An Analysis of Michael Brecker's Microtonal Variation and Mirroring within the Melodic Jazz Line

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Michael Brecker is one of the most influential and widely emulated saxophone players of the 1980s and 1990s.[1] After John Coltrane, his style is one of the strongest influences on young saxophonists.[2] "As a result of his stylistic and harmonic innovations, he is the most studied contemporary jazz musician in music schools throughout the world today."[3] Born in Philadelphia, Pennsylvania on March 29, 1949, Michael Brecker began playing alto saxophone in junior high school and switched to the tenor saxophone in high school. In 1969 he left Indiana University for New York City. His work with Horace Silver and Billy Cobham led him to become one of the most in-demand sideman and studio players on the scene. The formation of the band Dreams and later the Brecker Brothers with his brother Randy stood as a platform for which Brecker displayed his virtuosic technique and personal style that fused the rhythm and blues and bebop traditions. Frequent jam sessions at Brecker's New York City jazz club Seventh Avenue South led to the formation of Steps Ahead in 1979. After recording his first solo album in 1987, accolades began to accrue: Jazz Album of the Year (*Down Beat* and *Jazziz*), Best Soloist of the Year (*Jazzlife*),"Jazz Man of the Year" (*Swing Journal*), and Down Beat Jazz Hall of Fame Inductee. Brecker had recorded on close to 700 recordings[4] as sideman and leader and earned thirteen Grammy awards before passing away on January 13, 2007.

The profundity of scholarly research on Brecker is scarce in comparison to that on major innovators such as Lester Young or John Coltrane. Little scholarly work has been done in organizing and analyzing Michael Brecker's technical and harmonic style outside of two doctoral dissertations,[5] one masters thesis,[6] and eight short solo analyses

1 Basic biographic sources on Michael Brecker include Barry Kernfeld's *The New Grove Dictionary of Jazz 2nd Edition* (New York: Macmillian, 2002), Ian Carr's *Jazz: The Rough Guide* (London: Penguin Books, 2000), David Gelly's *The Masters of Jazz Saxophone: The Story of the Players and Their Music* (London: Balafon Books, 2000), and Richard Cook's *Jazz Encyclopedia* (New York: Penguin, 2005). Three published transcription books dedicated solely to Michael Brecker's solos include Carl Coan's *Michael Brecker* (Milwaukee: Hal Leonard, 1995) and *The Michael Brecker Collection* (Milwaukee: Hal Leonard, 1999), and Trent *Kynaston's Michael Brecker Improvised Saxophone Solos* (Hialeah: Columbia Pictures Publications, 1982). Three noteworthy websites devoted to the music and life of Michael Brecker include http://www.michaelbrecker.com, http://www.ibrecker.com, and http:// www.michaelbreckerliverecordings.com.

2 *The New Grove Dictionary of Jazz*, 2nd ed., s. v. "Michael Brecker."

3 Official Michael Brecker Homepage, "Press Release." http://www.michaelbrecker.com

4 ibrecker.com, "Discography." http://www.ibrecker.com

5 David R. Freedy, "Brecker's Blues Transcription and Theoretical Analysis of Six Selected Improvised Blues Solos by Jazz Saxophonist Michael Brecker" (PhD diss., Ohio State University, 2003); Tyler K. Kuebler, "The Improvisatory Language of Michael Brecker as Seen Through an Analysis and Comparison of Eight Improvised Solos: a Doctoral Essay. (DMA essay, University of Miami, 2005).

6 Ari Poutiainen, "Brecker and Patterns: An Analysis of Michael Brecker's Melodic and Instrumental Devices" (MM Thesis, Sibelius Academy, 1999).

limited to one solo.[7] The first attempt to compartmentalize Brecker's harmonic tendencies was in a short periodical article published by Trent Kynaston.[8] This article is a modest attempt at organizing and packaging Brecker's harmonic style; however, it has two shortcomings: 1) it contains a narrow scope of analyzed solo material[9] that would be much more beneficial to performers and educators if expounded on in future research; and 2) there is a significant development of depth and breadth to Michael Brecker's music making since 1985 that requires attention.

Poutiainen's Master's thesis was the first scholarly document to focus on the broad scope of Michael Brecker's improvisatory language. The objective of this document was to define and describe certain melodic devices characteristic of Brecker's musical expression. His analysis of three solos[10] focuses on the scalar aspects of his playing, categorized by playing inside the changes, diminished scales, chromaticism and enclosures, superimposition, altered scales, pentatonic scales and augmented scales. A short section regarding Brecker's use of alternate fingerings is presented. However, he deduces their use as chromatic phrases with descending motion used in modal situations. One example is provided, but the depth and breath in which Brecker uses this technique is not discussed.

Freedy's Doctoral dissertation summarizes Brecker's harmonic and melodic approach to improvisation over the twelve-bar blues. Six solos[11] were transcribed and analyzed independently. Freedy encapsulated Brecker's approach to nine components: 1) side-slipping; 2) sequencing, 3) utilization of non-standard modes and scales; 4) articulation of same quality triads in a planed manner; 5) use of implied chord progressions; 6) diatonic use of triads; 7) tertian harmonies; 8) diatonic scale usage; and 9) triad pairing.

Kuebler's Doctoral dissertation utilizes eight transcriptions[12] (four improvisatory vehicles recorded on two separate occasions) to analyze Michael Brecker's improvisatory language. The research spawned seven generative categories of material, including digital patterns, triads, seventh chords, chord/scale concept, sequenced patterns, chromaticism, and fully altered dominant harmony. These categories provide a motivic reduction of Brecker's improvisatory language that can be used to analyze his improvisations across domains of time, musical style, and instrument choice.

7 Shelly Yoelin, "Michael Brecker's Solo on 'Spidit:' A Tenor Saxophone Transcription," *Down Beat*, June 1981, 62-63.; David Demsey, "Michael Brecker's Solo on 'Suspone' by Michael Stern," *Jazz Educators Journal* 23, no. 4 (1991): 36-38.; Niels Lan Doky, "*Jazz Transcription: Developing Jazz Improvisational Skills Through Solo Transcription and Analysis* (Rottenburg: Advance Music, 1992).; "Miles Osland, "Michael Brecker's Tenor Sax Solo on 'Impressions,'" *Down Beat*, July 1996, 64-65.; Eric Allen, "Michael Brecker's Tenor Sax Solo on 'Body and Soul,'" *Down Beat*, May 1998, 80-81.; George Weremchuk, "Comparative Analysis of Improvised Solos Based on the Popular Songs 'Body and Soul,' 'Night and Day,' and 'Out of Nowhere' as Performed by Selected Jazz Tenor Saxophonists Representing Different Styles" (DMA essay, University of Miami, 1998); Miles Osland, "Michael Brecker's Tenor Sax Intro on 'Delta City Blues,'" *Down Beat*, April 1999, 72-73.; Tracey Heavner, "Michael Brecker's Side-slipping Tenor Saxophone Solo on 'Delta City Blues," *Down Beat*, March 2006, 90.

8 Trent Kynaston, "An analysis of Michael Brecker's Harmonic Style," *Down Beat*, May 1985, 54-55.

9 Kynaston identifies and explains some characteristics (harmonic and melodic devices) that appear in Brecker's playing over minor seventh chords and dominant seventh chords.

10 *Straphangin*, '*Nothing Personal*, and *Peep*

11 *Nothing Personal, Two T's, Cabin Fever, Jones Street, Delta City Blues*, and *Timeline*

12 *Oops, Nothing Personal, Some Skunk Funk*, and *In a Sentimental Mood*

A need still exists to further examine, organize, and present Michael Brecker's approach to harmony and saxophone technique for several reasons: 1) at the present time there is a lack of availability of this type of information; 2) the documentation of this material will aid in tracing the development of saxophone players in terms of harmonic approach, technique, and style; 3) more in depth scholarly work addressing Michael Brecker will aid in the establishment of his contributions to the canon of jazz history; and 4) organization of this material will aid in providing a pedagogical approach to learning, developing, and applying Michael Brecker's approach to improvisation. The purpose of this paper is 1) to initiate an analysis of the techniques executed by Michael Brecker by investigating and evaluating his advanced development and implementation of microtonal variation and mirroring[13] within the melodic line; and 2) to organize categories of microtonal variation usage in order to provide a foundation for a pedagogical approach to gaining facility through application of this microtonal technique in a structured and practical manner.

Michael Brecker creates effects of microtonal variation by using false fingerings accompanied by the technique of overblowing.[14] A false fingering is one that manipulates the overtone series[15] to produce a microtonal variation (timbral transformation) of a primary pitch. It should be noted that critics have linked negative connotations to this technique, particularly in the screams of the "young militant free jazz players of the 1960s,"[16] [Pharoah Sanders, Albert Ayler] in which this expression was commonly interpreted as black rage in the most directly confrontational manner and a rebellion against the European musical heritage.[17] Although the interpretation of these techniques is debatable, Brecker's approach to overtone and false fingering technique may have grown out of this expression; however, it is manipulated and utilized in an unrelated fashion. His particular manipulation of the technique is an employment of a carefully controlled adjustment of the embouchure, throat, and flow of air in combination of false fingerings in the midst of a fast-moving bop line. The distinction between Brecker's use of microtonal variation and that of his predecessors lies in his use of the technique in combination with a typically fast-moving eighth note or sixteenth-note melodic line.

Another technique used by Brecker to produce microtonal variation involves the process of mirroring, where a primary tone is played adjacent to a false fingering. In example 1[18], unaltered[19] pitches (functional fingerings) are notated as a filled sixteenth

13 Mirroring can be defined by the technique of playing a false fingering or overtone adjacent to a primary pitch of the same note.

14 *The New Grove Dictionary of Jazz*, 2nd ed., s. v. "Overblowing."

15 Traditionally, the performance of the overtone series on saxophone stems from five fundamentals: Bb3, B3, C4, C#4, and D4. The pedagogy and technical development of the overtone series can be found in: Sigurd M. Rascher, *Top-Tones for the Saxophone: Four-Octave Range, 3rd Edition.* (New York: Carl Fischer, 1977).

16 Eric Nisenson, *Ascension: John Coltrane and His Quest* (New York: St. Martin's Press, 1993) 189.

17 Ibid, 189.

18 All transcriptions are transposed to the key of B-flat, as played on the tenor saxophone.

19 The description of notes in terms of "altered" and "unaltered" is in relation to the application of microtonal variation upon that specific note. "Altered" refers to a pitch that is treated with an application of a false fingering or an overtone. "Unaltered" refers to a pitch that is treated with a functional fingering that produces a primary, or unaltered, pitch.

note and the altered or false fingerings are marked with an 'X.'[20] The two applications of the same pitch adjacent to each other form a mirror. A mirror can be formed in two methods: (1) a functional fingering followed by an altered fingering (B5[21] of the downbeat of beat 2), and (2) an altered fingering followed by a functional fingering (G5 of the downbeat of beat 1).

Example 1. *Delta City Blues.*

An alternate fingering is a secondary fingering that yields the same characteristic timbre of the primary tone (i.e. Bis Key B-flat as a secondary fingering of 1, 2, side B-flat on the saxophone).

Innovators of Microtonal Variation

Historically, the utilization of microtonal variation by jazz saxophonists derived from the microtonal inflections of the rural blues.[22] Although the blues derived separately from jazz, blues harmony became the underpinning foundation of jazz harmony.[23] The initial motivation of employing this technique was to emulate the voice by "singing through the instrument," particularly by applying false fingerings to specifically attain non-diatonic blue notes. Four saxophonists played an innovative role in the development of this microtonal technique: Jimmy Dorsey, Lester Young, John Coltrane, and Michael Brecker.

Jimmy Dorsey

The earliest of saxophonists to strategically employ microtonal variations as an expressive device in the jazz genre was Jimmy Dorsey. The earliest recorded source of Dorsey's employment is in a 1926 recording of the Red Nichols composition *That's No Bargain.*[24] In the ninth measure of this solo (0:59), he plays two motivic phrases that include successive eighth notes alternating between C4 unaltered and C4 altered. Each phrase is followed by one of two occurring pitches (harmonics) in the overtone series (C4 or G5).

20 Microtonal effects are created by false fingerings and manipulation of the overtone series. No distinction is given via notation. It is beyond the scope of this article to specify Brecker's particular use since specific evidence for each transcribed note cannot verified. Suggestions for such fingerings can be found in *Michael Brecker* (Milwaukee: Hal Leonard, 1995) and *The Michael Brecker Collection* (Milwaukee: Hal Leonard, 1999).

21 All pitch references are referred to as transposed pitches related to the tenor saxophone (key of B-flat).

22 Peter Lavezzoli, *The Dawn of Indian Music in the West* (New York: Continuum, 2006), 268.

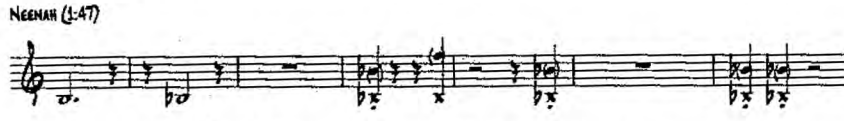
23 Ibid, 268.

24 Recorded in December 1926. *Red Nichols/1925-28*, Fountain DFJ-110

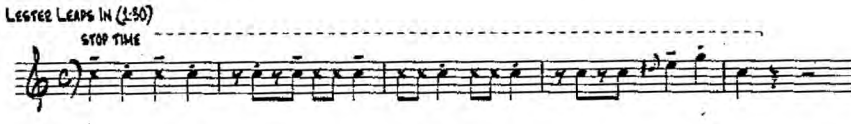
Lester Young

Although the technique of microtonal variation first came to popularity with Jimmy Dorsey, it is predominantly associated in the jazz genre with Lester Young.[25] In *Lester Young*,[26] Lewis Porter calls to attention five false fingering techniques utilized by Lester Young: 1) manipulation of the second (Bb4) and third harmonics (F5) above the fundamental Bb3 similar to the technique employed by Jimmy Dorsey (example 2),[27] 2) a repetitive mirroring of C5 using an overblown C4 fingering and left middle finger C (example 3),[28] 3) a "wah-wah" effect on Bb5 by depressing all fingers on the right hand while fingering an Bb5 (example 4),[29] 4) a "wah-wah on C5 while depressing all the fingers in the right hand (example 5),[30] and 5) a "choked" Ab5 moving to Bb5 in which he plays an Ab5 and depress D and C or E and D fingerings while controlling his embouchure to ensure an even pitch bend (example 6).[31]

Example 2. *Neenah.*



Example 3. *Lester Leaps In.*



Example 4. *Neenah.*

25 *The New Grove Dictionary of Jazz*, 2nd ed., s. v. "False Fingering."

26 Lewis Porter, *Lester Young* (Ann Arbor: University of Michigan Press, 2005), 50-53.

27 *Neenah:* Recorded on August 4, 1951. Pres Box 3019-3030

28 *Lester Leaps In:* Recorded on September 5, 1939. *Count Basie: The Essential Count Basie*, Pres Box 40608, 40835, 44150.

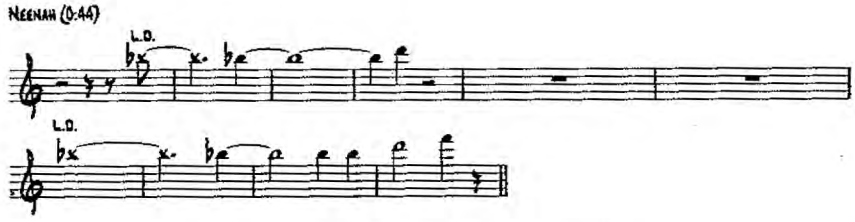
29 *Pres Returns/Lester Leaps In*: Recorded in November 1956. *The Complete Lester Young Studio Sessions on Verve* (Verve 314-547-087-2). *Neenah:* Recorded on April 2, 1950, *The Lester Young Quintet*, RCA 2119541-2.

30 *Neenah:* Recorded on April 2, 1950, *The Lester Young Quintet*, RCA 2119541-2

31 *Neenah:* Recorded on January 20, 1951, Charly LJCD-4

Example 5. *Neenah.*

Example 6. *Neenah.*



John Coltrane

Following Lester Young, John Coltrane was the next major innovator in the development of microtonal variation. Coltrane, through the influence of Young, developed the use of this technique in the mid-range of the tenor saxophone. Unlike Young, however, he extended this technique to the upper register thus broadening the saxophone's scope of tone color options. It was Miles Davis's band that was a catalyst for developing Coltrane's early exploration of false fingerings through his concept of "sheets of sound,"[32] although it was his later work with Thelonious Monk and his own group that advanced his use of the concept.[33]

John Coltrane's use of microtonal variation with Miles Davis's band is most often found in the context of a moving eighth-note melodic line unaccompanied by its unaltered mirror. It is generally confined to the mid-range of the saxophone and most often executed with the second overtone of D3 (A4) (examples 7-8).[34]

Example 7. *If I Were A Bell.*

32 Term coined by Ira Gitler ("*Trane on the Track,*" Down Beat, xxv/21 [1958] 16) to describe the rapid, sweeping lines as played by John Coltrane on his *Soultrane* release (Prestige, LP7142).

33 Jack Chambers, *Milestones: the Music and Times of Miles Davis* (New York: DaCapo Press, 1998), 272.

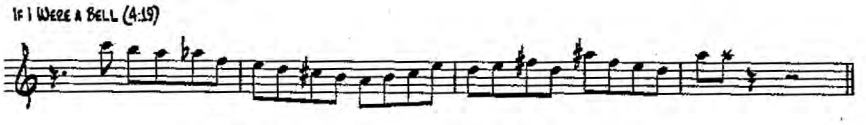
34 *If I Were A Bell*: Recorded on September 9, 1958, R 137456.

Example 8. *If I Were A Bell.*

Example 9. *Freddie Freeloader.*

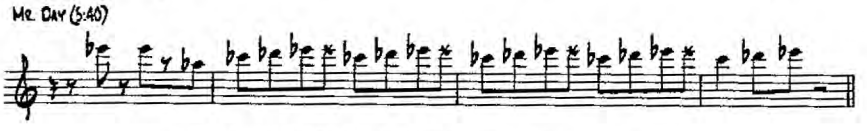
It seems that Coltrane was the first to manipulate microtonal variations in a way that employs the mirroring technique. This mirroring technique occasionally occurred in his recording efforts with Miles Davis. In example 10, Coltrane mirrors A5 at the end of a moving eighth-note phrase.

Example 10. *If I Were A Bell.*



However, the technique of mirroring as a successive and repetitious motive became more accessible in his vocabulary around 1960, particularly in his recording, *Coltrane Plays the Blues*. "Coltrane often made microtonal changes to notes, re-articulating them successively with this objective, and it seems that the greatest effect of this process is the change in timbre, rather than simply the minute change in pitch."[35] Examples 11[36] and 12[37] demonstrate Coltrane's use of mirroring within a repetitive motive.

Example 11. *Mr. Day.*

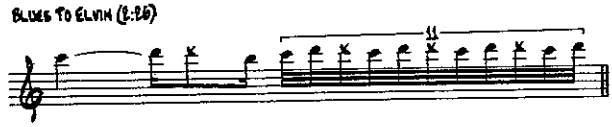


35 RT Dean and Hazel Smith, *Improvisation, Hypermedia, and the Arts Since 1945* (Amsterdam: Harwood Academic Publishers), 68.

36 *Mr. Day*: Recorded October 24, 1960, Atlantic Jazz: 1382-2.

37 *Blues To Elvin*: Recorded October 24, 1960, Atlantic Jazz: 1382-2.

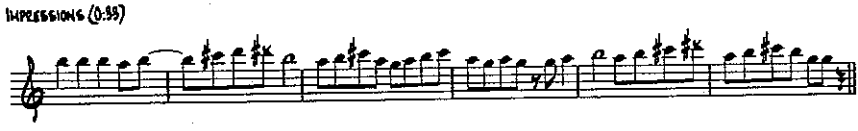
Example 12. *Blues To Elvin.*



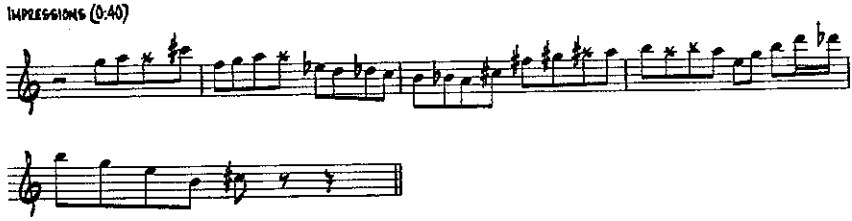
Coltrane developed this technique into more than a simple expressive device: "Coltrane restructures these [microtonal] techniques by reference to the point of view of a listener by shaping his improvisations in such a way as to make the approximate pitches and intervals mappable as thematic variations."[38]

John Coltrane's solo on his 1961 recording of *Impressions* shows a more developed awareness and partiality towards the technique of microtonal variation as an expressive device. In his first four solo choruses (approximately two minutes of recorded time), Coltrane employs thirteen methods of varying microtonal variations. Examples 13-19[39] demonstrates a sample of these methods:

Example 13. *Impressions.* Microtonal variation of D#6 unaccompanied by its unaltered mirror.

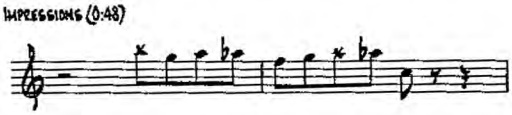


Example 14. *Impressions.* Microtonal variation of A5 as a mirror, A#5 as a mirror, and the combination of A5 and B5 in combination



38 Patrick Hogan, *"Cognitive Science, Literature, and the Arts: A Guide for Humanists* (New York: Routledge, 2003), 85.
39 *Impressions*: Recorded November 3, 1961- April 29, 1963, CDCD 1009 Charly.

Example 15. *Impressions.* Microtonal variation of B5 and A5 unaccompanied by their unaltered mirror



Example 16. *Impressions.* Microtonal variation of B5 with its unaltered mirror, D#6 without its unaltered mirror as an appoggiatura to C#6 and in ascending scalar movement, and B5 with its accompanying unaltered mirror

Example 17. *Impressions.* C6 unaccompanied by its unaltered mirror used as a passing tone.

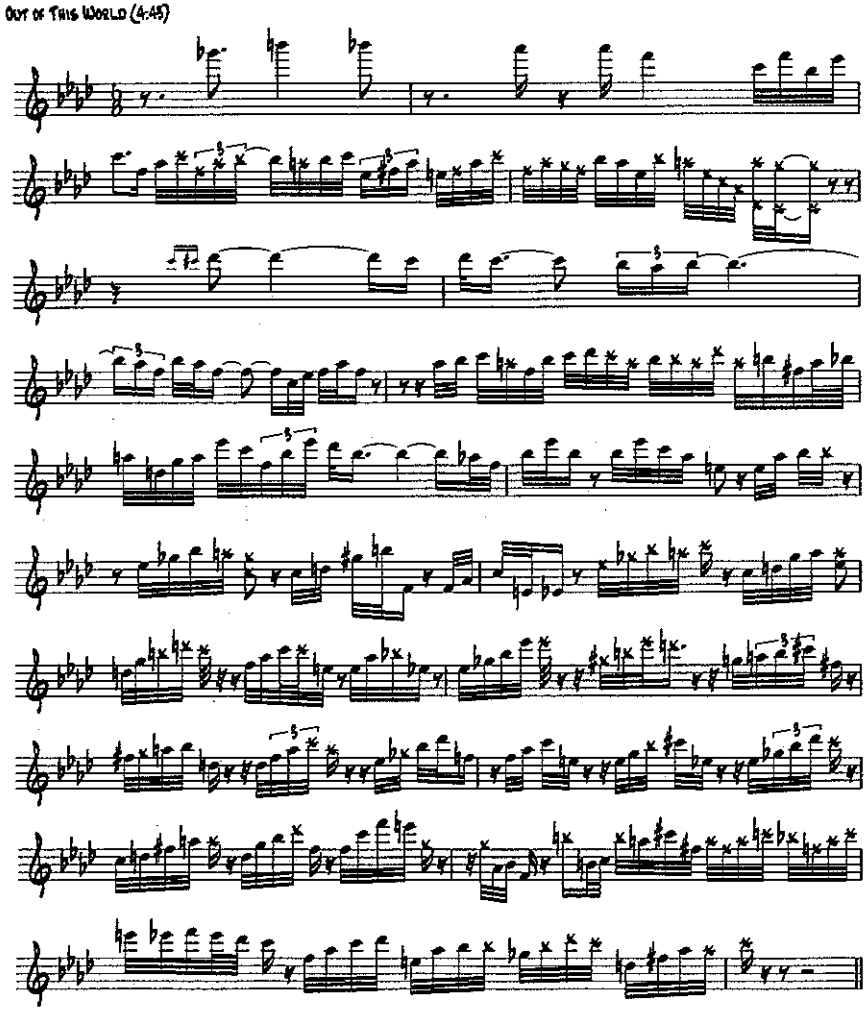
Example 18. *Impressions.* D6 used with its unaltered mirror.

Example 19. *Impressions.* Bb5 unaccompanied.

By 1963, Coltrane was not only using these techniques within the contour of the melodic line but as an overall color palette to accompany his concept of sheets of sound. The techniques displayed in his solo on *Out of This World* include a combination

of false fingerings and use of the overtone series that are not always confined within the context of a melodic line (example 20).[40]

Example 20. *Out Of This World.*



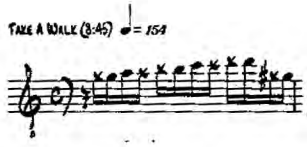
40 *Out of This World*: Recorded April 11, 1962-June 29, 1962, MCA Impulse: MCAD-5883. Transcription is modified and adapted from the transcription of Andrew N. White II, Vol. 8, No. 4/311.

Michael Brecker's Nine Techniques of Microtonal Variation[41]

"From Coltrane, Michael Brecker developed the use of the higher register combined with false fingerings, often setting up breathtaking polyrhythmic textures."[42] Learning the subset of this skill is an important aspect of contemporary saxophone playing and improvisation that should be addressed as part of the canon of saxophone development. Michael Brecker employs nine techniques that utilize microtonal variation.

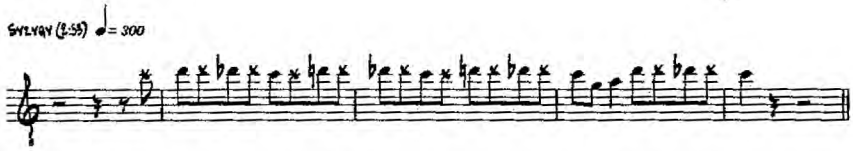
Technique #1 involves the use of microtonal variation in an ascending or descending scalar (diatonic and chromatic) motion. This technique can be categorized by six tendencies: 1) the notes generally range from G5 to Eb6; 2) between F5 and B5 the scalar motion tends to be upward and diatonic (example 21);

Example 21. *Take A Walk.*



3) between C6 and Eb6 the motion tends to be downward, chromatic, and repetitive; 4) between C6 and Eb6 the use of mirroring tends to be symmetrical (the first note is unaltered and the second note is a false fingering) (examples 22-25);

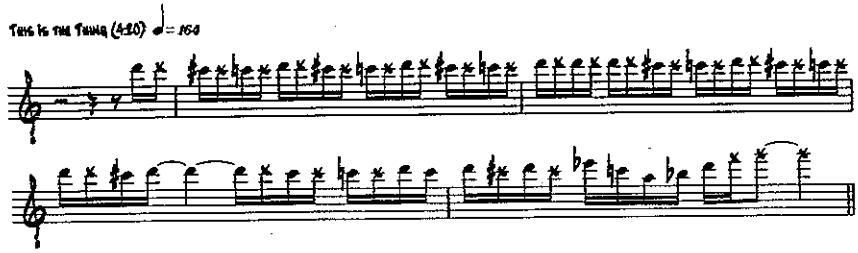
Example 22. *Syzygy.*



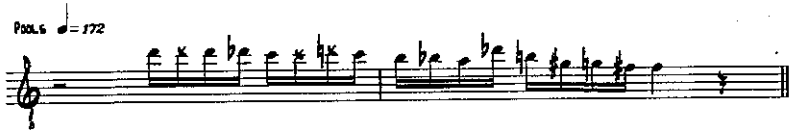
41 The following examples were gleaned and edited from *Michael Brecker* (Milwaukee: Hal Leonard, 1995), as transcribed by Carl Coan: *Chime This, Don't Try This At Home, Escher Sketch, Itsbynne Reel, Night Flight, Peep, Original Rays, Straphangin,' Sumo,* and *Take A Walk.* The following examples were gleaned and edited from *The Michael Brecker Collection* (Milwaukee: Hal Leonard, 1999), as transcribed by Carl Coan: *Cabin Fever, Impressions, Madame Toulouse, Slings and Arrows, Syzygy,* and *Two Blocks From the Edge.* The author produced all other transcriptions.

42 Ed. Richard Ingham, *The Cambridge Companion to the Saxophone* (New York: Cambridge University Press, 1998), 146.

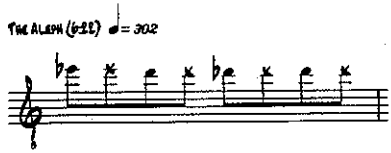
Example 23. *This Is the Thing.*



Example 24. *Pools.*

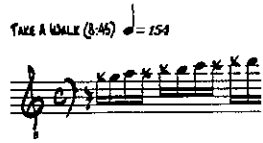


Example 25. *The Aleph.*



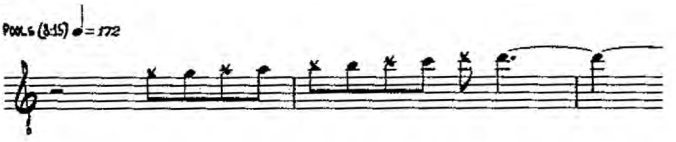
5) in the range of F5 to B5, the upward motion line tends to start on a false fingering G5 followed by its unaltered mirror, and unaltered A5, and a false fingering A5 and B5 (examples 26-28);

Example 26. *Take A Walk.*



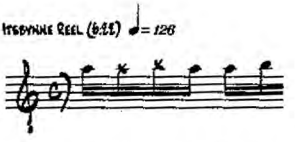
Example 27. *Take A Walk.*

Example 28. *Pools.*



and 6) the use of A5 and B5 in the upward motion from A5 to B5, where both notes tend to be false fingerings (examples 29-32).

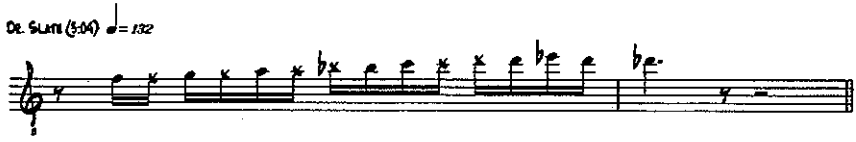
Example 29. *ItsbynneReel.*



Example 30. *Original Rays.*

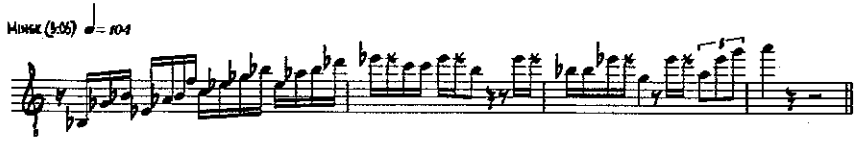
Example 31. *Sumo.*

Example 32. *Dr. Slate.*

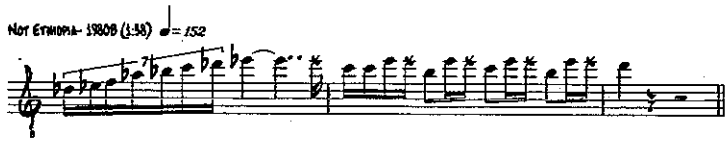


Technique #2 involves the use of two consonant upper notes (mirrored) in combination with one variable lower note. Characteristics of this technique include: 1) the sole use of D6 and Eb6 in the mirror; 2) the tendency of the variable lower note to either be a C6, B5, or Bb5 and altering back and forth between them (examples 33-35);

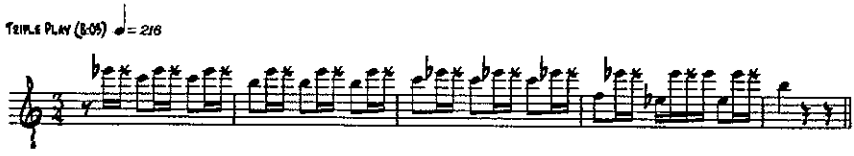
Example 33. *Minsk.*



Example 34. *Not Ethiopia* (1980B).



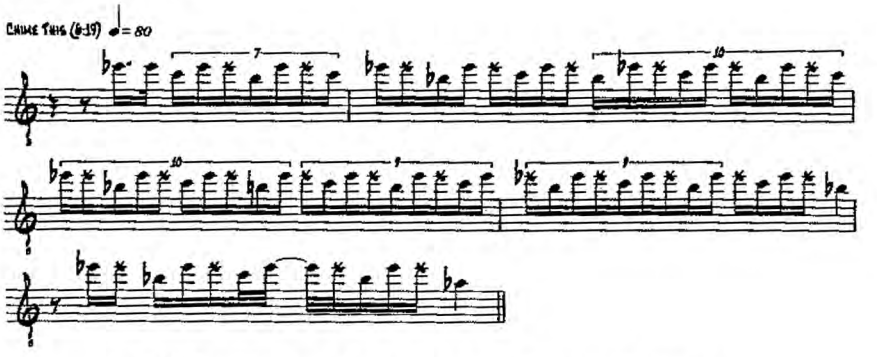
Example 35. *Triple Play.*



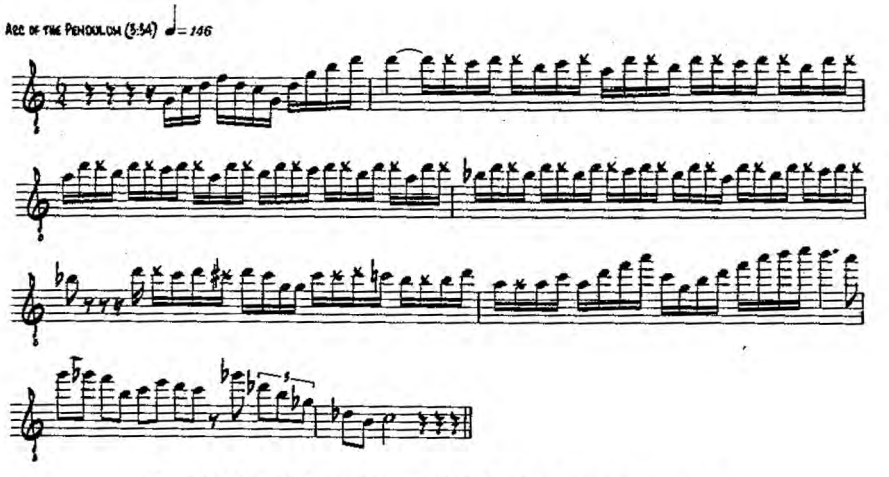
3) when the technique is employed a in a "sheets of sound,"[43] over-the bar-line fashion, the mirror typically falls on the upbeat, following the variable lower note which falls on the downbeat (examples 36 and 37);

43 The association of "sheets of sound" with this technique does not imply the harmonic implications associated with John Coltrane. It refers more to the rhythmic aspect of the term: dense, patterned lines, high-speed lines executed in rapid succession.

Example 36. *Chime This.*

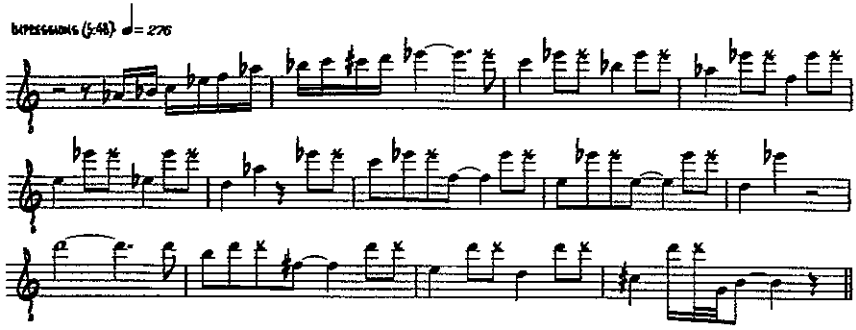


Example 37. *Arc of the Pendulum.*



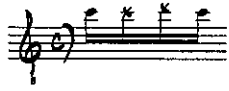
and 4) the variable lower notes moving in a descending or ascending diatonic or chromatic fashion (example 38).

Example 38. *Impressions.*

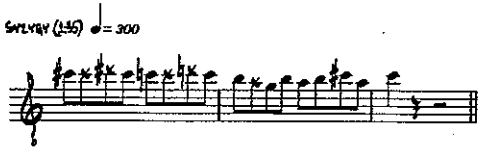


Technique #3 is the combination of a microtonal C6 and D6. The most characteristic form of this technique is executed by playing an unaltered C6, altered C6, altered D6, and altered C6 consecutively and uninterrupted (motive A) (examples 39-43).

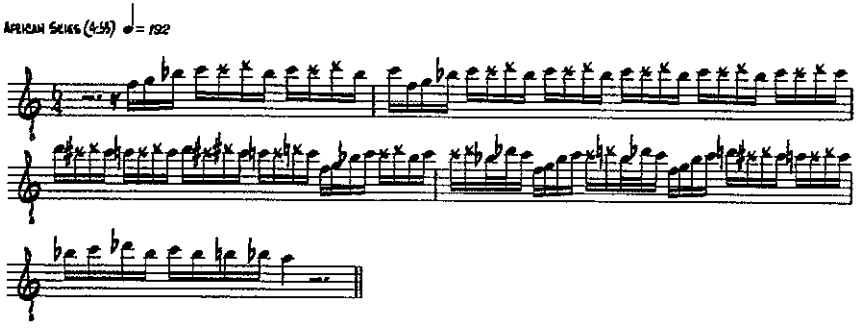
Example 39. Motive A.



Example 40. *Syzygy.*

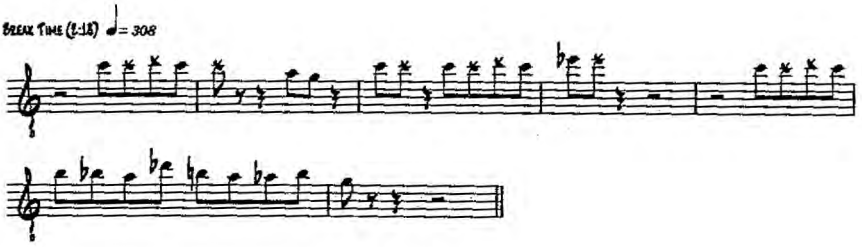


Example 41. *African Skies.*



Example 42. *Uncle Bob* (1980A).

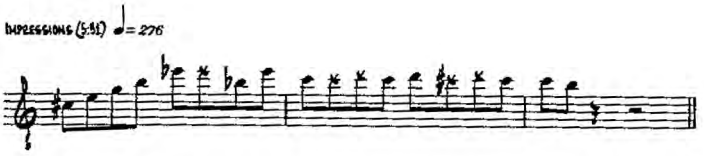
Example 43. *Break Time.*



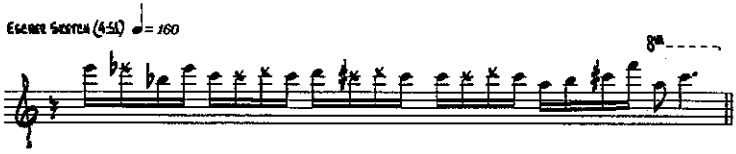
Example 44. Motive B.

The phrase starts as a paired microtonal C6 and D6 surrounded by unaltered C6s, moving to paired C#6 and D6 surrounded by a D6 and C6 and back to the original pairing. This phrase gives the allusion of sideslipping a half-step up with only employing one chromatic pitch (C#6). Motive A can 1) precede Motive B (examples 45-46);

Example 45. *Impressions.*

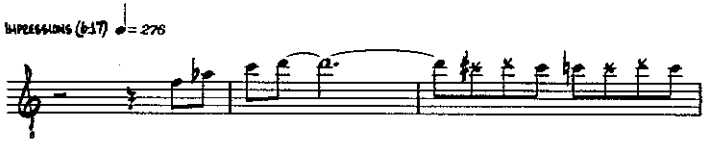


Example 46. *Escher Sketch.*



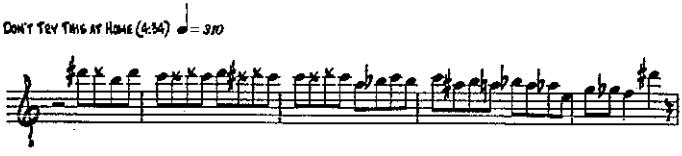
2) follow Motive B (example 47);

Example 47. *Impressions.*

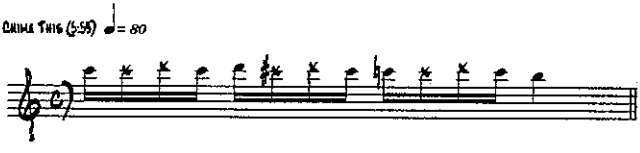


3) enclose motive B (examples 48-49);

Example 48. *Don't Try This At Home.*

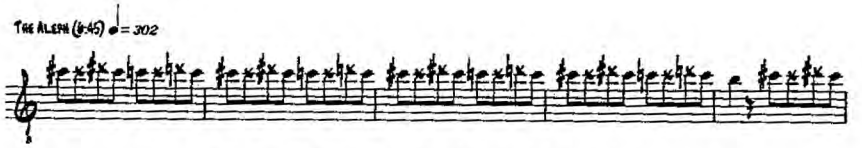


Example 49. *Chime This.*



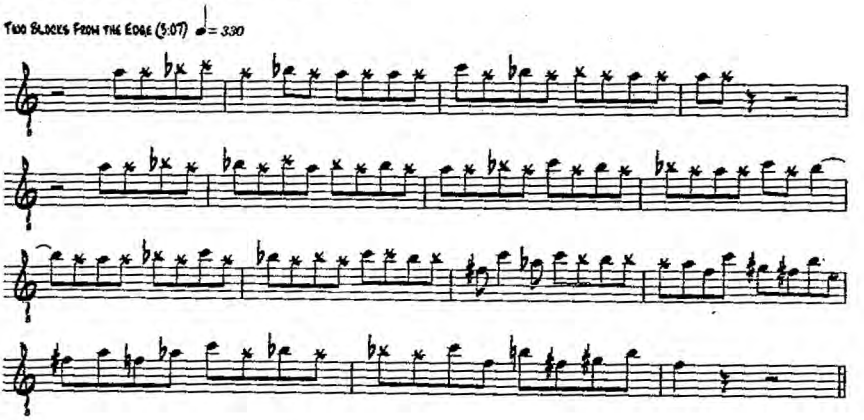
or 4): alternate with Motive B (example 50).

Example 50. *The Aleph.*

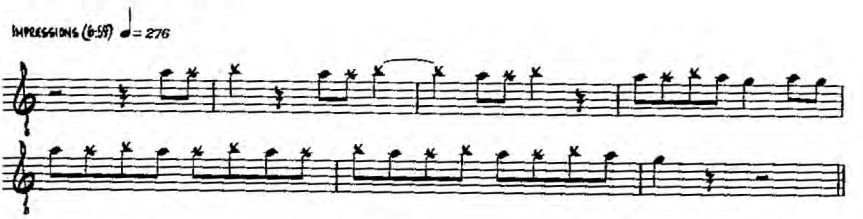


Technique #4 includes the relationship of A5, Bb5 and B5. Brecker manipulates the sounds of these three pitches by grouping them together and randomly assigning microtonal variations to them. The result is a long stream of similar sounding pitches with slight tonal and color variations. The application of this technique is typically in eighth notes at an up-tempo speed or sixteenth notes in a double-time constructed line (examples 51-55)

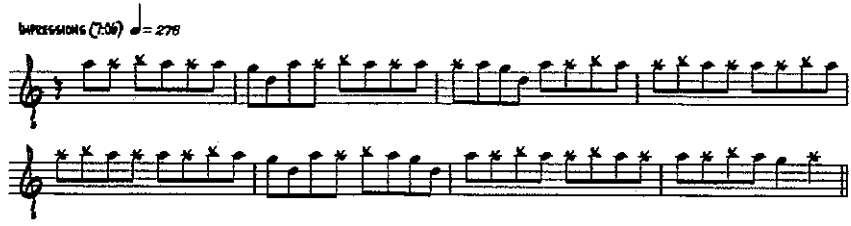
Example 51. *Two Blocks From the Edge.*



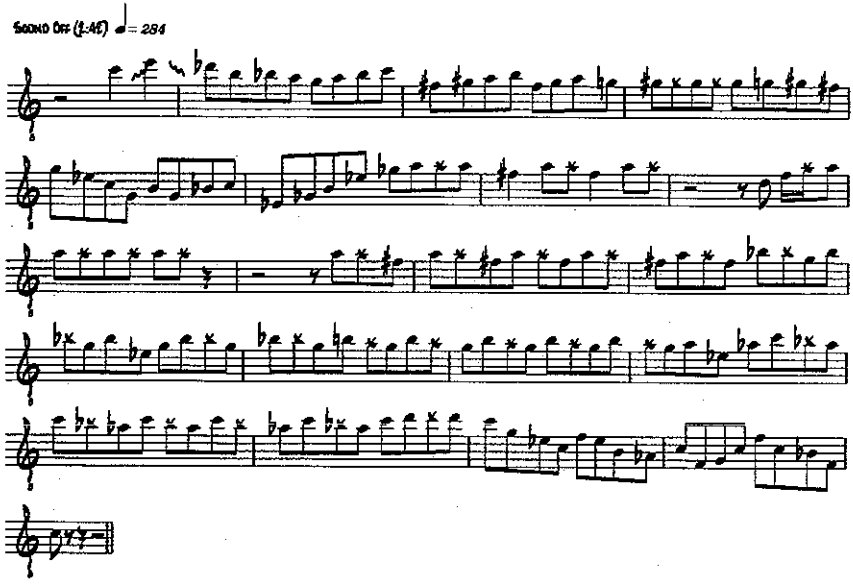
Example 52. *Impressions.*



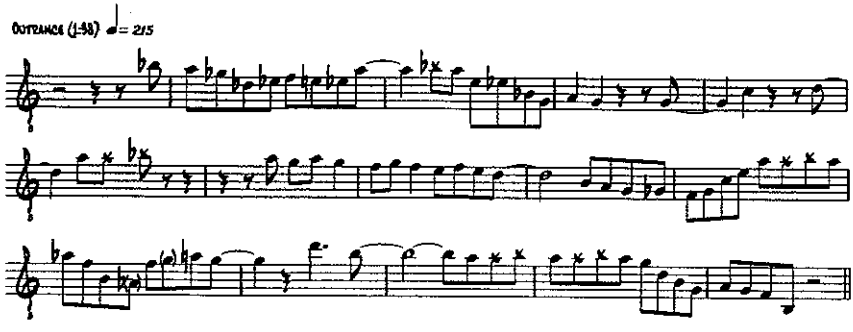
Example 53. *Impressions.*



Example 54. *Sound Off.*

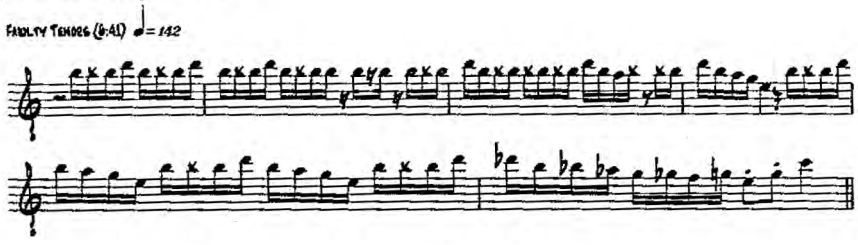


Example 55. *Outrance.*

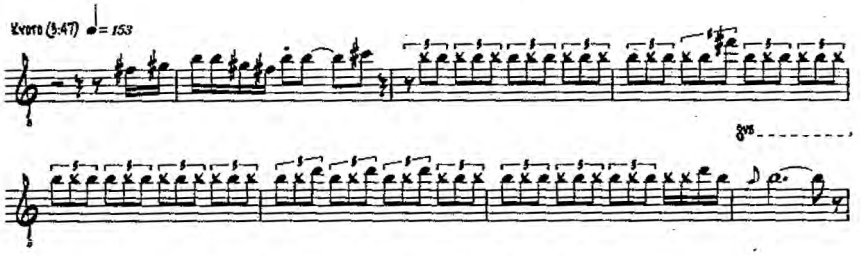


Technique #5 involves a mirror followed by an unaltered repeated note, forming an application of a group set of three. Almost on all occasions, the pattern of microtonal treatment will start with an unaltered, altered, unaltered. Specific applications of this technique include: 1) a stream of repetitive groupings of the same pitch (examples 56-57);

Example 56. *Fawlty Tenors.*

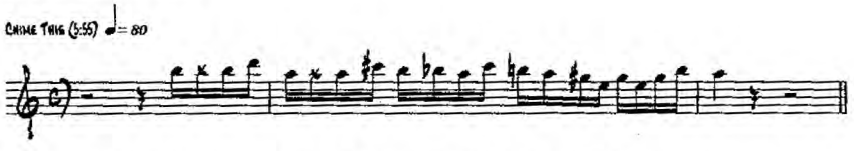


Example 57. *Kyoto.*



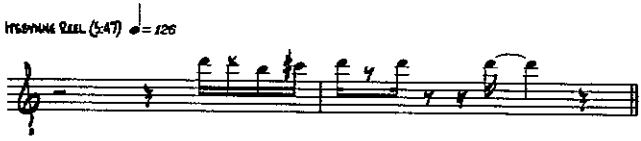
and 2) use of a form of sequencing (example 58).

Example 58. *Chime This.*

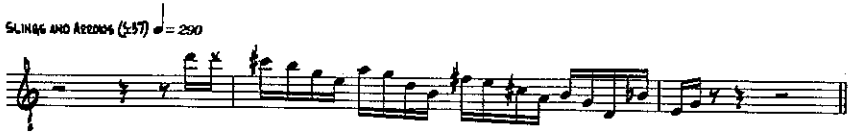


Technique #6 and technique #7 segregate the application of microtonal variation of C6 and D6. In terms of D6, two of the most common usages of this device include 1) a mirrored pick-up into a longer eighth note or sixteenth note phrase (examples 59-61);

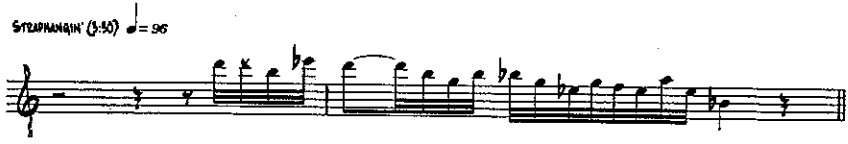
Example 59. *Itsbynne Reel.*



Example 60. *Slings and Arrows.*

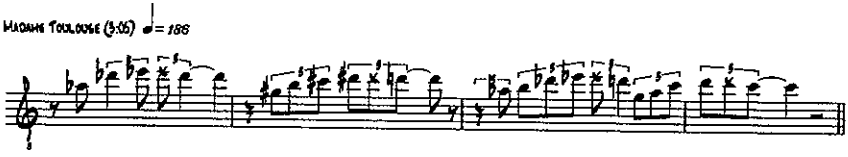


Example 61. *Straphangin.'*

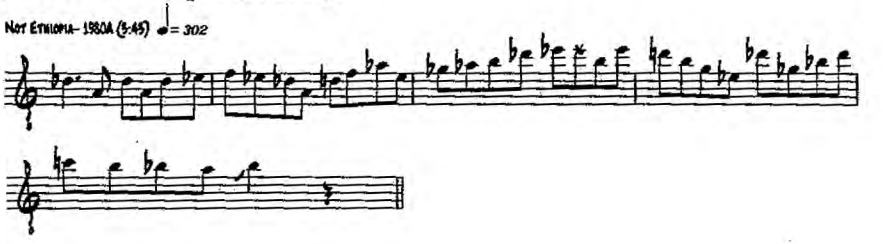


and 2) a form of an appoggiatura or enclosure in approaching a target note (examples 62-66).

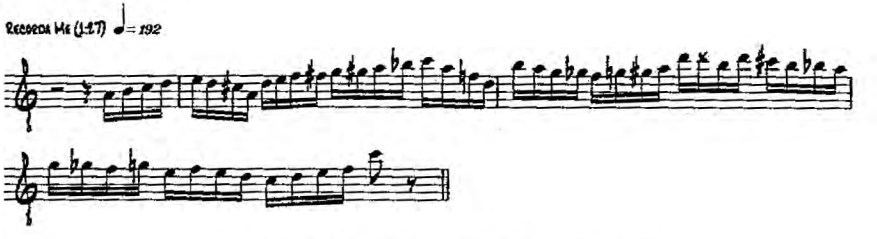
Example 62. *Madame Toulouse.*



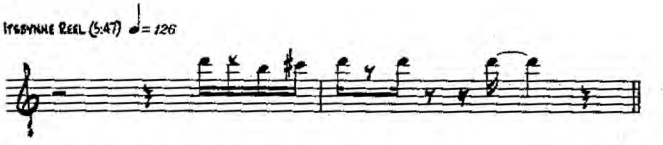
Example 63. *Not Ethiopia* (1980A).



Example 64. *Recorda Me.*



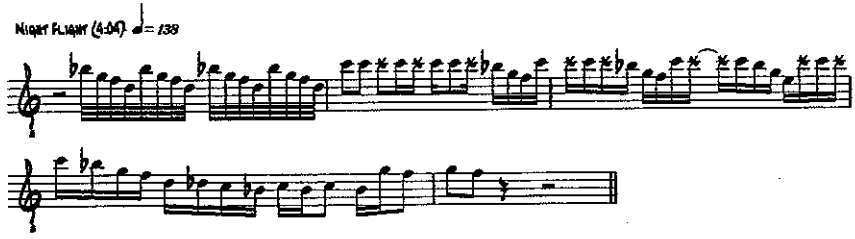
Example 65. *ItsBynneReel.*



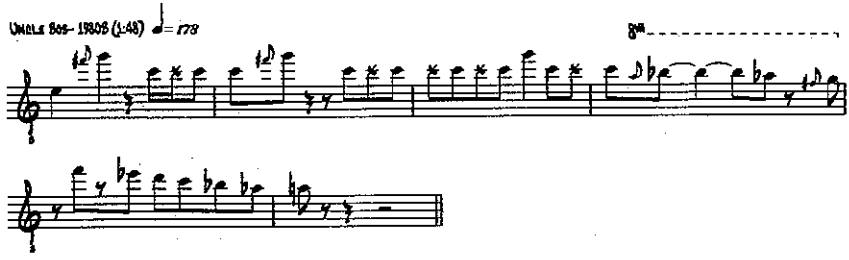
Example 66. *Peep.*

Brecker's methods for applying microtonal variation to C6 differ dramatically from his approach to D6. The tendency of his convention for C6 is to 1) serve as an anchor for motivic development (examples 67-68);

Example 67. *Night Flight.*

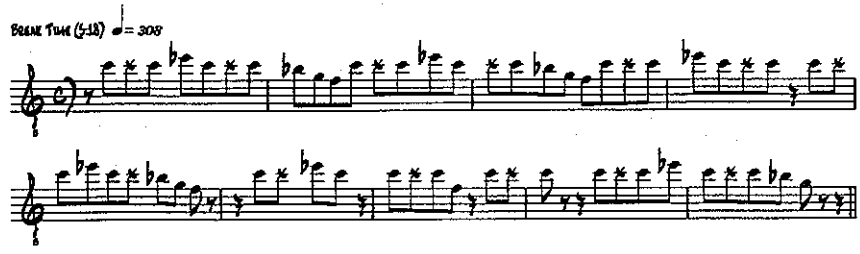


Example 68. *Uncle Bob* (1980B).

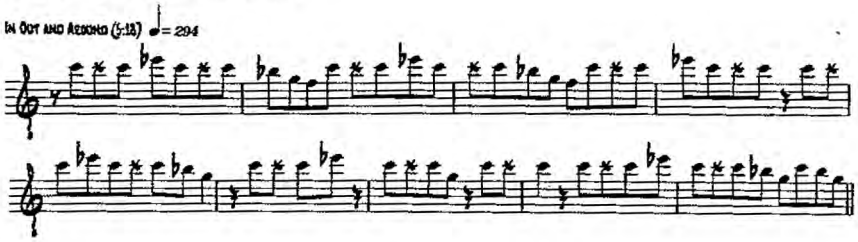


and 2) to serve as a fulcrum for development above and below itself (examples 69-70).

Example 69. *Break Time.*

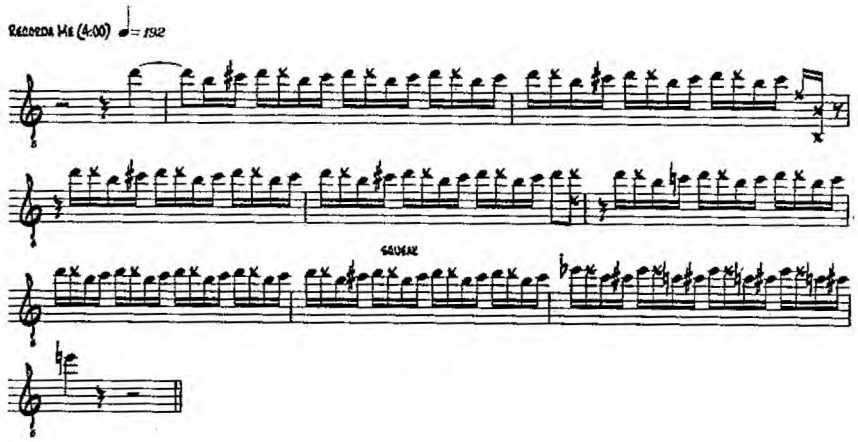


Example 70. *In Out and Around.*

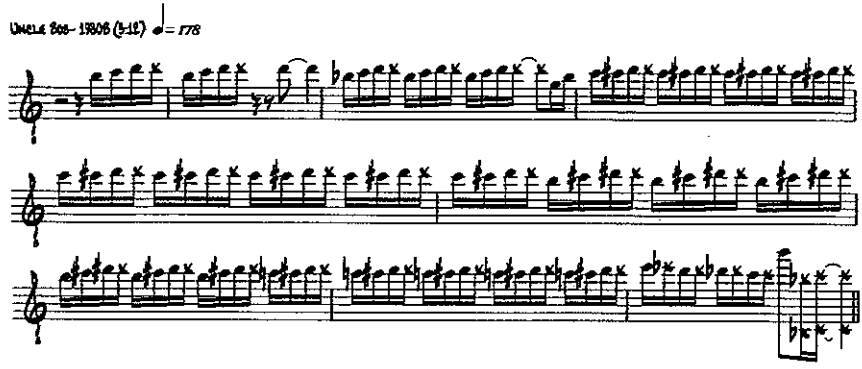


Technique #8 includes the use of mirroring at the end of a phrase. This technique contains two tendencies: 1) the mirrored note is always D6 or Eb6; and 2) it is almost always approached by stepwise motion (diatonic or chromatic) (examples 71-73).

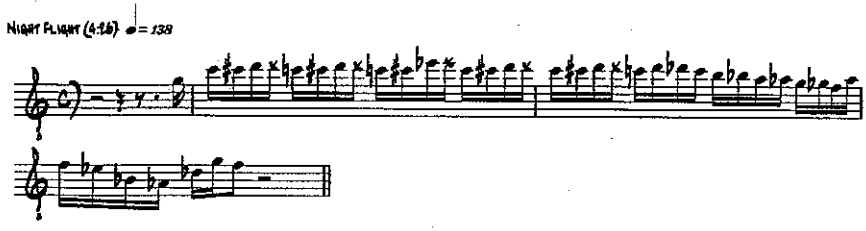
Example 71. *Recorda Me.*



Example 72. *Uncle Bob* (1980B).

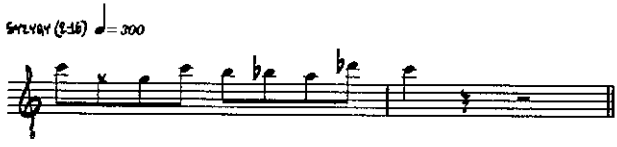


Example 73. *Night Flight.*



Technique #9 includes the application of microtonal variation of F4 and G4. This application seems less structured of an approach to other techniques and is the least used in terms of the solos analyzed. It can appear 1) in the form of a mirror (examples 74-75);

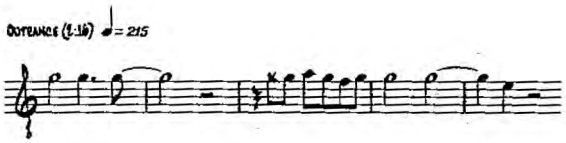
Example 74. *Syzygy.*



Example 75. *I'll Never Stop Loving You.*

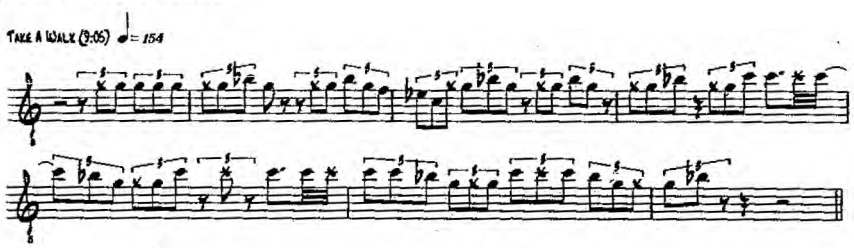
2) segregated (example 76);

Example 76. *Outrance.*



and 3) as a fulcrum for melodic development above and below the pitch (similar to technique based on C6 (example 77).

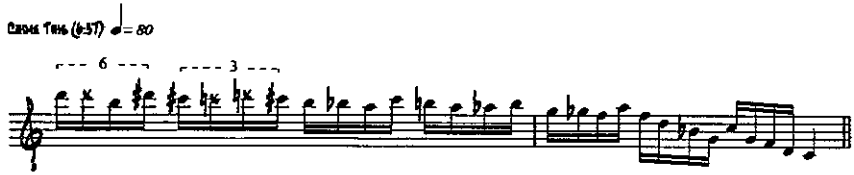
Example 77. *Take A Walk.*



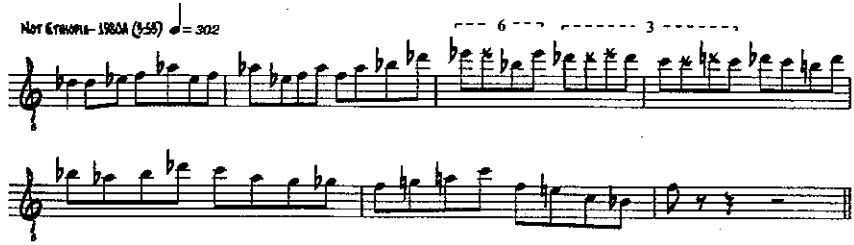
Putting it Together

Michael Brecker's technical mastery is demonstrated through the combining the nine microtonal techniques. His ability to flawlessly weave together the techniques in a seamless pattern is remarkably innovative. Although Brecker combines all nine techniques often and in unique ways, the examination of numerous solos revealed various patterns that prevailed in his solos. The most prominent configuration seems to be centered on the combination of technique #1 (microtonal variation in ascending and descending scalar motion), technique #3 (microtonal C6 and D6 in combination), and technique #6 (microtonal variation of D6 and Eb6 as a mirror). Examples 78 and 79 demonstrate how these techniques #3 and #6 lock together:

Example 78. *Chime This.*

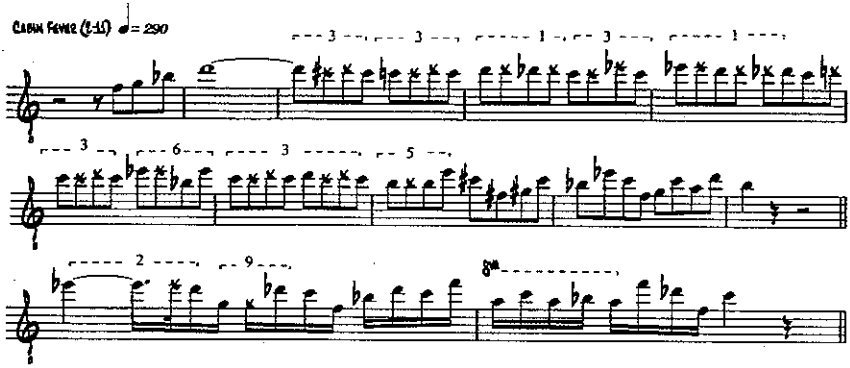


Example 79. *Not Ethiopia* (1980A).



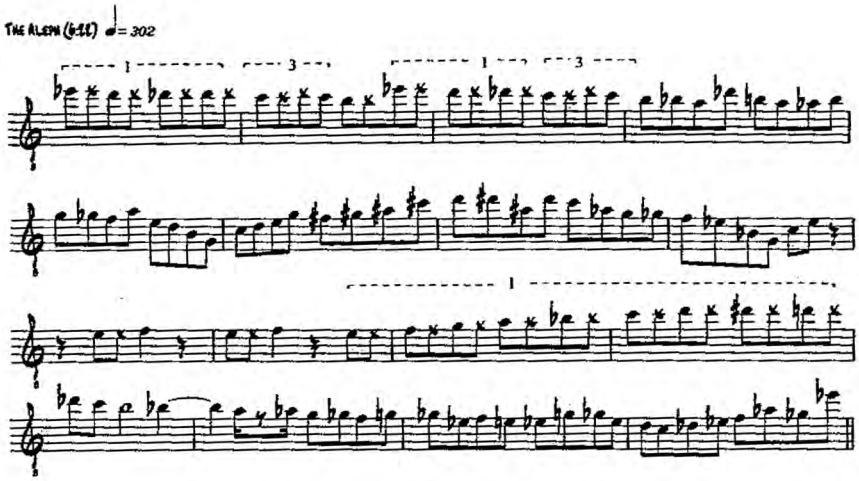
In addition to technique #3 and technique #6, Brecker often adds technique #1 as bridge to lock together multiple strands of the #3 and #6 combination (example 80).

Example 80. *Cabin Fever.*

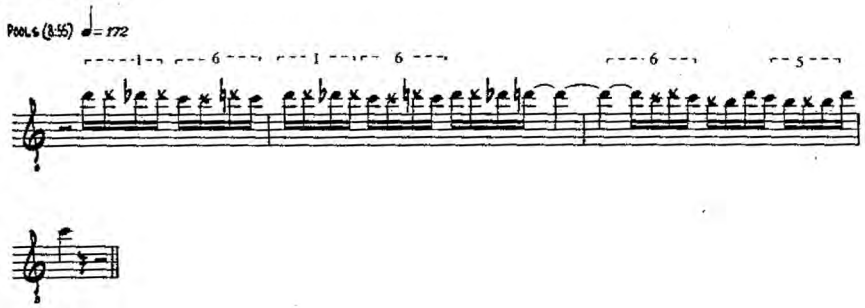


The interplay between Technique #1 and technique #6 without technique #3 are often demonstrated (examples 81 and 82).

Example 81. *The Aleph.*



Example 82. *Pools.*

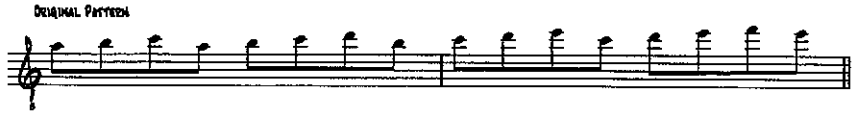


Pedagogical Implications

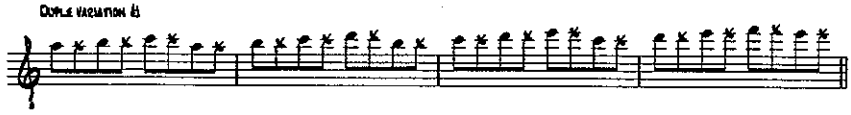
The categorical organization of the microtonal variation patterns Michael Brecker employs unlocks a rather elusive technique that has been utilized in many saxophone solos since the 1920s. Although this technique can be heard in recordings as early as the 1920s, it was Michael Brecker who utilized the technique in such a specialized manner. Preliminary exercises in developing this technique should include diatonic inclusion of mirroring into diatonic scales and patterns. This skill set can be applied to any scale or pattern in metrical groupings of two or three. Within each metrical grouping there are four adaptations for the placement of the microtonal fingering. By playing through each adaptation in both meters, every possible combination of microtonal variation is achieved. Upon completion of basic diatonic exercises, it is suggested that variations of the exercises 1) be practiced in every major and minor

key as well as all other scales; 2) be applied to more technically advanced patterns; 3) undergo more advanced combinations of polymeter through combing the duple and triple meters; and 4) undergo more advanced combinations of polymeter through added articulation and accents. Examples 83-91 demonstrate how duple and triple permutations can be conceived through a basic digital pattern.

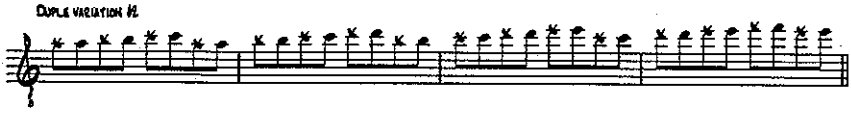
Example 83. Original pattern.



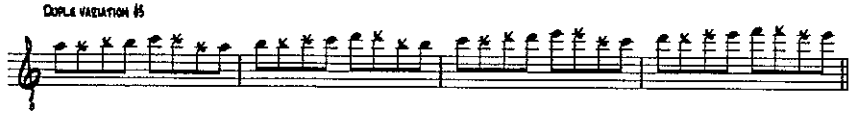
Example 84. Duple variation no. 1.



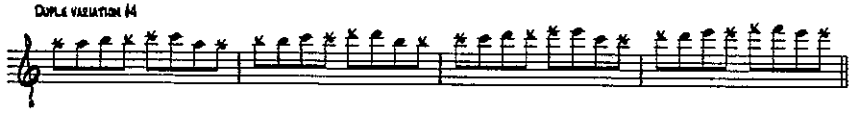
Example 85. Duple variation no. 2.



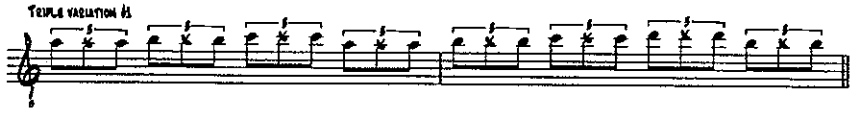
Example 86. Duple variation no. 3.



Example 87. Duple variation no. 4.

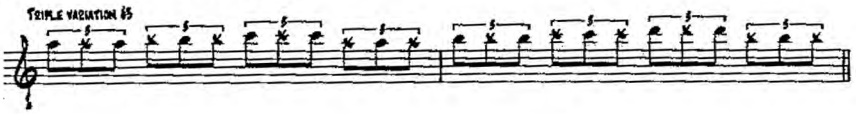


Example 88. Triple variation no. 1.



Example 89. Triple variation no. 2.

Example 90. Triple variation no. 3.



Example 91. Triple variation no. 4.

Once comfortable with the insertion of mirroring pairs into diatonic scale and pattern exercises, other exercises can be created to accommodate the techniques performed by Michael Brecker. The insertion of these techniques into the melodic line may be easier and more personalized once a command of the technique is solidified.

Conclusion

Michael Brecker's innovative application of microtonal variation to his improvisations has created a popular aesthetic for saxophonists to draw upon and has generated a style of contemporary improvisation synonymous with his name. Brecker has also created a style that involves such brilliant technicality that many saxophonists are reluctant to employ these techniques for trepidation of falling short of the standard Brecker set.

The basis for this research was to organize Michael Brecker's approach to implementation of microtonal variation in terms of his technical approach. Further research that would be beneficial to the educator and performer would be to analyze these approaches in terms of harmonic application. In addition, another practical research study would be to categorize his use of multiphonics and split-tone fingerings (a technique often associated with false fingerings and microtonal variation).

Appendix: Discography of Musical Examples

"African Skies," 1994. *Out of the Loop,* GRP 059784-2 [CD].
"The Aleph," September 18-19, 1981. *Steps: A Collection- Step By Step + Paradox,* NYC Records (US) NYC 6028 [CD].
"Arc of the Pendulum," November 2, 1999. *Time Is of the Essence,* Verve 547844-2 [CD].
"Blues to Elvin," October 24, 1960. *Coltrane Plays the Blues.* Alt LP1382.
"Break Time," July 7, 1978. In Out and Around, Timeless (Du) SJP119.
"Cabin Fever," 1995. *Tales From the Hudson,* Verve 547844-2 [CD].
"Chime This," 1988. *Don't Try This at Home,* MCA/Impulse 42229 [CD].
"Delta City Blues," 1998. *Two Blocks From the Edge,* Impulse! 051261-2 [CD].
"Dogs In the Wine Shop," 1990. *Now You See It (Now You Don't).* GRP 9622 [CD].
"Don't Try This at Home," 1988. *Don't Try This at Home,* MCA/Impulse 42229 [CD].
"Dr. Slate," November 2, 1999. *Time Is of the Essence,* Verve 547844-2 [CD].
"Escher Sketch," 1990. *Now You See It (Now You Don't).* GRP 9622 [CD].
"Fawlty Tenors," December 14-16, 1980. *Smokin' In the Pit,* NYC Records (US) NYC 6027-2 [CD].
"Freddie Freeloader," March 2, 1959. *Kind of Blue,* Col CL1610.
"If I Were A Bell," Sept 9, 1958. *Jazz at the Plaza,* Col 467144-2.
"I'll Never Stop Loving You," February 1978. *Redux '78,* Concord CCD4483 [CD].
"Impressions," April 13, 1995. *Infinity,* Impulse IMPD-171 [CD].
"In Out and Around," July 7, 1978. *In Out and Around,* Timeless (Du) SJP119.
"Itsbynne Reel," *Don't Try This at Home,* MCA/Impulse 42229 [CD].
"Kyoto," December 8-10. Steps: *A Collection- Step By Step + Paradox,* NYC Records (US) NYC 6028 [CD].
"Lester Leaps In, "September 5, 1939. *Count Basie: The Essential Count Basie,* Col 40608, 40835, 44150.
Madame Toulouse,"1998. *Two Blocks From the Edge,* Impulse! 051261-2 [CD].
"Minsk," 1990. *Now You See It (Now You Don't),* GRP 9622 [CD].
"Mr. Day," October 24, 1960. *Coltrane Plays the Blues.* Alt LP1382
"Neenah," August 4, 1951. *The Complete Lester Young Studio Sessions on Verve.* Pres Box 3019-3030.
"Night Flight," 1975. *Back to Back,* Arista AL4061.
"Not Ethiopia (1980A)," December 14-16, 1980. *Smokin' In the Pit,* NYC Records (US) NYC 6027-2 [CD].
"Not Ethiopia (1980B)," 1980. *Straphangin,'* Arista AL9550.
"Nothing Personal," Late 1986- early 1987. *Michael Brecker,* MCA/Imp MCA 5980 [CD].
"Original Rays," Late 1986- early 1987. *Michael Brecker,* MCA/Imp MCA 5980 [CD].
"Out of This World," June 19, 1962. *Coltrane,* Imp A(S)32.
"Outrance," November 2, 1999. *Time Is of the Essence,* Verve 547844-2 [CD].
"Peep," 1990. *Now You See It (Now You Don't),* GRP 9622 [CD].
"Pools," 1983. *Steps Ahead,* Elektra Musician 96.018-1.

"Recorda Me," December 14-16, 1980. *Smokin' In the Pit*, NYC Records (US) NYC 6027-2 [CD].
"Slings and Arrows," 1995. *Tales From the Hudson*, Verve 547844-2 [CD].
"Sound Off," November 2, 1999. *Time Is of the Essence*, Verve 547844-2 [CD].
"Straphangin," 1980. *Straphangin,'* Arista AL9550.
"Sumo," July 30, 1986. *Live In Tokyo 1986.* NYC Records NYC6006-2 [CD].
"Syzygy," Late 1986- early 1987. *Michael Brecker*, MCA/Imp MCA 5980 [CD].
"Take a Walk," September 18-19, 1981. Steps: A Collection- Step By Step + Paradox, NYC Records (US) NYC 6028 [CD].
"This is the Thing," February 1978. Redux '78, Concord CCD4483 [CD].
"Triple Play," February 1978. Redux '78, Concord CCD4483 [CD].
"Two Blocks From the Edge," 1998. Two Blocks From the Edge, Impulse! 051261-2 [CD].
"Uncle Bob (1980A)," December 14-16, 1980. Smokin' In the Pit, NYC Records (US) NYC 6027-2 [CD].
"Uncle Bob (1980B)," December 8-10. Steps: A Collection- Step By Step + Paradox, NYC Records (US) NYC 6028 [CD].