

Applying The Axis Concept To Improvisation

In 1988, I was fortunate to participate as a guitarist at the Banff International Workshop in Jazz and Creative Music in Alberta, Canada. Pat LaBarbera, the saxophone instructor that year, suggested that I check out *Lexicon of Symmetric Scales and Tonal Patterns*, by Dr. Maury Deutsch, which has since provided a wellspring of ideas for me in improvisation and composition. Deutsch explains that the octave can be split into these symmetrical divisions (in the key of C):

- Tritone: C-F#;
- Augmented triad: C-E-A \flat ;
- Diminished 7th chord: C-E \flat -F#-A;
- Whole tone scale: C-D-E-F#-G#-A;
- Chromatic scale: C-D \flat -D-E \flat -E-F-F#-G-G#-A-B \flat -B.

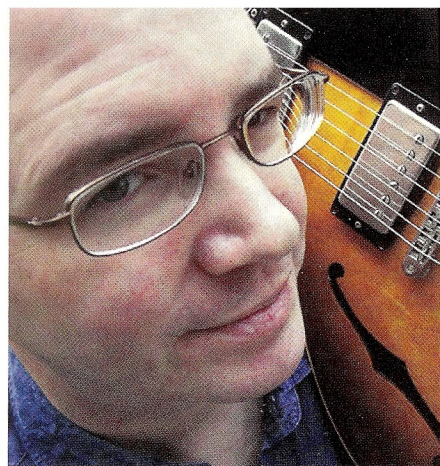
He named these divisions “axis” points, and wrote melodic ideas called “units” over each axis (the number of notes in the melodic idea

equals the number of units). I have found that the axis/unit concept works very well when applied to improvisation. In fact, it always provides me with a game plan when I am playing in a modal or free environment.

Two of my favorite axis points for improvising are the augmented triad (three axes) and the diminished 7th chord (four axes). Let’s begin with the augmented triad.

First, you need to create a drone in order to hear the axis points on top. This can be done by sitting at a piano, playing a low C and holding down the sustain pedal. I like using a looping pedal.

Once you have your drone going, play or sing the notes of the augmented triad (see e.g. 1). Now, we add melodic units on each axis. Let’s use the first, second and fifth note of a major scale on each axis point. This creates a three-unit shape over three axes (e.g. 2). You



can also use the three-unit shape over a Cmaj7#5—even though a B \flat creates an obvious dissonance.

Let’s try another three-unit, three-axes shape. Let’s use the first, second and seventh degree of a major scale over three axes (e.g. 3). You can try any number of units over each axis point, but the ear is still drawn to the augmented triad. The variation of each example suggests how you might play the material in a more melodic way.

Now, let’s look at the diminished 7th chord, with four axes (see e.g. 4). Let’s use the first, flat second and fifth of a phrygian scale over four axes. This three-unit shape works well over a C7 \flat 9 or a C7sus chord (e.g. 5). You probably figured out that this pattern generates the notes of a C half/whole diminished scale. Now let’s try a four-unit shape with the first second, seventh and eighth degrees of a dominant 7th scale (e.g. 6). This shape works well over a C7, or C7sus vamp. There are obvious dissonances again, but the ear navigates to the four-axes sound.

You can also apply the axis concept to composition. One of my favorite techniques is to write harmonies using a specific axis. In my composition “Jojo’s Waltz,” I used three-axes harmony on the first eight bars of the bridge (e.g. 7). The C major chord moves to A \flat maj, and then to Emaj+5.

In my composition “Third Waltz,” I used four-axes harmony on the second half of the tune (e.g. 8). The chords are moving down in minor thirds: Fmaj7, Dmaj7 to Bmaj7; then Amin7, F#min7 to E \flat min7.

I have been incorporating the axis concept into my improvisations and compositions for more than 20 years. I would suggest the next time you get together to play a session, try using some of these ideas over a vamp. **DB**

The musical examples are as follows:

- e.g. 1:** A melodic line starting on a C drone, showing the augmented triad (C-E-A \flat).
- e.g. 2:** A melodic line using the first, second, and fifth notes of a major scale over the augmented triad.
- e.g. 3:** A melodic line using the first, second, and seventh degrees of a major scale over the augmented triad.
- e.g. 4:** A melodic line using the first, flat second, and fifth degrees of a phrygian scale over a diminished 7th chord.
- e.g. 5:** A melodic line using the first, second, seventh, and eighth degrees of a dominant 7th scale over a C7 or C7sus vamp.
- e.g. 6:** A melodic line using the first, second, seventh, and eighth degrees of a dominant 7th scale over a C7 or C7sus vamp.
- e.g. 7:** A harmonic progression showing three-axes harmony: C Δ 7, A \flat Δ 7, and E Δ 7+5.
- e.g. 8:** A harmonic progression showing four-axes harmony: F Δ 7, D Δ 7, B Δ 7, Amin7, F#min7, and E \flat min7.

Guitarist Pete McCann is an adjunct faculty guitar teacher at The New School and City College in New York City. He also teaches at the NYU Summer Guitar Intensive and the Maine Jazz Camp. His latest CD, *Extra Mile*, is available on Nineteen-Eight Records. Email him at petemc@optonline.net.