M	O-1	E-1
2-4	N-2	L/E-1	J	O	E-1
2-5	N-2	L-4/E-/	M	O-3	E-1
2-6	N-2	N-3	J	O-1	E-1
2-7	N-2	N-3	M	O-4	E-2
2-8	P/ P-1	N-2	J	O	E-1
2-9	P-2/ P-2	G-2/ L	M	O-4	E-2
2-10	P/ P-1	P/ P-1	J	O	E-1
2-11	P-2/ P-3	P-2/ P-3	M	O-4	E-2
Total number of different letters	2	5	2	3	1
Prominent letters	N	N, L	J, M	O	E

### Motive 3

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6	Cell 7
3	O	L-2	L	E-1	J	O	E-1
3-1	O-2	L	L-3	E-1	M	O-1	E-1
Total number of different letters	1	1	1	1	2	1	1
Prominent letters	O	L	L	E	J, M	O	E

**Fariba Mouvement 4 part 2, motives and variants**

Motive 1

Motive and Variant Number	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6	Cell 7
1	A	A-1	B	C	D	E	F
1-1	A-2	A-1	B	C	D	E	F
1-2	A-1	A-1	B	C	D	E	F
1-3	G	C-1	B	C-1	D	E	F
1-4	A-1	C	B	C	D	E	F
1-5	C-1	D-1	E	C	D	E	F
1-6	H	D-1	E	H	D	E	F
1-7	G	I	E	G-1	I-1	E	F
1-8	A	I-1	E	A-2	I	E	F
1-9	A-2	E-1	F-1	G	I-2	E	F
1-10	K	G	F	G	I-2	E	F
1-11	G-2	G	F	G	I-2	E	F
1-12	G-1	G-1	L	G	I-2	E	F
1-13	G-2	G	L	G-2	I-2	N	F
1-14	A-1	H-1	F-1	E-1	I-2	E-2	F-2
1-15	E-2	E-2	L	C	I-2	N	F
1-16	E-3	E-4	F-3	C-2	I-2	E-2	F-2
1-17	E-2	E-2	L	C-1	I-3	N	F
1-18	E-5	E-2	L-1	C-3	I-3	E-2	F-2
1-19	G-2	G-2	L	O	I-3	N-1	F-4
1-20	J-1	J-1	P	A-3	I-3	E-1	F-2
1-21	A-2	E-6	L	G-3	I-2	N-1	F-4
1-22	A-4	A-5	P	M-1	I-2	E-1	F-2
1-23	G	A-1	F	G-3	I-2	N-1	F-4
1-24	M-1	A-3	F-5	M-1	I-2	E-1	F-2
1-25	G-4	A-1	P-1	G-4	I-3	N	P-1
1-26	J-2	A-6	P-2	J-1	I-4	E-2	P-1
1-27	E-7	E-2	P-3	Q	I-3	N	P-4
1-28	E-3	E-4	P-5	E-4	I-3	E-2	P-6
1-29	G-4	E-2	P-3	Q	I-3	N	P-4
1-30	J-2	A-6	P-5	E-4	I-3	A-6	P-7
1-31	E-8	E-8	R	G-4	I-3	N-1	P-6
1-32	E-9	E-9	R-1	J-1	I-4	A-6	P-7
1-33	E-8	E-8	R	G-4	I-3	Q	P-4
1-34	E-9	E-9	R-1	J-1	I-4	A-6	P-7
1-35	C	C	R	Q	I-3	N	P-4
1-36	A-8	A-8	R-1	E-10	I-4	A-6	P-7
1-37	G-3	G-3	F-7	N	I-3	N-1	P-8
1-38	M	M	F-7	N-2	I-3	A-6	P
1-39	H-3	H-3	S	G	I-3	N	P-1

1-40	O-1	O-1	F-8	J	I-3	A-9	P
1-41	H-3	H-3	S	G-1	I-3	N-1	P-8
1-42	O-1	O-1	F-8	J	I-3	A-8	P-9
1-43	G-2	G	L	Q	I-5	N	P-4
1-44	T	T-1	L	Q	I-5	A-8	P-5
1-45	G-3	G-1	L	Q	I-5	Q	P-4
1-46	J-2	J-2	R-2	A-5	I-5	A-8	P-5
1-47	E-7	E-2	L	Q	I-5	Q	P-4
1-48	E-3	E-4	P-10	A-8	I-5	A-8	P-5
1-49	E-2	E-2	L	Q	I-5	Q	P-4
1-50	E-3	E-4	P-10	A-8	I-5	A-8	P-5
1-51	H-4	H-4	L	H-4	I-5	G-5	P-11
1-52	H-4	H-4	P-10	H-4	I-5	A-8	P-5
1-53	C-4	C-5	L	U	I-5	G-5	V
1-54	J-2	M-2	P-5	U	I-5	G-6	V
1-55	M	M	L	U	I-5	G-7	V
1-56	J-2	M-2	P-5	U	I-5	G-6	V
1-57	G-8	G-3	L	U	I-5	G-5	V
1-58	M-1	M	P-5	U	I-5	G-6	V
1-59	Q	Q-1	P-3	U	Q-2	W	P-3
1-60	E-9	E-11	P-5	U	E-12	W	P-12
1-61	Q	Q-1	P-3	Q-1	Q-2	W	P-3
1-62	E-9	E-11	P-5	B-1	E-13	Q-3	P-5
1-63	Q-4	Q-5	P-3	Q-5	Q-2	W	P-3
1-64	A-5	A-10	P-5	A-6	B-2	Q-6	P-5
1-65	Q-4	Q-5	P-3	Q-5	Q-2	W	P-13
1-66	A-5	A-10	P-5	A-6	B-3	U-1	P-13
Total number of different letters	11	12	7	12	5	7	3
Prominent letters	E,A,G	E,A,G	P,C,F	Q,C,U	I	E,N,A	F,P

## ***Fariba* Mouvement 5, motives and variants**

### Motive 1

<b>Motive and Variant Number</b>	<b>Cell 1</b>	<b>Cell 2</b>	<b>Cell 3</b>	<b>Cell 4</b>
1	A	B	C	D
1-1	A-1	B	C	D
1-2	E	B	C	D
1-3	E-1	B	C	D
1-4	E-2	B	C	D
1-5	E-3	B	C	D
1-6	E-2	F	C	D
1-7	G	H	C	D
1-8	A-2	B	C	D
1-9	A-3	B	C	D
1-10	A-4	H	C-1	D
1-11	A-2	H-1	C-2	D
1-12	A-5	H-1	C-3	D
1-13	A-6	H-1	C-4	D
1-14	A-7	H-1	C-4	D
1-15	A-8	H-1	C-5	D
1-16	E-3	H-1	D	D
Total number of different letters	3	3	2	1
Prominent letters	A,E	B,H	C	D

## Appendix 7-E, Dariush Zarbafian, cells and variants

(Only includes cells with variants)

### Movement 1- cells and variants

Variant Number	Cell A	Cell B	Cell C	Cell D
1				
2				
3				
4				
5				
6				
7				

Variant Number	Cell F	Cell H	Cell I	Cell J
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				



Variant Number	Cell K	Cell M	Cell N	Cell O
1				

Variant Number	Cell P	Cell Q	Cell R	Cell T
1				
2				
3				
4				
5				
6				
7				

8				
---	--	--	--	--

Variant Number	Cell U
1	

## Movement 2- cells and variants

Variant Number	Cell C	Cell D	Cell E	Cell I
1				
2				
3				
4				
5				
6				

Variant Number	Cell J	Cell K	Cell P	Cell M	Cell O
1					
2					
3					
4					
5					
6					

### Movement 3-cells and variants

Variant Number	Cell A	Cell B	Cell C
1			
2			
3			
4			
5			
(...)			
8			
9			

Variant Number	Cell F	Cell J	Cell Q	Cell X
1				
2				
3				
(...)				
6				
7				

### Movement 4 part 1-cells and variants

Variant Number	Cell A	Cell B	Cell C	Cell E
1				
2				
3				
4				
5				
6				
7				

Variant Number	Cell G	Cell H	Cell J	Cell L
1				
2				
3				
4				

5				
---	--	--	--	--

Variant Numbers	Cell N	Cell O	Cell P
1			
2			
3			
4			

### Movement 4 part 2-cells and variants

Variant Number	Cell A	Cell B	Cell C	Cell D	Cell E
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Variant Number	Cell F	Cell G	Cell H	Cell I
1				
2				
3				
4				
5				
6				
7				
8				

Variant Number	Cell J	Cell L	Cell M	Cell N	Cell O
1					
2					





### Movement 5-cells and variants

Variants Number	Cell A	Cell C	Cell E
1			
2			
3			
4			
5			
6			
7			
8			

Variant Number	Cell H	Cell I
1		