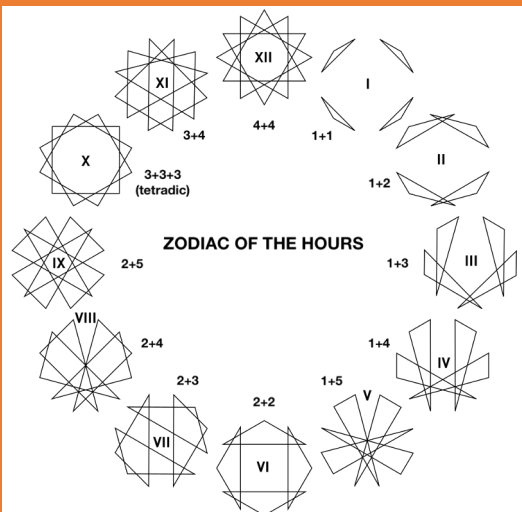


Improvising musicians
can freely apply twelve-tone
and post-tonal concepts
using
Tone-Clock Theory



Tone-Clock Theory and Jazz:

Applying Chromatic Tonalities to Improvisation

Tone-Clock Theory is a “**twelve-note harmonic system** [and] also a **chromatic ‘map’**, a tool providing a systematic and comprehensive view of the whole chromatic territory” - Jenny McLeod

“The Tone Clock Theory can only be judged when it’s **heard!**” - Peter Schat



Jenny McLeod, *Tone Clock Piece I* (1989)



John O'Gallagher, *Trichord 1+3* (2013)



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Jacksonville, Florida
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The History of Tone-Clock Theory:

Codified by Dutch composer **Peter Schat** in 1982.
Published in *De Toonklok* (1984).

Significantly expanded by New Zealand composer **Jenny McLeod** in the unpublished *Tone Clock Theory Expanded: Chromatic Maps I & II* (1994).
Composed *24 Tone Clock Pieces* for Piano (1989-2005).

Disseminated to jazz community by saxophonist **John O’Gallagher** in his book *Twelve Tone Improvisations: A Method for Using Tone Rows in Jazz* (2013).

Saxophonist **John Coltrane** and his pianist wife **Alice Coltrane** developed a similar intervallic approach.
Can be heard on his final recordings *Stellar Regions* and *Interstellar Space* (1967).

Tone-Clock Theory was first codified in 1982 by Dutch composer Peter Schat and later expanded by New Zealand composer Jenny McLeod in 1994



Peter Schat (1935-2005)



Jenny McLeod (1941-2022)



John O’Gallagher (b. 1964)



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Theoretical Principles of the Tone-Clock Theory

A **Chromatic Triad**, representing one of **12 Hour tonalities**, each with its own unique harmonic character, can be **steered** to create a full **non-repeating 12-tone harmonic field**.

Chromatic Triads (trichords)

Hours (chromatic tonalities)

Steering (compound transpositional operation)

Harmonic Fields

Chromatic	Scalar/Modal/Octatonic	Atonal/Hexatonic	Major
Hour I <1+1>	Hour II <1+2>	Hour III <1+3>	Hour IV <1+4>
Atonal/Octatonic	Diatonic/Whole Tone	Pentatonic/Minor	Lydian
Hour V <1+5>	Hour VI <2+2>	Hour VII <2+3>	Hour VIII <2+4>
Quartal	Diminished	Major/Minor	Augmented
Hour IX <2+5>	Hour X <3+3>	Hour XI <3+4>	Hour XII <4+4>

IIm [C]

×

VIII⁴m

=

II/VIII⁴ [C]








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John Coltrane Transcription

“Iris” from *Stellar Regions* (1967)



	Set A - IIm <1+2> [G#, A B]		Set C - IIm <1+2> [F#, G, A]		Set E - IIm <1+2> [E, F, G]
	Set B - IIm <1+2> [G, Ab, Bb]		Set D - IIm <1+2> [F, Gb, Ab]		

The transcription shows three staves of music. The first staff is primarily green (Set A) and yellow (Set C), with a red (Set B) section. The second staff is primarily yellow (Set C) and orange (Set D), with a blue (Set E) section. The third staff is primarily blue (Set E) and orange (Set D). Circled notes indicate 'Common Tone Pivots' between sections. Triplet markings (3) are present at the end of the third staff.

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Transcribed by Jonathan Lindhorst

John O'Gallagher Transcription

"Trichord 1+2" from *Twelve Tone Improvisation* (2013)



ii/VIII⁴ [C]

Prime A 1+2 B 2+1 C 1+2 D 2+1

T₁ A B C D

T₂ A B C D

T₃ A B C D

T₄ A B C D

T₅ A B C D

47

Set D (Ab, Bb, B)

Dyad with Pivot

10

Dyad

53

Dyad 3

56

C+D

Mixing of sets C and D into subscale

59

Dyadic superimposition [F] CT

14

Dyad

62

Dyad

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