Lennie and Ornette

Searching for Freedom in Improvisation

Observations on the Music of Lennie Tristano and Ornette Coleman

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Submitted in partial fulfillment of the requirements for
the degree of Doctor of Music.

Sibelius Academy
Jazz Music Department
Study Program in Performance
2002

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Abstract

This thesis examines the music of two pioneers of free improvisation in jazz: Lennie Tristano and Ornette Coleman. Besides emphasizing the melodic language of both musicians, this study presents analyses and transcriptions of their compositions and improvisations. The author's approach as a musician-researcher stresses the importance of *transcription* and *emulation* as study methods.

Because Tristano and Coleman are somewhat controversial figures in jazz history, this study addresses to most commonly asked questions: Was Tristano a genuine modernist and innovator who was ahead his time? Does Coleman's music have inner logic and structure despite its seemingly naive and chaotic surface?

Analyzing Tristano's music proved to that he was already using modern harmonic devices in his late 1940's compositions. In his *Line Up* improvisation, for example, he systematically employed *side slipping* techniques to create harmonic tension. Although Tristano experimented with odd time signatures and off-kilter melodic accents, his rhythmic concept and phrasing were not significantly ahead of his contemporaries.

Analysing Coleman's melodies proved that his melodic language consists of several elements – archaic country and blues, tonal bebop melodies and modal techniques among them – that are used deliberately. Coleman exploits the principles of western tonal music intuitively with great artistic success despite his apparent unfamiliarity with formal music theory.

Transcriptions of the music studied are included.

Keywords: Tristano, Coleman, free improvisation, free jazz, melody, music analysis

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1 Introduction

1.1 The object of study

In my work I discuss the music of two pioneers of free improvisation: Lennie Tristano (1919–1978) and Ornette Coleman (1930–). In the artistic part of my study I performed two concerts dedicated to the music of the respective composer. In both composers' music I have been particularly interested in the element of melody. The melodic language of bebop, both its original and more contemporary versions, is nowadays extensively discussed in jazz pedagogy the world over. From the material that I performed in concerts I selected themes and improvised solos that I believe would reveal certain principles of both musicians' melodic languages. By analyzing- this material from a practical point of view – the musician's perspective – I have tried to find results that could be useful to both researchers and musicians.

The study material consists of Tristano's recordings from 1946 to 1955. This period can be considered the most significant in Tristano's artistic career. His post-1955 recordings are no longer on a par with the modern jazz of that time.

In Ornette Coleman's case, this study concentrates on the period from 1958 to 1963. During that time Ornette made his first recordings; these were to exert a profound impact on the stylistic field of jazz. He also established his pianoless quartet concept (alto saxophone, trumpet, bass, drums), a lineup with stronger roots in jazz tradition than his later instrumentations, particularly those in which he played violin and trumpet in his unorthodox style.

The analytical section of my study treats the objects of study in reverse chronological order (first Coleman, then Tristano); as a musician myself, a retrospective approach feels more natural.

1.2 Previous study

Much has been written about bebop and other tonal jazz styles. This material generally concentrates on the relationships between an improvised melody its underlying chord structure. About Tristano and Coleman there is much less material. From *Dissertation Abstracts* 1998 I found three university level studies[1] that dealt with Coleman's or Tristano's music. Fairly good biographical information about Tristano is found in John McKinney's dissertation "The Pedagogy of Lennie Tristano". The study also includes a considerable number of interviews with Tristano and his students concerning his musical ideas. McKinney's work does not however contain any transcriptions or analyses of Tristano's music.

There are four transcriptions of Ornette's solos in Michael Cogswell's thesis "Melodic Organization in Four Solos of Ornette Coleman". Although I consider the analytical section of his work to be quite good, I do not agree with all the pitches and rhythmic interpretations in his transcriptions of the *Lonely Woman* and *Ramblin'* saxophone solos.[2]

Lynette Westendorf's dissertation "Analysing Free Jazz" deals with the overall problems encountered when analyzing free jazz and includes a solo transcription of Coleman's *Lonely Woman*. In this transcription as well I find some questionable pitches and the rhythmic interpretation in particular differs significantly from my own transcription.[3]

Both Ekkehard Jost's *Free Jazz*[4] and Gunther Schuller's Coleman article[5] in *The Grove's Dictionary of Jazz* contain transcriptions and analyses of Coleman's solos. Based on my

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[1]McKinney 1977, Cogswell 1989, Westendorf 1994.

[2]See *Published transcriptions* p.19.

[3]Ibid.

[4]Jost 1974.

[5]Schuller 1988.

own study I can concur with most of these analyses' results. There is also an excellent transcription and analysis of Coleman's *Ramblin'* by Michael Titlebaum in IAJE's *Jazz Research Papers*[6].

The only published transcription that I found of Lennie Tristano's music, a transcription of the three first choruses of *Line Up,* is contained in an article by Richie Beirach for Keyboard Magazine[7].

1.3 Key questions of study

During the late 1950's Ornette Coleman created an original approach to jazz performance; the fixed parameters of improvisation are melody and rhythm, while harmony is more the result of free-flowing melodic lines. After his first recording he did not use a chord instrument at all (before including electric guitars in the 1970's). Ornette created an easily recognizable improvisational style that will be discussed subsequently in greater detail. Ornette's melodic talent is perhaps shown off to best advantage in the several dozen melodies he has composed, many of which are frequently played by other jazz musicians. On the other hand, Coleman's art has often been called random and chaotic and his instrumental skills are said to be of amateur quality. This controversy makes Coleman even more interesting as an object of study.

By the late forties, ten years before Coleman's emergence, Lennie Tristano had already created his original way of playing "outside" the chords and improvising freely. His experiments however remained beyond the jazz mainstream and did not revolutionize jazz music's stylistic development as Coleman's did. Opinions about Tristano are sharply divided. He has been called the greatest unsung hero in jazz history, but has also been accused of producing academic and unemotional pseudo-art. One of my aims in this study is to determine if Tristano was a musical innovator who introduced modern musical elements that became commonplace in the subsequent development of jazz.

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[6]Titlebaum 1997.

[7]Beirach, Richie (1985): "Lenny Tristano's Line Up: The Essence of Bebop from a Neglected Pioneer of Jazz Piano Overdubbing". *Keyboard,* July 1985, pp.44–47.

1.4 Combining research and performance

As a musician whose roots are in the bebop tradition, I can somewhat relate to Tristano and Coleman like the musicians in those times. For that reason I find it quite natural to study these developments in jazz history through my own playing.

The performance part of my degree consists of five concerts and one published recording[8]. Two concerts, *Ornettology* and *Tristanology* were dedicated exclusively to Coleman's and Tristano's music respectively. I composed most of the music on my album *Shades*. Several tunes on the album utilize free improvisation without a chord structure. Two compositions, *Lumetar* and *Wandering Minds*, are almost entirely freely improvisations. The players only agreed that *Lumetar* would have a ballad feeling and that *Wandering Minds* would start with bass and drums following each other, the piano and saxophone ignoring the bass and drums and improvising simultaneously. The tune *Namelock* has an Ornette-like theme, and solos are freely improvised.

Performing Coleman's and Tristano's music in my concerts has given me deeper insight[9] into the objects of my study; in this context I call this musical research method *emulation*. I believe that a musician's view of the study material is essential to my work because the material itself is a result of improvising musicians' creativity.

1.5 Methods

The primary methodology in this study has been to utilize the musician's experience in the research process outlined in figure 1.1. Data has been collected by listening to recordings, going through published music and written material and transcribing, or translating, the aural experience into written musical notation. Data has been analyzed using emulation and conventional musical techniques for melodic and harmonic analysis.

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[8] Jari Perkiömäki: *Shades*, SAJD 97001.

[9] The type of knowledge that can be called *silent knowledge*.

1.5.1 Transcription

I have myself transcribed all the melodies and improvised solos analyzed in my work. Although several transcriptions were available in published pedagogical material[10] and university-level studies[11], I have used them only as references.

Jazz researchers should be able to transcribe their own study materials for at least two reasons. Many published transcriptions are inaccurate and they can contain serious misinterpretations of the music. The second and even more important reason is that a transcription is only a secondhand version of the research material, which is essentially music as it sounds in time, not as a score on paper. Compared with classical music this is even truer for improvised jazz music.

However good a transcription, it can only contain those elements of music that can be notated (melody, harmony, basic rhythmic structure). Other elements such as phrasing, articulation and intonation are impossible to express on paper in their full meaning. For that reason the listening and transcription processes, as research methods, are just as important as the transcription analysis.

1.5.2 Emulation

Emulation is a study method in which the musician/researcher attempts to reproduce the playing and improvising style of the object of study in his or her own playing as faithfully as possible. This includes transcribing, playing the transcription while trying to duplicate the sound of the original, and using similar stylistical devices to internalize the sound and overall playing conception for one's own improvisations. This study method is widely used in jazz pedagogy and has been applied by many established jazz artists in their learning processes.

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[10]Schuller 1988, Titlebaum 1997.

[11]Cogswell 1989, Westendorf 1994.

In my research work I played all my transcriptions in unison with the original recording to match the phrasing and nuances. I have also used emulation in a wider sense when performing entire concerts in these composers' respective styles.

Through emulation the researcher gains a playing experience besides the listening and transcribing experiences. This gives the researcher a fresh look at the study material that can bring him or her closer to the original playing experience of a particular artist (only *closer*, the original experience of another person can naturally never be duplicated). Comparing the original and the researcher's recordings can facilitate assessments of the study process.

1.5.3 Analysis

Many jazz scholars have analyzed jazz using methods that were originally developed for analyzing classical music. Consequently, many of those methods are of limited value when applied to jazz owing to the essential differences between these two musical genres. In Western art music the composer's score is considered the definitive expression of the work of art, even though it is meant to be played before the work actually exists for the listener. In jazz the "work" more closely resembles a process[12] and it only exists once. A transcription is not a "score", because it is never meant to be the starting point for performers. In my work the object of analysis is always a combination of the transcription, listening and playing experiences.

My analytical methods do not necessarily have a "scientific" basis (for instance Schenkerian), but they are very common among musicians and in jazz pedagogy. Here I discuss the melodies' relationships to their underlying chord structures, looking for motifs' developments and variations; harmonic functions or their absence are also analyzed. By listening and playing the material, I always maintain the musician's perspective. This will give the results of my study a practical dimension that will hopefully bring us closer to the musical thinking processes of Lennie Tristano and Ornette Coleman.

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[12]Elliott 1995.

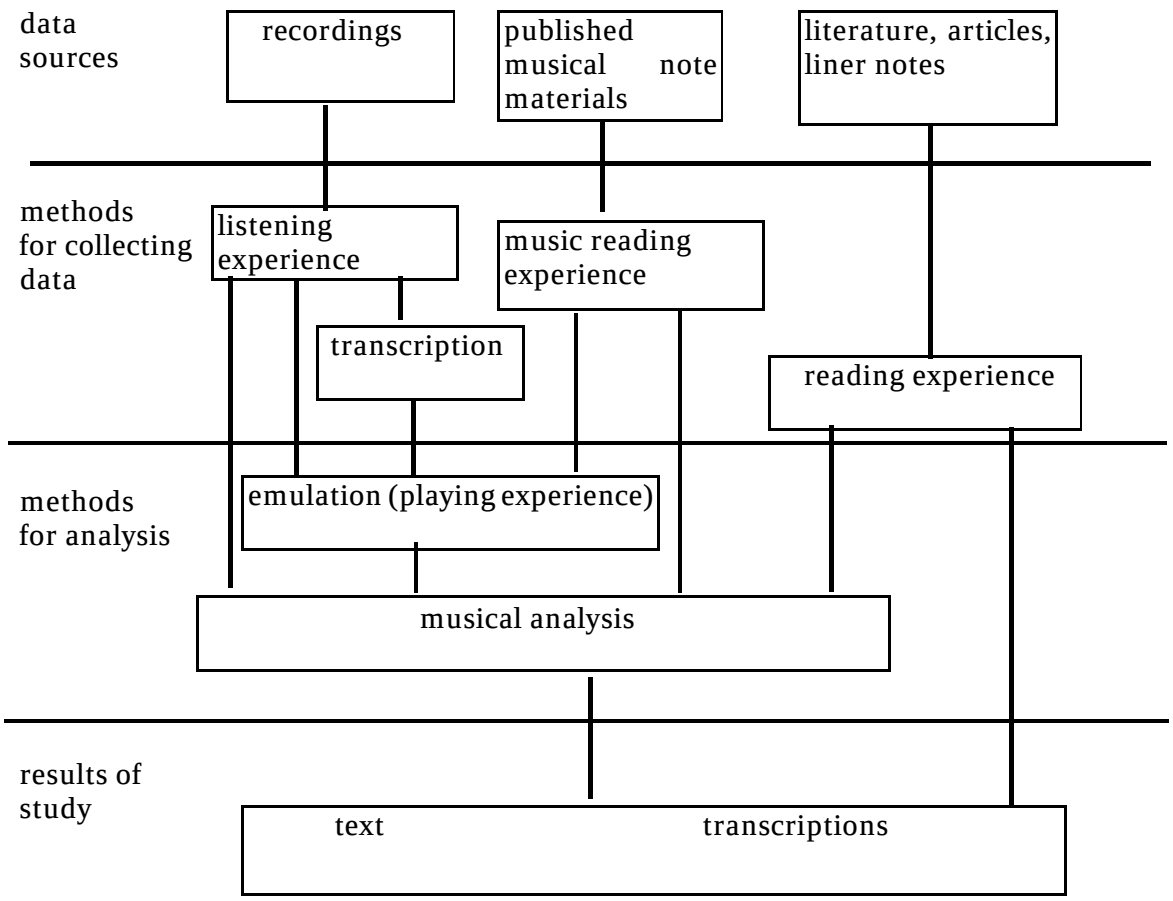

Figure 1.1 Musician/researcher's study process.

2 Ornette Coleman

2.1 Background

Ornette Coleman was born in Fort Worth, Texas on March 19, 1930. He started to play the alto saxophone at the age of fourteen and was self-taught. From 1949 he worked with various rhythm & blues bands in which he often played the tenor saxophone. In the late 1950's he lived in Los Angeles where he played occasional gigs and took part in jam sessions. These playing experiences often resulted in humiliation; other musicians refused to play with Ornette because they thought he was playing wrong and disturbing the music.[13]

Ornette began his recording career in 1958, partly because of a lucky coincidence. Bassist Red Mitchell had heard a Coleman original. He was quite impressed and told Ornette that he should take the music to Lester Koenig, owner of Contemporary Records. Ornette agreed. Coleman's first visit to Contemporary is not without a touch of comedy. “He came in alone one day when I was very busy,” Koenig recalled. “I asked him to come back in a few days. When he returned the following Friday, he said he had some music he wanted to sell and mentioned Red Mitchell had suggested he come see me. I took him to the piano and asked him to play the tunes. Ornette then said he couldn't play the piano. Then I asked him, 'How did you hope to play your tunes for me if you can't play piano?' So he took out his plastic alto and began to play.” Koenig liked the tunes, but, said he, “I liked the way he played the alto, too.” He spoke to Coleman about recording and when Ornette told him he had been playing with Cherry, Norris, Payne, and Higgins, Koenig arranged for the entire group to play an audition. Payne remembers that audition. “Red Mitchell sat with Les through the whole thing,” he said. “The group played a few charts of Ornette's and next thing we knew we had an album date.” Ironically, as Koenig noted, “Ornette had no intention of recording when he came to see me. He needed some money and came in to sell me some tunes.” Coleman recorded two LPs for Contemporary,

[13]Littweiler 1992, 30.

Something Else! The Music of Ornette Coleman (C3551) and Tomorrow Is the Question (M 3569), and after he moved to New York, switched to Atlantic Records.[14]

Koenig recalls: “I first heard Ornette play when Don Payne brought a test pressing of *Something Else!* to the Down Beat office. My first impression was one of complete shock. But I felt the power and experienced a curious sense of elation at the absolute lack of inhibition in his playing. Key words and phrases flitted through my head, rather than fully formed thoughts. Vitality! furious passion! what was that? ! the guy's crazy! where is he?! what the hell is he doing?! power! force! freedom.”[15]

John Lewis, the leader of the Modern Jazz Quartet arranged for Coleman and Cherry to attend the annual School of Jazz at Lenox, Massachusetts in the summer of 1959. Subsequently they made six albums for Atlantic that have become free jazz classics. The most radical of these recordings is *Free Jazz*[16], recorded in 1960. On this album Coleman employed two pianoless quartets improvising simultaneously. In 1962 Ornette stopped performing and taught himself to play trumpet and violin. In 1965 he returned to the stage with these new instruments added to his arsenal. His unconventional ways of handling these instruments caused a similar kind of shock in the jazz world as his first appearance at The Five Spot Club in New York five years earlier.[17]

In 1974 Ornette changed his instrumentation from acoustic to electric with electric guitars and bass. The basic rhythmic concept also became closer to rock and funk. From that time Ornette’s band has played and continues to play “harmolodic rock-jazz” at the time of this writing in 1999.

Unlike Tristano Ornette has been accorded wide recognition as one of the great innovators of jazz. His *free jazz* idea attracted an extensive following during the 1960's

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[14]John Tynan, July, 1960: *Ornette: The First Beginning*.

[15]Ibid.

[16]Ornette Coleman : *Free Jazz*, Atlantic 1364.

[17]Littweiler 1992, 98.

and 1970's; European musicians in particular have taken the free jazz path as the basis of their musical search for more original expression.

2.2 Harmolodic theory

Coleman's first use of the term "harmolodics" occurred in 1972 in liner notes for his *Skies of America* recording[18]. Since that he has occasionally indicated that he is working on a textbook of harmolodics, but it has yet to be published.

Cogswell has discussed harmolodics quite extensively, quoting Coleman's views on the subject several times. Coleman's definitions for the theory are often confusing[19] because he uses common musical terms like "unison" and "transposition" to express unconventional meanings. The most concise explanation of harmolodics is the equality of HARmony, MOvement and meLODY. Ornette's prose is stylistically similar to his saxophone improvisations: both are strikingly original, syntactically awkward, but curiously logical.

I agree with Cogswell that "the harmolodic theory" is more an artist's philosophy than music theory in the traditional sense. The key elements of harmolodics (and Coleman's music) are the equality of different musical elements and the spontaneous and honest expression of the individuals making music.

2.3 Criticism of Coleman

Although Coleman is today a widely respected artist, he has had to deal with considerable opposition and criticism. He was accused of playing out of tune, possessing inadequate harmonic capabilities and so forth. Coleman's interviews reveal that his grasp of traditional music theory was genuinely vague and based on certain misunderstandings from his youth. This might also be the secret of his originality. Coleman developed his musical ideas mostly by ear and intuition; through his peculiar

[18]Ornette Coleman: *Skies of America,* Columbia KC-31562, 1972.

[19]Cogswell 25–26.

way of thinking he became a highly personal and creative artist.

Ekkehard Jost has measured Coleman's intonation with the aid of electro-acoustical devices[20]. Although, according to Jost, these measurements show that the frequencies of Coleman's sounds do in fact often deviate from the tempered system, most of these deviations fall well within the range we usually tolerate in an opera singer or violin virtuoso. Naturally we should be very careful about making conclusions based on the purely physical or electronic measurement of any musical phenomena, but Jost's argument supports Coleman's own assertions concerning intonation and pitch. Coleman's "human intonation" or "vocalization of the sound"[21] is closer to manipulating a sound to get different tone colors than to raising and lowering the pitch.

We can also understand Coleman's "wrong" intonation as a means towards his musical goals. He was not trying to play in tune with the tempered system but to extract as much melodic expression from each note as possible. Using different intonation for musical expression is not new. Before the general acceptance of the tempered system these devices were widely used in European classical music, especially singing.

Despite these considerations, we should note that in his early recordings Ornette Coleman was occasionally playing out of tune in the real sense (he is however not the only great saxophone player in the history of jazz to have done that). His articulation and fingering technique are also occasionally imprecise. These problems in his playing might have been the consequence of a lack of opportunities to play on steady jobs. After his six-month engagement at the "Five Spot" in 1961 his improved technique is evident on the recordings that followed.

[20]Jost 1974, 53.

[21]Ibid.

2.4 Coleman's artistic personality

The stylistic field of jazz was still rather unified during the 1940's and 1950's. Ornette's musical environment during those decades was heavily oriented towards rhythm & blues and bebop. In light of those circumstances, it is rather surprising that Ornette did not develop into one of many bebop saxophonists; instead he chose to fight strongly for his own musical visions. This stubbornness usually resulted in unemployment or being left alone on the bandstand at jam sessions. One reason for that was Coleman's habit of playing melodically freely even on tunes that had a definite chord structure. Other musicians usually claimed that Ornette *could not play*. One might ask the classic question: was Ornette a *genius* or just *mad*? The answer could be that like many other original artists he was *mad enough* to follow his own ideas in spite of other players' reactions. But there was enough *genius* in Ornette to enable him to create an original melodic style that was idiosyncratic and attention-getting yet simultaneously rooted in various musical traditions.

3 Compositions by Ornette Coleman

During the last several years, Ornette Coleman's melodies have become quite popular in other jazz musicians repertoires. Some of Coleman's compositions, such as *Blues Connotation, When Will the Blues Leave* and *Lonely Woman* have become jazz standards. Ornette's success in writing catchy jazz tunes is now an established fact. In this work I have analyzed three melodies: *Invisible*, *Lonely Woman* and *Joy of A Toy*. Although these analyses make no attempt to find a recipe for tune-writing, which of course is impossible, I nevertheless believe that a discussion of those melodies is useful. I will approach them in three ways: by listening, analyzing and playing, also in a live concert situation.

Ekkehard Jost argues that there are several different types of Coleman themes, two of which are the most important: bebop-like themes from the fifties and later themes with several contrasting ideas recalling some of Charles Mingus's compositions (the earliest example is *Congeniality*[22]). According to Jost, the latter is the most important type of composition that emerged during the 1960's and it has been widely imitated by other jazz composers. Jost also argues that this type of theme is usually called the "Coleman theme" by musicians (like the "Parker theme" in the 1950's). However, in discussions with several musicians, I have encountered little support for this argument.[23]

To my ear, an essential aspect of Coleman's melodies is their relationship to jazz history and the folk music tradition. Coleman succeeds in combining a bebop-like melodic language with folk-like hillbilly phrases and archaic blues. After his first recording he was also able to free his compositions from standard chord structures and symmetrical forms. His melodies often contain a "hook", an asymmetrical phrase that provides the listener with a surprising and often humorous effect. For a musician starting to

[22]Ornette Coleman: *The Shape of Jazz to Come*, Atlantic 1317.

[23]Jost 1974, 56–57.

improvise from such a melody this effect can serve as a source of inspiration for a more intuitive and freer style of improvisation, compared to that employed on more conventional jazz tunes. These effects resemble those found in tunes by Thelonius Monk. Monk's success in jazz tune writing suggests that Coleman's compositions will have a long life as vehicles for future jazz playing.

Playing Coleman's tunes poses different kinds of challenges to players' improvising abilities than standard jazz tunes. On Coleman's tunes the improviser cannot lean on standard chord progressions and pre-memorized II–V "licks"; one has to build an improvised melody derived from such elements as the mood of the piece, thematic ideas, or melodic motifs suggested by other players.

3.1 Invisible

According to the recording's liner notes, *Invisible* was composed already in 1952 or 1953. Coleman had to however wait until the year 1958[24] for the tune to be recorded when he performed it on his first album, *Something Else!!!;* this is the only session where he employed a traditional jazz quintet instrumentation, including the piano[25]. As Ornette explains in the liner notes:

> "The melodic direction is pretty free. Actually, these are regular intervals that any musician would use anyway, but put together this way, it's very melodious"

Invisible can be found also on John Coltrane's *The Avant-garde* recording from 1960[26]. This album provides us with another view of Coleman's compositions of that time[27]. It is interesting to hear how Coltrane, the most exiting modern saxophonist of that day, interprets Coleman's compositions. On this recording these tunes are also played by a

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[24]Ornette Coleman: *Something Else!!!*, Contemporary S 7551.

[25]Walter Norris was the pianist.

[26]John Coltrane & Don Cherry: *The Avant-garde*, Atlantic 790041-2.

[27]*The Avant-garde* also contains *The Blessing*, another tune from *Something Else!!!*.

pianoless quartet – the lineup that Coleman also used exclusively after *Something Else!!!*.

3.1.1 Form

The basic form of *Invisible* is a 32-bar popular song structure in 4/4-time. This AABA-form consisting of four eight-bar phrases, as well as the 12-bar blues, are two of the most common forms in swing and bebop styles. *Invisible* has one slight deviation from this form: the seventh bar of the A section is six beats long. This elongation of the form is only used in the song's theme; the solos are in 4/4-meter throughout. Only the A section contains a composed melody, the B section (the so-called "bridge") has been left open for improvisation. This practice is also common in the bebop tradition. My transcription of the tune also contains Don Cherry's improvisation for the first bridge section.

The melodic language of the theme resembles bebop, which is why we could consider *Invisible* as one of Jost's first type of Coleman melodies[28]. The form of the melody is clearly an alternating sequence consisting of four call and response phrases. The harmonic structure differs from bebop: instead of tonal II–V cadences the melody modulates chromatically upwards in the first four bars. The first phrase starts in Db major in bar 1 but ends in D major in bar 2. The second phrase modulates from Eb major to E major in the third bar and then to F major in the fourth bar. The third phrase ends in a C major cadence. The fourth "turnaround" phrase reverts to Eb major but ends in a repeated note B. This kind of ending, an unexpected note outside the tonality of the phrase, is called *intervallic denial* by David Liebman[29].

[28]Jost 1974, 56.

[29]Liebman 1991, 52.

A

|| Db | D | Eb, E | F | Ab, Db | Dm7, G7 | C, Eb | B (single note) ||

B

|| D | Eb | B+ | A+ | Db | C7alt | F7, Bb7 | Eb7, Ab7 ||

Figure 3.1 Ornette Coleman's *Invisible*, harmonic structure, as played on the *Avant-garde* recording.

The harmonic structure in Figure 3.1 is made up of the chords implied by the melody and bass line on the *Avant-garde* recording[30]. Unlike Ornette's original recording, there was no chord instrument used so I have tried to minimize any guesses regarding chord types. The chords marked by a single letter can be either dominant seventh or major 6/9 chords. Places that imply clear dominant–tonic resolutions are marked with dominant chords.

The bridge starts with the same kind of ascending chromatic movement as the A section but now starts a half-step higher in D major. The latter half of the bridge is the most functionally harmonized, using a cycle of dominants resolving back to Db major.

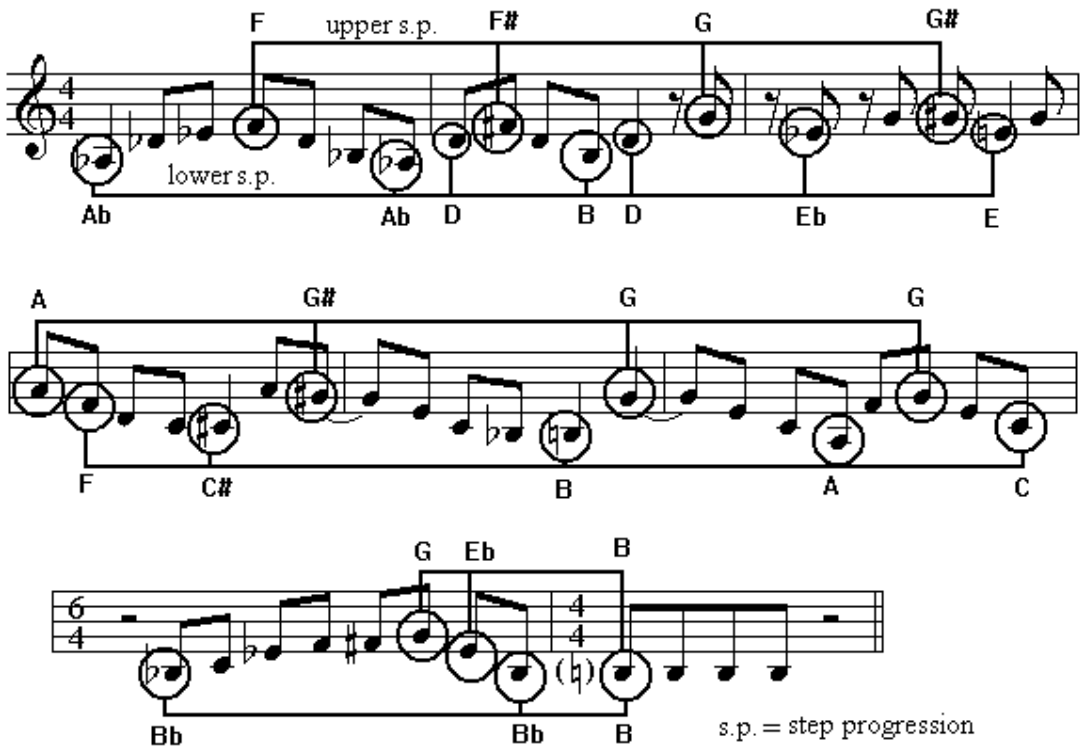
Db: | I | V/III | III7, VI7 | II7, V7 || I

Figure 3.2 Ornette Coleman's *Invisible*, bridge, bars 13–16.

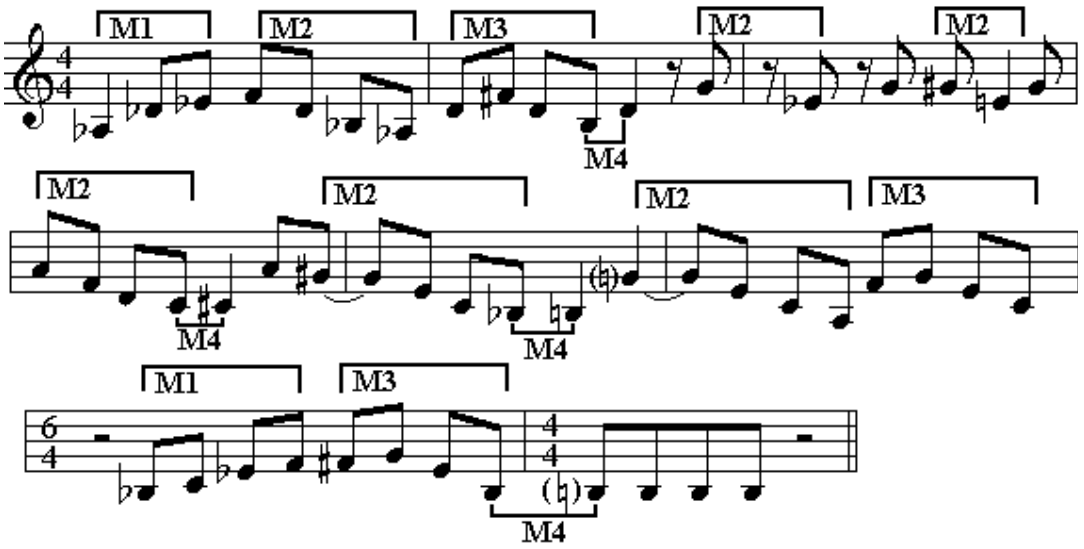
The melodic contour of *Invisible* also contains embedded note progressions or "step progressions"[31]. This technique was common already in bebop performance. A step progression is a hidden but audible melodic line nested within a longer phrase. It usually moves up or down stepwise. The upper and lower step progressions of *Invisible* are marked in Example 3.1.

[30]John Coltrane & Don Cherry: *The Avant-garde*, 1960, Atlantic 790041-2.

[31]Cogswell 1989, 14.



Example 3.1 Ornette Coleman's *Invisible*, step progressions in A section.



Example 3.2 Motivic structure of Ornette Coleman's *Invisible*.

3.1.2 Motivic analysis

The motivic structure of the melody consists of four motifs. The first motif (M1) is an ascending perfect fourth–major second (Ab–Db–Eb) that starts the first measure. The second motif (M2) is the descending chord arpeggio (F–Db–Bb–Ab) on beats three and four in the same measure. The third motif (M3) is the ascending and descending chord arpeggio (D–F#–D–B) in the beginning of the second measure. Although the building blocks of the third motif (an upward leap and descending chord arpeggio) are already present within the two first motifs, it can be heard as an independent idea. The melody also contains a repeating rhythmic–melodic motif that I call the fourth motif (M4); this is a resolution upwards from the weak eight-note to the beat. The theme's motivic structure is shown in Example 3.2.

After introducing the four motifs in the first two bars Coleman continues by developing motif M2 from the end of the second measure until the beginning of the fifth measure. The development starts with two descending thirds that are incomplete variations of M2. In bars 4–6, M2 is developed both rhythmically and melodically. The rhythmic development is conceived by starting the motif first on the first beat of the bar, then an eighth-note before the first beat and then a quarter-note before the first beat. Each consecutive appearance of the motif is thus initiated an eighth-note before the previous one. Melodic development is achieved by moving the motif chromatically to follow the harmonic structure of the melody (Figure 3.1).

M3 appears for the second time at the end of the seventh measure, here varied by changing the first interval from a third to a major second. In the last phrase Coleman repeats both M1 and M3, and the melody ends with the note B repeated four times.

Motif M4 appears in measures two, four and five, always ending on the third beat of the bar. M4 appears also at the end of the last phrase from Bb to B natural. This time it ends on the first beat of the bar to the repeated eight-note. M4's function in the melody is to occasionally interrupt the rhythmic flow of the phrase. In its first and last appearances it terminates M3 and in its other two appearances it terminates M2.

3.1.3 Conclusions

The analysis shows that *Invisible*'s melodic strength lies in the richness and logic of its motivic development and the daring chromatic displacement of melodic phrases. Also important is the extra 2/4-measure in the A section of the melody. This device, typically employed by Coleman turns the time around by a half note.

3.2 *Lonely Woman*

3.2.1 Published transcriptions

The saxophone solo of perhaps the best known Coleman composition *Lonely Woman* (composed in 1954[32] and recorded in 1959[33]) has been transcribed and analyzed by two American scholars.[34] These two transcriptions are however somewhat dissimilar and they both differ from my own transcription to a certain extent. My transcription differs from Westendorf's regarding ten different pitches and from Cogswell's with twelve different pitches. Some of these differences may result from the interpretation of non-tempered notes up instead of down and vice versa. In my transcriptions I have also marked several *ghost notes* and minor embellishments that are missing from Cogswell's and Westendorf's analyses.

However, the most pronounced differences between the transcriptions are in their rhythmic interpretations. Transcribing rhythms in freely pulsating music is a special challenge. To mark assumed bar lines in the music Both Cogswell and Westendorf use a dashed line. The hearing of these assumed bar lines is however extremely subjective. The basis of my rhythmic interpretation is my own experience as a saxophonist phrasing in the styles of swing, rhythm & blues and bebop. Because these styles accounted for a great deal of the music that Ornette was accustomed to, we can assume that they were

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[32]Littweiler 1992, 36

[33]Ornette Coleman: *The Shape Of Jazz To Come*, Atlantic 1317.

[34]Cogswell 1989, Westendorf 1994.

the source of his phrasing and articulation. For example I can detect much more syncopation and anticipated notes in Coleman's phrasing than the two aforementioned scholars.

3.2.2 Motivic chain association

Ekkehard Jost has named one of Coleman's improvisation techniques as *motivic chain association*[35]. John Littweiler[36] also speaks of *motivic evolution* to describe the same phenomenon. The technique differs from classical *motivic development*, where the entire musical entity is constructed by developing one or two principal motifs. In Coleman's solos, new motifs are introduced continuously, but the new motif is usually developed from the previous one; the new motif then provides inspiration for the next one and so on (chain association[37]).

In my opinion, the term is rather good for describing this phenomenon, which on the other hand, can be understood as one of the most natural principles of improvisational form. After a musical idea (motif or phrase) is played, it creates a natural need to be followed by some kind of logical answering idea, which in turn provides a musical justification for the following phrase. This simple principle has been successfully applied to Coleman's improvisations in both Jost's and Cogswell's works. Following are certain other interesting aspects related to Ornette's improvisations.

3.2.3 Melodic and harmonic analysis

Like *Invisible*, the melody of *Lonely Woman* is also an AABA form. The number of bars is however not 32. Due to the rubato character of the melody there is no reason to define the exact number of bars. The harmonic accompaniment in the A section is a pedal note D in the bass played with a fifth above (the note A). In spite of this rather modal

[35]Jost 1974, 50.

[36]Littweiler 1992, 56.

[37]The term has been borrowed from experimental psychology's free word association method, Jost 1974, 50.

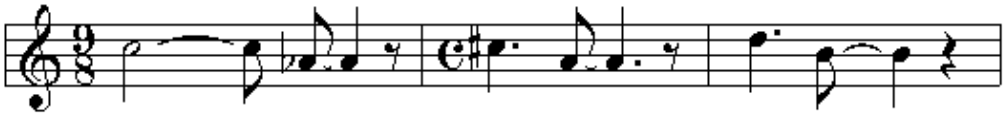
accompaniment the melody in the A section has a clearly tonal character in the key of D minor.

The melody that Ornette plays in the B section implies a chord progression in which a minor chord on the fourth degree of the scale is varied by moving the fifth of the chord chromatically upwards (5, #5, 6 etc.) This harmonic phenomenon is perhaps best known to the general public from the James Bond theme. In the best known published edition of *Lonely Woman*[38] this part is rather misleadingly harmonized as Dm, Ebm, Em etc. This harmonization is obviously based only on the bass line, but the melody line played by Coleman implies a Gm, Gm#5, Gm6 progression.

The tonal centre in Coleman's improvisation is D. In his solo Ornette uses natural, harmonic and melodic minor scales and the D minor pentatonic scale with an additional flatted fifth[39]. The overall form of the solo is also AABA, as in the melody. During the saxophone solo the beginning of the bridge (bar 24) is clearly marked when Don Cherry starts to play an ascending line from the fifth of the chord behind Coleman's solo. Additionally, the rhythm section and Ornette begin to play in the same 4/4 time at the beginning of the bridge. The A section of the solo is a freer pulse floating over the pulse of the rhythm section. Here Ornette's improvisation does not imply a G-minor chord, but is instead based on the D blues scale. He however plays a note alien to the D minor scale, F#, which increases the harmonic tension. That note could be analyzed as the major seventh of the Gm(maj7) chord, although it is more likely that Ornette is reacting to the harmonic tension in that part of the song instinctively by ear. In bars 39–41 Ornette builds a harmonic climax by playing a chromatically ascending sequence of a descending third motif C2–Ab1, C#2–A1, D2–B1 as shown in Example 3.3.

[38]Published by MJQ Music

[39]This scale is commonly known as the blues scale.



Example 3.3 Ornette Coleman's *Lonely Woman* -saxophone solo, bars 39–41.

It is possible to hear the melody line described in Example 3.3 as an implied Ab–A–Bm chord progression. The tonal centre in the beginning of the melody line has temporarily shifted to Ab[40]. After this phrase Coleman continues to the highest note of the solo, the note Ab2, which is the flatted fifth of the D-blues scale, thus creating a melodic climax, followed by a controlled return to the melodic D minor.

3.2.4 Conclusions

This analysis shows that the relationship of Coleman's improvisation's to tonality is by no means random, but can be clearly analyzed according to the basic concepts of Western harmony. In this particular solo Coleman employs the following devices:

– Alternating use of the natural, melodic and harmonic minor scales and the blues scale.
– Building to a climax by increasing harmonic tension.
– Creating a melodic climax by using the most colourful tone of the scale as the highest tone of the solo (the flatted fifth of the blues scale).
– Resolving tensions to the tonal centre.

Although he is not following a specific chord structure, Coleman also implies the AABA form of the song in his solo. In the melodic and harmonic sense the free jazz nature of *Lonely Woman* does not imply freedom from the laws of tonality. The actual free jazz devices used in this piece are the rhythmic elements creating the form: the A sections in both the theme and Coleman's solo are in a free-flowing rhythm superimposed over the

[40] *Secondary tonal centre,* Jost 1974, 48.

rhythm section's steady pulse. This also makes it impossible to follow any exact harmonic form.

3.3 *Ramblin'*

A transcription of *Ramblin'* containing both the theme and saxophone solo has been published in Michael Titlebaum's article[41]. His transcription is very accurate and almost identical to mine. Cogswell's transcription of the saxophone solo differs somewhat from both Titlebaum's and mine.

3.3.1 Melodic analysis

The form of *Ramblin'* is based on a traditional blues form in D major, but the structure is stretched beyond the conventional twelve bars. The melody consists of three phrases of varying lengths and the total length is 21″ bars the first time**.** On the repeat the length is 15 bars (Chart 3.3). From the harmonic structure of the blues, only the first chord change from the first degree to the fourth is clearly implied; instead of the normal four bars the tonic chord lasts for nine measures. The fifth degree normally present in the last bars of the blues structure is missing altogether. The third melodic phrase is built solely on the D major pentatonic scale. On the repeat the third phrase is also much shorter than the first time (Figure 3.3).

Stylistically the two first phrases have a strong bebop quality, whereas the third phrase is more country blues flavored. Coleman's way of elongating certain chords in the blues form can be traced back to the early blues tradition. The earliest blues singers, often accompanying themselves on guitar or piano, would frequently add several beats to their instrumental responses or extend the ends of their phrases to meet the needs of their text[42]. Even after the strict twelve-bar blues was firmly established, blues singers such as Leadbelly and Blind Lemon Jefferson were still using an earlier approach to singing blues that was much freer in conception. In that sense, *Ramblin'* is a direct descendant of

[41]Titlebaum 1997, 171–174.

[42]Titlebaum 1997, 166.

this early blues tradition.[43]

In the accompaniment the rhythm section plays in two different styles. Behind the three melodic phrases Charlie Haden plays a walking bass line while drummer Billy Higgins plays in straight swing time. Between the melodic phrases Haden plays the repeating fifth D–A on open strings. Haden tuned his low E-string down a whole step to let the open strings vibrate freely, a device employed commonly by folk guitar players. Higgins' drum feel is also different at the interstices between the melodic phrases.

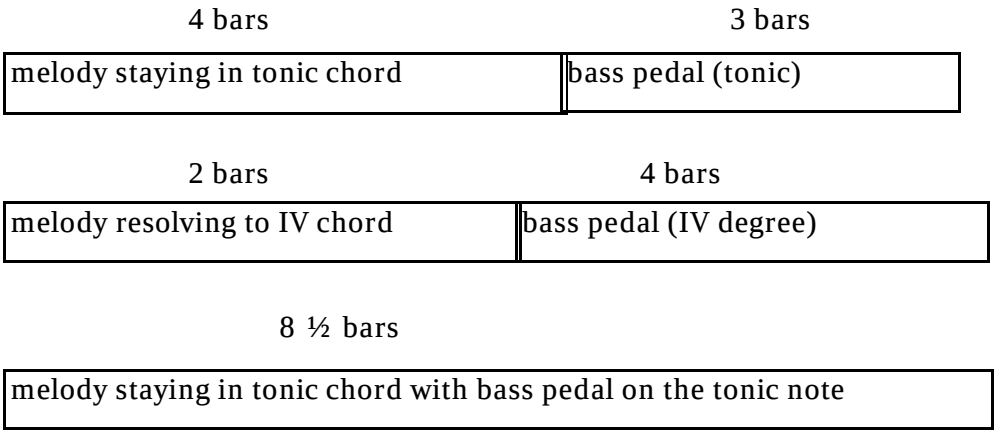
3.3.2 Analysis of Coleman's solo

The improvisation is played over a structure in which the rhythm section alternates between 12-bar and 16-bar choruses. The 12-bar choruses are played using the normal blues structure with a walking bass, while the 16-bar choruses are played mostly over a pedal D (D–A fifth) on the bass.

Throughout Ornette's solo his melodic language is quite ebullient, recalling country blues and hillbilly music. Although the rhythm section plays the 12-bar choruses in a bebop style, his melodic style remains quite consistent. Ornette plays eighth note lines but his phrases do not outline any tonal chord changes that would be essential to a bebop-style solo. Coleman's phrases employ the D major scale, D major pentatonic scale and occasional blue notes, the flatted third and flatted seventh. There is one motif in this solo that stands out from the overall note choices: F#–G–A–Bb–A–G motif occurring in measures 59, 82 and 110 of the transcription. An interesting feature of this motif is Coleman's way of using the flatted sixth with the D major scale. Because all three phrases using this motif end on the note G, the Bb-note could be heard as a flatted thirteenth of a D7 chord resolving to G major (or minor). Coleman however plays this motif in different sections of the chorus without outlining any chord changes on the blues structure.

[43]Ibid, 166.

Melody first time, 21 and half bars:



The repetition of the melody, 15 bars:

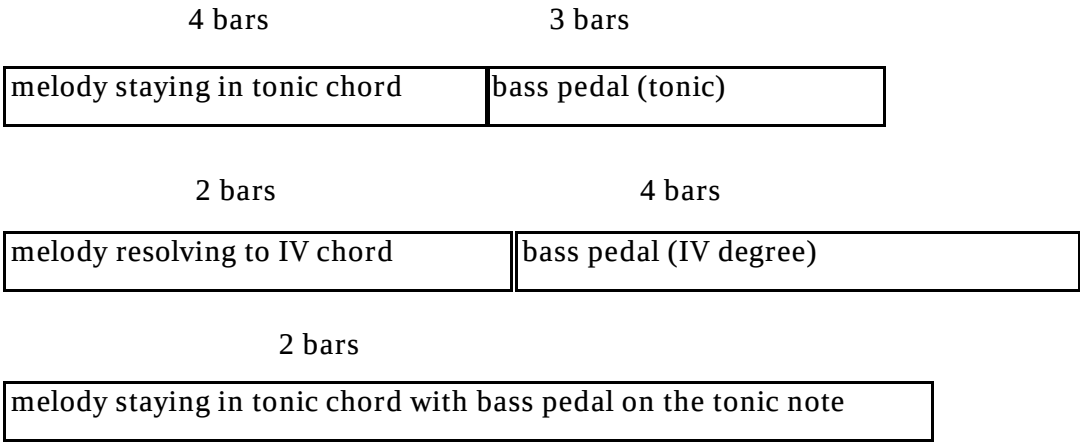


Figure 3.3 The form of Coleman's *Ramblin'*.

3.3.3 Conclusions

Ramblin' is an excellent example of Coleman's ability to draw upon different musical traditions to create a personal style. In *Ramblin'* Ornette combines the common 12-bar blues form and bebop-style rhythm section playing with a more archaic folk and country

blues tradition. Using this older blues style enables him to improvise more freely without outlining the chord changes. This harmonically freer style of improvisation is here clearly used as a means of artistic expression.[44]

3.4 *Joy Of a Toy*

Joy Of A Toy was recorded on July 26th, 1960[45]. The players and their instruments are Ornette Coleman, alto saxophone; Don Cherry, trumpet; Charlie Haden, bass; Eddie Blackwell, drums. In my opinion this is one of the most interesting and beautifully-sounding recordings of Ornette's famous quartet.

3.4.1 Rhythmic analysis

The overall form of the piece follows the conventional theme–solos–theme format. The theme's AABA form is also very common. The rhythmic feels of the A and B sections are however strikingly different.

The A section is a medium-fast bebop in 4/4 time with an extra 2/4 bar at bar 9, a rhythmic twist typical to many Coleman compositions. The B section is much slower, with an almost choral-like feeling. With its two contrasting thematic elements, *Joy Of A Toy* can be categorized as an example of Jost's *Coleman theme*[46]. In the A section the saxophone plays a unison line with the trumpet over an independent bass line. In the B section the three pitched instruments all play independent lines, creating a three-part counterpoint.

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[44]Coleman was often accused of not being able to improvise on chord changes.

[45]Ornette Coleman: *Twins* Atlantic SD 8810.

[46]Jost 1974, 57.

3.4.2 Tonal analysis

The tonality in the theme of *Joy Of A Toy* is quite interesting. The tonal centre of the melody line in the first ten bars is clearly F major. It then ascends with a half-step sequence to G flat major. The bass line however appears to be quite free of any tonal centre. The first six bars of the bass line consists of a three-note motif (up a tritone, down a whole step), that descends in a sequence of mostly whole steps.

Transcribing the bass line is also somewhat problematic because Haden plays almost all the A sections slightly differently. In the first appearance of the theme he starts the A1 from the second bar and plays the sequence until bar 8. In A he starts from the first bar but plays again until the eighth bar, including an F–C–Bb motif in bar 6 not heard in any of the other A sections. Only after the solos, when the theme is played the second time, does Haden play the A sections in a consistently similar manner by always ending the sequence at the eighth bar. His playing in the first theme also sounds slightly unsure rhythmically. In the second theme the bass line's second motif, an ascending leap (Bb–D) of an octave and third, is better suited to the melodic line and the bass line generally sounds more confident. For these reasons the bass line in my transcription is written the way Haden plays it the second time.

It is difficult to guess the original composed idea from Haden's way of placing the bass line differently each time. It is probable that the bass line was not written exactly beforehand but was improvised in the rehearsals. However none of the placements has a clear functional relationship to the melody's F major tonality. Instead, the bass line more closely resembles an atonal sequence following the shape of a cycle of fifths.

The slower, choral-like bridge starts clearly in the key of E major. The note F played on the saxophone in bar 19 signifies a gradual shift to the more dissonant latter part of the bridge. In actuality, the sense of a key is totally obliterated at the end. The climax of the theme is built in bars 22–25 by using different combinations of minor second and minor third intervals as thematic material. This intervallic combination, when repeated several times, produces the *augmented scale*, one of the most commonly used symmetrical scales in jazz. The descending line on the saxophone in bars 22–23 (F#–

Eb–D–B) is a fragment of that scale. In the same bars the bass line is ascending, but uses a *different* augmented scale (G–Ab–B–C), thus producing beautiful atonal counterpoint.

As usual in AABA-structured tunes, the thematic climax occurs in the last bar of the bridge (bar 25). The climax is created by shifting from the choral E major mood to more atonal dissonance (from bar 19 to the end) and by moving to the horns' upper registers. The note in bar 25 is the written E above the staff for both alto saxophone and trumpet[47].

3.4.3 Conclusions

Ornette Coleman's band employs an interestingly varied contrapuntal form in *Joy Of A Toy* (Figure 3.4). The following elements are used:

– Traditional AABA-form with the melodic climax at end of bridge
– Tonal bebop melodic language
– Atonal independent bass line
– Tonal choral-like mood at beginning of the bridge
– Atonal dissonance at melodic climax

Joy Of A Toy is an excellent example of the compositional devices later used in many free jazz tunes of the 1960's.

[47]When the theme is played the second time after the solos, Don Cherry misses the high E note.

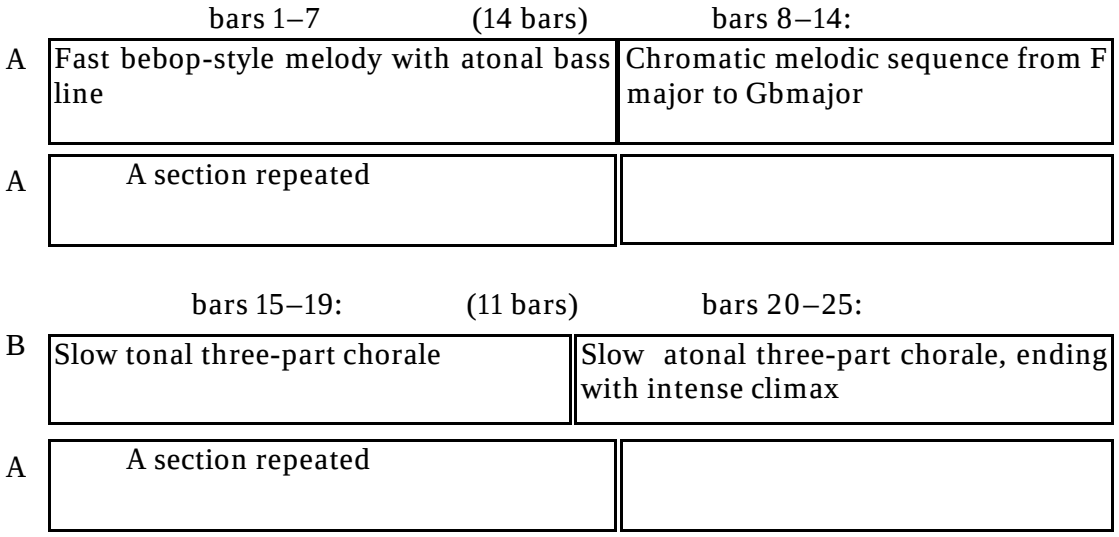

Figure 3.4 Compositional form of Ornette Coleman's *Joy Of A Toy,* melody.

4 Lennie Tristano

4.1 Background

Lennie Tristano (1919–1978) is a special figure in jazz history, a kind of legendary oddity who is considered the greatest forgotten genius of jazz by some, but consigned to oblivion by most others. Tristano's experiments with free improvisation in the late 1940's and the first free improvisation recordings *Intuition* and *Digression*[48] in 1949 are the historical facts that make Tristano a particularly interesting subject for this thesis.

Unlike the most jazz pioneers Tristano's ethnic background was white (European). As a small child Tristano had a degenerative eye disease that left him totally blind at the age of ten. In 1946 Tristano moved from his hometown Chicago to New York, where he played with many bebop pioneers. As a member of the Metronome All Stars Tristano also recorded with Charlie Parker and Dizzy Gillespie[49]. At that time the white jazz critics in particular were touting Tristano as the only white musician among the new geniuses in the revolution of jazz. From the beginning of the 1950's Tristano turned increasingly to teaching and supporting his students' careers more than his own. Partly for that reason Tristano's output as a recording artist is small compared with his reputation in jazz history.

Tristano's reluctance to perform was partly due to his uncompromising attitude towards jazz as an art form; he could not cope with record companies and club owners who wanted a product that is easily reproduced and stylistically marketable. Tristano considered jazz to be a fully independent art form. His view was that a jazz musician

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[48]Lennie Tristano and Warne Marsh: *Intuition*, CDP 7243 8 52771 2 2.

[49]Metronome All Stars: *Double Date* and *No Figs*, Columbia 38734 on an anthology album *The Bebop Era*, CBS 461096 2.

should only follow his own artistic vision and passion, free from the commercial pressures of the music industry[50]. Today it is easy to say that Tristano's opinions were too severe in many aspects. For instance, he considered the 1950's' hard bop a regressive development in jazz and saw little artistic value in it[51]. With the benefit of hindsight, we now know that hard bop was an essential stylistic development of jazz that led to the modernism of the 1960's. Later in the 1970's Tristano also expressed similarly derogatory opinions regarding the jazz-rock fusion movement.[52]

Tristano himself also had many critics saying that he "did not swing" and his playing sounded "academic" and emotionally cold[53]. His playing did indeed differ quite remarkably from the stylistic standards of bebop. At his best however, he was able to create a strong rhythmic drive and his improvisational style is said to have influenced pianists like Bill Evans[54], Paul Bley and Keith Jarret. His trademark was the skilful playing of much longer melodic lines than was usual in bebop playing. An excellent example of this is Tristano's *Line Up* from 1955, discussed in Chapter 5 of this thesis.

4.2 Tristano's sextet 1948–50

During the two last years of the 1940's Tristano worked steadily with a sextet that included his most talented students: alto saxophonist Lee Konitz, tenor saxophonist Warne Marsh and guitarist Billy Bauer. The bassist was Arnold Fishkin and the drummers were Harold Granowsky and Denzil Best. The sextet's recordings made in 1949 and 1950 clearly rank among the most important jazz recordings of that era. The quality of the band's playing is also the highest of Tristano's entire career. With these musicians Tristano also used free collective improvisation as a regular practicing

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[50]McKinney 1978, 31.

[51]Ibid, 20.

[52]Ibid, 111.

[53]Ibid, 67.

[54]Listen to "The Birth Of The Third Stream", Columbia CK 64929, George Russell: *All About Rosie*, piano solo by Bill Evans, 1957.

method. During the extra time remaining after one recording session a quintet line up without drums recorded the first freely improvised pieces in the history of the recorded jazz, *Intuition* and *Digression*[55].

Lennie Tristano's later groups rarely matched the standards of rhythmic cohesion and intensity achieved by this sextet. In that respect certain later recordings sound almost amateurish. Typically the role of bass and drums is problematic in Tristano's recordings; the bass and drums create a steady pulse without communicating rhythmically with the soloist. During the 1950's Tristano's swing-like use of rhythm section players could be considered old fashioned. Unfortunately, many drummers and bass players on the 1950's recordings were of mediocre ability compared with Tristano himself. One happy exception is a live recording from the Confucius Restaurant in 1955, where Tristano and Konitz played with master bebop drummer Art Taylor[56]. On these recordings the quartet plays mostly standard tunes creating elegant and melodically inspired jazz playing. Stylistically the group operates somewhere between swing and bebop; the more radical stylistical devices used in Tristano's earlier recordings are not present.

4.3 Studio recordings, 1954–55

Bassist Peter Ind was an eager student of Tristano and as a rhythm section player the quality of his playing was also convincing. Ind plays bass on the recordings Tristano made in his home studio in 1955 that were released on the same album with the live recordings from the Confucius Restaurant[57]. These recordings include *Line Up*, perhaps Tristano's most famous recording. *Line Up* is a melodic line played over the chord

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[55]Denzil Best had to leave the studio for another playing gig, Lennie Tristano And Warne Marsh: *Intuition*, Capitol Jazz CDP 7243 8 52771 2 2, Terry Martin: liner notes.

[56]Tristano: *Lennie Tristano*, Atlantic 1224. The album includes five tunes recorded at the Confucius Restaurant. The thirteen other tunes were released as *The Lennie Tristano Quartet*, SD-2-7006. All the recordings from the Confucius Restaurant (five sets, recorded on the same day) are released in an anthology album: Lennie Tristano, Lee Konitz & Warne Marsh: *The Complete Atlantic Recordings*, Mosaic MD6-174.

[57]Tristano: *Lennie Tristano*, Atlantic 1224

structure of *All of Me* in Ab major. On these recordings Tristano experimented with the new technology of multi-track recording. On *Turkish Mambo* he recorded several piano tracks in different time signatures. On the tunes *Line Up* and *East Thirty-Second* he first recorded the drums and bass playing steady straight-ahead swing time for several choruses. He then recorded the piano solo part by slowing down the tape to half-speed. Tristano therefore played the piano solo parts an octave lower and at half the speed that sounds when played back at normal speed[58]. These two piano solos exhibit a strikingly rich sense of melodic innovation and logic that continues to command admiration and respect among jazz musicians. Although the communication between the players is of naturally not functioning in both directions on these recordings, *Line Up* is generally acknowledged as proof that Tristano, often accused of academic detachment, was really able to swing[59].

Larry Kart[60] argues that *C-minor Complex*[61], recorded by Tristano in 1960–61 proves Tristano's ability to execute his musical ideas at the tempo of *Line Up* without manipulating the tape speed. Due however to the drastically different nature of *C-minor Complex* and *Line Up* as instrumental performances, any direct comparison between the two tunes is highly problematic. *C-minor Complex* is much slower than *Line Up*. On *Complex* Tristano also plays a walking bass line with his left hand, whereas *Line Up* is a single melodic line. Personally I do not hear the same richness of rhythmic articulation and melodic creativity in *Complex* that I hear in *Line up*.

A better comparison to *Line Up* can be made with the other recordings of tunes based on the chord progression of *All of Me* (Tristano always seemed to prefer the key of Ab major) that he recorded at approximately the same time between years 1954–56. Two

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[58]Larry Kart 1997, Lennie Tristano, Lee Konitz & Warne Marsh: *The Complete Atlantic Recordings*, Mosaic MD6-174: liner notes, p. 8.

[59]Lyons 1983, 41.

[60]Kart 1997, 4.

[61]Lennie Tristano, Lee Konitz & Warne Marsh: *The Complete Atlantic Recordings*, Mosaic MD6-174.

tunes can be found: Tristano's own *Momentum*[62] and Warne Marsh's *Background Music,* of which there are two released takes[63]. On these real-time recordings Tristano plays much fewer notes and also uses lengthy pauses. The density of musical material does not match that found in *Line up*. Additionally, Tristano's phrasing sounds quite stiff to me, especially on the alternate take of *Background Music,* and the overall musical level fails to attain the high standard of the *Line Up* and *East Thirty-Second* tracks.

[62]Lennie Tristano 1955-56: *Manhattan Studio,* Jazz Records 11 CD or Lennie Tristano: *New York Improvisations*, Elektra 60264.

[63]*The Lennie Tristano Quartet*, SD-2-7006, Background Music, released take. Lennie Tristano, Lee Konitz & Warne Marsh: *The Complete Atlantic Recordings*, Mosaic MD6-174, Background Music, two takes.

5 *Line Up*, improvisation

Line Up is a long melodic line, seven choruses of eighth note phrases built on the chord structure of *All of Me*. Due to the rather exceptional way the work was created, the dubbing of the piano part over a pre-recorded background, it can also be considered as more a composition than an improvisation. On the 1955 recordings Tristano uses multi-track overdubbing techniques for the first time in the history of recorded jazz[64]. On *Line Up* and *East Thirty-Second* the bass and drums were recorded first, playing normal 4/4 swing time. Tristano then recorded the piano solo line with the tape running at half speed. He also played his lines an octave lower than the recording sounds when played back at normal speed. It is also probable that he recorded the seven-chorus solo line of *Line Up* in shorter segments. After multi-track recording became a standard procedure in the 1970's it has inspired discussion about the originality and spontaneity of recorded jazz solos.

Today's jazz musicians generally consider *Line Up* to be Tristano's best and most interesting work. My own experience has shown that those not yet familiar with it are usually very impressed when they hear it for the first time. Comments usually refer to the piece as an interesting combination of swing-like phrasing combined with interesting melodic invention and passionate playing that however recalls more modern players such as Keith Jarret.

A notated transcription of an improvised solo can by no means tell us all the important factors regarding the artistic essence of the solo: rhythmic placement, phrasing, nuances, timbres and other factors are elements that written notation can only express approximately. However certain melodic and harmonic devices found in a transcription of *Line Up* reveal that it was quite modern for its time.

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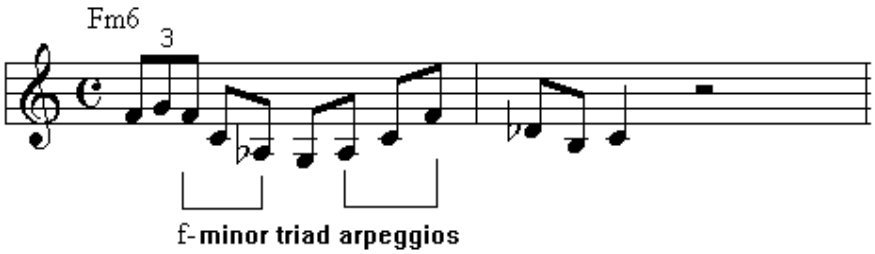
[64]Lyons 1983, 41.

The melodic/harmonic relationship in *Line Up* is for the most part typical of the bebop of the 1940's and 1950's. To increase harmonic tension Tristano uses several techniques common at the time, but other devices found in *Line Up* became common in the improvisational language of jazz only later in the 1960's.

5.1 Melodic language of bebop

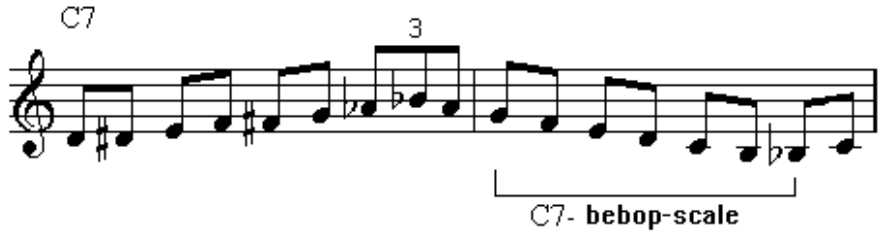
The melodic/harmonic relationships in bebop-style improvisation can be analyzed according to three main devices: *chord arpeggios*, *scalewise movement* and *approach-note figures*. On *chord arpeggios* the melody contains only chord tones (Example 5.1)[65] In *scalewise movement* the melodic line consists of passing tones on rhythmically weak beats that then resolve to chord tones on strong beats (Example 5.2). This phenomenon is known as the *bebop-scale*[66]. On *approach-note figures*, tones outside the chords are resolved diatonically and/or chromatically to chord tones (Example 5.3).



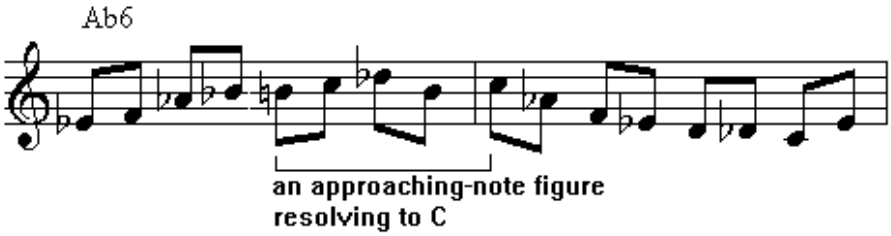
Example 5.1 Chord arpeggio, Lennie Tristano's *Line Up*, measures 75–76.

[65]In all notated examples of *Line Up* I have written the melody in the treble clef one octave higher (8va) than it sounds on the record (and *two* octaves higher than it was originally played at the lowered tape speed).

[66]David Baker 1986.



Example 5.2 Scalewise movement, Lennie Tristano's *Line Up,* measures 51–52.



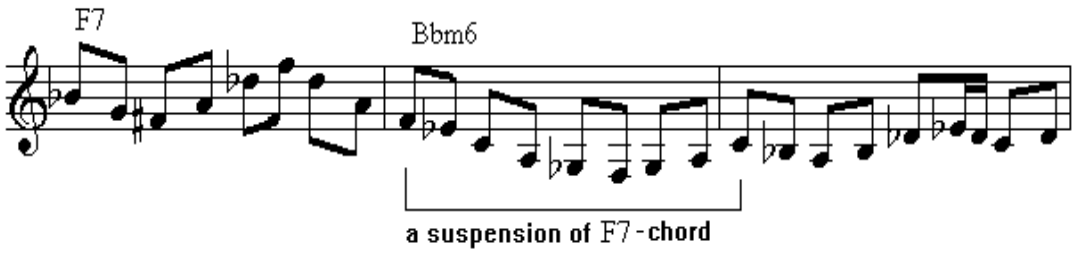
Example 5.3 Approach-note figure, Lennie Tristano's *Line Up,* measures 187–188.

5.2 Devices for increasing harmonic tension

The aforementioned three main devices for manipulating melodic/harmonic relationships also form the basis for Tristano's *Line Up*. To increase harmonic tension, Tristano superimposes *suspensions, chromatic runs* and *temporary dominants* over a sustained chord. Because the bebop musicians of the 1940's employed these devices frequently, these devices cannot however be considered particularly modern at the time *Line Up* was recorded in 1955.

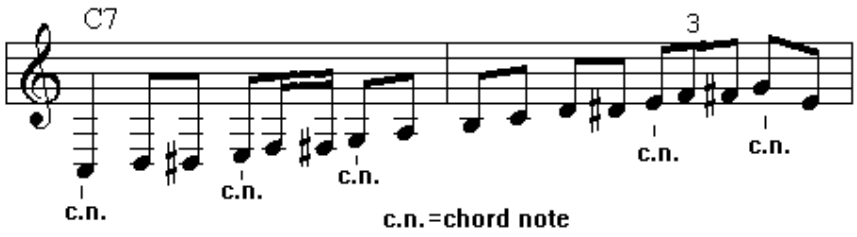
In classical music theory *a suspension* means a phenomenon in which one or more tones from a previous chord continue to sound during the next chord. In jazz improvisation we can also call a *suspension* a melodic line that continues to imply the previous chord

during the subsequent chord in the chord progression (Example 5.4). This technique can also be considered as one way of "playing across the barlines".[67]



Example 5.4 Suspension, Lennie Tristano's *Line Up,* measure's 134–136.

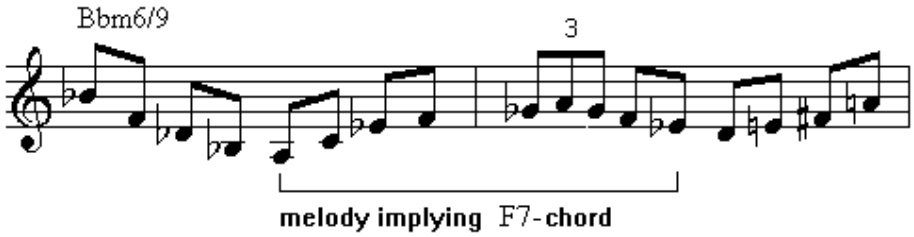
Tristano's use of *chromatic runs* can be considered as extended bebop scale lines because most of the chord tones fall on strong beats (Example 5.5).



Example 5.5 Chromatic run, Lennie Tristano's *Line Up,* measure's 73–74

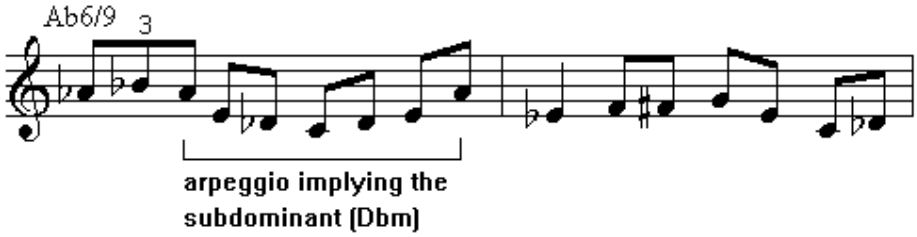
Over a longer sustaining chord (typically two bars in *All of Me*) Tristano uses melodic lines that imply the dominant of the chord and then resolve back to the chord; he is using *temporary dominants* that do not belong to the original chord structure (Example 5.6).

[67]Charlie Parker was generally admired for his ability to use this technique.



Example 5.6 Temporary dominant, Lennie Tristano's *Line Up*, measure's 87–88.

Similarly, he also uses *temporary subdominants* (Example 5.7).



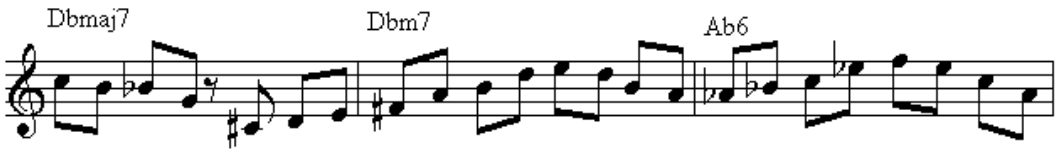
Example 5.7 Temporary subdominant, Lennie Tristano's *Line Up*, measure's 134–136.

5.3 Side slipping

As can be seen in the transcription, Tristano plays figures at some points in the melody line that are clearly a half step above or below the harmony. In many cases it is also fairly easy to hear this phenomenon because he also repeats the same melodic figure as a sequence in its "correct" harmonic position. This technique, called *side slipping*[68] became a common device for jazz improvisation in the 1960's. In *Line Up* we can find twelve different *side slipping* phrases (Examples 5.8–5.19).

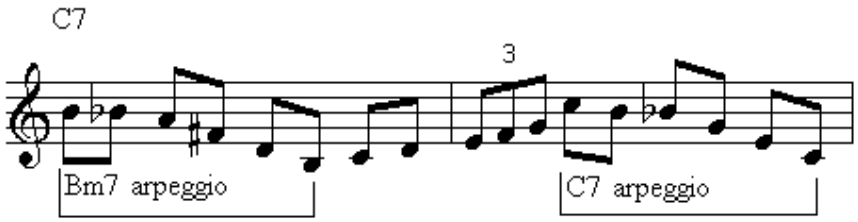
[68]Liebman 1991, 51.

Over a Db–Dbm–Ab chord sequence in bars 25–27 Tristano first plays a D major scale that resolves to an Ab major scale (Example 5.8). Immediately preceding the resolution he uses tones from the D major scale that also belong to the G major pentatonic scale (E–D–B–A) which are then resolved as an incomplete melodic sequence to the Ab major pentatonic scale (F–Eb–C–Ab). The chromatic tension is thus resolved by sequencing the motif chromatically upwards, but because the D major scale is being played over a Db major chord, I call this situation *upwards side slipping*.



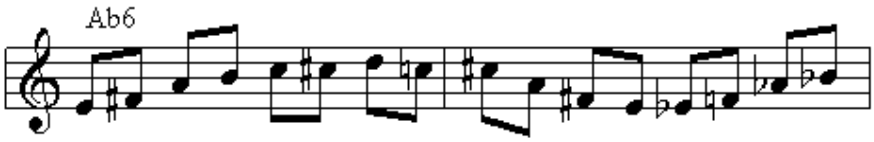
Example 5.8 Lennie Tristano's *Line Up*, measures 25-27.

In bars 41–42 Tristano first plays the tones B–Bb over a C7-chord; these could be analyzed as tones belonging to the D major bebop scale. He then plays a Bm7 arpeggio that then resolves to a C7-chord (Example 5.9). The tones D–B on the third beat of bar 41 form an approach note figure to note C, and the A and F# on the second beat are the C7 chord's tension notes. This means that only the first tone B is a strong outside note for the C7 chord. Taken together, the Bm7 arpeggio in bar 41 and the C7 arpeggio in the next bar form a chromatic sequence that can be called *downwards side slipping*.



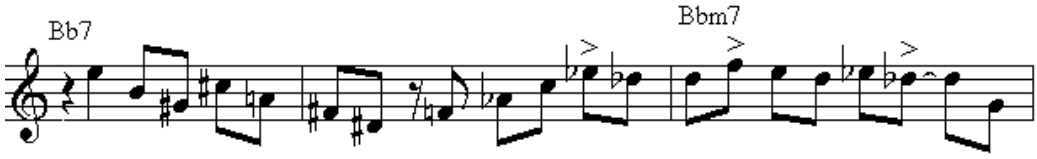
Example 5.9 Lennie Tristano's *Line Up*, measures 41–42.

Over an Ab6 chord In bars 65–66, Tristano plays an A major pentatonic scale for one and a half bars and then resolves to the Ab major pentatonic scale. This is a very clear descending chromatic sequence (*upwards side slipping*, Example 5.10). The latter half of bar 65 is an approach note figure within the key of A major resolving to C#.



Example 5.10 Lennie Tristano's *Line Up*, measures 65–66.

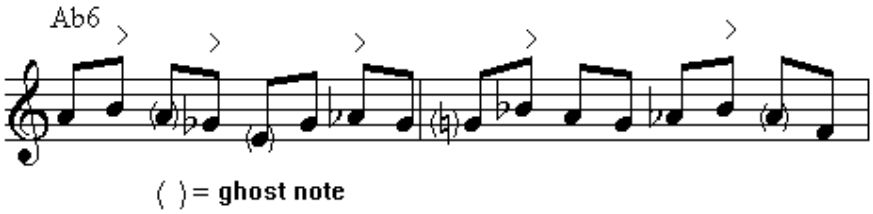
Over a Bb7 chord in bars 77–79 Tristano first plays the E major scale in the form of two arpeggios, an E major triad and D#m7b5. The D#m7b5 chord is a half step above the Dm7b5, part of the Bb9 that is then outlined in the form of an Fm7 arpeggio in bar 78. Over the Bbm7 chord in bar 79 Tristano plays a long approach note figure that resolves to the tone Eb. In bars 77–78 Tristano approaches the Fm7–Bb7 cadence (implying the Bb7 chord) with *upwards side slipping*. (Example 5.11).



Example 5.11 Lennie Tristano's *Line Up*, measures 77–79.

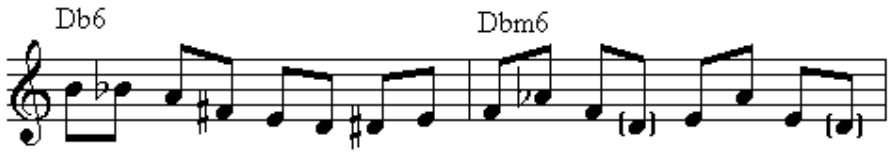
In bars 81–82 Tristano plays a long and complex chromatic line over the two bars' Ab major chord. He starts with accented A, B and Gb tones that belong to the A major pentatonic scale. The resolution to Ab major is then achieved through ascending chromatic motion. First, the Ab and Gb form an approach note figure that resolves to the

G on the first beat of bar 82. The note G then initiates a new approach figure that resolves to Ab on the third beat of the bar. This is *upwards side slipping* resolving from A major pentatonic to Ab major. There is also a clear chromatic sequence placed interestingly in the beginning of bar 81 (A–B–A–Gb) and at end of the 82 (Ab–Bb–Ab–F).



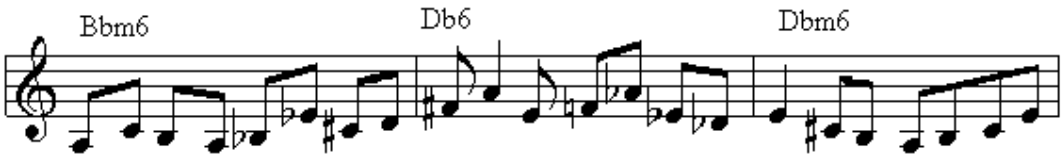
Example 5.12 Lennie Tristano's *Line Up*, measures 81–82.

In bars 89–90 Tristano again uses the D major pentatonic scale over the Db6–Dbm6 chord sequence (Example 5.13). This time however, he resolves it first to the Db major chord and then to the Db minor chord. To my ear, the ghosted D tones in bar 90 do not affect the harmonic content of the melodic line.



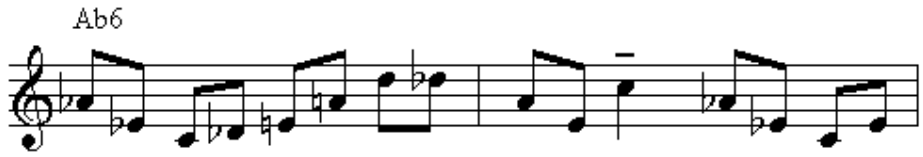
Example 5.13 Lennie Tristano's *Line Up*, measures 89–90.

In bar 121, a D major scale is again played over Db major. This time the D major scale already begins from the tone C# on the fourth beat of the previous bar (Example 5.14). The resolution to the Db major chord occurs on the third beat of bar 121. Although the two first and two last notes of bar 122 are the tonic and the third of the Db minor chord, the notes in the middle of the bar (B and A) make the entire bar sound like an A major chord. Bar 122 is therefore also heard as *upwards side slipping* to the Ab major chord that follows in bar 123.



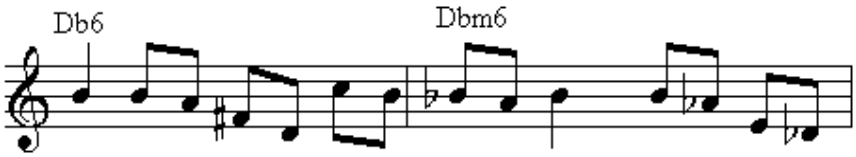
Example 5.14 Lennie Tristano's *Line Up*, measures 120–122.

In bar 145 Tristano shifts from the Ab major scale to A major scale midway through the phrase; here he uses the Db occurring on the latter half of the second beat to connect the two scales. Enharmonically, this tone belongs to both scales (Db–C#). He subsequently returns to Ab major on the second beat of bar 146. This is *upwards side slipping* (Example 5.15).



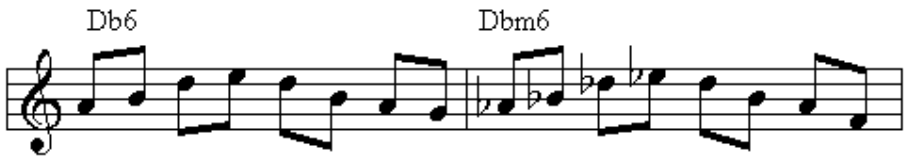
Example 5.15 Lennie Tristano's *Line Up*, measures 145–146.

In bar 153 there is another D major pentatonic scale phrase played over the Db major chord. The resolution occurs on the fourth beat of the bar where the tone C starts a descending chromatic scale line that can be considered a form of the Db major bebop scale (Example 5.16).



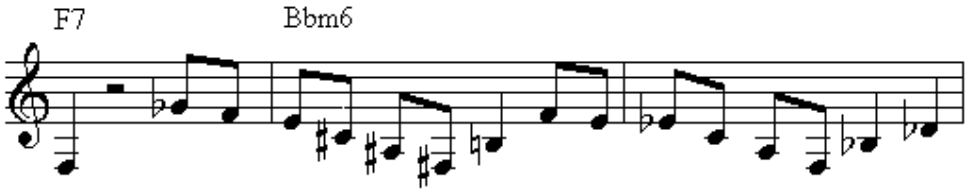
Example 5.16 Lennie Tristano's *Line Up*, measures 153–154.

In bars 185–186 the *upwards side slipping* is very clear. It is an exact chromatic sequence from the D major pentatonic scale to the Db major pentatonic scale. The sequential phrases are connected by the last note of the first bar (G in Example 5.17) that acts as a leading tone to the first Ab in bar 186.



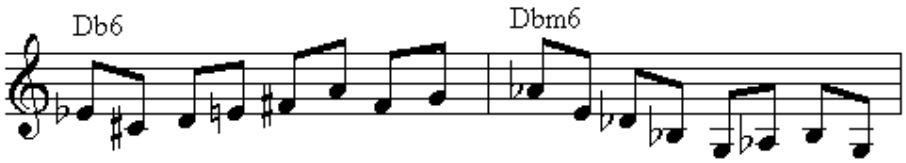
Example 5.17 Lennie Tristano's *Line Up*, measures 185–186.

In bars 214–215 Tristano plays a very clearly outlined F#7 arpeggio (E–C#–A#–F#) that resolves to the tone B and is then followed with an exact repetition a half step lower, now within the harmonic context (F7–Bbm, Example 5.18). This instance of *upwards side slipping* is one of the most easily aurally recognizable occurrences in *Line Up*.



Example 5.18 Lennie Tristano's *Line Up*, measures 214–216.

The last occurrence of *side slipping* in *Line Up* is in bars 217–218. Again we have the chord progression Db6–Dbm6 that Tristano handles by first playing a D major scale and then resolving it a half step down, this time directly to a Db minor chord arpeggio (Example 5.19).



Example 5.19 Lennie Tristano's *Line Up*, measures 217–218.

In light of the above, we can conclude that there is a certain point in the chord structure of *All of Me* where Tristano tends to favor the tension-producing *side slipping*. This is the chord sequence Db6–Dbm6–Ab; Tristano first uses the D major scale that then resolves to Ab major, either immediately or through Db major and/or minor. This place is also very important in the form of the tune; it is the beginning of the last eight bars of the 32-bar structure, commonly the location of its climax. In AABA structures this position marks the beginning of a return to the A section (Ornette Coleman's *Joy of A Toy*, page 29). In *All of Me*, the same location is the beginning of the second ending, or the first place where the repetition differs from the melody's initial appearance, as shown in Figure 5.1.

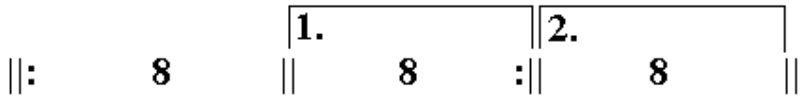


Figure 5.1 Form of *All of Me (Line Up)*.

At this particular point in the form, Tristano uses the *side slipping* -technique in six out of seven choruses of *Line Up*, the second is chorus constituting the sole exception.

Tristano's use of the *side slipping* technique in *Line Up* is also evident in other ways. First he plays a melodic line which is half a step away from the harmonic context and

then resolves the tension by coming back “inside” the harmony. In eight out of the twelve appearances of *side slipping* in *Line Up* (1st, 2nd, 3rd, 7th, 8th, 9th, 10th and 11th occurrences) the resolution is played as a melodic sequence in which the same melodic line is played first a half step away and then inside the harmony. Playing a half step figure *above* the harmony creates almost all the harmonic tensions. In bars 25–27 (Example 5.8) the chromatic sequence is resolving upwards but even here Tristano employs a D major scale over the Db major chord. Only in bars 41–42 (Example 5.9) is he clearly playing a half step *below* the harmony by arpeggiating the Bm7 chord over the C7 chord; only the note B from the Bm7 chord is inharmonic (a “wrong” note) over the C7 chord, meaning that the harmonic tension created is relatively mild.

5.4 Rhythmic elements

Lennie Tristano has been criticized[69] for being a rhythmically "cold" and non-swinging player. On the other hand, however, he used more polyrhythmic devices and asymmetrical groupings of notes than most bebop players[70]. By observing the rhythmical elements in *Line Up* we see that Tristano's use of rhythm differs from common bebop style in several ways. The average length of phrases in *Line Up* is much greater than is usual in bebop[71]. Additionally, Tristano does not syncopate so much on eight notes choosing instead to use different accents on quarter notes that sometimes creates a feeling of the time turned around[72]. Changing the direction of the line on an off-beat eighth-note is also used extensively on *Line Up*[73].

There are certain moments on *Line Up*, where one can hear some synchronization problems between Tristano and the prerecorded rhythm section[74]. However, by slowing the tape speed to half and playing one octave lower on the recording Tristano created a masterpiece that certainly swings in the melodic and rhythmic sense at a level greatly admired by later pianists and other jazz instrumentalists.

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[69]McKinney 1978, 67.

[70]George Shearing:"Lennie used to group notes into phrases of five or nine". Lyons 1983, 100.

[71]When I played the entire solo transcription on the saxophone at my doctoral concert, it was hard to find enough breathing spots.

[72]This can be heard at least in measures 55–64, 77–80, 92–96 and 204–208.

[73]E.g. measures 34, 35, 41, 134, 166 and 201.

[74]E.g. measures 92–101 and 145–152.

6 Tristano's harmony

Tristano's search for more modern harmonic universe is already discernable in the trio recordings made in 1946 with Billy Bauer and two different bass players, Clyde Lombard and Bob Leiniger. To me, the most interesting piece of music is *Atonement*[75], an original ballad composed by Lennie and not based on any standard chord progression.

6.1 *Atonement*

Listed below are the harmonic techniques employed in *Atonement* that were not common in the harmonic language of the bebop music of that time (see transcription, pages 79–80):

– The introduction is based on a harmonic sequence in which Maj7#11 chords descend in parallel motion, alternating between whole steps and half steps. In the last measure of the introduction under the alternating F# and G# tones in the melody, augmented triads move chromatically. In that last bar, I cannot find any tonal relationship between the final bar and the preceding or upcoming measures. Harmonically, the measure is not functional but could be categorized as modal or atonal.

– The first note of the theme is a dissonant F#, the b9 of the F major seventh chord. Or, it could also be called a raised eight (tonic), because it then resolves upwards to the ninth of the chord. The same melodic idea with the chromatic resolution is then transposed and repeated in the theme's second, third and fourth measures.

– The same idea occurs again in the last bar of the melody (bar 13), but slightly altered. The chords are minor triads instead of augmented triads and the entire step motif moves chromatically.

[75]Lennie Tristano Trio: *Keynote 1946–47*, Mercury 830 921–2.

– The tonal centers in the first four bars of the melody are F, G, Bb and D. However, the harmonic background in the improvisation section is based on more conventional I–VI–II–V progressions. The solo section changes key in the middle from D flat major to G major. This modulation (a tritone away) is the most distant in tonal harmony.

– In his playing under the melody ("comping"), Tristano uses a considerable number of dissonant color tones, at times rendering the tonality almost unrecognizable to the listener.

Generally, there are many modulations and tonal shifts occurring in *Atonement*. This is unusual in the bebop of the 1940's, but certainly not the first piece in jazz history to contain them. For instance, certain swing composers as well as the pianist Art Tatum already utilized these devices in the 1930's. *Atonement*, as the name suggests, is an early attempt to broaden the tonal jazz tradition towards atonality. Subsequently Tristano used dissonance in much the same way as on *Atonement* on several different recordings of Jerome Kern's *Yesterdays*. Perhaps the best known version is published among the 1949 *Intuition* recordings[76].

6.2 *Wow*

Like Charlie Parker and certain other bebop musicians, Tristano wrote or improvised new melodies based on standard chord progressions. In some of these compositions he also altered the original chord structure to some extent. An interesting example is *Wow*, recorded on March the 4th, 1949 with the famous sextet, that is based on the lesser-known standard *You Can Depend On Me*[77].

Figure 6.1 compares the original chord structure of *You Can Depend on Me* compared with the chords that Tristano used on *Wow*. To me, the most surprising substitute chords occur in bars 5 and 6 of the A section. Instead of the common subdominant

[76] Lennie Tristano and Warne Marsh: *Intuition*, CDP 7243 8 52771 2 2.

[77] Ibid.

chord of the second degree, Gm7, Tristano uses a Gmaj7 chord. This creates the feeling of a sudden key change from F to G. The F#m7–B7 cadence leading back to F major is also quite unexpected. In tonal jazz harmony, a tritone-related dominant seventh chord (B7–Fmaj7) resolution back to the tonic is unusual[78].

[**A sections**] *You Can Depend on Me*

|| Gm7 | C7 | Fmaj7 Bb7 | Am7 Abm7 | Gm7 | C7 | Fmaj7 | Fmaj7||

|| Gm7 | C7 | Fmaj7 | Fmaj7 | Gmaj7 | F#m7 B7 | Fmaj7 | D7 ||

Wow

[**B sections**] *You Can Depend on Me*

|| Cm | F7 | Bbmaj7 | Bbmaj7 | G7 | G7 | Gm7 | C7 ||

|| Cm7 | F7 | Bbmaj7 | Bbmaj7 | G9#5 | G9#5 | C7#5 | C7#5 ||

Wow

Figure 6.1 Harmonic structures of *You Can Depend On Me* and *Wow*.

6.3 *Marionette*

The third example is *Marionette*[79], recorded on May 16th 1949. It was not composed by Tristano but by one of his students, the guitarist Billy Bauer. It is nevertheless one of the best known tunes recorded by Tristano's sextet and it employs the same stylistical devices found in Tristano's own compositions during that period. *Marionette's* harmony is based on the chord progression of the standard tune *September In The Rain*. Bauer uses the chords of the A section as such but alters the chords of the B section considerably to suit his strikingly modern melodic ideas.

[78]The only example, that comes readily to mind is from the 1960's on Clare Fischer's *Pensativa* (transition from A to B sections), Art Blakey & The Jazz Messengers: *Free For All*, Blue Note BST 84170.

[79]Lennie Tristano and Warne Marsh: *Intuition*, CDP 7243 8 52771 2 2.

As shown in Figure 6.2, Bauer's harmonization features major seventh chords moving parallel in minor thirds and major seconds. This type of harmony was later used extensively in the 1960's and 1970's by Chick Corea and Joe Henderson, but as a student of Tristano, Bauer was exposed to this kind of harmonic thinking already in 1946 as shown in the introduction of *Atonement*. (Page 79).

[**B section**] *September in The Rain*

|| Bbm7 | Eb7 | Abmaj7 | Abmaj7 | F7 | F7 | Fm7 | Bb7 ||

|| Dbmaj7 | Emaj7 | Dbmaj7 Bmaj7 | Dmaj7 F7 | Bbmaj7 | C7b9 | Fmaj7 Fm7 | Bb7 ||

Marionette

Figure 6.2 *September In the Rain* and *Marionette*, harmonic structures in B sections.

This harmonization is however only used for the theme's initial and final statements. For the improvised solos, Tristano's sextet retained the original chords of *September In The Rain* in the B section as well. It would appear that improvising over these kinds of chord changes was still too difficult in 1949.[80]

6.4 Tristano's chord voicings

Listening to many of Tristano's recordings, his chord voicings often sound heavy and somewhat dated compared to the best jazz piano players of the 1940's and 1950's. This is most obvious on the solo piano recordings of 1960–62[81]. One of Tristano's teaching methods was to ask students to find a countermelody for the thumb using only the left hand. John Lewis criticized this method severely:

[80]At my doctoral concert, *Tristanology*, we also used Bauer's reharmonization, which no longer felt strange in 1998, for the solos.

[81]Lennie Tristano: *The New Tristano*, Atlantic 1357, 1962.

> "I had some kids who came from Lennie, and it was a disaster because they couldn't play with a rhythm section this way. The left hand gets in the way if you keep pounding chords out, and I had to get them to stop that."[82]

6.5 Conclusions

From the discussion above we can conclude that Tristano and his fellow musicians were indeed employing certain harmonic techniques that were not commonly used at that time but which later become part of the basic harmonic vocabulary of jazz. These include the following:

– Major seventh chords moving parallel in seconds and thirds.
– Use of chromatic dissonant tones as accented melody notes to create atonal dissonance.
– Use of atonal chords in tonal pieces.
– Rapid shifts of tonal centers.

When we consider Tristano's use of harmony as a whole, we must admit that he was certainly not a great innovator who would have made a great impact on the use of harmony in jazz. His chord voicings in particular were quite old fashioned for his time, at least in the 1950's. However, he and his band members in the 1940's used certain fresh harmonic ideas, probably derived from contemporary classical music, that were not commonly used in bebop, the modern jazz of that time.

[82]Lyons 1983, 80.

7 Summary

7.1 Research conclusions

7.1.1 Tristano

In my study I found that Lennie Tristano used many techniques in his music that were new and experimental for the jazz of those days. I consider the most important aspects to be the extension of harmony towards complexity and almost atonality (*Atonement)* and the use of striking chromatic tensions in the improvised line (*Line Up*). Viewing Tristano's music as a whole, it is easier to understand his experiments with free improvisation as an important part of his musicianship. In particular, his use of daring, almost aleatoric, dissonance in the *Atonement* and *Yesterdays* sessions of the 1940's can be considered a step towards freer and harmonically more complex improvisation.

The main body of Tristano's recorded music is however based on standard songs' traditional forms. In a way Tristano was closer to today's jazz musicianship that generally includes proficiency in the playing of standards and bebop playing as well as in free improvisation. Even if we do not rank Tristano among the greatest innovators of jazz history, he was certainly a seminal figure whose ideas and ways of making music were in some respects ten to fifteen years ahead of his time.

7.1.2 Coleman

The melodic language of Ornette Coleman is mainly simple and folk-like. His robust and straightforward way of playing can be considered as based on the old American folk music traditions and early New Orleans jazz. On the other hand, my study also shows that some of his compositions are very carefully planned conceptually and contain many astute artistic devices. For that reason his music cannot be classified as chaotic or produced by an eager dilettante. I believe that as a result of his ability to combine the

melodic aesthetics of simple folk and blues with modern and even complex compositional ideas, his music has always contributed a certain kind of sophisticated naiveté to the art of jazz.

Additionally, a so-called lack of instrumental technique has been used to achieve artistic goals[86]. Although many jazz musicians before him have employed humorous elements in their music, Coleman is the first jazz musician whose entire output seems to be an ironic comment on the stylistic development of jazz during the 1950's. As such, the free jazz movement inspired by Coleman occupies a rather natural position alongside avant-garde trends in the other arts, as well as the radical social movement of the 1960's.

7.1.3 Comparing Tristano with Coleman

Lennie Tristano and Ornette Coleman were exceptions from the usual model of the jazz artist of their time. In the 1940's and 1950's musicians usually gained experience ("paid their dues") by playing as sidemen with one or more master bandleaders before starting their own careers as leaders. Already at a young age, the individualism and originality of both musicians precluded any possibility of their becoming freelancers available on demand. Perhaps this partially explains how they were able to develop their own personalized jazz conceptions. What they had in common was a desire to develop their styles beyond the common bebop-based way of playing. They both also used free improvisation, although in Tristano's case, despite his two freely improvised tracks recorded in 1949, it was more a practicing method for ensemble playing. In Coleman's case, improvisation freed from strict chord changes was a key element of his style.

The starting points for making music were quite different for both artists. Typically for a white musician, Tristano was able to get classical music training as a youngster, whereas Ornette's early years entailed self-study and playing by ear in the Texas country music and blues environments. Considering these differences in backgrounds, it is quite easy to understand the more peaceful and tranquil chamber music-like mood of *Intuition* and

[86]Isn't that the case with every creative artist? After all, nobody's technical abilities are "perfect".

Digression[87] compared to the forceful and occasionally chaotic energy of *Free Jazz*[88].

Ornette Coleman's melodic language is mainly based on the traditions of folk and the blues. This might partly explain his relatively successful career as a jazz musician despite the presence of modern and avant-garde elements in his music. Tristano's melodies on the other hand are complex and are sometimes rejected by listener as academic and non-emotional music. In this aspect Coleman is closer to the traditional aesthetics of jazz, even though he arrived on the jazz scene later and is usually considered to be a more modern musician than Tristano.

7.2 Performing the music of Tristano and Coleman

Performing my doctoral concerts[89] *Ornettology* and *Tristanology* provided me with a great deal of musical insight into the music of Tristano and Coleman. The rehearsal processes and actual performances were both challenging and gratifying. The material for the *Tristanology* concert was more traditional in style and included some particularly difficult technical segments. The *Ornettology* concert was freer and contain little written music, but posed many creativity-related challenges.

Preparing for the *Tristanology* concert as well as the actual performance, were intense experiences that involved the playing of musical material that was somewhat alien and unfamiliar. After listening to a recording of the concert, I was however not be perfectly satisfied with the artistic results. It is obvious that the attempt to master Tristano's bebop-like but idiosyncratict musical style in a two-month rehearsal period was perhaps too difficult a task for our band. After all, Tristano's own sextet played the music for two years in the late 1940's.

Listening afterwards to the recording of *Ornettology* is much more satisfying. The

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[87]Lennie Tristano and Warne Marsh: *Intuition*, CDP 7243 8 52771 2 2.

[88]Ornette Coleman Double Quartet 1960: *Free Jazz*, Atlantic SD 1364, 1364-2.

[89]Sibelius Academy, Chamber Music Hall May 3, 1997 and April 18,1998.

overall spontaneity and expressive power are clearly greater than at the Tristano concert; our band was in any case already more familiar with the concept of improvising freely according to the mood of a piece rather than to a predetermined set of chord changes. This is also understandable when we consider today's professional requirements for jazz musicians. In this sense, Ornette's influence on contemporary jazz music is quite remarkable. Lennie Tristano will always have a secure place in jazz history as a special kind of experimental figure, but he has not influenced the entire evolution of jazz styles as Ornette Coleman has.

7.3 Suggestions for further study

In this study I discussed the music of Lennie Tristano and Ornette Coleman to gain additional historical perspective regarding free improvisation in jazz. The desire to understand free improvisation as a process has myriad possibilities for further study.

Compared to transcriptions of more conventional jazz styles such as bebop, notated transcriptions of free improvisations like Tristano's *Intuition* and *Digression* do not necessarily enable us to reach conclusions about the structure of the music. However, more good transcriptions of freely improvised jazz could provide us with more knowledge about the subject. For example, a transcription of Tristano's *Momentum*[90] might provide us with additional perspective for an analysis of *Line Up*.

Research treating free improvisation as a mental process is virtually non-existent, but Ed Sarath has provided us with one view on the subject in his article for the IAJE research papers of 1994[91]. Combining empirical analyses and transcriptions with cognitive research might take us closer to understanding the fundamental processes of free improvisation.

In my work as a teacher of jazz improvisation, I have noticed that sometimes even

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[90] *Momentum* is, like *Line Up*, based on *All Of Me* in Ab, although played in real time.

[91] Sarath 1994.

student players are able to attain more satisfying artistic results when improvising by ear without an exact knowledge of the overall form and chord progression (particularly when NOT reading the printed chord changes) of the piece being played. Pedagogical research assessings the various ability levels of jazz students and their improvisations could also contribute to our knowledge of the improvisational process.

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