Gregorian Chant Modes: 8 ways from C to C

In our modern system of scales, there are 8 pitches between any given note and its twin, an octave higher or lower. Every major scale has exactly the same structure, so any piece already in a major key may be transposed, so as to start on a different pitch, and retain the same structure.

Gregorian modes, on the other hand, have 8 distinct ways of getting from any given note to its twin, such that no two starting pitches will yield identical results.

Where the 8 modes come from…

Ancient Greek mathematicians figured out that the space between any given note and its twin could be neatly divided into 12 equal intervals. We call those intervals “semi-tones” or “minor seconds” or “half-steps”, all of which describe the same reality but each from a unique vantage point.

Fundamental difference: where the half-steps fall

Every modern major scale is made of the following progression of intervals:

Whole step + Whole step+ half step+Whole step+Whole step+Whole step+ half step.

Or, to think of it differently, since 2 semitones = 1 whole step

2+2+1+2+2+2+1 = 12 half steps, or semitones

BUT……

The Greeks “moved” the half step.

WS-HS-WS-WS-WS-WS-HS

HS-WS-WS-WS-WS-HS-WS

WS-WS-HS-WS-WS-HS-WS

WS-WS-WS-HS-WS-WS-HS

and so on…, so that each “scale” - the word means “ladder” - had a unique combination of half and whole steps.

Practically speaking

If we start on the same pitch for 8 scales, but follow a distinct pattern to get from start to finish, we have 8 distinct sounds. If we compose a melody, now, using only the notes in any particular pattern, we get a particular, one might even say typical, sound.

The Greeks, being the Greeks, however, saw the pattern as existing as if each mode had its own starting pitch, and creating the typical sound of each mode within the same 12-semitone structure I have already noted.

IF the notes have only designations, not names…

We shall (for a moment) call each pitch only by its designation, its place within the order of 12 half steps. If we choose a pathway, a combination of whole and half steps, to get from 1 to 1', the distinct character of each mode comes through, regardless of our actual starting pitch. (Remember that we're only considering relative place, now.) A whole step skips a number, and a half-step doesn't…..

1 2 3 4 5 6 7 8 9 10 11 12 1'

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Notice the unique beginning of each scale, using only whole steps and half steps.