Arabic Music: Samaie Farhafza Analysis
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Composer: Jamil Bake
Performer: Simon Shahim and the Near Eastern Music Ensemble

Preface:

The Arabic modal system is one of the most extensive modal. It has a long history, and some musicologists believe it is substantially similar to what was performed in the Eastern Mediterranean during the Roman period, however, it is modal and monophonic. The modal tone system in Arabic music is sometimes based on theoretical octave (Diwan) scales of seventeen, nineteen or twenty-four notes. Moreover, the temperament is not generally equal, and the practice is essentially diatonic. The favorite modes (Maqam\(^1\): Maqam) come from throughout the Arabic world. It is obvious ubiquity in all Arabic countries, South Africa (Ethiopia and Kenya), Turkey, Turkic nations (Azerbaijan, Turkmenistan, Uzbekistan, Kazakhstan), Iran, Armenia, Europe (Greece, Bulgaria, Serbia, Croatia, Macedonia and Albania), Fragments of Maqam theory can even be found in western China and in newer music of Malaysia and Indonesia.

It is important to note that in every country or region I mentioned, there are significant regional variants in the maqam system. There is not one Maqam system. It is more accurate to say that maqam represents a way of conceiving of tuning and mode that creates a framework to understand a lot of different folk and classical music traditions such as: Samaei, Doulab, Muwashah, Nawba (north Africa) and suite (Kashmir), particularly in countries that have been ruled under the Islamic Empire.

Arabic melodies draw from a vast array of melodic, known as Maqamat (singl. Maqam). Arabic books on music include as many as fifty-two melodic modes, of which at least twelve or so, are commonly used (rast, bayati, hijaz, huzam, saba, nahawand, kurd, sikah, nakriz, suznak, ajam, hijaz kar Kurd, and Farhfza). These modes feature more tones than are present in the western musical system, including notably smaller intervals that are sometimes called microtones, or half-flats § and half-sharps ¶. The tonal system of Maqam is based on a two-octave (Diwan) fundamental scale. In addition, the central of octave notes are named Rast, Douka, Sika, Jaharka, Nawa, Hussayni, Awj and Kirdan (C D E § F G A B § [ b ] C).

The aim of this paper is to analyze Samaie Farhafza on Maqam Farhafza, by Jamil Bake\(^2\) and performed by Simon Shaheen\(^3\) and the Near Eastern Music Ensemble. Moreover, the analysis will be in two deferent levels:

- The macro-levels, which will be, examine the form and the mode of the Maqam system and it is related issues such as; tetrachords and modulations.

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\(^1\) Maqam in Arabic means: rank or a place in a scale of quality or value. In addition, maqam could be used as a position or grade. Therefore, the meaning of maqam hassan, for instance, is high quality place or position.

\(^2\) Jamil Bake (Bey): (1871-1916) in Turkey. He wrote many composition in the Arabic musical form such as; Samai Farahfaza, Samai Shedaraban, Bachraf Mahour and Bachraf Tanbur.

\(^3\) Simon Shaheen was born in Tarshiha, Galilee, in 1955 and grew up surrounded by music. He began learning the instrument at the age of five, and a year later began studying violin at the Conservatory for Western Classical Music. He moved to New York City in 1980 to complete his graduate studies in performance at the Manhattan School of Music, and later in performance and music education at Columbia.
And the micro-level, which will be, examines each part of the Samaei with more depth in melodic and rhythmic structures.

**Historical system and theory:**

The first prominent of the Arabic maqam was undoubtedly al-Farabi\(^4\), who wrote extensively about the tuning of Arabic music in his book *kitab al-musiqa al-kabir* (Grand Book on Music). However, modern maqam much more closely resembles the theory of al-Urmawi\(^5\), who references al-Farabi, and wrote his large *Kitab fi al-Musiqiqa* (Book on Music). Al-Urmawi describes a tuning system for the four choruses (four double strings) *Oud*, using seventieth notes to the *Diwan* (octave). In addition, we don't know very much about where al-Farabi and al-Urmawi got their information about the Arabic Maqam, or more specifically, who invented the tuning systems and Maqams they describe. The maqam named are according to one of the following:

- Designate an important note in the maqam “scale”, for instant: *rast* or *nawa*.
- After cities such as: *Asfahan* and *Nahawand*.
- After a landscape such as: *hijaz* or *Iraq*.
- After a person or ethnicities such as: *mahour*.

Moreover, a number of *maqams* have been invented in the last 200 years, including Shad Araban, Ferahafza, and Muhayyer Kurdi. These have a very romantic sentiment, they are more complicated and intricate, and specific in their structure.

**The Jins (ajnas) and the maqam**

Trichords are defined as sequences of three notes. Similarly, tetrachords are grouping of four adjacent notes, and pentachords are sequences of five notes. The Arabic word for these sequences is *Jins* (plural: *ajnas*), which means gender or type. Another Arabic synonym is ‘*aqd* (plural: ‘*uqud*). These sequences are the building blocks for the Arabic *Maqam*. In general, each maqam is made up of a lower (first Jins) and an upper (second Jins) sequence, although some Maqam includes three or more sequences. The first *jins* is called *al-juza* and determines the nature and name of the maqam, and the second *jins* is called *al-fara’a*. In addition, most Maqams have secondary (overlapping) sequences, which can be exploited during modulation. I believe it is possible and more practical to view the Maqam as a collection of sequences instead of a collection of notes.

Different Arabic music references define sequences slightly differently. As with the Maqam, many sequences are too archaic or rarely used. There is also disagreement about the length of each sequence: three, four, or five notes. The three types of creating modal scales of the tetrachordal joining (*Jam’e*) in the Maqam systems are:

- Disjunct (*Munfasil*).
- Conjunct (*Muttasil*).
- Overlapping (*Mutadkhil*).

Maqam Farhafza, for instant, is based on G tonic and consists of two disjunct tetrachords and one overlapping tetrachords. The first disjunct one-Nahawand tetrachord on G (*Nahawand*), the second one is rast tetrachord on D (*Dokah*). The overlapping tetrachord is on B♭ (*Ajam*) as shown on the figure below.

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\(^4\) Muhammad ibn Muhammad ibn Tarkhan ibn Uzalagh al-Farabi, also called Abu Nasr al-Farabi (b 878 Wasiq, district of Farab, Turkestan; d Syria, 950). He wrote on logic, ethic, politics, mathematics, alchemy, philosophy and music.

\(^5\) Safi ad-Din al-Urmawi (d.1294), who developed the Pythagorean system, which was based on al-Farabi’s methods.
Maqam Farhfaza has the same tonal intervals as maqam Nahawand transposed on G. However its melodic development is different, and makes much use of the Ajam trichord on the third (B♭). In addition, Maqam Nahawand has two versions shown bellow. In general the first version (Nahawand-Hijaz) is used on the way up, and the second version (Nahawand-Kurd) is used on the way down.

Maqam Nahawand, first version

Maqam Nahawand, second version

The Ajam trichord sounds very similar to the first three notes in a major scale in Western Classical Music. The third note is tuned slightly lower than usual, which makes it mellower than a major scale. Some books represent this trichord as a tetrachord since the fourth note is almost always 1/2 a tone away (B♭).
Al-Farabi had theoretically divided the diwan (octave) into twenty-five intervals, which he demonstrated that on the Oud. For the division of the Jins (tetrachord), he calculated ten possible intervals as the following (see chart next page):

<table>
<thead>
<tr>
<th>Fracti-on</th>
<th>1/1</th>
<th>256/243</th>
<th>18/17</th>
<th>162/149</th>
<th>54/49</th>
<th>9/8</th>
<th>32/27</th>
<th>81/68</th>
<th>27/22</th>
<th>81/64</th>
<th>4/3</th>
<th>3/2</th>
<th>18/11</th>
<th>19/9</th>
<th>2/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td></td>
<td></td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td>E♭</td>
<td>F</td>
<td>G</td>
<td>A</td>
<td>B♭</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cents</td>
<td>0</td>
<td>90</td>
<td>98</td>
<td>145</td>
<td>168</td>
<td>204</td>
<td>294</td>
<td>303</td>
<td>355</td>
<td>408</td>
<td>498</td>
<td>702</td>
<td>853</td>
<td>996</td>
<td>1200</td>
</tr>
</tbody>
</table>

In addition, the intervals regarding to Al-Farabi method, which is still valid in Arabic music, were conceptualized in terms of limma and comma intervals:

\[
\begin{align*}
\text{C} & \quad \text{D} & \quad \text{E♭} & \quad \text{F} & \quad \text{G} & \quad \text{A} & \quad \text{B♭} & \quad \text{C} \\
4/4 & \quad ¾ & \quad ¾ & \quad 4/4 & \quad ¾ & \quad ¾ & \quad = 24/4
\end{align*}
\]

Some Arabic music theories describe the row of maqam rast, for instance, on the bases of the comma units as follows:

\[
\begin{align*}
\text{C} & \quad 1 & \quad 1 & \quad \text{D} & \quad 1 & \quad 1 & \quad \text{E♭} & \quad 1 & \quad \text{F} & \quad 1 & \quad 1 & \quad \text{G} & \quad 1 & \quad 1 & \quad \text{A} & \quad 1 & \quad \text{B♭} & \quad 1 & \quad \text{C} \\
9 & \quad 8 & \quad 5 & \quad 9 & \quad 9 & \quad 8 & \quad 5
\end{align*}
\]

Quarter tones (♯/♭) in Arabic music

The basic system in contemporary Arabic notation is to use a 24-note diwan, with half-flat and half-sharp in between the 12 tones of a western chromatic scale. In addition, the notation is usually a flat symbol with a slash through it for half-flats ♭ and a sharp with only one vertical line for half-sharps ♯. The quartertone is halfway between a natural note and a flat or sharp note. However, the natural pitch relationship determined by the physics of sound suggests slightly different divisions, depending on the tonic (Qarar) and other factors. Some times the same quartertone is slightly lower or higher from one maqam to another; for example, the E♭ in maqam rast is commonly understood to be higher than E ♭ in maqam bayati. Perhaps, the most important thing is to listen carefully to Arabic performers and try to hear what the notes sound like.

This technique is based on al-Farabi’s methods that extracted the following intervals: octave (Diwan), fourth, fifth, seventh, whole note, half note and quarter note. He defined the destination on the Oud string between two positions of the first

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6 The value of the quartertone is 50 cents, where a cent is a logarithmic measurement equal to 1/100 of the semitone in the well-tempered scale.
7 The value of the comma is: the Pythagorean comma (23.46 cents), the syntonic comma (21.306 cents) and the Arabic comma (22.6415 cents).
8 Arabs use the western notation in the second half of the nineteenth century and the beginning of the twentieth century.
quartetone as 35/36 of the total length of the string. In addition, al-Farabi called the third *Wusta-Zalzal*, which is larger than a tempered (minor) third and smaller than a tempered (major) third, whose ratio is 27/22.

**Modulation in the Maqam**

Modulation is a method and a technique used during the melodic development of the *Maqam*. It consists of playing one or more notes outside the scale of the *Maqam*, in order to produce a second known *maqam* that is compatible with the first one. Modulation can carry on by transitioning to another *Maqam* or *Maqamat*, and usually returns to the starting *Maqam*. In the *Taqasim* or the *tahmelah*, Arabic musical forms with free rhythm; the soloists can modulate quite a few *Maqams*. In addition, the most common way of modulation is to replace the *maqam*’s upper *Jins* with another compatible *Jins* of the same size.

In *Maqam Farhafza*, a lower *Jins* and an upper *Jins* result in *Maqam Nahawand and Kurd*. Usually, the first modulation would be replacing the upper *Jins* with *Maqam Nahawand* (for example; the composer or the soloist can modulate move around *Maqam: Nahawand, Ajam and Kurd* by using the tonic, third and fifth notes of the native *Maqam*).

Another modulation on *maqam Farhafza*, is replacing the upper *Jins* with *maqam Kurd*, resulting in a variant *Maqam* (*Kurd*). The *Kurd Jins* can be use to start a full *Maqam Kurd* (*the fifth note*) and so on. Another common modulation technique exploits similarities between *ajnas*, by going back and forth between an incomplete *Jins* and its full version. The first three notes of the *Maqam Farhafza* (*ajnas*), can lead to the *Maqam Nahawand*. Modulation is a very important method and technique that shows the true richness, beauty and artistic side of the Arabic *Maqam* system. It requires years of experience and knowledge of the *Maqam*.

**Maqam definition:**

**The different between a *Maqam* and a scale:**

The Arabic *Maqam* is built on top of the Arabic *diwan*. The *Maqam* is generally made up of one *Diwan* of eight notes, sometimes the *Maqam* scale extends up to two *Diyans* as I mentioned in the introduction. In addition, the *Maqam* in Arabic music is much more than a scale for the following reasons:

- Each *Maqam* may include microtonal variations such that tones, half tones and quartetones in its underlying scale are not precisely that. For instance, the E♭ in *Maqam Rast* is tuned slightly lower than the E♭ in *Maqam Bayati*. 
• Each *Maqam* includes rules that define the starting note (*Qarar*)\(^9\), the ending note (*Mustaqar*)\(^10\), which in some cases is different to the tonic, and the dominant note (*Ghumma*). The dominant is the starting note of the second *jins*.
• Each *maqam* has a different character, which conveys a mood, although that mood is subjective. Moreover, since classical Arabic musical forms (*Samaie, Longa, Tahmelah, and Muwashah*) are mostly melodic, the choice of *Maqam* greatly affects the mood of the composition.

### Analysis

The *Samaie* is a composed genre comprised of four sections (*Khana*, plural *Khanat*), each followed by the refrain (*Taslim*). The *Samaie* composition demonstrates the 10/8 rhythmic mode (called *Samai Thaqil*) followed throughout the *Taslim* and the first three *Khanat*. The ten rhythmic structure of the *Samei’s Thaqil* (*Wazn* in Arabic) has form of (3+4+3), however, some teachers and professional musicians believe it has the form of (5+5) because of the of the location of strong and light beats in the *Wazn*.

![Diagram of Samaie rhythm](image)

The fourth *Khana*, which precedes the last statement of the refrain, is typically composed in a 3/4 or 6/8 meter, called *Samai Darj*\(^11\). Some contemporary composers display a 5/8, 7/8 or 9/8 meter in the fourth khana, however, *Samei’e Farhaifza* is display a 6/8 the rhythmic pattern (see chart).

![Diagram of Samai Darj rhythm](image)

In the context of the oral tradition, the patterns have special didactic functions as, for instance, in the transmission of Arabic music; vocal and instrumental. Before beginning to learn to sing or play, the student must have a command of the rhythmic patterns, the *Wazan*.

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\(^9\) In Arabic is decision; used to indicate the tonic.
\(^10\) In Arabic is resting place; used to indicate the ending note in the maqam.
\(^11\) A 6/8 rhythm, used in the *samaie* and to accompany the Arabic-Andalusian muwashshahat.
The Samaei Farhafza is like most pre-composed genres in Arabic music are set to rhythmic cycles that alternate strong and weak beats and silences. Each beat is represented by one of two types of drum strokes that vary in intensity; *Dum* designates the deep sound produced by hitting the center of the drum and *Tek* the clear high-pitched sound produced by hitting the edge of the drum with the fingertips.

Usually the first three *Khanat* of the *Samai* consist of four to six measures. The last *Khana* varies from six to twenty four measures. Generally the first *Khana* in the *Samai* displays the selected *Maqam* in a stepwise motion. It is usually played in the lower tetrachord (*Jins*) of the *Maqam*. The second *Khana* shows a modulation to a related *Maqam*. In the third *Khana* the melodic range expands and reaches the higher tetrachord of the *Maqam Conclusion*.

*Maqam Farahafza* has the same tonal intervals as *Maqam Nahawand* transposed on G. However its melodic development is different, and makes much use of the *Maqam Ajam* trichord\(^{12}\) on the third (B\(^\flat\)).

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\[^{12}\text{The Ajam trichord sounds very similar to the first 3 notes in a major scale in Western Classical Music. The 3rd note is tuned slightly lower than usual, which makes it more mellow than a major scale. Some books represent this trichord as a tetrachord since the 4th note is almost always 1/2 a tone away (B\(^\flat\)).}\]

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Sine each *Khana* in the *Samaie* followed by the refrain “*Taslim*”, one can notice that the first *Khana* of the *Samaie* starts at the beginning of the composition. The beginning note on the *Khana* or the *Taslim* could start on the third as in the first *Khana* (B\(^\flat\)), or on the sixth as in the *Taslim* (E\(^\flat\)).

The *Samaei* performed by small ensembles called the *Takht*, which made up of three to six players of the following Arabic/Middle Eastern instruments:
**Oud:** Typically pear-shaped, short-necked and fretless, with five or six strings. It is played by plucking. The instrument has a warm timbre, low tessitura, and microtonal flexibility, which make it extremely popular in Arab World and the Middle East.

**Qanun:** A flat zither-type instrument with twenty-six (singles, double and Treble) strings, which are played by plucking. The strings are tuned to the basic notes of a given scale and the pitch is raised or lowered by stopping the strings with a series of metal levers.

**Kaman:** Nowadays this is the term for a western-style violin (though tuned to Arab musical requirements G D G D).

**Nay:** An open-ended reed flute, blown obliquely. With a wide range and breathy tone, it is highly expressive, and capable of producing dynamic and tonal inflections. The development and use of the nay has been attributed to shepherds, but it is, in fact, an urban instrument.

**Daff:** Generally a small tambourine. Also known as a Riqq. Often used alongside the Tablah. It is one of the instruments traditionally used in the ensemble (Takht).

**Tablah:** (Darbukkah, Derbouka): A hand-drum, usually conical or vase-shaped. May be made of pottery or metal.

The formal structure of this Samaei can be represented as $\text{A T B T C T D T}$ (where $T=$ Taslim). The first Khana (A) consists eight measures starts on the third note, and ends on the fifth note of Maqam Farahafza. There are some display modulations to neighboring Maqam rows, for instance, in measure six it changes to Maqam Ajam and in measure seven it changes to Maqam Nahawand.

The Taslim (T) section, which will be repeated continually after each Khana, starts on the third of Maqam Farahafza and consists four measures. The first and the fourth measures are carrying notes out side Maqam Farahafza. The first one is consists notes of Maqam Nahawand and the fourth of Maqam Hijaz.
The second *Khana* (B) contains eight measures and starts on the tonic of *Maqam Farahafza*. It carries number of notes out side the *Maqam*. The first and the third measures carried elements from *Maqam Hijaz*, and the sixth measure from *Maqam Bayati*, and *Nahawand*. However, this *Khana* ends on *Maqam Bayati Doukah* (on D).

The third *Khana* (C) contains eight measures and starts on the second note (E♭) of *Maqam Hijaz*. One can notice that the modulations in this *Khana* go back and forward between *Maqam Hijaz* (the native *Maqam* of this *Khana*) and *Maqam Nahawand* with some passive notes on *Maqam Ajam* (the fifth measure), which usually give a different color to the musical composition.

The fourth *Khana* (D) is the longest and fastest *Khana* in this *Samaei*. It is 6/8 and in *Maqam Hijaz*. The modulation in this *Khana* is not critical. This *Khana* consists two parts; the first has sixteen measures with repeat, and the second part has eight measures with repeat. Ratenuto is required in the second time of repeat leading to the *Taslim*.

*Maqam Hijaz*
The range of each part in this Samaei is differ from one part to another, however, the charts show the range of every Khana and the Taslim.

1. First Khana (A)  
   ![Diagram](Image 1)

2. Taslim (T)  
   ![Diagram](Image 2)

3. Second Khana (B)  
   ![Diagram](Image 3)

4. Third Khana (C)  
   ![Diagram](Image 4)

5. Fourth Khana (D)  
   ![Diagram](Image 5)

Since Arabic music considered as improvised and memorized music, the ornamentations in this Samaei are found everywhere in every measure, and are not only useful, but indispensable. They connect the notes and give them meaning. Moreover, ornamentations give the player an opportunity to show off his technical skill and power of expression. Also, in the performance the appoggiatura, glissando, vibrato, and trills are widely used (see examples).

In short, the following table consists eight categories in the left column. The fourth row “Modulations” consists the “starting Maqam” of the Khana(t) and the Taslim (the bold fonts) in addition to the neighboring Maqam.
<table>
<thead>
<tr>
<th></th>
<th>Structure</th>
<th>A</th>
<th>T</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Sections/Khanat</td>
<td>First Khana</td>
<td>Taslim</td>
<td>Second Khana</td>
<td>Third Khana</td>
<td>Fourth Khana</td>
</tr>
<tr>
<td>3</td>
<td>Start</td>
<td>Third</td>
<td>Fifth Note</td>
<td>Fifth</td>
<td>Second</td>
<td>Tonic</td>
</tr>
<tr>
<td>4</td>
<td>End</td>
<td>Fifth</td>
<td>Tonic</td>
<td>Tonic</td>
<td>Tonic</td>
<td>Tonic</td>
</tr>
<tr>
<td>5</td>
<td>Range</td>
<td>9</td>
<td>9+1/2</td>
<td>9+1/2</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>Modulations (Out side the native Maqam)</td>
<td>“Farhafza” Ajam and Nahawand</td>
<td>“Farhafza” Nahawand and Hijaz</td>
<td>“Hijaz” Bayati and Nahawand</td>
<td>“Hijaz” Nahawand and Ajam</td>
<td>“Hijaz” Nahawand</td>
</tr>
<tr>
<td>7</td>
<td>Time Signature</td>
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<td>10/8</td>
<td>6/8</td>
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<td>8</td>
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<td>8</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>Section’s Maqam</td>
<td>Farhafza</td>
<td>Farhafza</td>
<td>Hijaz</td>
<td>Hijaz</td>
<td>Hijaz</td>
</tr>
<tr>
<td>10</td>
<td>Repeats</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Study of the *Samaei* form is a highly significant aspect of the study of Arabic and Middle Eastern music, because it is one of the most important instrumental compositions and should be expanded to include performances of a large number of groups and ensembles.
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