



Rhythm as pattern and the study of free rhythm: the case of Iranian Classical music

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Free rhythm in non-western musical cultures, like that of Iran, India, Arab world, etc. has always been a focus of attention for musicologists, with lots of unanswered questions and little clue to start studying the matter and even less results (Clayton, 1996). Questions start with basic definitions of what we call free rhythm and expand to a much broader need for an understanding of how music is organized and structured through time when we have that so-called freedom. Is it just an absence of the underlying timing structure that in western music we know as metre? If so, then we should just define, as some do, free rhythm as non-metric. But even so, how could timing structure occur without any sense of metre and what are its fundamental elements? Is there such a thing as correct and incorrect in performing free rhythm music? If there is, then we should be able to draw a line, though not a strict one, between better and worse performed musical phrases of free rhythm.

Cooper and Meyer (1960), Kolinski (1973) and Lerdahl and Jackendoff (1983) provided a strong background to study rhythm, especially through defining a practical distinction between metre and rhythm, and introducing grouping at different levels as the key point in analyzing the structure of phrases. Grouping structure has also shown high consistency with some of Gestalt principles of cognition in music (Cambouropoulos, 1998). These principles result in grouping sounds (tones) together, or in other words segmentation of phrases into smaller units (motifs, etc.) that tend to be recognized and recalled as patterns.

Segmentation of phrases is done according to two key factors: gap and change. By the rule of proximity in Gestalt theory, gaps are taken as time intervals between successive tones relatively longer than those already perceived, and change can be a jump to a different register or timbre or an accent that intensifies one tone and separates the following from the preceding. These two can define borders of groups and segment a whole phrase into smaller units that we here call rhythmic cells. Analyzing music rhythmically, with the aid of segmentation and grouping can lead us to two things:

First, the rhythmic cells that happen to form the whole timing structure and their frequency in a piece or particular repertoire.

Second, the way such cells organize in a whole phrase and whether they are set in a reasonably defined structure, or is sentencing based on a sort of randomness.

The present study is aimed at analyzing the structure of free rhythm or the so-called non-metric music, through segmentation of phrases and finding its basic repetitive celllike patterns. As the case, the focus of the study is on non-metric parts in Iranian Classical music repertoire: 'Radif-e 7 Dastgah'.

Not much has been done so far to find such a structure in 'Radif', only two major works are present to date. One (Tsuge, 1970) has examined samples of 'Avaz' (vocal) with words, trying to get to the underlying structure through 'aruz' (poetic metre), and the other (Azadehfar, 2006) has walked in the direction of classification for different 'gusheh's (small parts of Iranian Classical repertoire) rather than exploring the meaning of free rhythm. Therefore, a comprehensive revision of the whole body of free rhythm in 'Radif' seems to be necessary for the analysis.

For that, samples of 'gusheh's are analyzed and segmented into cell-like units with regard to the gaps and changes that define borders, to show how we segment phrases. Then timing structures of those units are extracted, eliminating tones, just keeping their time values. Such cell-like units are summarized in the analyzed 'gusheh' to see the way they are organized to form an entire phrase. It's shown that both the organizing structure and production of patterns are based on an 'additive' concept of rhythm. Patterns are generated by simply adding one or more elements to a previously made pattern, and phrases are easily produced by successive rows of patterns, usually ending in a kind of rhythmic rhyme.

We have done the same for the whole body of 'Radif' repertoire, using an especially written software system that is made on a segmented data base of phrases, stored in a way that any search and pattern recognition is possible. The final output of this system is a list of cell-like rhythmic patterns. We can see that patterns show different levels of order and repetition as they organize into phrases, and this is the reason why all studies have ended classifying 'gusheh's into metric vs. non-metric.

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درآمد
Darâmad

The image displays a musical score for the piece 'Darâmad'. It consists of seven staves of music, each beginning with a treble clef and a key signature of two flats (B-flat and E-flat). The notation includes various rhythmic values such as eighth and sixteenth notes, as well as rests. Several measures are marked with a '2' and a red slash, indicating a second ending or a specific rhythmic pattern. Some notes are marked with a 'V' and a double accent (>>), suggesting a vibrato or a specific performance technique. The score is written in a style typical of traditional Persian or Arabic music notation.

segmentation of a 'gusheh' in Mahur into rhythmic cells

The diagram illustrates the process of segmenting a 'gusheh' (a rhythmic unit) in the Mahur mode into individual rhythmic cells. It begins with a musical staff showing a sequence of notes and rests. A red arrow points down to a simplified rhythmic notation where notes are represented by vertical stems and rests by horizontal lines. A second red arrow points down to a series of seven horizontal lines, each containing a different rhythmic cell extracted from the original piece. The cells are marked with red slashes and numbers (2, 4, 2) indicating their duration or structure.

Negar Booban

Iranian musician and Ud player,
born in Tehran, Iran, 1973.

At the Faculty of Fine Arts, University of Tehran, getting an MA degree in Architecture, with the design of Tehran future Conservatory, focusing on special acoustic design for Iranian music rehearsal venues, she concurrently studied music and musical acoustics.

Mastered playing Ud and Iranian Radif with the renowned Iranian Ud master Mansur ariman, Negar has been working with different bands of Iranian Classical music for over a hundred live performances and several recordings since 1994, along with frequent recitals at the Faculty of Fine arts, Fajr and Yas Music Festivals, and radio programs. She's also worked as an instructor of Ud and Iranian music (theory and practice) for 10 years, and cooperated with Mansur Nariman in notating and editing of his two books for Ud players: "42 pieces for Ud" and "The seven Dastgah-s of Iranian Radif for Ud". Negar is an instructor of Ud at Tehran Conservatory of Music now.

With a basic knowledge of acoustics and musical acoustics, Negar got interested in principles of Iranian music of the past and with the well known researcher Dr. Khosro Moulana, she went through the treatises from 10th to 16th century (A.D.) by Farabi, Safialdin Ormavi, and Abdolqader Maraqi, as well as other sources for research, like miniatures and wall paintings. This led Negar to a research career and academic life, lecturing at Universities of Tehran, Honar, and IRIB (Faculty of Radio and Television). Following the path, she has also done a PhD in Art Research, her thesis on a comparative study of rhythm in Iranian music and Persian language, with Iranian maestro Hossein Alizadeh as the music supervisor.

Negar Booban is deeply involved with the art of improvisation, both in traditional way of Dastgah concept and in free improvisation on themes of various origins and modes. A manifestation of this is made in her solo Ud album: "Payaapey" (continuous), with each piece improvised on a pre-composed short theme, recorded in one take. The album was released in August 2008 by Mahriz records, Tehran.