CIRCULAR REPRESENTATIONS & A CYCLICAL ANALYSIS MODEL FOR MAQAM MUSIC

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The aim of this essay is to emphasize the benefits of circular representations of the rhythmic cycles and to offer an alternative analysis model for maqam music, which can provide the analyst with pillars of composition that might have gone unnoticed with current analysis techniques. Our model is based on the relationship between phrase rhythm and the underlying cyclic rhythm frameworks (namely *usül*s). The level of synchroneity between these two interrelated layers of music can prevail the structurally important focal points of a piece besides outlining the 'breathing-in' and 'out' moments of music.

Circular Representations

Although they are not to be confused with the Western meter, when notationally represented, the rhythmic cycles in maqam music, *usüls,* are generally represented in a linear fashion and kept inside bars similar to Western meter - an idiom which was appropriated during Turkey's modernization phase. However, one should not also forget that notational representations, besides their many other

Figure 1

usages, allow grounds for building conceptual frameworks about the music they are employed in too. As their name (*devir*, or 'cycle') also imply, characteristics such as irregular organization of accents, or different periodic versions having identical time values affirm that it might be misguiding to approach *usüls* in a Western sense. Alternatively, circular representations of

Figure 2

usüls - as they had been depicted in the old music treatises, *Edvars* -may show the periodicity of the rhythmic cycles clearer as well as revealing the rhythmically dense areas within the cycle and the distribution of the relative accents more accurately than their linear counterpart. A comparision of both depictions can be observed from **Figure-1.** Here the linear depiction of the *Devr-i Revan usül* is first analyzed according to the 'hierarchical dot-notation' theory of Lerdahl & Jackendoff's Generative Theory of Tonal Music showing *usül*'s number of beats and their respective level of ac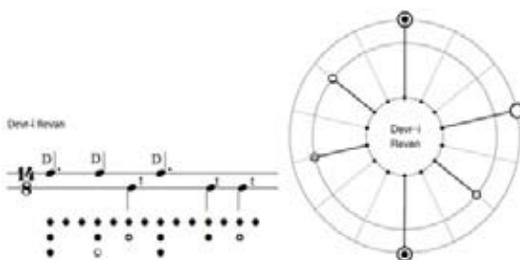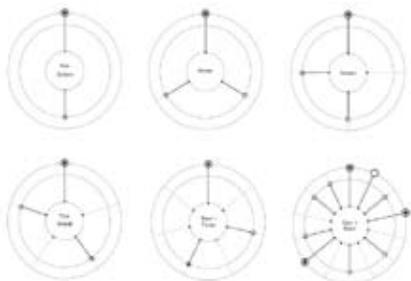cents. This analytical depiction is then reworked and implemented to circular representations. The accentual distribution within a cycle becomes much more clear as can be seen from the figure. **Figure-2** shows some other examples of different usüls represented in a similar fashion.

Analytical examples
Pencgah Mevlevi Ayini, First Selam Devr-i Revan Section

To understand the relationship between the rhythmic frameworks provided by *usül* and the musical phrasings of *seyir*, one can start by analyzing the grouping structure and mapping

it around the circular model we had just presented. **Figure-3** presents such an analysis of the opening six cycles of *Pencgah Mevlevi Ayini* – First *Selam* and show how the phrasings are distributed among cycles. Here, the first phrase (A) starts around *Rast* (tonic) and immediately proceeds to *Neva* through the *Rast* pentachord, establishes it and cadences. The next phrase starts with a prolongation on *Çargah* as we see motions to *Dügah* through *Uşşak* tetrachord, with which it then ascends and cadences on *Neva* again. Notice the ascending *Segah* trichord to *Neva* in most of the cadential points in phrases (A) and (B). The last phrase (C) acts as a closing phrase for this section making a prolongational descent from

Figure 3

Hüseyni to *Neva*; which includes a restatement of *Rast* pentachord at its beginning. After this a new section will begin, which's first phrase will start with the first '*Düm*' of the *Devri Revan*. As can be seen from the circular analysis, this section takes a total of six-full cycles of *Devr-i Revan*, but what is more interesting is that all three phrases of the section start on a different '*Düm*' of the *Devr-i Revan* cycle (**Figure-3**).
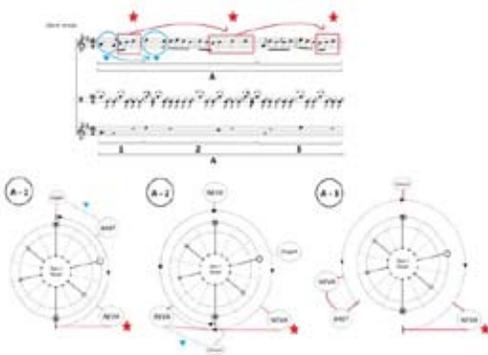

Figure 4-a

Figures 4-a, 4-b and 4-c investigates these three phrases separately. As can be seen from **Figure 4-a**, the opening phrase can be grouped under three subphrases. The first of these (A-1) starts 'near' *Rast* , 'shows' it and establishes the *Rast* pentachord with an initial ascend to *Neva*, marking the end of this subgroup. The pitches of this initial ascent (*Segah-Çargah-Neva*) are encountered in the following lines, and interestingly all ending a subgroup similar to the first one. The next grouping start very similar to the beginning (*Dügah-Rast*) with a rhythmically and intervallically identical approach, the only difference is that the approach is to the dominant this time (*Hüseyni-Neva*). Notice how this approach is backed-up by the same usül pattern, as the upper neighbor pitches are played with '*Düm*'s and the essential tones are played with '*Tek*'s. The subgroups (A-2) and (A-3) have similar *seyir*s as can be seen from the reduction below; both prolong the established pitch Neva, with ornamentations from its upper and lower neighbor notes (*Hüseyni* and *Çargah*).
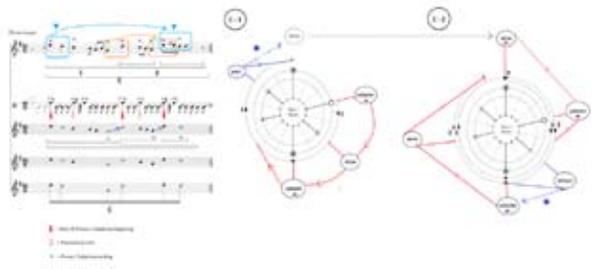
Phrase A (**Figure 4-a**)

The circular analysis also maps the essential pitches and marks their progression through the phrase. Notice how the approaches of the neighboring tones *Dügah* & *Hüseyni* to *Rast* and *Neva* in (A-1)

Figure 4-b

and (A-2) are reciprocals actually (marked with ▼). Another interesting thing is how the trichordal cadences to *Neva* (*Segah-Cargah-Neva*) conclude at the same cadential point (marked with ★) in this phrase. In the next phrase B we the same trichordal motion can be observed at the caddence, however it is at a different place of the rhythmic cycle, and ends on a strong beat (*Düm*); making the phrase (B) both a beginning accented (*Düm @ Çargah*) *Çargah* prolongation moving towards an End-accented (*Düm @ Neva*) *Neva* caddence (**Figure 4-b**).

Figure 4-c

As we have mentioned before, the last phrase C functions as a closing phrase for this section with a final cadence on Neva **(Figure 4-c)**. Notice from the figures how the *Hüseyni-Neva* motion (marked as ▼) is recalled from (A-2) and how it starts and ends this part. There are three subgrouping as can be seen from the figüre, which are also in accordance with Gestaltian rule of 'Good-Continuation'; the leap from first subphrase ending to the next one (*Rast-Neva*) is also projected to the leap we see from *Dügah* to *Hüseyni*; not only that *Rast* and *Dügah* are the last pitches of their respective groupings, but the first pitches of the following groupings are also backed by the '*Düm'* strokes in the rhythmic framework. Thus the accents caused by the leaps get even more stronger and become important focal points. The circular analysis also shows this projection, again the processes happen at the reciprocal sides of the cycle as can be seen from **Figure 4-c**.

Figure 5

Pencgah Mevlevi Ayini, Third Selam Devr-i Kebir Section

The same analytical model also expose and help us see some interesting facts about the third *Selam* of the same *Mevlevi Ayin* (*Pencgah*), *Devr-i Kebir* section [**Figure 5**]. This section is mainly formed of four cycles in an A-B-A-C form which repeats. The phrase grouping and circular analysis of this section 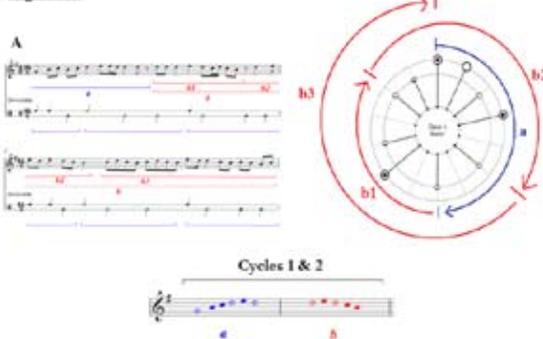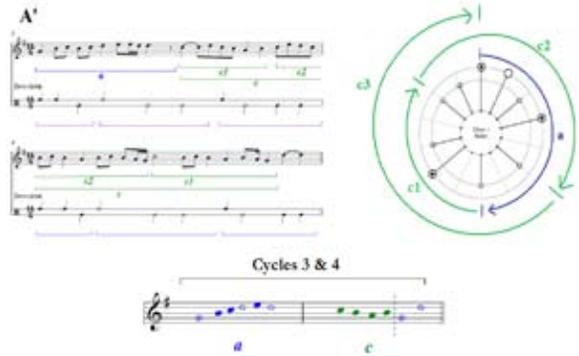can be observed from **Figure 6-a**, **Figure 6-b** and **Figure 6-c**. As can be seen, the A sections involve the ascents from *Rast* to *Neva* whereas the B and C sections descend back to *Rast*. Interestingly, although B and C sections differ musically, their inner-phrasings are quite parallel, as both are composed of three ornamented sub-phrases, covering the same areas of time as can be observed from the cyclical mappings in **Figure 6-c**. Moreover, what is


Figure 6-a

Cycles 1 & 2

more interesting is that although the phrasings seem to get in synchrony with the strong beats (*Düm*) of *Devr-i Kebir* by every two cycles, it might not be so. Notice that each subphrase of phrase B starts with an ascent toward *Hüseyni* after which it starts to descend back to *Rast*. Here *Hüseyni* is a very important focal point not only because it is the highest note, but that every time it occurs it is backed by a strong beat, a *Düm* stroke; therefore the pitches moving towards it act similar to pick-up notes or anacruses

Figure 6-b

Cycles 3 & 4

Figure 6-c

as can be observed from **Figure 8-a** and **8-b**. These figures also show clearly how these descents were ornamented differently and don't sound as mere repetitions.
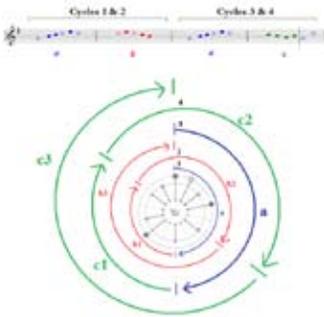
Conclusion

This paper has presented how circular representations and a how a holistic phrasing analysis based on these representations can provide us with additional information when analyzing maqam music. As maqam music has mostly been an orally transmitted tradition up until 20th century when Turkey adapted the technology and the practice of Western notation during its rapid modernization process, the analyses also showed the questionable efficiency of the notion of barline that came along with the Western notation system, especially in bigger cycles, in which we see the function of barline in hyper-metric levels only.[1] A related study with this topic, involving how this 'imported' technology (and the notion) of barline effected maqam music (especially in bigger cycles) during the 20th century is also continued, however it is beyond the scope of this presentation.

References Cited

Lerdahl, Fred & Jackendoff, Ray. 1999. *A Generative Theory of Tonal Music.* Massachusetts: MIT Press

Yekta, Rauf. 1934. *Istanbul Konservatuarı Neşriyatı- Mevlevi Ayinleri.* İstanbul: Feniks.

Figure 7-a

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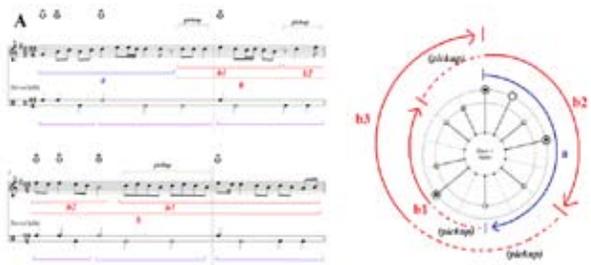
1 It shouldn't be forgotten that the development of meter and the concept of barline goes in parallel with the development of harmony (and the harmonic rhythm) in Western music.