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THE PERSIAN *TAHRIR* AS GLOTTAL TECHNIQUE AND MELISMATIC FORM

Abstract: *The tahrir (and its equivalent azeri zəngulə) is a melismatic form which uses a vocal technique of rapid succession of glottal strokes over a series of notes. Several articles (1974, 2016, 2019) have highlighted this effect at the level of its acoustic spectrum, but the most in-depth studies (2020) were carried out in a French laboratory, using an electro-glotto-graphic device, with the collaboration of the famous singer Mohammad-Rezā Shajarian (d.2020). In addition to this scientific approach, the article questions the often ambiguous and vague uses of the terms tahrir, ghalt, tekye, and yodel, and proposes precise definitions based on the explanations of singing masters. These definitions are informed by the literal etymological meaning of the terms mentioned. At a musical level, the article also defines the place of tahrir in the vocal art as a melisma governed by subtle rules and aesthetic choices. It appears that the tahrir (and probably the zəngulə), is not only a decorative element appearing spontaneously in phases of expressive climax; it is an essential component of ghazal singing in all its registers, and is part of the very composition of each āvāz and gushe. This is why the tahrir formulas are also adapted to the instrumental playing of the canonical repertoire (radif), and are memorised note by note, as in singing.*

Keywords: *Tahrir. Vocal melisma. Iranian āvāz. Zəngulə. Preliminary definition*

The Iranian and Azerbaijani vocal repertoire comprises two main categories, as in most *maqām* traditions:

— measured songs (*tasnif*), —free singing (*āvāz*) not measured or pulsed, but flexibly structured in a by a poetic meter.

The particularity of this form is that it requires a vocal technique or laryngeal mechanism (Castellengo 2009) which can be defined as a glottal appoggiatura (Simms & Koushkani p. 273). It is implemented:

—in an ornament or a short embroidery that often stretches the meter over a long syllable;

—or in a long melisma escaping from the text and the meter to shape an autonomous sequence within a melodic model (*āvāz*, *gushe*).

In both cases, embroidery or melisma, and even if it is only an ornament on a few notes with a glottal appoggiatura, it is generally called *tahrir*. In common Iranian usage, this term is therefore ambiguous, as it designates both the melodic form (embroidery or vocalisation) and the laryngeal mechanism involved.

The *tahrir* as a melodic sequence is assimilated to the vocal technique by which it is distinguished from an ordinary melisma.

One of the aims of this article is to clarify the usage and semantic scope of the terms applied to the vocal art.

Etymology

The ambiguous use of the term *tahrir* (of Arabic origin) is reflected in its polysemy. Its most common meaning is “liberation, emancipation”. Musically, this makes sense, as the vocalization is freed from the meter pattern and from the verse’s meaning.

Another meaning, in Arabic, Iranian and Turkic languages, is “editing” of a text, or “writing”, which also makes sense, as the chant “edits” or rewrites the poem with incisions and illuminations.

The root of the word *tahrir* is *harir*, which means a light silk cloth [1], and by extension a sheet of silk paper on which one takes notes. These three meanings converge to designate, in Iran as well as in the

Iraqi Maqâm (Simms 2004), a melismatic vocal form. In Azerbaijan, the equivalent of *tahrir* is called *zəngulə* (bell).

Much more than a short or elaborate embroidery, the *tahrir*, with its characteristic glottal mechanism, is considered “the pillar and identity marker of Persian singing” (Kazemi:15). A singer whose *tahrir* is not satisfactory should limit himself to measured songs (*tasnif*), or to religious singing (Koranic psalmody, elegies, shi‘i *ta‘zie* opera) where sobriety is required.

Faced with the lack of precision of the term *tahrir* in common usage and even in scholarly publications, I interviewed master Mozaffar Shafi‘i, a high-level amateur from a long ancestry of singers. From the outset, he says: “we must distinguish the isolated *tahrir* (*tak*) from the chains of *tahrir*”. And he produces a glottal blow, then two, then three in chains, and finally a longer series, which is the *tahrir* proper, commonly called *bolboli* (of the nightingale). This glottal stroke or *appoggiatura* is called *tekye*, or *ghalt*. In his publication of ‘A. Davāmi’s canonical vocal repertoire Dariush Talai does not use the term *tekye* at all, but he too specifies that the *ghalt* appears “alone or in a group” (p. 17). For his part M.-R. Lotfi (p. 23-4) points that “a distinction must be made between the *tahrirs* that ornate a few notes and those that constitute entire phrases.”

The *tekye* or *ghalt* is the minimal unit of what is called *tahrir*. In a singing as well as in instrumental performance, it occurs at any time, but what is meant by *tahrir* proper are these bursts which can be sporadic (repeating the same note or shaping a short motive) or structured in melisma.

Tekye means “support” and *ghalt* “rolling”. In effect, notes with a *tekye* are highlighted, and if repeated quickly, can be said to *roll*. The French Chevalier de Chardin, who lived in Isfahan in the middle of the 17th century, reports that the singers “draw a great voice from the bottom of the stomach, which they roll with great force and brilliance.” (T. II, p. 206).

Technical definition of the glottal jump

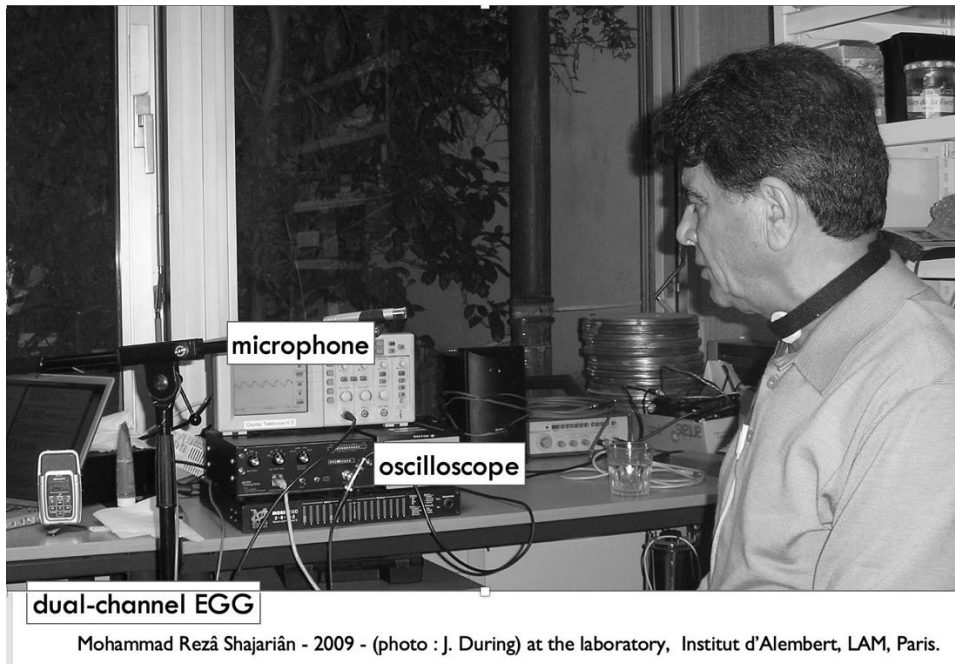
What is the glottal jump?

In the middle register of the human vocal range, the larynx can vibrate either in a “heavy” laryngeal mechanism (M1) or in a “light” mechanism (M2). On a given note, a change of mechanism triggers a sudden jump in frequency. Western lyrical technique proscribes such melodic discontinuities but other vocal cultures, on the contrary, cultivate and refine these discontinuities. This is particularly the case in the vocal repertoire of the *dastgāhs* and the *mughams*.

Several scientific publications have analysed its acoustic characteristics, but the most advanced research has been carried out in Paris at the Laboratoire d’Acoustique Musicale of the Centre National de Recherche Scientifique. While earlier researches were based mainly on the analysis of recordings, we worked with two high-level singers: first with Mrs. Solmaz Badri, and a few years after with the late Mohammad-Reza Shajarian.

“The change in laryngeal mechanism underlying *tekye* has been reported by different authors [see bibliography]. It has been questioned in 2019 [3] yet without laryngeal-behaviour assessment. To clarify laryngeal physiology in Iranian *tahrir*, we recorded simultaneously the acoustic and the electroglottographic signal (EGG) of these two vocalists. For both singers, *tekye* realization goes with a sudden decrease in glottal contact corresponding to a change in laryngeal vibratory mechanism.

The electroglottographic and glottal-contact measurements confirm our previous observations on laryngeal-mechanism jumps in *tahrir*. The *tekye* switch between Mechanism 1 and 2 can be done on ranges as large as two octaves, attesting to exceptional laryngeal control. The two singers adjust *tekye* parameters (duration, melodic shape, interval) to the musical context [4].”



Mohammad Rezā Shajariān - 2009 - (photo : J. During) at the laboratory, Institut d'Alembert, LAM, Paris.

Fig. 1. Ostād Shajarian watching his electroglottographic signal.

The frequency-jump musical interval is around a minor third for Mrs. Badri, which can be considered as a standard. (In instrumental renditions of the *tahrir*, the jump interval is also currently between 2 to 4 half tones.) For M.-R. Shajarian, *tekye* frequency jump can vary from a minor third (315 cents) to a major seventh (1000 cents), with a flexible and changing melodic form. The movement of the glottis is extremely rapid, of the range of 0,05 second.

In what is called *tahrir*, the glottal jump (*tekye*) is usually repeated at a rate between 4 to 6 per second. Laboratory experiments show that *tekye*'s mechanism is different from yodeling (Tyrolean or else), the *juk juk* of the Turkmen *bagşy* or the Kurdish vocal genre *hore* or *siaw chamani*, said to be inspired by the partridge (*kawk*).

TWO SHORT AUDIO EXAMPLES OF JUK-JUK AND KAWK STYLE ARE GIVEN

Based on Lloyd Miller's opinion (1999: 108-9, 324), some claim that *tahrir* is also practised by Iraqi, Syrian, and even Flamenco singers. So far I never heard any example of it, and it is probably a confusion between sporadic *ghalts* and actual *tahrir*. In the Maqām al-'Irāqī, *tahrir* designates also an introductory melisma, but devoid of series of *tekye*. Hence, what the Iranians commonly call *tahrir* and the Azeris *zəngulə*, is specific to their music and occupies a central place in it.

As *tahrir* commonly designates a glottal effect and a vocal (and instrumental) melisma, for greater precision, another term may be used. A common and suggestive term is *chah-chah*, which also refers to the “chirping” of birds and corresponds to *zəngulə* (bell) in Azerbaijan. In the ancient treatises (Marāghī p. 385), *tahrir* was called *marghule* which means “gurgling”, one of the dictionary definitions of which being: “to emit (a sound) in a throaty voice”, or “borborygmus”, as indeed *tahrir* only articulates syllables or onomatopoeias.

Tekye or ghalt?

Like the concept of *tahrir*, the use of the terms *tekye* and *ghalt* is not very clear. In Kāzemi's important work, published in 2019, *tahrir* and *ghalt* are somewhat confused (p. 22), as are *tahrir* and *chah-chah*. “Vocal *tahrirs*, he says, are very often an arrangement (*tarkibāt*) of *tekye* and *ghalt* notes. A movement from one note to the other without *tekye*, that is, in a kind of legato, is called *ghalt*.” (Kāzemi p. 25). Shafī'i on his side calls *ghalt* or *tahrir-e māleshi* (spread, pasty), a melisma with only a few scattered *tekye* but without *chah-chah*, without chains of *tekye*.

Most articles on *tahrir* only mention the term *tekye*. However, it seems that *tekye* applies to both voice and instrument, while *ghalt*, as defined by Master Shafī‘i, is: “an opening and closing of the vocal cords that each one does in his/her way, for example, smoothly, or with an accent”. In his analysis and transcription of ‘A. Davāmi’s repertoire (*radif*), Talai uses only the term *ghalt*. In transcriptions, it is customary to indicate it by a ° above the note, whether for singing or for instrumental *tekye*, but for singing, the reality is more subtle. Talai identifies four shades of *ghalt*, which he indicates by small arrowed circles: horizontal, upward tending, downward tending, and interrupted. Furthermore he provides analysis of more discreet but no less essential effects: several kinds of “allusions” (*eshāre*) and cuts (*maqtu‘*), for which he designed special marks (p.18-21).

A wide variety of melismas

Let us now return to the *tahrir* proper, the one that includes *chah-chah*.

Two varieties are commonly distinguished: the *bolboli* (nightingale) *tahrir*, with a fast cadence, and the hammered (*chakkoshi*) *tahrir* with a slower cadence. Yet the matter is complicated by the fact that in the literature on the subject, many qualifiers are also associated with the term *tahrir*, referring to nuances of timbre and style: glissando, nasal, buccal, etc. (*langari*, *qāne‘i* / *kheyshumi*, *dahāni*). In addition, some have established a *tahrir*’s classification according to their melodic profile: ascending, descending, back and forth (*farāz* and *nashib*, *raft o bargasht*, etc.). Thus, the Iranian Wikipedia website lists more than twenty varieties of *tahrir*. Moreover, connoisseurs identify *tahrir* styles specific to certain singers (Simms & Koushkani p. 36-38, 145). For example, the *tahrirs* of Tāj Esfahāni were said hammered (*chakkoshi*), those of Banān and Adib Khānsari smooth (“from the mouth”, *dahāni* or *ghalt*), in contrast to those of Zelli which are qualified as “toothed” (*dandān-dār*) and *bolboli*. As for the ordinary public, they mainly differentiate between *tahrir bolboli* (nightingale, up to 6 or even 9 *ghalt* per second), and *chakkoshi* (hammered, about 2 *ghalt* per second).

TWO MUSICAL EXAMPLES ARE GIVEN: ONE CHAKKOSHI
AND AN AMAZING BOLBOLI BY QAMAR OL MOLUK VAZIRI.

All these terms, often mentioned in articles, lead to some confusion, as they belong to different registers. Nevertheless, they reflect the importance of melisma and the refinement of vocal technique.

Melisma articulation

If the *tahrir* or *chah-chah* engages acousticians as a vocal mechanism, it also deserves the attention of musicologists as a melodic form and a work on the voice.

In his abundantly documented work, Ali Kāzemi analysed and classified some fifty melisma of the great singers of the last hundred years, collected on two CDs. He also considers that the *tahrir* and its *chah-chah* is much more than an embroidery that can be added or deleted, it is part of the vocal compositions (*āvāz*, *gushe*). As a melisma, it also has an important place in instrumental performance, as does the simple *tekye*.

I would add that *tekye* and *chah-chah* are precision tools that allow for the clear detachment of notes in a rapid flow, which can hardly be done with a fluent vocal emission. A comparative sonogram between an Iranian *tahrir* and an Iraqi vocal line shows that the former is sawtooth, and the latter in gentle waves (Bahadoran p. 94).

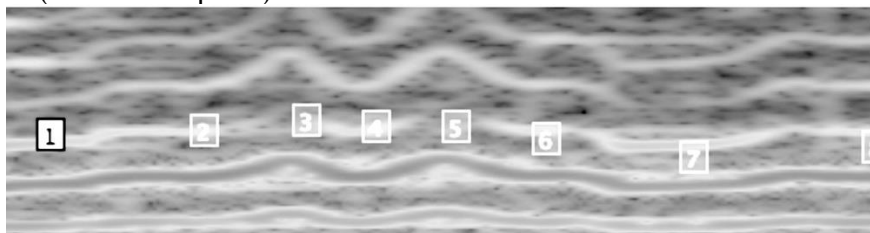


Fig. 2. A short excerpt of an Arabic vocal ornament.

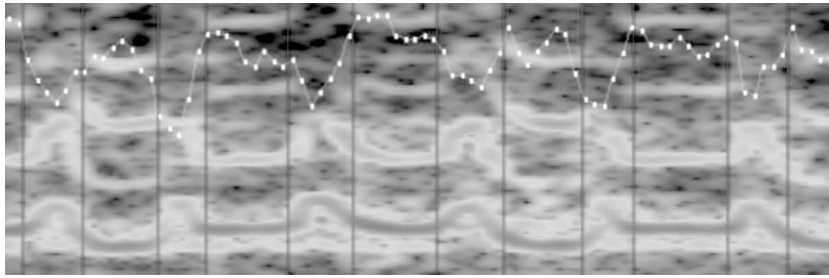


Fig. 3. Iranian tahrir.

In the *maqām* space there are no procedures such as solmisation in India, so to meet the aesthetic need to articulate melisma, non-textual syllables were used: *la*, *lā*, *dele*, etc. This form, called *tarannum*, was common in ancient compositions that are still sung in Turkey. It has disappeared in Iran, but still existed in the beginning of the 20th century (Kazemi p.173) as we can hear.

A MUSICAL EXAMPLE OF TARANNUM SUNG. BY SEYYED AHMAD KHĀN

Apart from *tarannum*, the verbal support of *tahrir* has three aspects that can be combined:

- stretched vowels: ā in general, ô and u, sometimes i; never a nor e;
- syllables like *hā---* *vāy*, *a---* *kh*, *dele*;
- very short filling words (*jān*, *yār*, *dād*, *amān*, ‘*aziz*, *khodā*).

Some singers and connoisseurs have reservations about the use of these terms (Miller, 1999 p. 109) and recommend using them sparingly, considering that “these banal and meaningless words diminish the spiritual significance of the song” (Kāzemi p.51, quoting M. Forugh).

Behind these reservations, it’s the ethos of the song that is targeted: *vāy*, *akh*, *jān*, *dād*, are expressions of a pathos that rarely has its place in the ghazals of Sa’di, Hāfez, or others. Moreover, the *chah-chah* does not a priori have an expressive function, but rather an impressive one, especially in the high register and in the culmination of the melody; it does not communicate feelings to the listeners but is a matter of taste and mastery of the vocal art. (Similarly, according to the Turkmens, the *juk juk* expresses joy as well as sorrow, from which one can conclude that it expresses nothing).

In the high register, the *tahrir* and *ghalt* induce additional tension, but they also occur in the low register, where they merge into the melodic flow, as in this example of a conclusion in Rāst, sung by Mozaffar Shafi‘i:

MUSICAL EXAMPLE OF SOFT TAHRIR IN THE LOW REGISTER IS GIVEN

On the proper use of melismas

The melismatic *tahrir* is not an *ad libitum* embroidery or a spontaneous flight, it obeys rules as to its place in the text, its length, and its structure. Moreover, voice inflections are not limited to a series of *tekye* or *ghalt*, as we said earlier. The famous singer Hoseyn Tāherzāde (1882-1955) claimed that he had developed and refined this genre. He had collaborated with Nur ‘Ali Borumand (an important transmitter, d.1976), who memorised his *tahrirs* and reproduced them on his *tār*. It is well known that when the young and already famous Shajarian visited Borumand, the latter pointed out to him that it was a shame to limit his *tahrirs* to a few clichés, since each melodic type (*gushe*) has its own melisma. In his view, no two *tahrirs* should sound the same in a performance. Shajarian later explored this path, referring to all available old recordings, so that one can say that: “the striking feature of Shajarian's *tahrirs* is their seemingly infinite variety. While they may share an overall contour and use similar unit configurations, no two are ever quite the same.” (Simms & Koushkani, 2012 p.390).

Another aesthetic issue concerns the place of the *tahrir* or *chah chah* in the performance of an *āvāz* or *gushe* and its localisation in the cantillation of a poem. The flaw that Borumand pointed out to the young Shajarian is often found among singers who, lacking culture or taste, slip in *chah-chah* wherever they can, and in stereotyped forms. I remember a *maqām* competition where a singer was eliminated in

the first round, despite her superb voice and the quality of her repertoire. The reason was that she had spoiled her performance by inserting dazzling *chah-chahs* at every moment, which ended up saturating the ears of the jury. Six centuries ago, Marāghi (p. 386) already recommended not to overuse *tahrir*, otherwise, the singing would turn out like an “overly salty dish”. Though many recordings of the great singers of the first half of the 20th century could lend themselves to the same criticism, they must be seen in the context of 78 rpm records, where the performance was limited to three minutes and had to impress the audience.

While the *tekye* or *ghalt* is an obligatory ornament, the *tahrir* is a constitutive element of the cantillation of poems, whose compositional principle resists analysis, despite attempts at classification (Simms & Koushkani 2012, Kāzemi 2019). Its most salient features are asymmetry and avoidance of repetition. According to the masters, the model for the *tahrir* is the song of the nightingale (hence the term *bolboli*), not so much because of its volubility as because its formulas are never repeated identically from one piece (*gushe*) to the next, which is a characteristic of the song of the nightingale.

As for asymmetry, it appears in the phrasing and in the almost random distribution of groups of 2 and 3 notes, of 3 and 4 or of 4 and 5. For example:



Fig. 4.

In this respect, *tahrir* justifies the original meaning of the term: not only does it free the voice from subordination to verse and meter, but it also overflows the melodic line (*āvāz*, *gushe*). On the surface it comes in as moments of freedom where the singer can shine with his technique and eloquence, but it is often part of the composition itself, as it is taught with perfect accuracy. Hence the need to memorise formulas, some of which being standards, like *tahrir-e Javād*, *Nāyeb Asadollāh*, *Abu-Atā*, *Samali*, *Hesār*, *Bayāt-e Kord*, etc. [5].

Whatever the case, the audience enjoys these moments of intensity. Mozaffar Shafī‘i reports that when he was obliged to sing in religious ceremonies, his father advised him “not to do too much *tahrir*”. But nowadays, when he goes up to the pulpit, listeners say to him: “Do some *tahrir*, okay? Because, without it, it has no charm.”

Notes

[1] In Iran it has more the meaning of “writing”.

[2] The term is mentioned three times in the Qu‘ran, as the fabric of a heavenly garment.

[3] Tahamtan M. and *al.*, 2019. There are some weaknesses in this research: —the singer (whose name is not mentioned) is not a professional; —the analysis concerns only one *tasnif* (*Morgh-e Sahar* by Morteza Neydāvud recorded in 1927, of which an Azeri version exists); —the interpretation of a *tasnif* does not require *tahrir* mastery and may only involve a few *ghalts*.

[4] This paragraph is taken and adapted from a presentation given by Castellengo, During, Henrich (2020).

[5] The *tahrir* sung in Hesār (*Chahārgāh*) is almost identical in Iran and Azerbaijan.

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