

GEORGE RUSSELL'S LYDIAN CHROMATIC CONCEPT
FROM 1960 THROUGH 1972:
THE FOUNDATION OF CHORD-SCALE THEORY IN JAZZ EDUCATION

by

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Abstract

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George Russell's Lydian Chromatic Concept From 1960 through 1972: The Foundation of Jazz Education and Chord-Scale Theory

Thesis directed by Professor Brad Goode

Abstract: This paper explores the development of George Russell's Lydian Chromatic Concept during the early years of jazz education, composition, and improvisation from 1960-1972. It also discusses Russell's influence on Miles Davis, who created the greatest selling jazz record of all-time, *Kind of Blue*, as the LCC was a catalyst for the stylistic innovation of modality. Information was acquired through scholarly articles & websites, LCC Text, Organic Music Theory, and interviews with former students or colleagues of Russell. This goal of this thesis is to better understand specific elements of George Russell's Lydian Chromatic Concept and to explore the history of the early years of the concept's development.

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Introduction

Since its humble yet controversial beginnings, the musical genre of jazz has captured many musicians and listeners alike with its wide variety of tempos and feels, virtuosic challenges, and rhythms. During the early years through the 1940s and early 1950s, few questioned the theoretical approach to jazz improvisation, composition, and the means of teaching these skills to future musicians that would eventually carry on the idiom's traditions. While jazz is understood to be a consistently evolving idiom with many influences from other musical genres, one musician single-handedly conceived a new theoretical concept for jazz, while simultaneously inventing what is now the foundation of jazz education. Jazz's first theorist, George Alan Russell, formulated a new way of seeing, playing, composing, and improvising jazz. This innovation provided to players and teachers of the tradition a new perspective and approach for understanding how to navigate chord changes. This approach can be observed in the harmonic content of several of Russell's compositions and arrangements such as, *All About Rosie*, and *Cubano-Be Cubano-Bop*, as well as in his small group albums, like *The Jazz Workshop*.¹ Russell's ideas were not received well by all musicians. Nonetheless, George's innovations prevailed as a primary catalyst for the Modal Movement in the 1960s after influencing Miles Davis's approach to the best-selling jazz album of all time, *Kind of Blue* in 1959. George Russell's interpretation of jazz harmony known as the Lydian Chromatic Concept of Tonal Organization inspired the understanding and implication of chord-scale harmonic theory, which to this day is still predominantly used in the education of the jazz idiom.

¹ Peter Ellis Kenagy, "George Russell's Jazz Workshop: The Composer's Style and Original Methods of 1956" (UMI 3406762, 2009): 4-12.

Chapter 1

Introduction to George Russell

The Lydian Chromatic Concept of Tonal Organization was the first theoretical conceptualization to be introduced in jazz, though The Concept's creator, George Russell, was not a music theorist by trade. George Alan Russell was born on June 23, 1923, in Cincinnati, Ohio to a white father and a black mother. According to Ben Schwendener in an interview conducted via the Zoom video platform in December of 2020:

He never really finished any formal education. He was born in 1923. His mother was an African American student at Oberlin. His father was a white teacher. He was then adopted by a black family in Cincinnati and grew up in a neighborhood with people like Art Tatum, Fletcher Henderson, Horace Henderson...the gospel churches, and the riverboats would come up the Mississippi and Duke Ellington would be playing, and you can only imagine that he was marinated in really high-quality music.²

Russell also learned the drums, which was the first instrument he played in the tradition.

Upon the arrival of a young and talented Max Roach, Russell gave up the drums and went back to piano. What happened was George was a drummer and he was playing he did go to some schools, but he always got either kicked out or just left. He was going to Wilberforce for a while, which is the first black college in America, I believe. And he was playing drums. You know, he's pretty good on drums and he eventually ended up moving to New York with and he was working with Benny Carter at that time. At one point, I guess, Benny Carter said 'I'm going to have to let you go, George, somebody just appeared on the scene.' George knew, of course, that that was Max Roach, so Max Roach took over George's place, but at the same time, George Russell was very interested in composition, harmony, and really just finding new ways to look at and to understand what was happening in the African American music and jazz and at that time.³

Though the Schuller indoctrination as a music theorist was not addressed until the 1980s, George is revered in the idiom as a pianist, composer, arranger, and theorist.

...what was happening back then, in the 30s and 40s, black musicians were creating a new way to navigate on Tin Pan Alley tunes and chord changes...along with the blues and all that stuff as well, but the interesting thing was this movement to actually start playing on chord changes, that was like Coleman Hawkins or Louis Armstrong and, you know, the list goes on. They were really pioneering this way of improvisational

² Ben Schwendener, Interview with Ben Schwendener, Zoom Video Conference, December 31, 2020.

³ Schwendener.

navigation down what George would later call a “chord stream” and he created a chart called The River Trip.⁴

George Russell’s theoretical discovery was the result of confinement, deep thought, and recovery. When the pianist was hospitalized with tuberculosis, he was drawn to the hospital-owned piano rig. As told by NEC Professor Ben Schwendener,

So long story short, he's hanging out one evening with who else but Miles Davis and they're trading changes. This is in the 40s. [What George] always says is ‘I asked Miles what his musical aim was, and Miles said, I want to learn all the changes.’ So then fast forward a little bit. George is living in New York, it's the mid to later part of the 40s, and he was going to sign up for the draft. So, he goes to get his draft physical and he's in a room with a bunch of naked guys and they look at look him over and they take all these tests [and say] ‘you're out of here, you've got TB’.⁵

After so many months of care and intuitive focus at the hospital piano, he reached a staggering epiphany, which would eventually lead to the Modal Jazz Movement. This was just the beginning of the Concept’s impact in the jazz community.

So, Russell said he didn't even know it, but he was diagnosed with tuberculosis, and he couldn't go into the army. Then it started getting worse. He ended up in a Bronx hospital for 17 months. And George said this was the best thing that could have possibly happened to him because the gentleman right next to him. His name was Harold Gascón. He was a bass player, and he knew all about the fundamentals of music, notation, chord symbols, and basic kinds of music theory and nomenclature. George kept thinking about this question that he asked Miles and Miles saying: ‘I want to learn all the changes.’ That got him to intuitively think, and all the concept - I must stress - came out of George's, as he would say, ‘intuitive center’.⁶

Ben Schwendener’s colorful and insightful recollection of the LCC’s backstory continues:

Remember, this guy did not go to school. This guy was educated on the streets, you know, and the whole concept had been a 50-year plus process for George. Having an idea and then trying to destroy it, but eventually finding justification - and yes, that justification is scientific because if it's true here, it's got to also be true there. Otherwise, it's just a rule and this is what he found when he went to us. He posed the question. He said, well, for every chord, there must be an organization that sounds closest to in consonance and in unity or in harmony, because the definition of harmony that he found

⁴ Ben Schwendener, Interview with Ben Schwendener, Zoom Video Conference, December 31, 2020.

⁵ Schwendener.

⁶ Schwendener.

was unity. So, this idea of unity and the reason he said that was because jazz musicians were playing a lot more than just the chord tones, one three five seven. They were like playing around the chord tones. And it kind of suggested to George that there is a bigger organization than just a triadic thing that's going on there. He would play. So, he's in the TB ward, the sanatorium where all the tuberculosis patients in the 40s would go to smoke.⁷

Schwendener continues,

He'll be playing that over and over, and he said that all those guys would start throwing tomatoes at him. George is very colorful in his description. They'd be yelling stuff at him, get out of here. So eventually he went to the library, and he was the only person in there. They had a piano, and it was a Catholic church. One of the sisters was in there. So he did it, you know, with the major scale, you think like, for instance, C, major scale must be the sound of a C major chord, but there's a problem here, a problem in terms of answering the question of unity. Well, that fourth degree, as we know from jazz education, is called the avoid tone. It's not it's not an evil tone, it just does not sound consonant with the chord. And I was taught that don't ever land on it for very long. You want to kind of move through it. The whole incidentally, fast forward, moving through is a horizontal phenomenon, but we'll talk about that later. OK, so the first four notes don't sound C major, but the next four notes do. It's clear that those four notes sound very, very, very consonant with that, and they give you the extensions of a major six and a major seven, which are commonly used. Well, knowing only the major scale, George said, well, why don't I try the G major scale?⁸

Russell found that all of the notes in the scale worked well because the first half of the scale correspond the sound of the C scale, and the second half corresponds to the sound of the G scale. After looking into the church modes and realizing that this particular sound was affiliated with the lydian mode, he called it the Lydian scale. Ben Schwendener offers the following perspective on Russell's innovation:

George has his own way of saying it. And this is basically what it is, 'the natural phenomena of elements, tones, having a self-organized order in relation to a single central element, which is called the center of total gravity self-organization of scale defined in this way is due to laws and principles found in nature and have universal correspondences. I think what George said was a naturally occurring order of elements evidencing a technical bias toward a single element as its center of total gravity and fundamental DO. The tactical endowing property of the interval, the 5th, is due to laws and principles found in nature and having universal correspondences. George would say: 'Due to universal laws of gravity now manifesting in music.' So it's heavy-duty stuff, but it's interesting that we're looking at scale as a naturally occurring order of elements. My understanding is the Latin origin for the word scale is *scala* - that means ladder and the Lydian scale is a ladder of octaves. Six intervals of a fifth. What's so big about the fifth?

⁷ Ben Schwendener, Interview with Ben Schwendener, Zoom Video Conference, December 31, 2020.

⁸ Schwendener.

It's based off the overtone series, that's the overtone series. And who created that overtone series? The ruler of the universe and the natural law of nature.⁹

After learning of the concept's backstory, Ben implied the importance of this project for better understanding and being able explain the LCC. I was brought up to speed on the verbiage and definitions that George implemented as categorizations for his concept. The Lydian Chromatic Concept is an influential theoretical perspective which changed the direction of jazz performance and became an influence on the pedagogy of early jazz educators. George Russell's parallel view of modality in conjunction with the Lydian Chromatic Concept provided the jazz world with a theoretical approach that stood apart from classical theory. This paper explores the fundamental concepts of Russell's theory, and its development.

⁹ Ben Schwendener, Interview with Ben Schwendener, Zoom Video Conference, December 31, 2020.

Chapter 2

The Building Blocks of the Lydian Chromatic Concept

The Lydian Chromatic Concept functions through a series of theoretical elements, first conceived by George Russell. His initial publication of the concept was in 1958. The first edition of George Russell's publication is titled, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*. The book itself has an easily digestible layout that lends itself as a standard music book for instrumentalists. His sections are labeled as *Lessons*, complete with applicable examples, playing exercises, and even tests – one must consider what his long-term goal was in displaying the concept in this fashion. This book also highlights George Russell's original intent for the application of his concept: Improvisation. Before diving into how this theorization was conceived, it will be important for readers to understand the basic terms and tools George Russell uses to describe the implications and methods to execute the concept.

The LCC's application in improvisation is done with the use of *Tonal Gravity*, Parent Scales, and several other theoretical tools. While there are many tricks and tools Russell developed to help others understand his concept, *Tonal Gravity* and *Parent Scales* are paramount throughout the entirety of the concept and its applications. The definition of *Tonal Gravity* is posited by George Russell in his first edition of *The Lydian Chromatic Concept of Tonal Organization*. He states, “tonal gravity emanates from the first seven tones of the Lydian mode.”¹⁰ “As the player ventures further from the tonic, however (and further up the circle of fifths), the tonal gravity shifts.”¹¹ In other words, “unlike physical gravity, which only attracts, tonal gravity has two polarities – it can attract or repel. If an interval is generated by

¹⁰ George Russell, *George Russell's Lydian Chromatic Concept of Tonal Organization*, Fourth, vol. 1 (Brookline, Massachusetts: Concept Publishing Company, 2001): 2-9.

¹¹ Russell, 2-9.

multiplication, it will *pull* toward the tonic. If generated by division, the sensation is more of a *push*.’ From a mathematical point of view, “overtone notes are stable, reciprocals are unstable. Reciprocal intervals create tension, overtone ones create resolution.”¹² The definition of a *Parent Scale* on the other hand, comes from being able to utilize a specific scale that will best convey the sound of a given chord. This information comes from the first lesson of the book, which George labeled *Determining the Parent Scale of a Chord*. At the start of this lesson, George points out “this conversion of a chord into a scale, is *Vertical Polymodality*. In *Vertical Polymodality*, the melody is dictated by the chord.”¹³ He adds that this will be prevalent in lessons one through four. This is the foundation for finding a parent scale. George’s example of converting chords into scales follows:

The image displays four musical staves, each representing a different scale. Each staff is in treble clef and 4/4 time, with notes written as half notes. Roman numerals I through VII are placed below each note to indicate scale degrees.

- D FLAT LYDIAN SCALE:** Notes are D (I), Eb (II), F (III), G (+IV), Ab (V), Bb (VI), C (VII).
- LYDIAN TONIC - E FLAT LYDIAN SCALE:** Notes are E (I), F (II), G (III), Ab (+IV), Bb (V), C (VI), D (VII). A red arrow points to the first note (E).
- D FLAT LYDIAN - (PARENT SCALE):** Notes are D (I), Eb (II), F (III), G (+IV), Ab (V), Bb (VI), C (VII).
- D FLAT LYDIAN AUGMENTED:** Notes are D (I), Eb (II), F (III), G (+IV), Ab (+V), Bb (VI), C (VII).

¹² Gary Garrett, “Putting Some Numbers on Tonal Gravity,” *Untempered Music* (blog), October 22, 2013, <http://www.garygarrett.me/?p=1705>.

¹³ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 2.

The image displays five musical staves, each representing a different Lydian mode or auxiliary scale in D-flat. The notes are written in a treble clef with a key signature of one flat (B-flat). Roman numerals are placed below the notes to indicate their scale degrees.

- D FLAT LYDIAN DIMINISHED:** Notes are D-flat, E-flat, F, G, A-flat, B-flat, C. Roman numerals: I, II, -III, +IV, V, VI, VII.
- D FLAT AUXILIARY AUGMENTED:** Notes are D-flat, E-flat, F, G, A-flat, B-flat, C. Roman numerals: I, II, III, +IV, +V, -VII.
- D FLAT AUXILIARY DIMINISHED:** Notes are D-flat, E-flat, F, G, A-flat, B-flat, C. Roman numerals: I, II, -III, IV, +IV, +V, VI, VII.
- D FLAT AUXILIARY AUGMENTED:** Notes are D-flat, E-flat, F, G, A-flat, B-flat, C. Roman numerals: I, II, III, +IV, +V, -VII.
- D FLAT AUXILIARY DIMINISHED BLUES:** Notes are D-flat, E-flat, F, G, A-flat, B-flat, C. Roman numerals: I, -II, -III, III, +VI, V, VI, -VII.

In the next chapter, the student is introduced to *The Lydian Chromatic Scale*. He continues with the example from the previous chapter: “If we have the symbol Eb7, its parent scale will be Bb Lydian. As we’ve learned, not only Db Lydian, but also any of the other scales listed on the chart may be built on Db, the tonic of the *parent scale* (Lydian Tonic) and used as a source of melodic color with the chord”¹⁴ George continues to name the six scales that he defines as the “primary colors of music” – Lydian, Lydian Augmented, Lydian Diminished, Auxiliary Diminished, Auxiliary Augmented, and Auxiliary Diminished Blues. Each of these can contribute their own “melodic colors” to the sounds of the chords.¹⁵ “If we combine these six scales, they will form a chromatic (twelve tone) scale. We call this chromatic scale the Lydian Chromatic Scale because it is created when the three Lydian Scales (Lydian, Lydian Augmented

¹⁴ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 2.

¹⁵ Russell, 3.

and Lydian Diminished) are combined with the three Auxiliary Scales (Auxiliary diminished, Auxiliary Augmented and Auxiliary Diminished Blues).”¹⁶

The twelve *Lydian Chromatic Scales* exist on the tones of the chromatic scale. George makes it clear that the *Lydian Chromatic Scales* are to be utilized by the student as it is where they are drawing individual musical ideas in most of their improvisational endeavors. Every *Lydian Chromatic Scale* contains the six vertical chord producing scales, which feeds into converting chords into scales once again. “When we convert a chord into its *parent scale*, we convert it into its parent *Lydian Chromatic Scale* as well. We might say that the parent scale of a chord is the small parent scale within the big parent scale, the Lydian Chromatic Scale.”¹⁷

The rest of this chapter goes on to explain how to utilize the chord category to aid in determining the parent scale of a chord. The procedure and visual aids for determining this are in the appendix:

1. Identify the prevailing chord by its name
2. Classify the chord with its proper chord category
3. Look to the right of the chord category and select one of the scale degree Roman numerals. The first scale to the right of a chord category will always produce the most consonant scale.
4. Place the designated scale degree under the tonic of the chord and think down the same interval as the scale degree. The tone at which you arrive will be the tonic of the parent Lydian Chromatic Scale of the chord (Lydian Tonic).

¹⁶ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 9.

¹⁷ Russell, 10.

5. Turn to Page 1 of the chart and look through each scale, starting with the Lydian Scale, until you find the scale in which the chord first appears on the designated scale degree. This will be the actual parent scale of the chord. Build that scale on the Lydian Tonic, using the degrees of the scale shown by the Roman numerals on the chart.
6. Use the *parent scale* and/or any of the other scales of the prevailing *Lydian Chromatic Scale* as a source of melodic color with the chord.

The result of this order of determination is a variety of scales whose structure is closest to the parent scale and will sound best with the specified chord. “Simple basic chord structures provide the improviser with greater freedom in [their] choice of scale color. The fewer the notes of the chord, the greater melodic freedom it will support. The more complex the chord, the more it will restrict the choice of scale colors.”¹⁸ Russell goes on to explain how these tools should be put into practice, and like most music-oriented theoretical approaches, these are best utilized by practice and memorization.

Lesson three further deciphers the implications of the *Lydian Tonic* versus a *Chord Tonic* and how both function within the concept. Lessons four and five introduce the four types of melody which embrace all melodies that are now being invented, that ever could be invented in the equal temperament system, by any improviser. In other words, our chromatic scale would have to be enlarged beyond its twelve tones to produce a melody that cannot be related to one of these four types of melody.¹⁹ The four types of melody are as follows:

1. Ingoing Vertical Melodies (Absolute or Chromatically Enhanced)
2. Outgoing Vertical Melodies (Chromatic Scale Interval Melody)

¹⁸ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 13.

¹⁹ Russell, 21.

3. Ingoing Horizontal Melodies (Absolute or Chromatically Enhanced)
4. Outgoing Horizontal Melodies (Chromatic Scale Interval Melody)

Absolute Scale Melody and *Chromatically Enhanced Scale Melody* are the two melodic devices that may be applied through all four melody types. George's definition of an *Absolute Scale Melody* is one that uses only the tones of a given scale. He defines the existence of a *Chromatically Enhanced Scale Melody* (C.E.) occurs when the tones of a melody resolve inward to the tones of a scale or to the tones of a structure within a scale. The scale or scale structure is used as a frame for a melody which enhances it chromatically. The inward resolution of the tones of a melody do not need to be immediate in musical succession. Chromatic enhancement may be prolonged a great deal.²⁰

The lesson continues, "Now you see, we are reaching for a chromatic scale to have all the notes at our command. This is our ultimate goal. But of course [you] had the chromatic scale before you began this course. What we are trying to give you is an organized, orderly way to develop the use of the chromatic scale for improvising."²¹ Now that the *Lydian Chromatic Scales function* and importance has been established, it would be who of the learner to further understand George Russell's defining factors of ingoing and outgoing vertical melodies.

Vertical Polymodality is the tonal gravity conveyed by a given chord. These situations arise when the choice of scales is determined by the 'prevailing chord'. "In other words, the soloist is using the given chord and converting it into one or more scales to develop his improvised lines. The chord (vertical thinking) is determining [their] choice of scales. Polymodality (possible use of more than one scale) greatly frees the improviser from the vertical

²⁰ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 22.

²¹ Russell, 22.

limitation of arpeggiated playing. The number of scales at the player's command opens new avenues of improvising."²² An *ingoing vertical melody* is a melody derived from a member scale of the *Lydian Chromatic Scale* determined by a chord. This scale is used as a frame for absolute or chromatically enhanced melodies.²³

The Scale:

B FLAT LYDIAN (ABSOLUTE)

The Melody:

B FLAT LYDIAN (ABSOLUTE)

The Scale:

B FLAT LYDIAN (CHROMATICALLY ENHANCED)

The Melody:

B FLAT LYDIAN (CHROMATICALLY ENHANCED)

An *outgoing vertical melody* is one which is not contained in any of the member scales of a Lydian Chromatic Scale but is derived from the body of intervals of the Lydian Chromatic Scale itself.²⁴

Analysis of intervals of the Lydian Chromatic Scale:

Fmaj⁷ Fmaj⁷

-2ND 4TH 3RD 4TH -2ND 3RD -2ND -2ND -3RD 3RD -3RD 3RD -3RD

²² George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 22.

²³ Russell, 23.

²⁴ Russell, 24-25.

Chapter five introduces the learner to *Horizontal Polymodality* (Tonal Gravity conveyed by the scale. This type of polymodality utilizes two melodies classifications which are determined by factors broader than the single chord and are labeled by George Russell as:

1. Horizontal Ingoing Melodies (Absolute and Chromatically Enhanced)
2. Horizontal Outgoing Melodies

“Horizontal Polymodality occurs when we impose a single Lydian Chromatic Scale (usually in the form of one of its horizontal scales, Major or Blues) upon a sequence of chords. It is in horizontal situations that the Major and the Blues Scales are most effective. The scale we choose conveys the tonal center to the listener rather than the improviser.”²⁵

There are three factors that may establish the Lydian Chromatic Scale to be imposed upon a sequence of chords. These are:

1. The resolving tendency of two or more chords
2. The key of the music
3. Aesthetic judgement

George further elaborates upon the idea of the resolving tendency of two or more chords on page 29.

We may take any composition based on definable chords and analyze it for its tonic stations. (Tonic stations are tonics to which two or more chords tend to resolve.) If it is a simple song, it will have fewer tonic stations than a more complex song. In either case, the key of the music, of course, will be the big overall tonic station. Within the key of music, however, you might find that each eight-bar phrase has its tonic station, and that each four-bar phrase within that eight also has a tonic station. Therefore, when you choose to be melodically horizontal, you may relate to the Lydian Chromatic Scale inferred by an eight-bar tonic station, or to the Lydian Chromatic Scale inferred by a one-bar tonic station. In some instances, when the changes are fairly simple (the blues for example), you may relate to the Lydian Scale inferred by the key of the music.²⁶

²⁵ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 28.

²⁶ Russell, 29.

Page 30 gives the student a glimpse into George's implication for how the key of the music is to be used and observed when considering a choice of a parent Lydian Scale in a Horizontal situation. George's original example follows:

“For example, if we have a twelve-bar blues in the key of C, then we would naturally accept the C Lydian Chromatic Scale as our parent Lydian Chromatic Scale because it is the one that is inferred by the key to the music. We would select the Major Scale and/or the Blues Scale (possibly others) from the C Lydian Chromatic Scale and impose them upon the Blues' changes. (It can be pointed out here that scales containing the 4th, such as the Major, Blues, or the Auxiliary Diminished Scales, are usually the most ideal scales to employ in horizontal situations. However, the possibility of employing any of the other scales of the parent Lydian Chromatic Scale which you are using might also be explored.)”²⁷

Before exploring what George calls outgoing and outgoing horizontal melody, Russell empowers the student to consider their own aesthetic judgement. George Russell explains his reasoning for this on page 32.

Chapters six, seven, and eight are all concise chapters with vital information on how to truly understand the inner workings of the Lydian Chromatic Concept. Russell recaps the amount of new information that has been presented and reminds the student that this can all be ascertained with tricks and memory aides. In an interview, NEC's Ken Schaphorst described one exercise in particular:

...I think about modes very differently than I would have, but I think about his exercises often. One exercise is the first thing that all lydian chromatic students have to do. So, you'd write one bar that had to be just white notes. Next bar - I guess you can go one of two directions, but let's say flat. So, it'd be like first bar in A, second bar B flat lydian. Then you go back to F and then the next bar is now the fourth bar, you go to two flats. So, this would be E flat Lydian. You go back and forth, white notes, one flat white

²⁷ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 30-32, 41.

note, two flats, one white notes, three flats all the way until you go all around the twelve tones if you want. I don't think that he made them do that. This is a substitute for chord changes, basically. So, no two-fives, obviously, but you're creating a way of organizing an increasingly tense relationship between the white notes and all these flats. This is a great way to get all of us to think about modes in a new way. He would often say, 'well, it doesn't have to be Lydian - it could be Dorian'. So, the important thing is the mode change. What's in the root is less important. I think that's also a pretty powerful lesson, which I have definitely learned from George as we hear the group or collection of pitches. He writes great counterpoint. There's a chromatic idea of moving away from the home base, but increasingly looking outside of the mode. That's something I think about more after learning the theory, but also looking at his music.²⁸

George Russell also acknowledges the Lydian Concept is more easily understood with a new way of thinking, but a complete understanding of fundamentals now will allow for short cuts later. George asserts it is a necessary to work out/write down scales to ensure a full understanding of the Concept and allow for quicker note processing and fluidity in improvisation. Lesson seven introduces and informs the student of how to use George Russell's Lydian Chromatic *Slide Rule* as a means of rapidly locating notes of scales. He goes on to explain this process, which is available for reference in the appendix.

The final chapter of George Russell's first iteration of *The Lydian Chromatic Concept of Tonal Organization for Improvisation* discusses the construction of chord patterns and the substitution of chords. The tool Russell uses to achieve these patterns and substitutions is called *The Circle of Close to Distant Relationships*. This tool consists of intervals of fifths as they relate to the distance between Lydian Chromatic Scales. "This relationship is based primarily upon intervals of fifths ranging upward in a sharp direction, and downward in a flat direction from the Lydian Tonic of any given Lydian Chromatic Scale."²⁹

²⁸ Ken Schaphorst, Interview with Ken Schaphorst, Zoom Video Conference, 12/20.

²⁹ George Russell, *The Lydian Chromatic Concept of Tonal Organization for Improvisation*, 1st ed. (Suite 1206 12 East 41st Street New York 10017: Concept Publishing Company, 1959): 41-42.
View pages 43 and 44 in the Appendix

Chapter eight continues with analysis of the chords produced and how they are undoubtedly related to one another in the exact way as the Lydian Chromatic Scales – by intervals of fifths. Russell continues by explaining the Procedure for Composing or Substituting Chords using the Circle of Close to Distant Relationship by means of a written example.

The close of the final lesson reiterates the purpose of learning this theoretical approach. From there, the student is met with a message from George Russell expressing hope that the individual has gained a new way of exploring chromaticism as his concept ties into jazz's traditional chord-based framework. The text itself does not end at the conclusion of the eighth lesson; the reader is given a glimpse into the foundation of what would eventually become George Russell's music theory textbook entitled: *Lydian Chromatic Concept of Tonal Organization – Volume One: The Art and Science of Tonal Gravity*. In the words of Ben Schwendener, "it's actually very simple. It sounds incredibly complicated and just scientific, and it is scientific, but science doesn't have to be complicated."³⁰

³⁰ Ben Schwendener, Interview with Ben Schwendener, Zoom Video Conference, December 31, 2020.

Chapter Three

Development of LCC

As the first jazz theorist, George Russell recognized a need for communication and understanding of the concepts jazz musicians use in their improvisation. His inspiration originated within the classically understood *Church Modes* and adapted over time to fit the educational necessity of the jazz idiom. George may not receive the recognition deserved for his discovery and innovations in music education, but the validity of his findings is seen to this day in jazz education, many thanks to the descendants of the Lydian Chromatic Concept of Tonal Organization.

They were known to each other as *the disciples* of the concept – musicians who yearned to have a deeper theoretical understanding of the music they created. George Russell had a huge part in communicating his concept to younger musicians as jazz education had come into existence by way of Stan Kenton and the advent of summer jazz camps. Over time, Russell's theory would be at the forefront of jazz education but would not receive the deserved recognition. George's theory text was the first of its kind and would go on to inspire his disciples to create their own method books and means of teaching eager learners. From here, jazz education reels into a theoretical revolution.

Upon interviewing five individuals: Jamey Aebersold, Dan Haerle, Ken Schaphorst, Ben Schwendener, and Henry Godfrey - who all have experience with the Lydian Chromatic Concept – contextually and historically – the pedagogue David Baker was mentioned numerous times. David Baker was one of George Russell's closest pedagogue friends and had the utmost respect and reverence for George. As stated in Monika Herzig's book about David Baker, "Russell's ideas became an essential ingredient in Baker's compositions, and the personal relationship

established at the Lenox School was to be a turning point in David Baker's career."³¹ Herzig goes on to share an interview snippet of Baker recollecting his inquiring nature of George's ideas:

And I fought tooth-and-nail, man: I was the thorn in George's side. I was *Mr. Inquisitive*: 'Tell me why: I want to know. Don't tell me it's a *priori*. I was to know why.' And he presented me with cogent arguments that allowed me to shape a philosophy that encompasses the Lydian Concept but is not exclusively that – even though I suppose George would say that if I were to look at it, I probably could confirm that everything that happened in music has been embraced by the Concept. And that's no different from Scriabin and others who thought the "chord of nature" encompassed everything. I can only say that for me it works. Only when I started playing with George and began to write pieces did I actually begin to use the Lydian Concept. I probably had used that material; but until George presented it, I had never thought to put a label on it that would have enabled me to use it consistently.³²

David Baker is considered one of George's original disciples. A man of many talents, Baker was known for his trombone playing, improvisation, arranging, compositions, but most so is revered for his contributions to the jazz idiom through educational pedagogy.

Ken Schaphorst, a music professor at NEC speaks on the importance of George's impact on his students: "I talked to a lot of his former students, some of which are very famous. I think the most significant was David Baker, who was the chair of the jazz department at Indiana. I mean, he loved George so much. And I have a lot of stories about that. But maybe the most important and I'll go on to tell you what I think, George taught David Baker and how important that is."³³

Succinctly, Baker codified the bebop scale. To expand upon this notion, the opening sentences of the Pedagogy of Jazz subheading in the Defining Jazz Education Chapter of the Herzig book summarize David Baker's contributions eloquently. "I cannot think of anyone better

³¹ Monika Herzig, *David Baker: A Legacy in Music*, n.d., 31.

³² Herzig, 31–32.

³³ Ken Schaphorst, Interview with Ken Schaphorst.

equipped to teach Jazz Pedagogy than David Baker. He has taught jazz at all levels, neophytes to professionals, for over fifty years; written more than sixty books and four hundred articles on the subject; and experienced every facet of the art form as composer, arranger, performer, and bandleader.”³⁴ David is just one of many profound pedagogues touched by the esoteric charm of George Russell’s Lydian Concept. Ken Schaphorst speaks to the importance of David Baker in George’s life as a descendant of the concept, but also a close friend to George:

I think it was George's 80th birthday. I proposed to have the NEC Jazz Orchestra go to New York. At that point, there was this it's what's become, but at that time it was called the International Association of Jazz Educators. And they were having their meeting in New York. And I thought we should play, you know, a concert of George's music at that point. You know, he did sort of lose his focus. I mean, he had Alzheimer's, basically. I guess I can say that now. And he couldn't conduct himself. So that's where I started conducting his music. He would come to the rehearsals, and he would sometimes get up and conduct a little. But that was interesting when he felt like I wasn't doing something right. We applied to the IAJE, and we were turned down. David Baker at that point was the president. So, I emailed and said, 'David, I just thought you should know that we applied to do this'. I got a call within a couple of days, 'oh, we're sorry, I made a mistake'. David told me later he threatened to resign if they didn't invite George. So, that was an example to me of how important George was to him. David played in his groups, by the way. What's also important was when he was playing trombone, he played in George's groups with Eric Dolphy. There were some amazing groups with Don Ellis on trumpet. That's a whole other connection. I've met a lot of people who played in those groups. I played for a long time with a drummer named Joe Hunt who still lives in Boston, who has a lot of great stories about George. Anyway, David Baker told me how important George's teaching was to him.³⁵

In one of the interviews, the author had the opportunity to speak with one of David Baker’s long-time friends and colleagues, Dan Haerle. Not a direct descendant of the Concept himself but influenced by George through David Baker, and by Jerry Coker during his tenure at the University of North Texas. His primary contributions to jazz education include the adaptation of recognizing the Major 7th chord tone and eventually picking up the minor 7th – as presented in George’s Lydian Chromatic Concept. One of Dan Haerle’s contributions is a scale

³⁴ Herzig, *David Baker: A Legacy in Music*, 101.

³⁵ Ken Schaphorst, Interview with Ken Schaphorst.

that starts out diminished, and finishes as a whole tone scale, which received the obvious name given its content of the *diminished whole tone scale*. Later, Herb Pomeroy also figured out this scale and would share it at workshops. Haerle is best known for his educational contribution by writing a book entitled *Scales for Jazz Improvisation*. In the interview, Haerle goes on to discuss the *Super Locrian Scale* and asserts, “the name of a scale doesn’t matter as long as you understand the structure,”³⁶ and no one knew this notion better at the time than George Russell, who was the first person to codify the idea of the chord-scale relationship. Dan goes on about this anomaly: “If you needed that sound, you chose the scale that included it,”³⁷ stating further that it did not matter which scale degree it was built on. Obviously, these ideas carry on today in the jazz idiom. Haerle also made a clear connection of George’s scales to their relations outside of the lydian concept. Simply put, he states “all of George’s versions of the major scale are technically harmonic major – in other words, major scales with sharp 5’s and flat 6’s. The lydian scale is mostly made of major lydian augmented, which is a mode of melodic minor.”³⁸ George Russell’s lydian diminished (Dan Haerle named this as harmonic major) is a major scale with an augmented 2nd interval/ Lydian b7 is important – it includes all the notes of the 13th chord, thus completing the whole tone scale. Another one of Haerle’s contributions of playing on Jamey Aebersold’s play along tracks segues into the next LCC descendant’s contributions, which had a massive impact on the world of jazz education.

Jamey Aebersold – a name that is synonymous with jazz education. His contributions to jazz education have been nearly limitless. He is a direct descendant of the Lydian Chromatic Concept, technically, a 3rd generation of its teachings. Jamey was a student of

³⁶ Dan Haerle, Interview with Dan Haerle, Zoom Video Conferencing, 12/20.

³⁷ Haerle.

³⁸ Haerle.

David Baker in the 1960s and recalls how the lessons changed his perception of how to approach jazz from an improvisational standpoint. Aebersold still remembers his lessons with David but more specifically, how much he himself transcribed: “I transcribed so much when I was younger, and I can’t imagine doing it now – I had more time. David showed me the idea of seeing relationships present with scales, chords, licks, etc., because the transcriptions were an extensive form of study.”³⁹ He recalls a jazz camp he attended in 1968 – “At the Lenox School of Jazz, I had daily Lydian Concept lessons with Herb Pomeroy; this was too over my head, very confusing.”⁴⁰ That same year he was in lessons with David Baker in Indianapolis who in his mind ‘owned’ the concept. “David Baker helped make sense of creating solos from scales and chords.”⁴¹ Jamey went on to explain that with George Russell’s idea in motion, musicians were beginning to look to other cultures now for similar tools like scales and chords such as the Hindu scales, the Japanese scale, etc. “Then modes came along. Dorian was very big. Phrygian was not used very much, but then came all these music books with scales in them. I think people started writing songs and experimenting all through the 60s and 70s. The scales were all available. Coltrane was a good example – taking a scale or two or three and playing it [improvisationally] for upwards of 15 to 20 minutes.”⁴²

Returning to Aebersold’s many contributions; he was introduced to the usage of scales by David Baker, but then went on to create something bigger – he created the first recording of a play-along for other students, educators, and professional musicians to practice to. “Scales help with playing by means of being able to readily play what you hear in your head.”⁴³

³⁹ Jamey Aebersold, Interview with Jamey Abersold, Zoom Video Conference, 2/21.

⁴⁰ Aebersold.

⁴¹ Aebersold.

⁴² Aebersold.

⁴³ Aebersold.

Jamey starts his students by playing scales instead of first learning the Blues. He speaks to this in his interview: “Volume 1 started using Dorian minor tracks to get people used to hearing the sound of jazz – getting the feel of playing with the drums, and the bass, and the piano, keeping your place, being able to change after 8 bars to the next 8 and so on...”⁴⁴ He thought this was a good idea way back when, but jazz educators did not think this was the path for the future of jazz education. There was a lot of criticism of this which caused friction among educators, but Jamey made his vision possible and was the first to put all preconceived concepts together in a practical and playable format. With technological advances, Jamey Aebersold’s vision was facilitated thus giving eager pupils access to his recorded play-along tracks and scale-centric books for learning. Aebersold was the first person to join all these concepts together into a practical and playable format. Another Aebersold contribution, is the *Jamey Aebersold Jazz Handbook* and this book showcases Jamey’s scale syllabus. This presents scales to students and asks them to improvise using only the given notes and their imagination, thus facilitating the ability to play what they hear.

In 1967, at the age of 27, Aebersold taught at Indiana University during the annual summer big band camp. He did this for seven years before coming up with the idea for a combo camp that would allow students more opportunity to improvise and to be taught how to improvise. In this camp, he implemented drilling scales and arpeggios to relate them to chord changes. This type of educational practice took years to accomplish en-masse for jazz education. Further into Jamey’s interview, he began to extrapolate connections and disconnections between the past and the present regarding those learning jazz improvisation. “These days, you’ve got people learning jazz improvisation from the internet...everything had a classical basis ‘back

⁴⁴ Aebersold, Interview with Jamey Aebersold.

then’.”⁴⁵ Aebersold began alluding to the idea that those with a classical background underwent a more tamed “regimen” with scales and exercises, and thus, have a better grasp on scalar incorporation in improvisation that those who do not learn what is considered nowadays as basic technical training. This concept will be discussed further in the next chapter.

Jamey, by way of the genius of George Russell, brought this to jazz’s educational infancy, resulting in the codification of jazz technique and performing American Songbook Standards and jazz tunes. He asserted that classical training is important to jazz’s legitimacy, and this is an idea that was presented in a similar fashion by each interviewee. “Everyone has music in them - it’s just that they don’t have their instrument under control.”⁴⁶ Ken Schaphorst speaks succinctly on where Aebersold departs from the concepts nomenclature, which inevitably takes away from the LCC’s conventional freedoms within improvisation:

Whether the Lydian Chromatic or Lydian, let's just say let's talk about the Lydian, because that's the chromatic thing is another thing which is important. But the Lydian being the sort of the centerpiece of the universe, which is really how George sees it almost in a religious way, that's important. If you really want to understand George and his students, and I don't consider myself one of those, by the way, even though I learned a lot from George, I'm not a believer in the sort of quasi-religious aspect of his theory, but this idea that the Lydian scale almost has this gravity. George talked a lot about gravity. It's almost like that's the center of the universe. Jamey Aebersold doesn't talk about that. I would say David Baker does more. He's more of a believer in that sense in the theory. They both recognize George as the one who's talked about it, again, this relationship between chords and scales...He [George Russell] liked these terms: ingoing and outgoing. If you read his books, I'm sure you'll see those. I've always loved that concept because so often, Jamey Aebersold is great, but he sort of tells you, it's either black or white. You've got the good notes, you got the bad notes. George would never describe it that way. Ingoing basically meant you're going to focus more on the foundation of the harmony.⁴⁷

⁴⁵ Aebersold, Interview with Jamey Abersold.

⁴⁶ Aebersold.

⁴⁷ Ken Schaphorst, Interview with Ken Schaphorst.

Another important disciple of the Lydian Chromatic Concept and contributor to jazz education is Professor Ben Schwendener. Schwendener is a devoted student-turned-pedagogue of George Russell and was his teaching assistant while educating students in an advanced theory course at the New England Conservatory. Ben was also facilitative in helping George reproduce his Lydian Concept in its second edition. This edition is a more scholarly way of seeing and experiencing the concept – dry grammar and all. Pedagogically speaking, Ben may be the only current educator who is well-versed in the LCC and is actively educating the modern jazz student on what it is and how to use it at the New England Conservatory in Massachusetts. In essence, Ben is teaching George’s ideas, but has his own way of viewing the concept. One of Schwendener’s individual contributions is his continuation of George’s ideas, but he too created a book that is used in jazz education and occasionally classical musical theoretical education under the title of Organic Music Theory. His ideas are parallel to George’s, but his grasp takes a step further in the pursuit of tonal freedom in music. Ben’s adaptation of the concept is based around tonal elements and modes of melodic behavior. Ken Schaphorst spoke to some of this in his interview:

He (Ben Schwendener) studied with George. And not only that, but he became George's T.A. So, after he graduated, Ben would play through the compositions that students wrote for the Lydian chromatic concept classes. And then when George retired, Ben took up the classes and still teaches them, although we don't call them Lydian chromatic concept. Now we call them advanced jazz theory classes. The concept, that's the way George would talk about, it is still taught. I mean, Ben has his own ideas, which are great and interesting. But at the core of it, he's teaching George's idea.⁴⁸

Ben Schwendener not only gave back to the concept, but he also helps propel George’s concept forward in the modern day by teaching it in his own words through his book entitled *Organic Music Theory*. This educational text takes many of the same elements that were

⁴⁸ Ken Schaphorst, Interview with Ken Schaphorst.

presented in George's second edition of the Lydian Chromatic Concept, but approaches the topic from a deeper, more spiritually based point of view.

As a descendant and contributor, Ben Schwendener has his own descendants now and has recently certified one of his own students to be a teacher of the Lydian Chromatic Concept. His name is Henry Godfrey and is one of the youngest known descendants to teach George Russell's concept by way of Ben Schwendener. In his interview, he gave insightful and informative answers to questions about his experience learning about the Lydian Chromatic Concept from Ben and how it has impacted his musical life from being a student and switching roles, becoming the teacher. The result of interviewing a younger disciple of the concept was their ability to give answers of more succinct nature regarding the subject matter. He uses the concept in every facet of his musical career – from composing and educating, to being certified and gaining formal recognition as an apprentice. Henry considered these to be of great honor distinctly because of the lineage – Professor Scwendener's direct work with George Russell. Godfrey proceeded to emphasize elements present in the concept that set it apart from other harmonic approaches. He establishes that the true idea of the concept is to borrow from the cycle of fifths, reiterating that there are no avoid tones in the concept – it is purely a discussion of consonance and dissonance. Henry Godfrey explains that this approach causes the music created to sound more natural in a harmonic sense and gives physical movement to the sound. For him, this helped to define the feeling of different sounds, which unlocks the chance to move to any key at any time, and the ability to anticipate how it will sound. "Modulations and relationships of all notes and chords can move to each other freely without relation to traditional ear training and no relation to tonal harmony."⁴⁹ When asked to give the simplest explanation of this idea as possible he responded as

⁴⁹ Henry Godfrey, Interview with Henry Godfrey, Zoom Video Conference, 12/20.

follows: “This applies to any piece of music – it can happen to notes occurring at the same time or in succession; notes next to, above, or below simultaneously and they create a distinct feeling. These all come from keys or parent modes. Lining up the notes creates a chord; they belong together and have a home base which is Lydian tonic, or “C” and using this, one knows how every note relates back to “C”. With this knowledge, composers can decide the emotion of the music.”⁵⁰ Next, he gave his insight on tonal gravity; more specifically, horizontal tonal gravity. He uses the words “unity” versus “finality” to describe aspects of tonal gravity and Lydian as “floaty” – i.e. “not a final resting place of a tune’.”⁵¹ This is just a small testament to the knowledge Henry Godfrey has obtained from learning about the Lydian Chromatic Concept from Ben Schwendener’s extensive knowledge of the subject. The lineage lives on and continues to capture curious theoretical minds as jazz education perpetually evolves. All interviewees were deliberate in their understanding of relating the concept to the evolution of jazz education.

⁵⁰ Godfrey, Interview with Henry Godfrey.

⁵¹ Godfrey.

Chapter Four

LCC and the History of Jazz Education

Music education in America has developed vastly into the model that serves the education system today. In jazz education, there is not a streamlined “one-size-fits-all” model of teaching music theory in the jazz idiom that comes from the jazz tradition. George Russell’s Lydian Chromatic Concept of Tonal Organization would be a perfect vehicle and has served as a solid foundation in jazz education thus far.

Originally posed to be a new thought by means of the new phenomenon of Tonal Gravity, the concept, at its core, is the basis of chord scale theory that jazz education still utilizes. George Russell was the first to consider the church modes in jazz and apply them to different harmonic series. “Nobody in the mid 50s was talking about modes. George was the one who actually went into the theory textbooks and said, oh, this is the Phrygian, this is the Dorian mode. No one was talking about that. That was like ancient history in only medieval music. I don't know scholars who were talking about it. George was the one who actually discovered what the names of all these modes are and started to talk to jazz musicians about them.”⁵² Some of the controversies surrounding George’s concept are the assumption that the LCC would be implemented to replace the existing theory construct in education – this has never been the case for adding it to the jazz curriculum.

Having been granted the opportunity to interview professionals who have had experience with George Russell, his concept, etc., I sought out candidates who may hold some of the lesser-known details of George’s life, his concept, and everything in between. The wealth of information received from interviewing Ken Schaphorst was insightful and transparent,

⁵² Ken Schaphorst, Interview with Ken Schaphorst.

especially given the nature of controversy surrounding the Lydian Chromatic Concept. In the interview, Ken states that he had the chance to get to know George Russell very well while he was on the faculty at the New England Conservatory. “When he was getting ready to retire, he did tell me that he would like to continue teaching the concept at the point but said he would like it to be turned into an institute – like a school within a school. NEC did not ‘bite’ on this idea.”⁵³ He thinks this was George’s first attempt to get NEC to pay him to teach the concept. He then references The Berklee School of Music, which began as the Schillinger School. “He was a very significant teacher, particularly in the jazz world, and to some degree, classical, in the early 20th century – George Russell told me that Joseph Schillinger taught George Gershwin.”⁵⁴ A lot of jazz students studied at the Schillinger School. Schaphorst also states that the Berklee School of Music started out as the kind of school he thinks that George envisioned for himself – but teaching his theory, not 18th century harmonic theory. “He was a real believer in the Schillinger system and anyone who studied there at the beginning – I’ve talked to people, Quincy Jones, Steve Lacy, who taught at NEC, they all learned the Schillinger system which was basically their curriculum.”⁵⁵ It’s important to remember that George Russell was not trying to implement this across the country in every school. It was not feasible at the time but could be now under the right circumstances and guidance.

Early jazz education was based on the classical music model – classical harmonic concepts, counterpoint, playing over chords with the mentality of arpeggios, or as George calls it, playing vertically. This was seen as an older style of improvisation with the likes of Coleman Hawkins, most notably, his solo on *Body and Soul*. However, the horizontal movement or *chord*

⁵³ Ken Schaphorst, Interview with Ken Schaphorst.

⁵⁴ Ken Schaphorst.

⁵⁵ Ken Schaphorst.

scale playing can be seen in Lester Young's playing. Two very different approaches that are both considered 'correct'. George took his Lydian Chromatic Concept and made a provable theory that both can and should be used within improvisation. With the controversies, these ideas would need to go beyond the bureaucracy and sought out by individuals who knew what George's concept was capable of accomplishing for the world of jazz education. This is where the ideal of disciples and descendants (many of whom were discussed in the previous chapter) of the Lydian Chromatic Concept would take form, giving new light to understanding George Russell's concept.

18th century harmonic theory dominates the educational realm across all musical disciplines, but while it is important, it offers a narrow view of what is possible within musical creation. This perspective was put into question while interviewing Ken Schaphorst: "So you're saying should we teach the Lydian Chromatic Concept or are you talking about just music theory in the broadest sense of how to update it? I mean, I think it could be and should be taught in jazz schools. I feel pretty strongly about that since modes have become such a big part of how we think of music. Of course, there's been a lot of music written with that idea of starting like I said, around Miles, and Kind of Blue, but that's continued."⁵⁶ He goes on to share a composer who was influenced by the LCC: "We were just at a master class with Maria Schneider. And she heard George's music when she was a student at Eastman. He came there [as a guest] and I think he had a big influence on her, thinking about modes and the fact that she wrote this kind of remarkable music using those ideas, but in a much more creative way."⁵⁷ As the conversation on this idea continued, Schaphorst shared interesting points that confirmed my preciously held notions. For example, he states: "I think you've probably heard this, but a lot of classical

⁵⁶ Ken Schaphorst, Interview with Ken Schaphorst.

⁵⁷ Ken Schaphorst.

composers, Takami, too, is a very famous Japanese composer. He'd love to live in the chromatic concept... [there were] people who wouldn't... Well, they aren't jazz musicians. I just say that I have talked about how influential his book was to them. Does that mean every music student should study it? I think it's important to talk about modes. I mean, I'm glad if maybe because of the jazz interest in modes, I think that's being taught more today than it was when I was a student."⁵⁸ This segues into validating the importance of church modes within learning music theory and Ken gives a personal anecdote relating to his experience as a young musician:

I mean, I still remember when I was in high school, I was writing something, and I went to my choir director because I was basically trying to figure it out, I knew about the Dorian mode. I knew a couple of the modes, but I didn't know Phrygian, I didn't know the name. I looked in books and I literally couldn't find that information out anywhere. I don't think anyone today would have that problem. The diatonic modes, how they're organized, it's just sort of become part of our educational system, I think. Yes, I think that in jazz education, I think George's theory holds a very important place and should be taught. I think it does describe things that we deal with every day. I also think his music should be taught and played, by the way. I mean, that's a whole separate thing. But his music does reflect some of these ideas, but in a very complicated way.⁵⁹

He touches on recognizing that George Russell's music is rarely performed or taught.

From this point, he is nailing the author's conceptions of what is truly missed from a lack of George's concept in music classrooms.

Maybe I'll say one more thing to the Lydian Chromatics. All these things are things I talked to George about, and Ben - I think they're important. He called it the Lydian Chromatic Concept. So, the Lydian, I think he had reasons for considering that scale the foundation. Personally, I feel like that gets in the way sometimes of what I think of as being the more important parts of this theory. But the chromatic part I really like, and if I had to put in my words what he meant by that was that musicians should feel free to stick to the mode, I guess in the case of the Lydian mode. Let's just say we were playing it over an F lydian scale or maybe a F major seven, that would be a typical scale to play. But he [George Russell] believed very strongly that you should feel free to go outside of that mode.⁶⁰

⁵⁸ Ken Schaphorst, Interview with Ken Schaphorst.

⁵⁹ Ken Schaphorst.

⁶⁰ Ken Schaphorst.

Ken emphasizes the need for freedom of expression here, which George's concept gives to jazz improvisors. The tonal gravity as discussed in previous chapters is predominant in Schaphorst's next statement. This also sheds light on jazz's segue into the Avant Garde – again, utilizing the freedom of self-expression by adapting to the use of modes over chord changes, or completely eradicating them, to free the improvisor more.

Outgoing would mean expanding it to the other notes that are outside of that mode. I think he heard jazz musicians doing this...Eric Dolphy played in his groups. I'm sure he heard Eric Dolphy every day play notes that were not in the mode. I think he was trying to make sense of that. Well, it sounds good. One of my favorites of his melodies is Ezzthetic, which is based on Love for Sale, and it's a very chromatic line. But more interesting than that to me is the line itself, which is very chromatic, sounds like Lennie Tristano, but even more chromatic, I would say. So many of his lines do that. He basically heard Eric Dolphy heard these more Forward-Looking players. I think he wanted a way to conceive that impulse in his theory. That's where this idea of ingoing and outgoing or chromatic [comes from]. Basically, don't limit yourself to the mode, but feel free to go outside of that mode. So, that's my just very brief attempt to describe what I think he meant by that.⁶¹

Often, collegiate music education and in this case, jazz education may have a way of isolating itself from the masses with its unnecessary over-complexity with terminology and attempting to over-explain the simplest of concepts, which was very true of George's second edition of the concept. Ken Schaphorst was quite honest about this: "I'll just say I think it's partly that he doesn't make it as easy to understand as it could be. I would always talk to George about that. Can we get rid of some of the sort of over complex terminology and the dogma? I guess I'll just say in this sense that I mean, George would say everything is based on the Lydian Chromatic Concept."⁶² He then goes on to share an opinion that musicians would ascribe to if they were successful in their triumphs musically – they all were super secretive, which served as a

⁶¹ Ken Schaphorst, Interview with Ken Schaphorst.

⁶² Ken Schaphorst.

detriment to the educational system of jazz in its infancy. An example of this from Ken's interview follows:

I often would ask George, 'so in this part of this piece, are you dealing with this?' And again, this is maybe part of George's personality. I think he likes to think that there was something sort of secret that he didn't want to let me in on. That was a very common reaction. 'Oh, it's a little bit more complicated than that'...that was his first response. But he would basically say, 'yeah, I guess that's part of it.' So, I think he separated his theory and his music to some degree. And yeah, he was sort of secretive about his music. Sort of an old school thing I ran into with a lot of older players [and] composers is they didn't want to share some of the secrets thinking, 'well, you'll just get my stuff, and you'll steal it and then I won't get any gigs.' I think that was the philosophy and maybe there was some justification for that at one time.⁶³

There was agreement in the notion that jazz theory and music theory in general needs to be updated and this held true through most of the interviews. Some of the interviewees gave compelling reason for the importance of 18th century harmony remaining as a prevailing educational model but continue to see the validity in George Russell's implementation of the church modes that comprise the LCC, most often referred to as chord-scale theory. Understanding the connection between chords and scales is something that should be taught in music classrooms. It is a basic and logical idea that fits in with music education's other theoretical knowledge, and George Russell was at the forefront of this adaptation in the 60s.

⁶³ Ken Schaphorst, Interview with Ken Schaphorst.

Chapter Five

Conclusions

The Lydian Chromatic Concept is a unique perspective on music theory and harmony. It was a catalyst that revolutionized jazz theory concepts in the classroom and on stage. Its presence brought about jazz's modal movement, but most importantly, codified the way jazz is taught today. With adaptations to George's LCC by his disciples and descendants, jazz education entered the mainstream music classroom to be taught to the collegiate level pupil who yearned to be able to appropriately play over the chord changes with the more experienced musicians. George's new perspective on jazz theory provided a sense of freedom not yet utilized in music at the time in which the concept was conceived. He gave new life to improvisers by way of explaining the ability to choose if one prefers to approach chord changes from a horizontal, vertical, or supra vertical tonal gravity in which to display harmony.

George Russell was definitively the first person who implemented the use of church modes to open a scalar (horizontal) approach to improvising, arranging, and composing over chords; hence the modern determination called chord-scale theory. The Lydian Chromatic Concept was quite revolutionary and a stroke of genius in the era which Russell realized this concept. To this day, George Russell remains generally unacknowledged as the innovational genius he truly was. Perhaps this is due in part to the ways in which his Lydian Chromatic Concept morphed into the more streamlined chord-scale theory. This paper seeks to share the unacknowledged genius and findings of George Russell and his disciples through several extensive informative interviews. The perspectives included can benefit music students and jazz educators alike.

Appendix

THE RIVER TRIP EXPLANATION OF HORIZONTAL *and* VERTICAL MELODIES

(see page xviii)

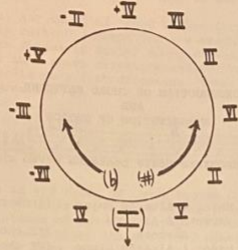
THE C LYDIAN CHROMATIC SCALE and its SEVEN PRINCIPAL CHORDS

The eight acknowledged Primary Modal Tonic (PMT) degrees are shown in boxes, and correspond to the eight Primary Modal Genre (PMG) listed. The listing of MT degrees in this example correspond to the LC (Western) order of TG. Modal Tonic degrees bIII, bII, II and bII are not acknowledged as Primary chord producing degrees (PMT).

The Sunshine Chart

Appendix B

EX. 40 CIRCLE OF CLOSE TO DISTANT RELATIONSHIPS



The tonic (Lydian Tonic) of the over-all parent Lydian Chromatic Scale.

The over-all parent Lydian Chromatic Scale has the same meaning as what is traditionally termed "the key of the music". If a composition is in the key of G major, then the over-all parent Lydian Chromatic Scale will be the G Lydian Chromatic Scale. It's Lydian Tonic, the over-all tonic station of the composition, will be the tone G natural. (See chapter V.) If the music is in a minor key the overall parent Lydian Chromatic Scale may be either the one which resides on the tonic of the minor key or the one on the tone a minor third up from the tonic of the minor key. The explanation for this is on page 31.

The Roman numerals in example 40 represent the tones of the overall parent Lydian Chromatic Scale on which other Lydian Chromatic Scales reside. If, for example, the key of the music were the G Lydian Chromatic Scale, then by placing G (the Lydian Tonic) under Roman numeral I, we may ascertain that D is the closest Lydian Chromatic Scale to G in a sharp direction and that C is the closest Lydian Chromatic Scale to it in a flat direction. The chords of the Eb Lydian Chromatic Scale would be four fifths removed in a flat direction from the G Lydian Chromatic Scale, the key of the music, but it would be six fifths removed in either direction from the chords of the A Lydian Chromatic Scale. (There is no need to go beyond six fifths in either direction from a given Lydian Chromatic Scale, the Ab Lydian Chromatic Scale is not, for example, seven fifths removed from the G Lydian Chromatic Scale in a sharp direction, it is five fifths removed in a flat direction.) We may put the Circle Of Close To Distant Relationships to good use in the construction of chord patterns and in the substitution of chords.

CONSTRUCTION OF CHORD PATTERNS AND SUBSTITUTION OF CHORDS

Each Lydian Chromatic Scale contains seven chord categories. They are:

- Major & Altered Major (I chords)
- Seventh & Altered Seventh (II chords)
- Minor & Altered Minor (VI chords)
- Minor Seventh b5th (+IV chords)
- Seventh +5th (+V chords)
- Eleventh b9 (VII chords)
- Minor +5th (III chords)

We might say, then, that each Lydian Chromatic Scale has its:

- I chord (Major or Altered Major)
- II chord (Seventh or Altered Seventh)
- VI chord (Minor Altered Minor)
- +IV chord (Minor 7b5th)
- +V chord (Seventh +5th)
- VII chord (Eleventh b9th)
- III chord (Minor +5th)

The Tonal Gravity Chart of A Lydian Chromatic Scale

The Twelve Interval Categories of a Lydian Chromatic Scale		Prime	-2	2	-3	3	4	+4	5	+5	6	-7	7
C O N S O N A N T N U C L E U S	L Y D I A N	I V II VI III VII +IV	VII +IV V II VI III +IV	I V II VI III VII +IV	VI III VII +IV	I V II VI III VII +IV	V II VI III VII +IV	I +IV	I V VII +IV	III VII VI +IV	I V II VI III VII +IV	II VI III VII +IV	I V
	LYD AUG	+V	+V	+IV	+V	III +V	II +V	II +V	+V	VII I	VII +V	+V	VI
	LYD DIM	-III	II	-III	I	VII -III	VI -III	VI -III	-III V	-III +IV	-III -III	-III	-III
	NINE TONE	-III V	-III V	-III V	-III V	-III V	-III V	-III V	+V	+V	+V	+V	+V
	AUX DIM	IV	IV	-III	IV II	IV	I	VII IV	IV	VI	+V IV	IV	+IV
	AUX AUG	-VII	-VII	+V -VII	+IV -VII	+IV -VII	+IV -VII	III -VII	-VII	-VII II	-VII	-VII I	-VII
	ELEVEN TONE	-VII VI III	-VII VI III	IV	V	-VII IV	-VII IV	-VII IV	-III -VII	-VII	-VII	V	VII -VII IV
	LYD CHRO- MATIC	-II	-II	VII -II	-II -VII	VI -II	-II +V	V -II	+V -II	-II IV	-II IV	III -II	-II -III

Appendix C

GEORGE RUSSELL'S LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION FOR IMPROVISATION

LYDIAN CHROMATIC SCALE DEGREES
I -II II -III III IV +IV V +V VI -VII VII

THE SIX SCALES OF THE LYDIAN CHROMATIC SCALE AND THE CHORDS THAT ARE PRODUCED ON THEIR SCALE DEGREES

LYDIAN SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

MAJ TRIAD	SEVENTH	MINOR +5	MIN SEV. b5	INVERSIONS	MIN TRIAD	ELEVENTH b9
MAJ SIXTH	NINTH	(MAJ 3B)	(MIN 6B)	OF	MIN SIXTH	(MIN 9B)
MAJ SEVENTH	ELEVENTH	INVERSIONS	SEV b7+11	MODAL TONIC	MIN SEV	
MAJ SEV. +11	THIRTEENTH	MODAL TONIC	(MAJ b5B)	I CHORDS	MIN NINTH	SEV b9 th
		I CHORDS				

I II III +IV V VI VII

LYDIAN AUGMENTED SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

AUG MAJ TRIAD	SEV b5 OR +11	INVERSIONS	MIN SEV. b5 th	SEV +5 th	MIN +7	ELEV b9 th
AUG MAJ SEV	NINTH	OF	(MIN 6B)	SEV +5 th , b9 th	MIN 9 th +7 th	(MIN +9B)
AUG MAJ NINTH	THIRTEENTH	MODAL TONIC	NINTH +11	SEV +9 th , +5 th	(MIN +7B)	SEV b9
		I CHORDS	THIRTEENTH -11	(MIN +7B)		SEV b9, b5 th

I II III +IV +V VI VII

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LYDIAN DIMINISHED SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

DIM MAJ TRIAD	SEVENTH b9	INVERSIONS	DIMINISHED	DIM MAJ	MIN SEV b5	SEV +9
DIM MAJ TETRACHORD	ELEVENTH b9	OF	TETRACHORD	(5B)	MIN NINTH b5	SEV +5
DIM MAJ SEVENTH	THIRTEENTH b9	MODAL TONIC	I CHORDS			SEV b9
DIM MAJ NINTH						SEV b7+5

I II -III +IV V VI VII

AUXILIARY DIMINISHED SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

DIM MAJ TRIAD	SEV b9	INVERSIONS	SEV b9	INVERSIONS	SEV b9	MIN SIXTH +5	SEV b9
DIM MAJ TETRACHORD	SEV +9	OF	SEV +9	OF	SEV +9	INVERSIONS	SEV +9
DIM MAJ SEVENTH	SEV b5	MODAL TONIC	SEV b5	MODAL TONIC	SEV b5	OF	SEV b5
DIM MAJ NINTH	SEV +11	I CHORDS	SEV +11	I CHORDS	SEV +11	MODAL TONIC	SEV +11
DIM MAJ 9 th , b13 th	SEV b9, b5				SEV b9, b5	I CHORDS	SEV b9, b5

I II -III IV +IV +V VI VII

AUXILIARY AUGMENTED SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

AUG MAJ TRIAD	SEVENTH +5	INVERSIONS	SEVENTH +5	INVERSIONS	SEVENTH +5
	NINTH +11	OF	NINTH +11	OF	NINTH +11
	SEVENTH b5	MODAL TONIC	SEVENTH b5	MODAL TONIC	SEVENTH b5
		I CHORDS		I CHORDS	

I II III +IV +V -VII

AUXILIARY DIMINISHED BLUES SCALE AND CHORDS PRODUCED ON ITS SCALE DEGREES

MAJ TRIAD		INVERSIONS	MIN SEV. b5	INVERSIONS	MIN TRIAD
MAJ SIXTH		OF	SEV. b9 +11	OF	MIN SIXTH
MAJ 13 th , b9		MODAL TONIC		MODAL TONIC	MIN SEVENTH
		I CHORDS		I CHORDS	

I -II -III III +IV V VI -VII

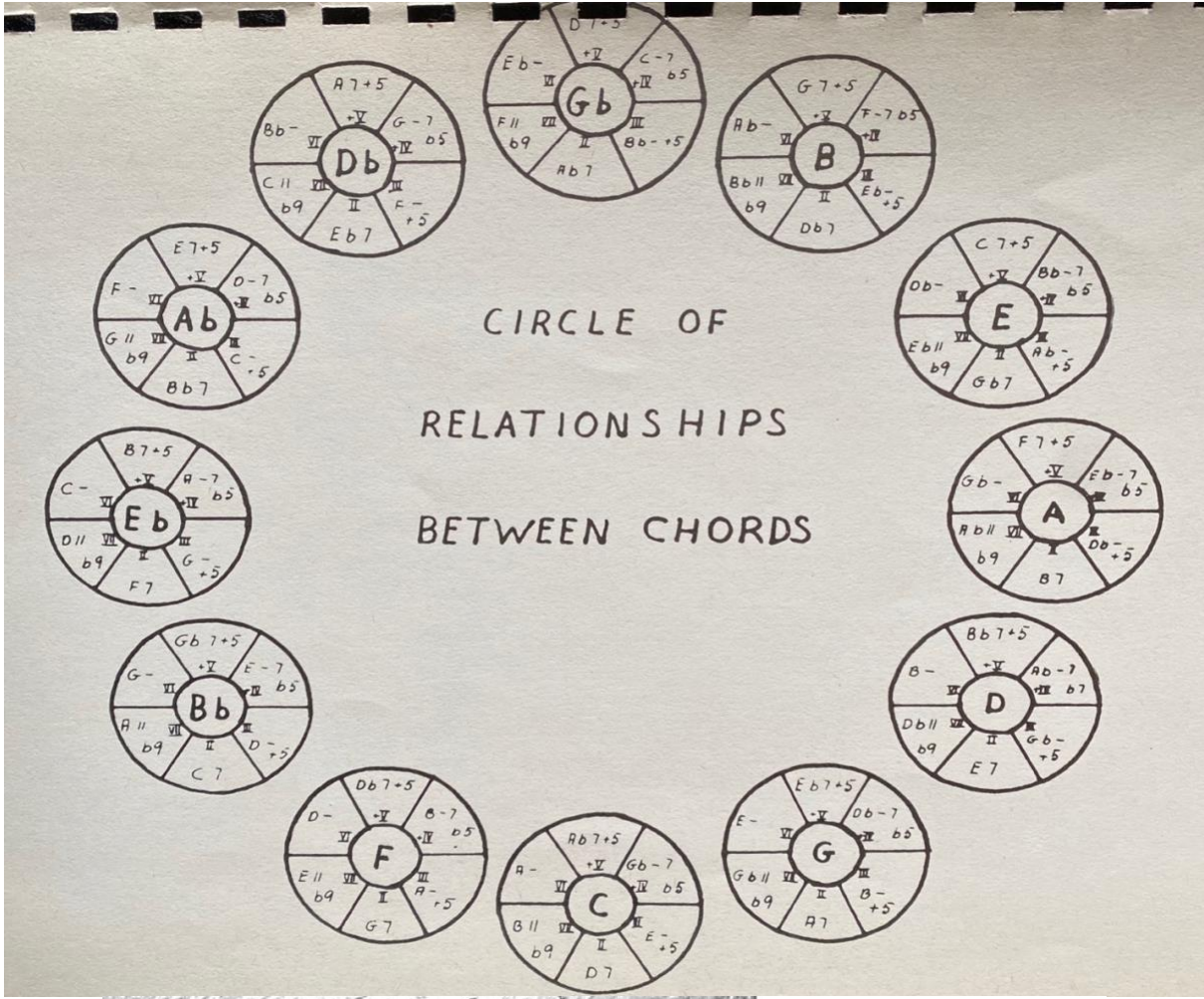
- 2 -

CHORD CATEGORIES AND THE SCALE DEGREES UPON WHICH THEY RESIDE IN A LYDIAN CHROMATIC SCALE

CHORD CATEGORIES	SCALE DEGREES
MAJOR AND ALTERED MAJOR CHORDS	I
MINOR AND ALTERED MINOR CHORDS	VI, +IV
SEVENTH AND ALTERED SEV. CHORDS (SEVENTH bNINTH CHORDS)	II, +V, VII (II, +V, VII, +IV)
MINOR SEV. b5, (MIN. 6B) CHORD	+IV, VI
SEVENTH +5 (MINOR +7B) CHORD	+V, VII, II
ELEVENTH b9, (MINOR 9B) CHORD	VII, II
MINOR +5 (MAJOR 3B) CHORD	III

- 3 -

Appendix D



C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b
C	D ^b	D	E ^b	E	F	G ^b	G	A ^b	A	B ^b	B	C	D ^b	D	E ^b	E	F	G ^b

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