Tropus Virgilianus in devotione sororia
[cf. Virgil, _Aeneid_, XI:823-831]
First Byzantine Echos or Tone, or Maqam Huseyni
Pitch is relative, with octaves A-G and a-g (lower voice C-c, upper voice D-f)
The accidental "d" (e.g. Ed, bd) lowers a note by around a quartertone to a
sixthtone (see musical notes below for more details).
It is also quite possible to disregard the "d" accidentals and sing these notes as naturals (Ed as E, bd as b or German h, ed as e), in which case a setting in the medieval European Mode I (authentic Dorian) results.

```
a a G a G F Ed D
O so-ro - res,
D D C D D C C D
```


Hac- te-nus scri-be-re_ et__ cur - ri-cu-lum am-bu - la-re po- tu-i,

a c d d d d c bb a G c d f ed d c bb a G
Et in ar-ti-um pu- gna__ ex-sul-ta- vi__:
D F G G G G GF G G G a C bd a GF G G
a c d d d d d c bd a a G F Ed D
Nunc lex na-tu-rae cir-ca-di-a- na su-per- rat_.



a a G F G F Ed D a G F G a G F Ed D
Ad ter-rae trac-ti- o - nem spon - te flu- ens_.
D D D C D D D D D Ed F Ed D D C C D
a c c d d d f ed d c d d d c bd a a G F Ed D
Lin-quo ha-be-nas quat-tuor mem-bro - rum et quin-que sen-su-um me-o - rum,
D F F G G a C bd a G a a G F $\begin{aligned} & \text { F }\end{aligned}$

a c d d c bb a G G a bd c c c d c c bd A G F Ed D
Et ar-cum pha-re-tram-que__rhe-to-ri-cae et dis-cur-sus tem-po-ra -



d d c d c bd a a G F Ed D
Cus-tos a- mi- ci- ti- ae so-ro-ri-ae_:
c c c d a c c d d f ed d d d d c c bb a
Ad-iu-va me ut pau-lum-per ex-sol - var cor-por-is mun-di-que cu-ris;


G G G G bb bb bb a c d f ed d d c bd a G F Ed D
am-pli - or ac-ce - dam ad il-lu-mi-na-ti-o-nem tu - am__.


O sisters, thus far I have been able to write and walk the racecourse [i.e. in a walking race], and in the battle of the arts I have exulted: now the circadian law of nature overpowers [me]. Into your protection I commend myself for my journey.

Now according to the mirror of sisterhood, I recline, willingly flowing toward [i.e. yielding to] the pull of the earth. I release my grasp on the reins of my four limbs and five senses, relinquishing my weapons, principally the javelin of my pen and the bow and quiver of rhetoric and temporal discourse.

O Sovereign, O supreme Charity [or Love], guardian of sisterly friendship: Help me so that for a little while I may be freed from the cares of the body and the world; Through the darkness of night, beyond the shadows, may I more closely approach to thy illumination.

Nusical notes
----------_-_-
This piece, in a modality like Maqam Huseyni or the First Byzantine Tone (Protus), uses middle or Zalzalian steps (often named after the `oudist Mansur Zalzal of Baghdad, ?-791, who is said to have introduced a middle or neutral third fret on this instrument, one of whose descendants is the European lute), somewhere between a major and minor interval in size. These middle intervals appear both as melodic steps (e.g. F-Ed-D or c-bd-a), and as vertical or simultaneous intervals (e.g. the cadential use of a middle third like C-Ed resolving to a unison on $D$ by contrary motion; or sometimes a middle second resolving obliquely to a unison, D-Ed to D).

A general convention for the First Byzantine Tone, and often for Maqam Huseyni, is that in the melodic figures $D-E d-F, A-B d-C$, and $d-e d-f$, the lower middle second step (e.g. D-Ed) should be somewhat larger than the upper step (e.g. Ed-F). For example, in the just tuning given by Chrysanthos of Madytos, identical to the famous oud tuning of al-Farabi (c. 870-950), D-Ed-F-G would have steps of 12:11-88:81-9:8 or 150.6-143.5-203.9 cents. In a different tuning of al-Farabi, recommended in the 20th century by Suphi Ezgi for Turkish Huseyni, would have 11:10-320:297-9:8 or 165.0-129.1-203.9 cents. The latter is quite close to the standard adopted in 1881 by the Byzantine Committee on Music: 166.7-133.3-200.0 cents. In practice, singers unconstrained by fixed-pitch instruments should and will tend toward a somewhat variable intonation.

The First Byzantine Tone or Maqam Huseyni has a usual ascending form like this, with the letters $T$, $Z 1, Z s$ showing steps of a tone, larger Zalzalian or middle second, and smaller Zalzalian or middle second:
$\mathrm{D}^{\mathrm{Zl}} \mathrm{Ed} \mathrm{Zs} \quad \mathrm{T} \quad \mathrm{G} \quad \mathrm{T} \quad \mathrm{Zl}$ bd $\mathrm{Cs} \quad \mathrm{T} \quad \mathrm{C}$

Often in descending, bd may become bb, a minor rather than middle sixth above the final or resting note $D$. Here the symbol s shows a regular diatonic semitone or limma:


In the setting, bb is sometimes favored in order to provide a pure fourth above $F$ in the lower voice.

On a fixed-pitch keyboard with 24 notes per octave, I favor a very mildly tempered tuning where fifths are slightly wider than a pure 3:2 (702.0 cents) and fourths slightly narrower than a pure $4: 3$ (498.0 cents). In my favorite scheme, they are tempered at 703.7 and 496.3 cents, or about 1.76 cents impure. In this tuning, $D-E d-F-G$, for example, is 150.0-138.9-207.4 cents, quite close to a theoretical division with ratios of 33:36:39:44 or 12:11-13:12-44:39
(150.6-138.6-208.8 cents).

Here the middle second steps are very close to superparticular ratios of $12: 11$ and 13:12. The use of a mild temperament allows all regular

```
fifths and fourths to remain very close to pure, whereas in a just
tuning based on 12:11-13:12-44:39, some fifths and fourths would be
pure, and others impure by the ratio of 352:351 or 4.925 cents. Such
fifths and fourths are acceptable for many purposes, but quite audibly
contrast with their pure counterparts at 3:2 or 4:3. This mild
tempering also produces regular major and minor intervals slightly
larger and smaller respectively than in a Pythagorean tuning with pure
fifths and fourths.
Margo Schulter
mschulter@calweb.com
2-4 November 2016
```

