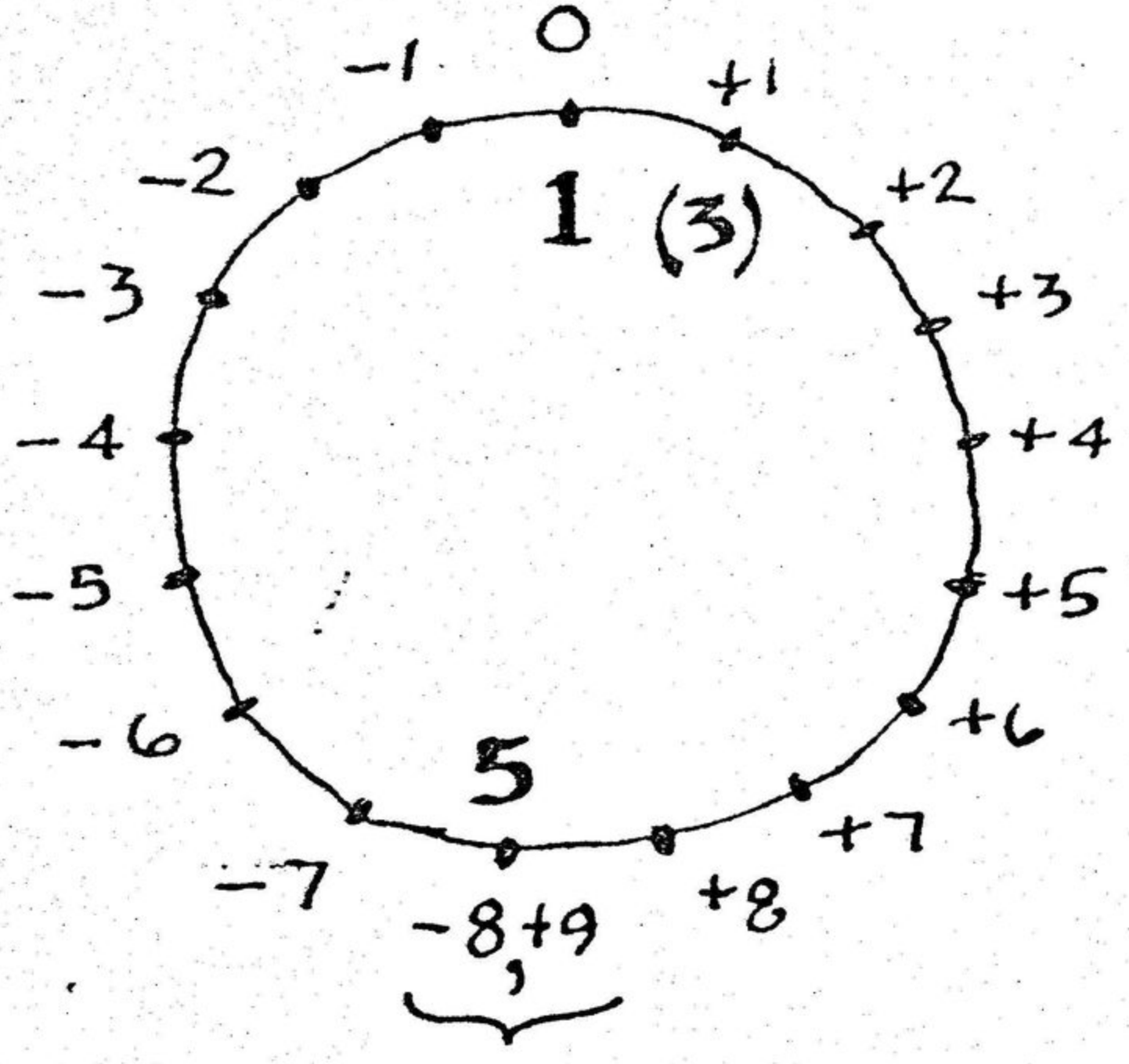


It is this progression which the intonational systems of the Near East might well be expected to follow. If you can locate a copy of Treatise on Music by Abdurakhman Djami, it gives considerable insight into the intended use of the 17-member system by the Persians. That this system is, in fact, fretted up, with commatic distinctions, for popular use (!) must give one cause to pause and reflect. The 17-tone systems are the flower of Near-Eastern acoustical endeavor. Where Turkish theorists have extended the linear series to 24 members, they have gained tones, but lost on integration. They would better have extended the series out to 29 members where the quasi-cyclic properties of the moment-of-symetry are again instated. Or stayed with 17.

At the quasi-cycle of 17 members there arises the possibility of again re-mapping the 5-function, from linear -8 to linear +9.

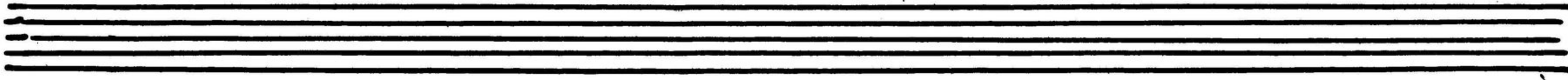


Turkish Baglama Scale

(as inferred from string lengths)
by z.w.

D	$\frac{12}{11}$	2.
E	$\frac{5}{4}$	5.
A	$\frac{5}{3}$	12.
B	$\frac{15}{8}$	15.
G	$\frac{16}{11}$	9.
A	$\frac{27}{16}$	13.
B	$\frac{243}{128}$	16.
E	$\frac{81}{64}$	6.
G	$\frac{3}{2}$	10.
A	$\frac{27}{16}$	13.
B	$\frac{16}{9}$	14.
C	$\frac{2}{1}$	17/0
F	$\frac{4}{3}$	7.
a	$\frac{128}{81}$	11.
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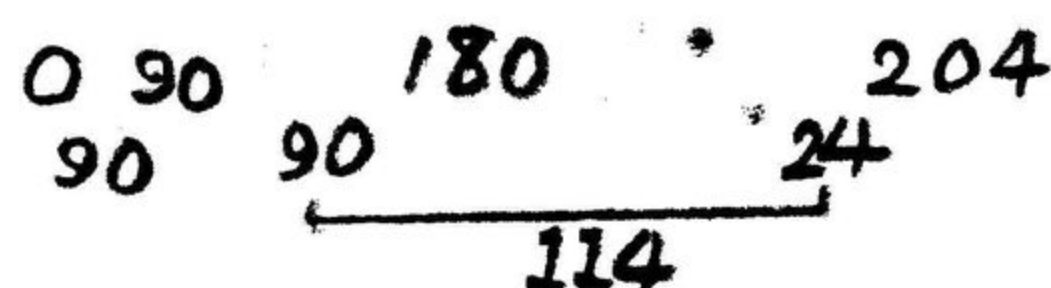
In consequence we get a seventeen-degree scale of the following structure:



which gives five large whole-tones of 204 cents:

c - d, d - e, f - g, g - a, b - c' ,

with an internal division of each of these into two small semitones of 90 cents and a comma of 24 cents:



and also two small semitones of 90 cents:

e - f, a - b ,

this comprising the diatonic basis of the seventeen-degree scale.

Showing the possibility of forming the $\sharp\sharp$ scale in the higher registers of the second and third octaves, Djami directs attention to the approximation, but not absolute accuracy, of the realization of the seventeen-tone (or any other) scale on instruments, since the stopping of the fingers on the finger-board of the instrument can never be absolutely accurate.

Section 8. This section contains a short account of the theory of the *miql* or the system used by the mediaeval Arabian and Iranian ~~musical~~ musical theorists for the comparison of interval-size and "harmonization" of tones, composing this or that interval, among themselves. This is discussed in the following section.

Section 9. This defines the principal intervals of the 17-tone scale, called "harmonic" by Djami. This means "producing healthy feelings". Djami considers nine such intervals to be of importance:



- 1) bu'd zil kull twice ---- The double octave, 2400 cents
- 2) bu'd zil kull wal hams --- The twelfth 1902 cents
- 3) bu'd zil kull wal arba'a the eleventh 1698 cents
- 4) bu'd zil kull The octave 1200 cents
- 5) bu'd zil hams Perfect fifth 702 cents
- 6) bu'd zil arba'a Perfect fourth 498 cents