C-MAJOR SCALE

C . D . E F . G . A . B

R . 9 . 3 4 . 5 . 6 . 7

E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E
C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C
.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.
E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E
C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C
.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.
E	.	D	.	C	B	.	A	.	G	.	F	E	.	D	.	C	B	.	A	.	G	.	F	E

3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3
R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R
.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.
3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3
R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R
.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.
3	.	9	.	R	7	.	6	.	5	.	4	3	.	9	.	R	7	.	6	.	5	.	4	3

->	1	b2	2	b3	3	4	b5	5	b6	6	b7	7
1	C	.	D	.	E	F	.	G	.	A	.	B
b2												
2	D	.	E	F	.	G	.	A	.	B	C	.
b3												
3	E	F	.	G	.	A	.	B	C	.	D	.
4	F	.	G	.	A	.	B	C	.	D	.	E
b5												
5	G	.	A	.	B	C	.	D	.	E	F	.
b6												
6	A	.	B	C	.	D	.	E	F	.	G	.
b7												
7	B	C	.	D	.	E	F	.	G	.	A	.

->	1	b3	3	b5	5	b7	7	b9	9	11	b13	13
1	C	.	E	.	G	.	B	.	D	F	.	A
b2												
2	D	F	.	.	A	C	.	.	E	G	.	B
b3												
3	E	G	.	.	B	D	.	F	.	A	C	.
4	F	.	A	B	C	.	E	.	G	.	.	D
b5												
5	G	.	B	.	D	F	.	.	A	C	.	E
b6												
6	A	C	.	.	E	G	.	.	B	D	F	.
b7												
7	B	D	.	F	.	A	.	C	.	E	G	.

Harmonic Cube "C"

->	1	4	b7	b3	b6	b2	b5	7	3	6	2	5
1	C	F	.	.	.	.	.	B	E	A	D	G
b2												
2	D	G	C	F	.	.	.	.	.	B	E	A
b3												
3	E	A	D	G	C	F	.	.	.	.	.	B
4	F	.	.	.	.	.	B	E	A	D	G	C
b5												
5	G	C	F	.	.	.	.	.	B	E	A	D
b6												
6	A	D	G	C	F	.	.	.	.	.	B	E
b7												
7	B	E	A	D	G	C	F	.	.	.	.	.

HARMONIC MATRIX CUBE USAGE

Last, but not least, is the Harmonic Matrix Cube "C". Note how this cube is again characterized by a different interval arrangement than our two previous cubes when viewed along it's rows and across columns. Although it appears somewhat abstract in design at first glance, the interval arrangement in perfect fourths actually functions as an optimized cycle of fourths display of our scale.

I use this cube primarily to assess a scale's potential for basic logical harmonic movement from each scale tone. Be aware that I don't consider this cube's assessment as an absolute "etched in stone" rule for chordal movement. Unlike the previous two cubes which are more definitive and absolute regarding of their scalar reference points Harmonic Cube "C" is useful as a quick, "at a glance" type guide to the logical, common harmonic motion in fourths.

Keep in mind that there are many ways to move chords, especially with good voice leading. However, because of it's relative musical strength and commonality, when confronted with a new or unfamiliar scale for the point of harmonization, I like to base the chordal motion in fourths initially and then experiment from there.

The influence of modality will strongly dictate the logic and direction of chordal movement as well. For example: let's take our C Major Scale. Using the Harmonic Matrix Cube "C". Reading across the row that shows the note "C" as our subject, we see that the only perfect fourth movement possible is to the "F" degree. So if we had a C Major 7th chord to move by fourths, the next chord would be an F Major chord or one of it's relatives which could be derived from this particular scale degree. I use the 'Matrix Cube "B" for this kind of reference.

However, because this is obviously not the only chordal movement possible (we could move to D Minor Seventh or B Minor Seventh Flat Five, etc., for example), I always emphasize this cube's use as a guide to relative melodic or harmonic tension or balance within the scale instead of an absolute reference to potential harmonic motion.

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