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the

LYDIAN CHROMATIC CONCEPT¹

of
TONAL
ORGANIZATION

BY
**GEORGE
RUSSELL**



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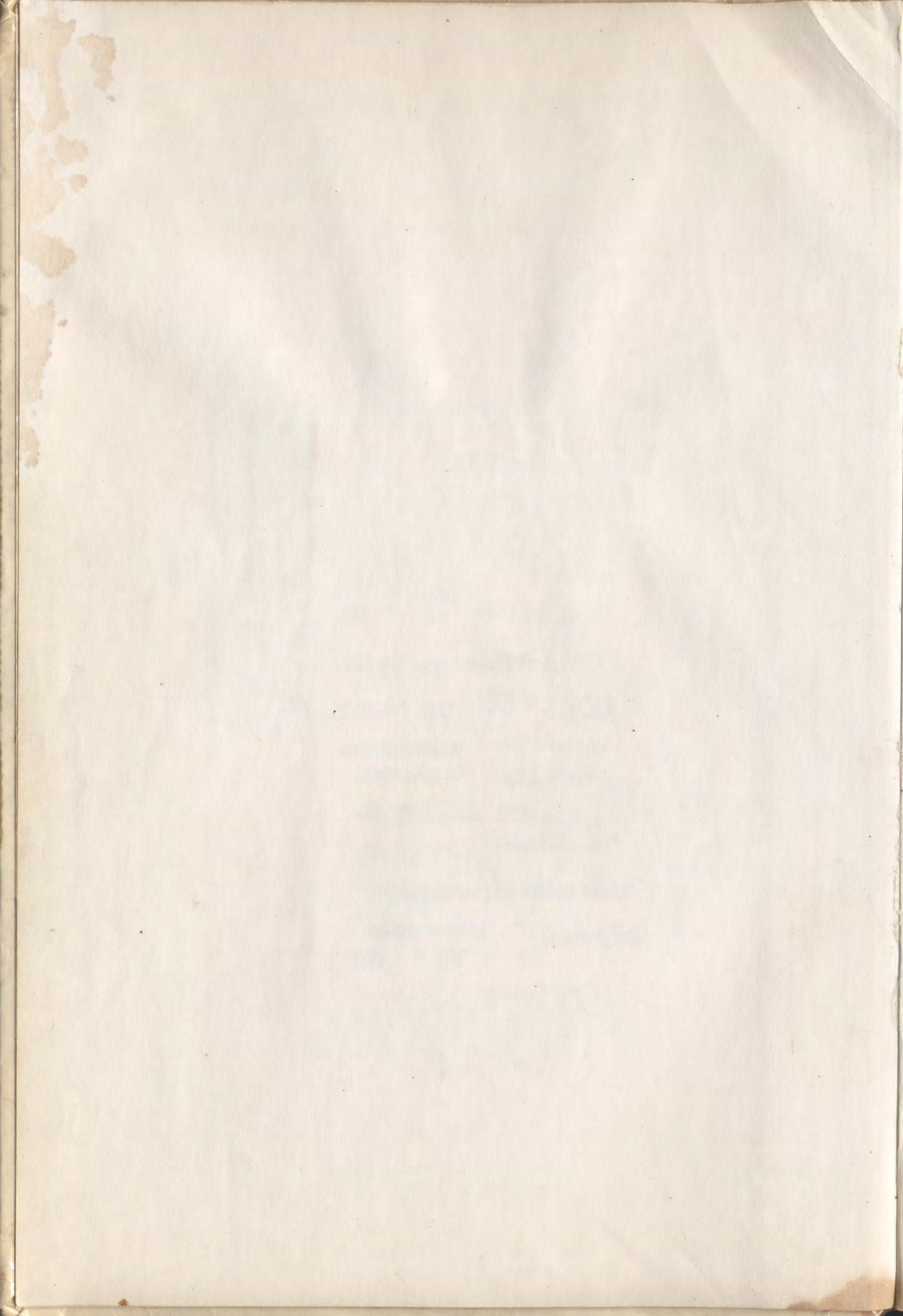


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Lydian Chromatic Concept of
Tonality

LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION FOR IMPROVISATION

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FOR IMPROVISATION



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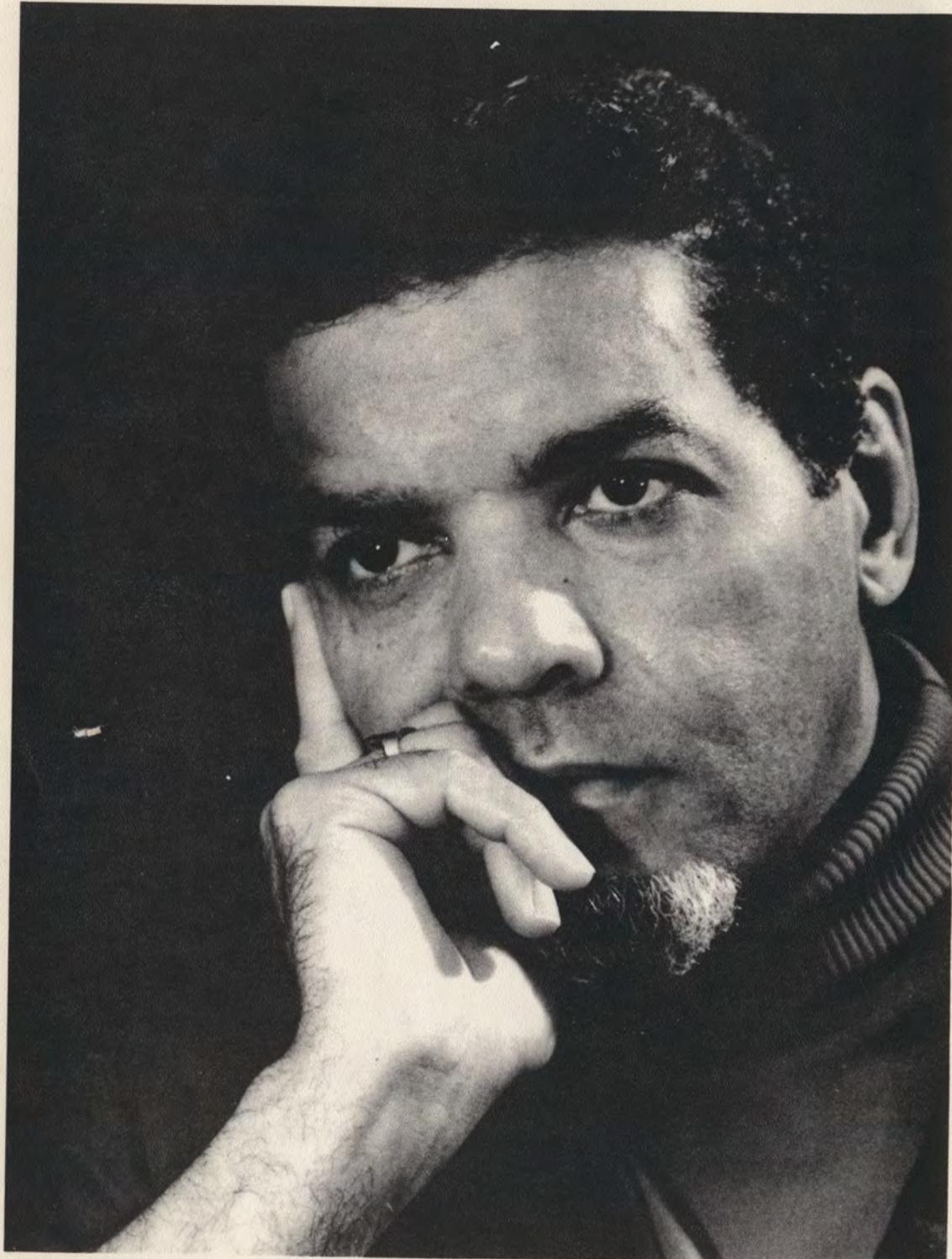
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To Juanita and Mom ---

for their love,
patience and
understanding.

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to Annette Stevens and Elizabeth Zorn for their painstaking performances of the many exacting tasks in compilation

and

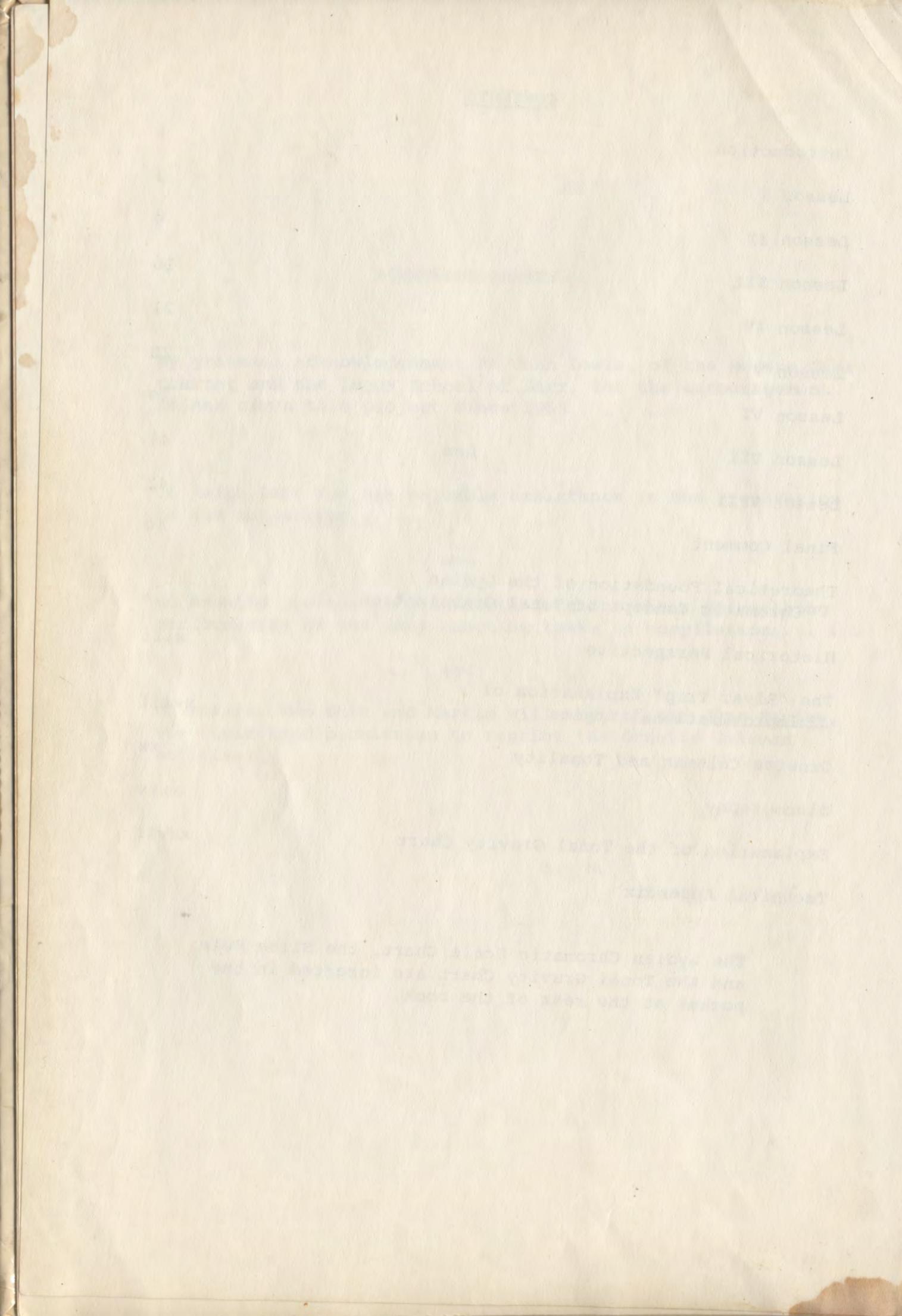
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G. R.

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The Lydian Chromatic Scale Chart, the Slide Rule,
and the Tonal Gravity Chart are inserted in the
pocket at the rear of the book.



THE LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION FOR IMPROVISATION

INTRODUCTION

In preparing for any business, trade or science, we generally need a great deal of preparation and study. In painting, literature and music, we also need to learn the tools of our trade. The artist needs paints to express himself, while the jazz musician uses tonal resources.

The Lydian Chromatic Concept is an organization of tonal resources from which the jazz musician may draw to create his improvised lines. It is like an artist's palette: the paints and colors, in the form of scales and/or intervalic motives, waiting to be blended by the improviser. Like the artist, the jazz musician must learn the techniques of blending his materials.

The Lydian Chromatic Concept of Tonal Organization is a chromatic concept providing the musician with an awareness of the full spectrum of tonal colors available in the equal temperament tuning. There are no rules, no "do's" or "don'ts." It is, therefore, not a system, but rather a view or philosophy of tonality in which the student, it is hoped, will find his own identity.

The student is made aware of the whole chromatic situation surrounding the chord (vertical) or a tonal center (horizontal). It is believed that this knowledge will liberate the student's melodic inhibitions and help him to intelligently penetrate and understand the entire chromatic universe.

The professional player finds himself having to adapt to many types of music and musicians. The Lydian Chromatic Concept provides him with the materials to improvise according to the situation at hand. The Concept will provide the player with the proper resources for any type of music he may encounter.

LESSON I

DETERMINING THE PARENT SCALE OF A CHORD

Very frequently the jazz musician is required to improvise with written chord symbols. Our first lesson deals with converting a chord symbol into the scale which best conveys the sound of the chord. We call this conversion of a chord into a scale Vertical Polymodality. In Vertical Polymodality, the melody is dictated by the chord. We shall be concerned with chord-dictated melodies (Vertical Polymodality) in our first four lessons. In later lessons we learn that there is a broader basis than the single chord which may dictate a melody.

Now, let's see how we can convert chords into scales.

Eb7 for example: Eb, G, Bb, Db

What we want to find is the scale that will best convey the sound of this chord. (This will be called the parent scale of the Eb7 chord.)

Over the Roman numerals of the scales, on pages I, II and III of the chart (in pocket), are listed different chord families. (For example; over Roman numeral II of the Lydian Scale are listed seventh, ninth, eleventh and thirteenth chords. They belong to the same family -- dominant seventh chords.)

The chord we are looking for, Eb7, is found in this family; above Roman numeral II of the Lydian Scale on page I of the chart. The Lydian Scale will therefore be the parent scale of the Eb7 chord.

We substitute the root of our Eb7 chord for Roman numeral II.

Now Eb becomes the 2nd degree of the parent scale.

If Eb is the 2nd degree of the parent scale, Db will be the 1st degree. (Think down a Major 2nd.)

Now we have found the tonic or root (Lydian Tonic) of our parent scale.

D_b is the Lydian tonic, and the scale is called D_b Lydian.

Our next step is to fill in the rest of the Roman numerals of the scale.

Now we have the parent scale of the E_b7 chord, D_b Lydian, the scale that will best convey the sound of this chord.

Now let's find the parent scale of another chord:

Cm7 (C, E_b, G, B_b)

The chord is found in the minor chord family above Roman numeral VI of the Lydian scale, on page I of the chart.

We substitute the root of our Cm7 chord for Roman numeral VI.

Now C becomes the sixth degree of the parent scale. (The scale that best conveys the sound of the chord.)

If C is the sixth degree of the scale, then E_b will be the 1st degree. (Think down a sixth.)

The tonic of our parent scale (Lydian Tonic) is E_b; and the scale is called E_b Lydian. (The scale that best conveys the sound of a Cm7 chord.)

Now fill in the rest of the Roman numerals and we have the complete scale.

Let's try Gm7b5.

The Minor 7b5 chord is found above + IV of the Lydian scale.

This means that G (the tonic of the chord) is an augmented fourth above the Lydian Tonic of the parent Lydian Scale.

Think down an augmented fourth and we get the root of the scale Db (the Lydian Tonic).

Place Db under Roman numeral I, and build the scale dictated by the remaining Roman numerals.

Ex. 3

LYDIAN TONIC

I II III + IV V VI VII

The scale is Db Lydian; the parent scale of Gm7b5 and the scale that conveys the sound of this chord.

Of course the parent scale is just one of the scales that may be constructed on the Lydian Tonic (the tonic of the parent scale). The parent scale may be thought of as the prime color and the other five scales on the chart represent colors related to the prime color.

The Eb7 chord had a parent scale of Db Lydian. The other five related scales on the chart may be used to add color to the parent scale at the discretion of the improviser.

Let's build the rest of the scales listed on pages I, II, and III of the chart, based on our Lydian Tonic Db.

Ex. 4

D^b LYDIAN [PARENT]

I II III + IV V VI VII

D^b LYDIAN - AUG.

I II III + IV V VI VII

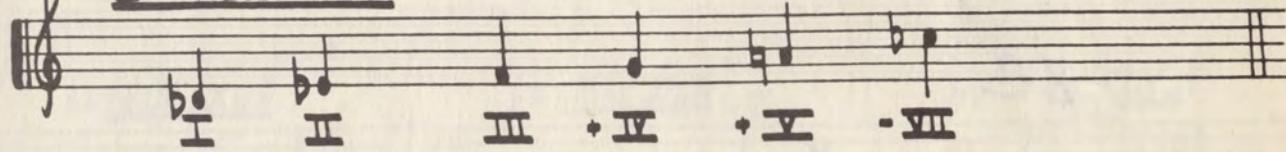
D^b LYDIAN-DIM.



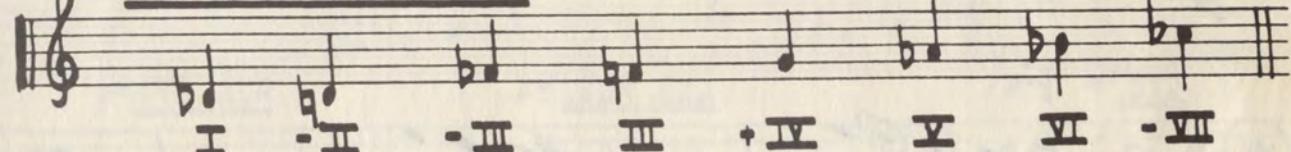
D^b AUX. · DIM.



D^b AUX. AUG.



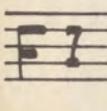
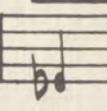
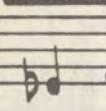
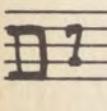
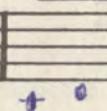
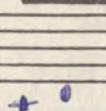
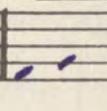
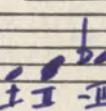
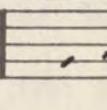
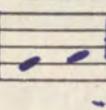
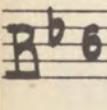
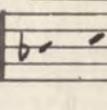
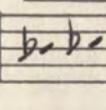
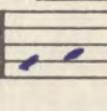
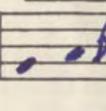
D^b AUX. DIM. BLUES



Melodies may be derived from any of these six scales and imposed upon an Eb7 chord.

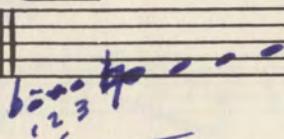
LESSON I - TEST A

At this point we have prepared a test to find parent scales and other scales based on the Lydian Tonic. The scales for the first chord (F7) have been completed for you. Fill in the given scales for the other nine chords.

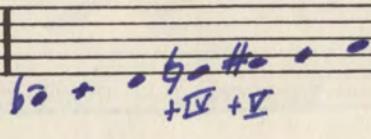
<u>E^b LYD. PARENT.</u>	<u>E^b LYD. AUG.</u>	<u>E^b LYD. DIM.</u>
		
LYD. & C	AUX. DIM.	AUX. AUG.
		
LYD. F	LYD. AUG.	AUX. DIM.
		
LYD. G	LYD. AUG.	LYD. DIM.
		
LYD. B-flat Ab	LYD. DIM.	AUX. DIM. BLUES.
		
LYD. G	LYD. AUG.	AUX. DIM.
		

LESSON I - TEST A (CONT.)

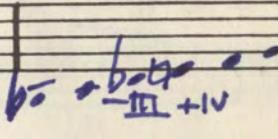
LYD. B_b



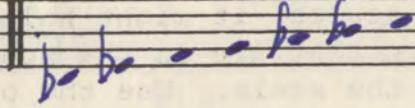
LYD. AUG.



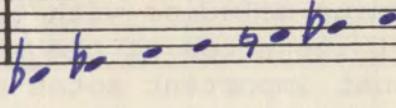
LYD. DIM.



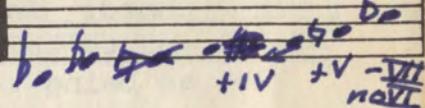
LYD. D_b



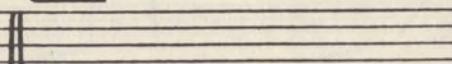
LYD. AUG.



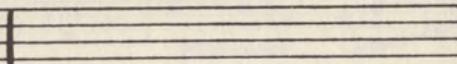
AUX. AUG.



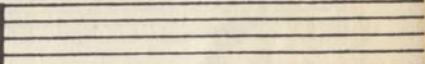
LYD. A



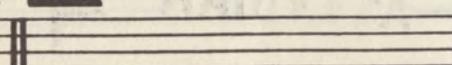
LYD. DIM.



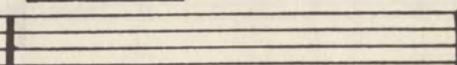
AUX. DIM.



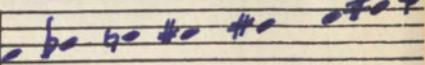
LYD. A



LYD. AUG.



AUX. DIM. BLUES.



LESSON I - TEST B

Here are some examples written by a student and enclosed for the purpose of analysis.

Here is how you should analyze the lines.

Page 1 - Example 1 - Bar 1

Chord - Fm7

Parent Scale - Ab Lydian

Scale used in Example - Ab Lydian

Notes of scale used in Example - Ab, Bb, C, D, Eb, F, G

+2U
C

LESSON I - TEST C

Try improvising within the scales established in Test Lesson B. Form your own melodies within the scale provided by each chord. In forming melodies with the scales, it might help you to think of the notes of the chord that are in the scale as being the most important notes of the scale. Use the other notes in the scale to color the notes of the chord. Use the chord tones as a frame for your melody.

A^b LYDIAN

EX.5

F-7

CHORD TONES →

EXAMPLES USING THE LYDIAN SCALE

1.

Fm7 ~~II~~
 B^bm7 ~~VII~~
 Eb7 ~~III~~
 Abmaj7 - VI (+V)

D^bmaj7
 Dm7 ~~II~~
 G7 ~~IV~~
 C Maj7 -

2.

Fm7
 B^bm7
 Eb7
 Abmaj7

D^bmaj7
 Dm7
 G7
 C Maj7 -

3.

Fm7
 B^bm7
 Eb7
 Abmaj7

D^bmaj7
 Dm7
 G7
 C Maj7 -

EXAMPLES Using THE LYDIAN AUGMENTED SCALE

min 13 + 7

1.

F_m⁷ B_b⁷ E⁷ A^b maj⁷

D^b maj⁷ D_m⁷ G⁷ C maj⁷

2.

F_m⁷ B_b⁷ E⁷ A^b maj⁷

D^b maj⁷ D_m⁷ G⁷ C maj⁷

3.

F_m⁷ B_b⁷ E⁷ A^b maj⁷

D^b maj⁷ D_m⁷ G⁷ C maj⁷

EXAMPLES USING THE LYDIAN DIMINISHED SCALE

1.

F_m^7 (ab) $B_b m^7$ (D_b) E_b^7 (D_b) $A_b m a j^7$ (G_b)

$D_b m a j^7$ (B) D_m^7 (F) G^7 (F) $C m a j^7$ (B_b)

2.

F_m^7 $B_b m^7$ E_b^7 $A_b m a j^7$

$D_b m a j^7$ D_m^7 G^7 $C m a j^7$

3.

F_m^7 $B_b m^7$ E_b^7 $A_b m a j^7$

$D_b m a j^7$ D_m^7 G^7 $C m a j^7$

EXAMPLES USING THE AUXILIARY DIMINISHED SCALE

1.

F_m⁷ B_b_m⁷ E_b⁷ A_b_{maj}⁷

D_b_{maj}⁷ D_m⁷ G⁷ C_{maj}⁷

This example shows a melodic line using the auxiliary diminished scale over a harmonic progression. The progression includes F_m⁷, B_b_m⁷, E_b⁷, A_b_{maj}⁷, D_b_{maj}⁷, D_m⁷, G⁷, and C_{maj}⁷. The melody consists of eighth-note patterns.

2.

F_m⁷ B_b_m⁷ E_b⁷ A_b_{maj}⁷

D_b_{maj}⁷ D_m⁷ G⁷ C_{maj}⁷

This example continues the harmonic progression from example 1, featuring the same chords and melodic style using the auxiliary diminished scale.

3.

F_m⁷ B_b_m⁷ E_b⁷ A_b_{maj}⁷

D_b_{maj}⁷ D_m⁷ G⁷ C_{maj}⁷

This example concludes the harmonic progression, maintaining the use of the auxiliary diminished scale throughout the piece.

EXAMPLES USING THE AUXILIARY DIMINISHED BLUES SCALE

1.

F_m^⁷ B_b_m^⁷ E_b^⁷ A_b_{maj}^⁷

D_b_{maj}^⁷ D_m^⁷ G^⁷ C_{maj}^⁷

2.

F_m^⁷ B_b_m^⁷ E_b^⁷ A_b_{maj}^⁷

D_b_{maj}^⁷ D_m^⁷ G^⁷ C_{maj}^⁷

3.

F_m^⁷ B_b_m^⁷ E_b^⁷ A_b_{maj}^⁷

D_b_{maj}^⁷ D_m^⁷ G^⁷ C_{maj}^⁷

u

LESSON II

THE LYDIAN CHROMATIC SCALE

If we have the symbol Eb7, its parent scale will be Db 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.

Hence for an Eb7 chord, a melody may come from any one (or more) of the following scales:

1. Db Lydian
2. Db Lydian Augmented
3. Db Lydian Diminished
4. Db Auxiliary Diminished
5. Db Auxiliary Augmented
6. Db Auxiliary Diminished Blues

These six scales represent the primary colors of music. Each scale contributes its own melodic color to the sound of the chord.

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

Ex. 6

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

There are twelve Lydian Chromatic Scales. A different

Lydian Chromatic Scale exists on each tone of the chromatic scale. As we go on with this course, we begin to utilize the Lydian Chromatic Scale; because it is from this scale that we draw all our musical ideas.

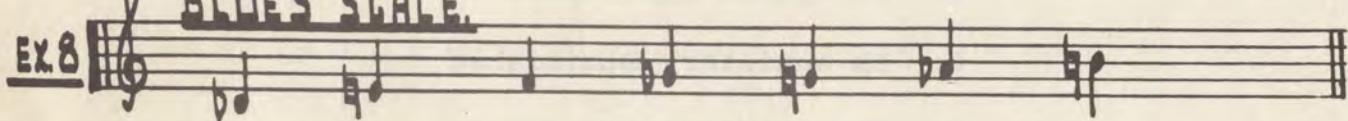
Each Lydian Chromatic Scale contains the six vertical (chord producing) scales listed on the chart and two additional scales not listed on the chart -- the Major Scale and the Blues Scale (not to be confused with the Auxiliary Diminished Blues Scale).

We call the Major Scale and the Blues Scale "Horizontal Scales." Their role in melody will be discussed in later lessons.

MAJOR SCALE.



BLUES SCALE.



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. Example 9 shows us that the parent scale of an Eb7 chord is Db Lydian. However the parent scale is just one of eight scales that may be used to color an Eb7 chord within the Db Lydian Chromatic Scale (the parent Lydian Chromatic Scale) of the chord.

Example 9:

(Eb7 Chord)

1. Db Lydian Chromatic
2. Db Lydian (parent scale)
3. Db Lydian Augmented
4. Db Lydian Diminished
5. Db Auxiliary Diminished
6. Db Auxiliary Augmented
7. Db Auxiliary Diminished Blues
8. Db Major}
9. Db Blues} ----- Horizontal Scales

As we go further in the course, we begin to learn techniques that ease the task of manipulating the vast resources and color offered by the Lydian Chromatic Scale.

UTILIZING THE CHORD CATEGORY IN
DETERMINING THE PARENT SCALE OF A CHORD

In our first lesson we used the Eb7 chord (Eb, G, Bb, Db), and determined the parent scale.

Now note the rest of the seventh chord family above Roman numeral II on the chart -- Eb9, Eb11, Eb13. These have the same parent scale and have the same scales in development as the Eb7 chord -- Example 4. But say the chord was more complex. For instance, Eb7+5,b9 (Eb, G, B, Db, Fb).

What we want to find is the scale that will best convey the sound of this chord. (This will be called the parent scale of the Eb7+5,b9 chord).

Turn to the chord category section on page 3 of your chart, and you will notice seven different chord categories. (All of the definable chords of music can be reconciled with one of these seven chord categories.) To the right of each category are one (or more) Roman numerals. These are called scale degrees. They indicate the root position of the chord in its parent scale.

Execute the following procedure for determining the parent scale of our chord (Eb7+5,b9).

PROCEDURE FOR DETERMINING THE PARENT SCALE OF A CHORD

1. Identify the prevailing chord by its name.

(Eb7+5,b9)

2. Classify the chord with its proper chord category.

Seventh +5 (minor+7B) chord category

(Any seventh chord having an augmented 5th should be classified with this chord category.)

3. Look to the right of the chord category and select one of the scale degree Roman numerals.

The first scale degree to the right of a chord category will always produce the most consonant parent scale. We shall therefore designate the +V scale degree Roman numeral.

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).

(G) = Lydian Tonic

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. The Seventh +5,b9 chord is found initially on the +V degree of the Lydian Augmented Scale. The parent scale of our chord will therefore be G Lydian Augmented.

G LYDIAN AUG.

EX.10

I II III IV V VI VII

(It will be necessary to think enharmonically at times when determining the parent scale.)

Now we have the parent scale -- the scale that most nearly gives the sound of Eb7+5,b9 -- the G Lydian Augmented.

G, A, B, C#(Db), D#(Eb), E(Fb), F#(Gb)

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.

You now have the choice of using the following scales with an Eb7+5,b9 chord. (Of course the parent scale is the closest to the sound of the chord.)

1. G Lydian Augmented (Parent Scale)
2. G Lydian
3. G Lydian Diminished
4. G Auxiliary Diminished
5. G Auxiliary Augmented
6. G Auxiliary Diminished Blues
7. G Major
8. G Blues
9. G Lydian Chromatic

Those scales whose structure is closest to the parent scale will sound best with the chord.

CHORDS AND CHORD STRUCTURES

MAJOR AND ALTERED MAJOR CHORDS	INTERVAL STRUCTURE	COMMENTS
Maj. Triad.....	(3 -3)	
Maj. Sixth.....	(3 -3 2)	
Maj. Seventh.....	(3 -3 3)	
Maj. Seventh (+11) or (b5)....	(7 4 2)	
Aug. Maj. Triad.....	(3 3)	
Aug. Maj. Seventh.....	(3 3 -3)	
Aug. Maj. Ninth.....	(3 3 -3 -3)	
Aug. Maj. Ninth (+11).....	(3 3 -3 -3 3)	The fifth may be dropped from a ma- jor sixth,
Dim. Maj. Triad.....	(-3 -3)	major sev- enth, or
Dim. Maj. Seventh.....	(-3 -3 4)	
Dim. Maj. Ninth.....	(-3 -3 4 -3)	any type
Dim. Maj. (b) Thirteenth	(6 +4 4 -3)	of major
Dim. Maj. Tetrachord.....	(-3 -3 -3)	chord built
Maj. Thirteenth (b9).....	(6 5 4 3)	on the maj- or triad.

MINOR AND ALTERED MINOR CHORDS		
Min. Triad.....	(-3 3)	
Min. Sixth.....	(-3 3 2)	
Min. Seventh.....	(-3 3 -3)	
Min. Ninth.....	(-3 3 -3 3)	The fifth
Min. Seventh (b5).....	(-7 4 -3)	may be dropped
Min. (+7).....	(-3 3 3)	from any
Min. Ninth (+7).....	(-3 3 3 -3)	type of
Min. Sixth (+5).....	(6 +4 4)	minor chord.
Min. (+5).....	(-3 4)	

SEVENTH AND ALTERED SEVENTH
CHORDS

Seventh.....	(3 -3 -3)	The fifth may
Ninth.....	(3 -3 -3 3)	be dropped from
Eleventh.....	(-7 3 -3)	7th, 9th, 11th
Thirteenth.....	(-7 3 -3 3)	and 13th chords.
	or (-7 3 2 4)	
Seventh (b9).....	(3 -3 -3 -3)	The fifth and
Eleventh (b9).....	(-7 -3 3)	third may be
Seventh (b9,b5) or (b9,+11)	(-7 -3 4)	dropped from any
Seventh (b9,+5).....	(-7 -3 -3 3)	type of Seventh
Thirteenth (b9).....	(-7 -3 -3 4)	(b9) chord.
	or (-7 -3 3 3)	
Seventh (b9,b5,+9,+5).....	(3 +4 4 4 4 4)	
	or (-7 -3 -3 3 3 -3 -3)	
Seventh (b5 or + 11).....	(-7 +4 2)	
Ninth (+11).....	(3 +4 3 3)	
Thirteenth (+11).....	(3 +4 3 3 -3)	
Seventh (+5).....	(-7 +4 3)	
Seventh (+9).....	(-7 +4 +4 4)	
	or (5 6 +4 4)	
Seventh (+5, +9).....	(-7 +4 3 5)	

Simple basic chord structures provide the improviser with greater freedom in his 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.

LESSON II - TEST A

Following the "Procedure For Determining The Parent Scale Of A Chord," locate the Lydian Tonic and then fill in the parent scale for the following chords. Try using associate scales of the parent Lydian Chromatic Scale, especially those scales whose structure is most like the parent scale of the chord.

For now, use only the first scale degree to the right of a chord category when executing step 3 of the "Procedure For Determining The Parent Scale Of A Chord." (Page 11)

- | | | |
|----------|----------------|------------|
| 1. Bb7b9 | 8. B7+5b5+9b9 | |
| 2. Ab13 | 9. Eb7b9 | |
| 3. D7b5 | 10. F7+5 | 15. C13+11 |
| 4. G7b5 | 11. Gb7b5 | |
| 5. A7+5 | 12. E7b5b9 | |
| 6. C9 | 13. Cb7+5b9+9 | |
| 7. Db7b9 | 14. A7+5b5+9b9 | |

Any seventh chord containing an augmented fifth (#8 above) for instance, should be treated as a +V chord initially (seventh +5 chord category). Seventh +5 chords may be treated either as +V (Lydian Augmented Scale), VII chords (Lydian Diminished Scale) or as II chords (Auxiliary Augmented Scale).

By memorizing the seven chord categories and their corresponding scale degrees, the whole process of converting chords into their parent scales should become a natural process within a very short time. For instance, any minor chord is either a VI chord, or a +IV chord.

Use the Procedure For Determining The Parent Scale Of A Chord and write the parent scale (or associate scale of your choice) above each chord.

LESSON II - TEST B

The musical score consists of five staves of handwritten music. Each staff begins with a key signature and a time signature. The chords are written above the notes, often with Roman numerals and superscripts indicating specific scale degrees or chord qualities. The first staff starts with C major. The second staff starts with B-7. The third staff starts with G7. The fourth staff starts with F major. The fifth staff starts with F-7. The music includes various note heads and stems, with some notes having horizontal lines through them.

LESSON III

In reconciling a chord with its proper chord category on page three of your chart, you've probably noticed that most of the chord categories have several scale degree choices (Roman numerals).

So far we have been dealing with only the first scale degree of each chord category. Now let's explore other scale degree choices.

If the given chord were Cm7b5, its chord category would be the "minor seventh b5" chord category. The chord category offers two scale degree choices, +IV and VI. Let us take +IV first. This means that C, the tonic of the chord, rests on the +IV degree of its parent scale.

EX.11

+ IV

A musical staff with a treble clef and a key signature of one sharp. A single note is positioned on the fourth line from the bottom. Below the staff, the Roman numeral '+ IV' is written.

Thinking down an interval of a +IV, we arrive at the root of the parent scale Gb (Lydian Tonic).

EX.12

LYDIAN TONIC CHORD TONIC

I + IV

A musical staff with a treble clef and a key signature of one sharp. Two notes are shown: one on the first line (labeled 'I') and one on the fourth line (labeled '+ IV').

We find that the Lydian Scale is the first scale that produces the Minor 7 b5 chord on a +IV scale degree. Now fill in the rest of the scale.

EX.13

I II III + IV V VI VII

A musical staff with a treble clef and a key signature of one sharp. All seven notes of the Lydian scale are shown, labeled with Roman numerals: I, II, III, +IV, V, VI, and VII.

So the parent scale of our Cm7b5 chord is the Gb Lydian Scale, the parent scale that the +IV scale degree provides for the Cm7b5 chord.

Of course the other scales of the Gb Lydian Chromatic Scale may be used as sources of melodic color with the Cm7b5 chord.

Now let us try the alternative scale degree provided by the "minor 7b5" chord category for our C-7b5 chord, Roman numeral VI. This means that C, the tonic of the chord, rests on the VI degree of the parent scale.

EX.14

VI

A musical staff with a treble clef and a key signature of one sharp. A single note is positioned on the fifth line from the bottom. Below the staff, the Roman numeral 'VI' is written.

Thinking down an interval of a VIth, we arrive at the root of the parent scale Eb (Lydian Tonic).

Ex.15

The staff shows two sets of notes. The first set, labeled 'LYDIAN TONIC', consists of a C-sharp, D, E, G, A, B-flat, and C-sharp. The second set, labeled 'CHORD TONIC', consists of a C-sharp, D, E, G, A, B-flat, and C-sharp.

We find that the first scale which produces a Minor 7th b5 chord on its VIth scale degree is the Lydian Diminished Scale. Now fill in the rest of the scale.

Ex.16

The staff shows a scale with Roman numerals below the notes: I, II, III, IV, V, VI, VII. The notes correspond to C-sharp, D, E, G, A, B-flat, and C-sharp respectively.

So, if we choose scale degree VI for our CM7b5 chord, its parent scale will be Eb Lydian Diminished.

Again any associate scale of the Eb Lydian Chromatic Scale may be substituted for the parent scale or used along with it.

Now let's work with the scale degrees of two chord categories which are commonly used in jazz; the "minor and altered minor" chord category, and the "seventh and altered seventh" chord category. The chords that we shall use in our study form what we call in jazz a 'cycle of fifths'; that is, when each chord of a progression resolves to a chord an interval of a fifth below.

In the following progression we shall work with minor chords which resolve to dominant seventh chords a fifth down, which in turn resolve to minor chords another fifth down (or a fourth above -- the fourth being an inverted fifth) etc.

Ex.17

The staff shows a sequence of chords: (1) C-7, (2) F-7, (3) B-flat-7, (4) E-flat-7, (5) A-flat-7, (6) D-7, (7) G-flat-7, (8) B-7. Each chord is shown with a specific note highlighted.

We shall work out the first four bars for you.

Bar 1

Chord - C-7

Category - Minor & Altered Minor

Scale Degree Selected - +IV

Lydian Tonic - Gb

Parent and/or Associate Scale - Gb Lydian Augmented

Bar 2

Chord - F7

Category - Seventh & Altered Seventh

Scale Degree Selected - VII

Lydian Tonic - Gb

Parent and/or Associate Scale - Gb Auxiliary Diminished

Bar 3

Chord - Bb-7

Category - Minor & Altered Minor

Scale Degree Selected - VI

Lydian Tonic - Db

Parent and/or Associate Scale - Db Lydian Augmented

Bar 4

Chord - Eb7

Category - Seventh & Altered Seventh

Scale Degree Selected - +IV

(If you will check your scales on the chart, you will see that the following scales produce a type of seventh chord on their (+IV) degree: Lydian, Lydian Augmented, Auxiliary Augmented, and Auxiliary Diminished Blues.)

Lydian Tonic - A

Parent and/or Associated Scale - A Lydian and A Lydian Augmented

We have worked out the scales of the first four bars of our progression, now let's write them in above their respective chords.

EX 18

The musical staff consists of four measures. Measure 1: Gb Lydian Augmented scale over C-7 (+IV). Measure 2: Gb Auxiliary Diminished scale over F7 (VII). Measure 3: Db Lydian Augmented scale over Bb-7 (VI). Measure 4: A Lydian and A Lydian Augmented scale over Eb7 (+IV).

You will notice that bars 1 and 2 have the same Lydian Chromatic Scale, although they employ different scale colors of it. We can form a rule about this and say that whenever we have a minor chord followed by a seventh chord a fifth below, we may stay in one Lydian Chromatic Scale by assigning the +IV scale degree to the minor chord, and the VII scale degree to the seventh chord. This is also the case if we assign a VI scale degree to the minor chord, and a II scale degree to the following seventh chord a fifth below.

LESSON III - TEST A

Fill in the scales for bars 5 through 8 of example 17. Put the scale you choose above the chord and place the scale degree which dictated the choice to the right of the chord (as in example 18).

LESSON III - TEST B

Fill in the scales for the following cycle of fifths chord progression using scales of Lydian Chromatic Scales dictated by the scale degree to the right of each chord. In this example we shall use the following chord categories "minor and altered minor," "seventh and altered seventh," "minor seventh b5" and "seventh + 5."

Note to PIANISTS

When playing a scale against a minor chord, it is only necessary to play the tonic and minor 7th (or minor 6th) degrees of the chord in the left hand. The tonic and seventh degrees of a seventh chord too are all that is necessary. Avoid making chords too full. Let the scales do the coloring.

The image shows two sets of musical staves. The top set consists of four staves, each with a label above it in blue ink. The labels are: "B Lyd. Aug.", "E♭ Lyd. Aug.", "G♭ Lyd. Dim.", and "G♭ Lyd.". Below each label is a staff with a key signature of one sharp (F#), followed by a chord symbol and its scale degree. The chords and degrees are: F#-B-E (IV), B-B7 (+V), E-B-E7 (VI), and B-B7 (II). The bottom set also has four staves, each with a label above it in blue ink: "G Aug. Aug.", "C Lyd.", "D Lyd. Dim.", and "G Lyd. Aug.". Below each label is a staff with a key signature of one sharp (F#), followed by a chord symbol and its scale degree. The chords and degrees are: D-B-G (IV), G-B-G7 (+V), B-B-B7 (VI), and E-B-E7 (+V).

LESSON III - TEST B (continued)

A musical staff with five measures. Measure 1: A-7 (A, C, E, G). Measure 2: (VII) (D, F#, A, C). Measure 3: D-7 (D, F#, A, C). Measure 4: (II) (E, G, B, D). Measure 5: G-7b5 (G, B, D, F#).

A musical staff with two measures. Measure 1: F-7 (F, A, C, E). Measure 2: (VII) (F, A, C, E).

In the "minor seventh b5" chord category we see the term (minor 6B). This is simply another way of defining the minor 7th, b5 chord that is produced on the +IV scale degree of the Lydian, Lydian Augmented and Auxiliary Diminished Blues Scales.

By taking a minor 6th chord (A, C, E, F#), for example, and placing the sixth of the chord (F#) in the bass, we create an F#-7b5 chord (F#, A, C, E), or A Minor 6B (sixth in bass) chord.

In the "seventh + 5th" chord category we see the term (Minor +7B). By taking a minor + 7th chord, (A, C, E, F#, G#) for example, and placing the (+7th) degree of the chord (G#) in the bass, we create an (Ab7th, + 5, b9) chord -- (G#, F#, A, C, E) or (A Minor + 7B) chord.

When we drop the third (E) of a major triad (C, E, G) in the bass, we produce an E Minor + 5th or (C Major 3B) chord. (See above Roman numeral III of the Lydian Scale.)

When we drop the ninth degree (B) of a minor ninth chord (A, C, E, G, B) in the bass, we produce a B eleventh b9, or (A Minor 9B) chord. (See above Roman numeral VII of the Lydian Scale.)

When we take a major triad, b5 (C, E, G, F#) for example, and drop the b5th degree in the bass, we produce an F# seventh b9, +11th chord, or (C Major b5B). (See above Roman numeral + IV of the Lydian Scale.)

LESSON III - TEST C

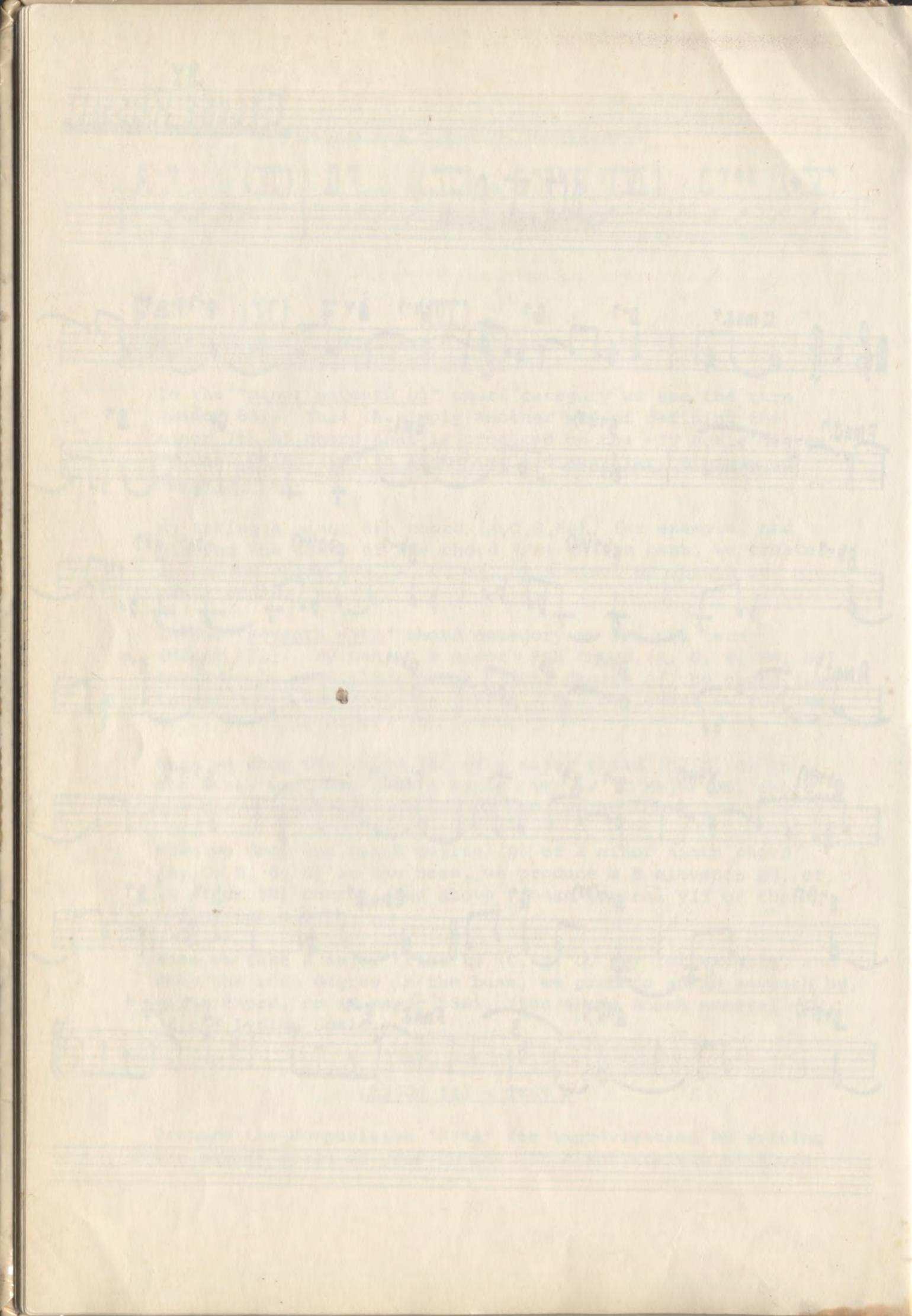
Prepare the composition "Nita" for improvisation by writing the parent scale of your choice (or associate scale) above

BY
GEORGE RUSSELL

NITA

A handwritten musical score for a band, consisting of six staves of music. The music is written in common time (indicated by 'C') and uses a treble clef. The score includes the following chords and rests:

- Staff 1: Cmaj.7, G7, Gb7, E7, B7
- Staff 2: Fmaj.7, B7(+9), Emaj.7, Gb7, B7
- Staff 3: Bb7, Bb7(+9), Bb7, Bb7(+9), Bb7(+9)
- Staff 4: Amaj.7, Bb7, G7, Bb7, E7
- Staff 5: Gb7(+9), B7(+9), E7, A7, Fmaj.7, B7(+9)
- Staff 6: E7(+9), B7(+9), G7, Cmaj.7, B7, G7, B7
- Staff 7: Bb7(+9), A7(-9), Fmaj.7, E7, B7, G7, G7



each chord. Write the scale degree (Roman numeral) you choose for each chord to the right of the chord. (See Kary's Trance.)

LESSON IV

In Lessons IV and V of our course we shall discuss four types of melody that embrace all melodies that are now being invented, or 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. The four types of melody are as follows:

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

First let us discuss two melodic devices that may be applied with all four types of melody.

Absolute Scale Melody

An Absolute Scale Melody is one that uses only the tones of a scale.

B^b LYDIAN (ABSOLUTE)

EX.19

B^b LYDIAN (ABSOLUTE)

EX.20

Chromatically Enhanced Scale Melody (C.E.)

Chromatic enhancement exists 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.

EX.21 B^b LYDIAN (CHROMATICALLY ENHANCED)

EX.22 B^b LYDIAN (CHROMATICALLY ENHANCED.)

The inward resolution of the tones of a melody need not be as immediate as in the above examples. Chromatic enhancement may be prolonged a great deal more.

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.

Vertical Polymodality (Tonal Gravity conveyed by a chord)

Vertical polymodal situations exist 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 his choice of scales.

Polymodality (possible use of more than one scale) greatly frees the improviser from the vertical limitation of arpeggiated playing. The number of scales at the player's command opens new avenues of improvising.

There are two different types of vertical melodies within Vertical Polymodality -- Ingoing and Outgoing Vertical Melodies. We shall discuss the Ingoing Vertical Melodies first.

1. Ingoing Vertical Melodies

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.

Thus far in the course we have been getting our parent scale from the single chord (vertical polymodality), and we have contained our melodies within the tones of the parent scale itself, or within the tones of a member scale of the parent Lydian Chromatic Scale. So our melodies may be labeled "absolute" Ingoing Vertical Melodies. (Melodies contained completely within a scale of the Lydian Chromatic Scale determined by a chord.)

"Chromatically Enhanced" Ingoing Vertical Melodies come from a scale of the Lydian Chromatic Scale determined by each chord, but the melody only uses the scale (or any part of the scale) as a frame through which it will weave in and out. (Sometimes more out than in, and vice versa.) The Lydian Chromatic Scale determined by the chord functions as the container for the chromatic enhancement of any of its scales.

For good examples of chromatic enhancement, analyze Lee Konitz' "Kary's Trance." The entire line can be termed an Ingoing Vertical Melody. The choice of scales is always determined by each chord. The line also makes use of the chromatic enhancement technique, and there are some instances where an absolute scale melody is employed. So we might say that Lee employed "Absolute & Chromatically Enhanced" Ingoing Vertical Melodies.

Let's analyze a few bars of this interesting line.

Bar 1

1. Chord and Scale Degree Selected - F#-6/ VI
2. Parent Lydian Chromatic Scale - A
3. Member Scale Used - A Auxiliary Diminished
4. Type of Melody - An absolute scale melody. The last note of the bar (B#) could actually be viewed

KARY'S TRANCE

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BY LEE KONITZ

① A AUX. DIM.
F# M6 VI

② A LYD. AUG.
F#-6 VI C.E.

③ D LYD. AUG.
Bm6 VI C.E.

④ Bm6 VI

⑤ D LYD.
C# 7-9 VII C.E.

⑥ F LYD. AUG.
C# 7-5-9 +V C.E.

⑦ A LYD.
F# M VI C.E.

⑧ F# M6 VI

⑨ A LYD. AUG.
F#-6 VI C.E.

⑩ A LYD. AUG.
F#-6 VI C.E.

⑪ D LYD.
BM6 VI

⑫ D LYD.
Bm6 VI

⑬ D LYD.
C# 7 VII

⑭ D LYD. DIM.
C# 7 VII

⑮ A MAJ.
F# M6 VI

⑯ F# m6 VI

⑰ Bb AUX. DIM.
E 7 + IV

⑮ D AUX.DIM E7 II
 ⑯ A LYD A I
 ⑰ A AUX.DIM A I
 ⑱ A MAJ. A I

⑲ F# AUX.DIM G#7 II
 ⑳ F# AUX.DIM G#7 II
 ㉑ F# LYD. AUG. C#7 +V

㉒ F LYD. AUG. C#7 +V
 ㉓ A LYD. F# M6 VI
 ㉔ F# M6 VI

㉕ D LYD. BM6 VI (C.E.)
 ㉖ B M6 VI C#7 VII

㉗ C#7 VII F# M6 VI
 ㉘ F# M6 VI

as a chromatic enhancement of the A Lydian Augmented Scale used in bar 2. In fact, this occurs again in bar 2. Bar 2 features an absolute A Lydian Augmented Scale except for the last note (C natural) which is actually employed as a chromatic enhancement of the scale used in bar 3, D Lydian Augmented.

In bars 5 and 6, a C#7(b9) chord occurs, but two different scale degree choices are employed.

In bar 5, a VII scale degree choice is made to color the C#7(b9) chord, giving the chord a D Lydian Scale color.

In bar 6, a +V scale degree choice is made so the C#7(b5)(b9) chord is colored with the F Lydian Augmented Scale.

In bars 17 and 18, one chord again appears in both bars.

In bar 17 a +IV scale degree is used on the E7 chord. The parent Lydian Chromatic Scale is therefore Bb. The member scale used is Bb Auxiliary Diminished. This scale is projected over to the first beat of bar 18. A change of scale color occurs on the second beat of bar 18. (The changing of the parent Lydian Chromatic Scale is purely at the discretion of the improviser. There is no law that it must occur only on the first beat of a bar.)

We have discussed the first type of vertical melody, "Ingoing Vertical Melodies." Now we'll explore the second type of vertical melody, "Outgoing Vertical Melodies."

OUTGOING VERTICAL MELODIES

Before discussing "Outgoing Vertical Melodies," let's explore the nature of the chromatic scale itself.

Any chromatic scale produces all twelve of the interval categories; (Prime, Minor 2nd, Major 2nd, Minor 3rd, Major 3rd, 4th, Augmented 4th, Fifth, Augmented 5th, 6th, Minor 7th and Major 7th.) Each interval category contains twelve of its own kind of intervals. For instance, there is a Major 3rd interval on all twelve degrees of the C Lydian Chromatic Scale. There is a Minor 2nd interval on all twelve degrees of the C Lydian Chromatic Scale, etc. Any one single Chromatic Scale contains all intervals. Since any melody is merely a horizontal sequence of intervals and any harmony merely a vertical

sequence of intervals, and all intervals are contained within one single Chromatic Scale, then all the melodies and harmonies that have ever been created could conceivably be related to any one single Chromatic Scale. This Chromatic Scale could be any one of the twelve Chromatic Scales. Consequently if we are relating to the Lydian Chromatic Scale determined by the chord as we have been doing thus far in the course, then any melody that we could think of creating might be related to that single Lydian Chromatic Scale.

Our Lydian Chromatic Scale has eight scales as you know. These scales actually are prearranged groups of intervals of the Lydian Chromatic Scale. For example, the Major Scale uses the following sequence of intervals of its Lydian Chromatic Scale (starting on the Lydian Tonic): Major 2nd, Major 2nd, Minor 2nd, Major 2nd, Major 2nd, Major 2nd. A melody built on the major scale would naturally sound the intervals of that scale.

An outgoing melody, however, is a melody that uses the total body of intervals of a Lydian Chromatic Scale as its frame of reference and not just the intervals of a member scale within that Lydian Chromatic Scale. In other words, the outgoing melody draws upon the many intervals of the Chromatic Scale itself as a source for its melodic material. The definition of an "Outgoing Vertical Melody" is then as follows:

Outgoing Vertical Melody - A melody 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.

Example: 1. Chord - F Major 7th

2. Scale Degree - I

3. Parent Lydian Chromatic Scale - F Lydian Chromatic

An Outgoing F Lydian Chromatic Scale Melody.

EX. 23

F MAJ.
7
-2 ND, 4 TH, 3 RD, 4 TH, -2 ND, 3 RD, -2 ND, -2 ND, 3 RD, 3 RD, 3 RD, 3 RD, 3 RD, 3 RD.

There are several interesting things to be learned from the

above melody. The melody in the first bar could be interpreted as a chromatic enhancement of an F Lydian Scale, although it was conceived as an intervalic sequence composed primarily of fourths and minor seconds of the F Lydian Chromatic Scale. We may say, then, that an outgoing melody derived from a sequence of intervals of the Lydian Chromatic Scale may, by coincidence, resemble a member scale melody that has been chromatically enhanced (an ingoing melody).

The second bar of our example contains a melody that could be classified as an Eb Minor chord arpeggio. As we know, Eb Minor comes from the Gb Lydian Scale. So what we are really doing is imposing a form of the Gb Lydian Scale upon an F Major 7th chord. However, we are calling this melody an "outgoing melody" of the F Lydian Chromatic Scale (the Lydian Chromatic Scale determined by the chord). In fact, we could have composed a melody coming from any scale of any Lydian Chromatic Scale and still called it an "outgoing melody" of the F Lydian Chromatic Scale because the latter is a chromatic scale and therefore it is possible to relate any melody to it.

So then, we can say that an "outgoing melody" of the parent Lydian Chromatic Scale may take the shape of an absolute or chromatically enhanced scale of any other Lydian Chromatic Scale (bar #2 above), or it may be formed of a thematic sequence of intervals (bar #1 above).

Vertical melodies may range from outgoing to ingoing and vice versa.

SUMMATION OF LESSON IV

1. In the Lydian Chromatic Concept of Tonal Organization you are always relating to a parent Lydian Chromatic Scale with its eight member scales.
2. It is just a question of whether your parent Lydian Chromatic Scale is being determined by each new chord (Vertical Polymodality), or whether it is being determined by other factors (which we shall take up in Lesson V).
3. Once you have obtained your parent Lydian Chromatic Scale, then there are two types of melody that you may employ:

- (a) Ingoing Melodies - (a melody that is an absolute or a chromatically enhanced melody derived from a member scale of your parent Lydian Chromatic Scale) and,
 - (b) Outgoing Melodies - (a melody derived from the intervals of the parent Lydian Chromatic Scale itself. An outgoing melody of the parent Lydian Chromatic Scale may take the shape of an absolute or chromatically enhanced scale of any other Lydian Chromatic Scale.)
4. If we are letting each chord determine our parent Lydian Chromatic Scale (Vertical Polymodality) then we have a choice of expressing each parent Lydian Chromatic Scale with an Ingoing and/or Outgoing Vertical Melody. The word vertical simply lets us know that we are getting each parent Lydian Chromatic Scale from each new chord.
 5. To sum it up even more, let's put it this way. If you want to express the parent Lydian Chromatic Scale to which you are relating (in this case determined by a chord) then you are free to do anything your taste may dictate, for you can resolve the most "far out" melody since you always know where home is (the parent member scale within the parent Lydian Chromatic Scale).

The "outgoing melody" enables you to reach out into the chromatic scale to which you are relating and almost automatically impose all kinds of tonal color (without having to stop and decide what scale degree choice you are making) on the chord. Or if you choose, you may employ an "inggoing melody" and stay relatively close to the gravity of the chord by using the parent member scale of that chord as your frame of melodic reference.

Whatever you play, you are always (in vertical polymodality) somewhere within the parent Lydian Chromatic Scale determined by the chord. You may not always be where you'd like to be in relation to the tonal gravity of the chord to which you are relating (that is you may be too close or too distant from it), but you are always somewhere within the parent Lydian Chromatic Scale of your chord.

So far in this course we have been getting our parent Lydian Chromatic Scale from each single chord (Vertical Polymodality). Now let's discuss a broader factor that can determine our choice of a parent chromatic scale.

LESSON V

HORIZONTAL POLYMODALITY (Tonal Gravity Conveyed By The Scale)

We have dealt with "Vertical Polymodality" and the two types of melody used therein to express the Lydian Chromatic Scale determined by a chord.

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

Now we'll discuss Horizontal Polymodality and the two types of melody used in it to express the Lydian Chromatic Scale determined by factors broader than the single chord. These two types of melody are:

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 chord. (Lester Young is an example of a horizontal improviser. Listen to the Blues Scale he projects on the chords in his opening statement of "Dickie's Dream." It is the scale he chooses which conveys the tonal gravity of the melody. Coleman Hawkins, on the other hand, is primarily a vertical improviser. That is, his melodies are generally derived from each passing chord. In his case, it is the chord which manipulates the gravity of the melody. Both ways of playing have their advantages and disadvantages.)

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.

Let's take the first of these factors.

1. The resolving tendency of two or more chords.

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 the music however, you might find that each 8 bar phrase has its tonic station, and that each 4 bar phrase also has a tonic station. Therefore when you choose to be melodically horizontal, you may relate to the Lydian Chromatic Scale inferred by each 4 bar tonic station, or to the Lydian Chromatic Scale inferred by an 8 bar tonic station, or to the Lydian Chromatic Scale inferred by a 1 bar tonic station. In some instances when the changes are fairly simple (the blues for example) you may relate to the Lydian Chromatic Scale inferred by the key of the music (as in Ex. 26). Here, for example, is a chord sequence that indicates a resolving tendency to a tonic station. These chords tend to resolve to the tonic station C.

EX.24

Let us consider C to be the tonic of the Lydian Chromatic Scale to which we shall relate our melody (the C Lydian Chromatic Scale), and select the horizontal scale (major or blues) within the C Lydian Chromatic Scale that best suits the sound of the chords. We shall select the C Blues Scale because its lowered third (Eb) goes well with the AbMajor7th and the CMinor7th chords. Now we may improvise a melody derived from the C Blues Scale with the chord sequence.

Try forming an absolute scale melody derived from the C Blues Scale and imposing it upon these chords.

EX.25

Now try a chromatically enhanced C Blues Scale upon the above chord sequence.

The second factor which might influence the choice of a parent Lydian Chromatic Scale in Horizontal situations is:

2. The key of the music.

For example if we have a 12 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 of the music. We would select the Major Scale and/or the Blues Scale (and 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.)

Try filling in absolute or chromatically enhanced melodies based on the horizontal scales given you in the following Blues' changes. We have composed a melody in bars 1, 2 and 3 dictated by the C Major Scale. Improvise a melody dictated by the remaining scales which example 26 provides.

Ex 26

C MAJOR

(1) (2) (3)

C C7 F7 F[#]7 G G7+5 A-7 C7+5

F7 A7+5 D7 D7b9+11 E-7 Bb7 G-7 Eb7+5

C AUX. DIM. — C MAJOR — C BLUES —

If a group of chords tends to resolve to a minor chord tonic station, then scales with lowered thirds (Blues or Auxiliary Diminished) of the Lydian Chromatic Scale beginning on the minor chord tonic station may be superimposed upon those chords.

These lowered third scales may be viewed as scales in the Lydian Chromatic Scale a minor third above the minor chord tonic station. This will be the parent Lydian Chromatic Scale of the minor chord if a VI scale degree is designated to it. There is a very close analogy between lowered third scales of the Lydian Chromatic Scale beginning on the minor chord tonic station and scales of the Lydian Chromatic Scale a minor third above the minor chord tonic.

Notice the similarity between an E Blues Scale and a G Major, Chromatically Enhanced (C.E.), Scale.

E BLUES (OR G MAJOR - C.E.)

EX. 27

MIN. TONIC STATION

There is no difference at all between the E Auxiliary Diminished Scale and the G Auxiliary Diminished Scale.

The third factor that might influence our selection of a Lydian Chromatic Scale to be used in horizontal situations is:

3. Our own aesthetic judgement.

For instance, the following sequence of chords resolves to an F Major 7th chord.

Ex. 28

A musical staff with five measures. Measure 1: G flat-7 (G flat, B flat, D, F). Measure 2: B7 (B, D, F sharp, G sharp, B). Measure 3: E-7 (E, G, B, C sharp, E). Measure 4: A7 (A, C sharp, E, G, A). Measure 5: F major 7th (F, A, C, E, G). The staff has four vertical bar lines and five measures indicated by vertical tick marks.

The first bar tends to resolve to an E Minor tonic station so we might impose an E Blues Scale on the first two bars. However, as we pointed out in Ex. 27, a Blues Scale is very similar to the Major Scale of the Lydian Chromatic Scale a minor third above it. We might therefore try imposing a G Major or G Blues Scale on the first two bars of the chord sequence. Another possibility might be the C Major Scale. We can justify our use of the C Major Scale by reasoning that if we continue the cycle of fifths pattern of the first two bars, then in the third bar would be D-7, G7 and would resolve to C very nicely. So try imposing the C Major Scale upon the first two bars. Since an A Blues Scale has much in common with the C Major Scale, we might try an A Blues on the first two bars of chords. The sequence comes to rest on an F Major 7th chord, so the F Major Scale is, of course, another possibility. It is up to our own taste and aesthetic judgement to decide which of these scales to use.

It is actually possible to impose any scale on a sequence of chords. However, we should try to justify the scale we are going to employ horizontally with the resolving tendency of the chords. If a scale sounds good on a sequence of chords, then there is probably a reason for it implied somewhere in the resolving tendency of the chords.

We have been discussing Ingoing Horizontal Melodies thus far in Lesson V. The definition for Ingoing Horizontal Melodies is the same as the definition for Ingoing Vertical Melodies,

except that in Ingoing Vertical Melodies we get the parent Lydian Chromatic Scale from each chord; while in Ingoing Horizontal Melodies we get the parent Lydian Chromatic Scale from broader factors. Here is the definition of an Ingoing Horizontal Melody.

Ingoing Horizontal Melody

A scale (Major, Blues, Auxiliary Diminished) of the Lydian Chromatic Scale determined by the resolving tendency of two or more chords, the key of the music or our aesthetic judgement, used as a frame for absolute or chromatically enhanced melodies.

EX.29

Try the following sequence of Ingoing Horizontal scales on the chord progression above. Scales may be absolute or chromatically enhanced.

Bar 1 - F Blues Scale

Bar 2 - Eb Blues Scale

Bar 3 - Db Blues Scale

Bar 4 - Cb Blues Scale

Now let's analyze what we've done.

Bar 1 - (G7/ C7/) resolves to tonic station of F and we use the F Blues Scale from the horizontal scales of the F Lydian Chromatic tonality.

Bar 2 - (F7/ Bb7/) resolves to tonic station of Eb.

Bar 3 - (Eb7/ Ab7/) resolves to tonic station of Db.

Bar 4 - (Db7/ Gb7/) resolves to tonic station of Cb.

Our melodies here are absolute and/or chromatically enhanced treatments of a horizontal scale within the Lydian Chromatic Scales determined by the resolving tendency of two or more chords. The melodies therefore are Ingoing Horizontal Melodies.

Now try the following sequence of horizontal scales on the same sequence of chords (Ex. 29).

Bar 1 - F Major

Bar 2 - Eb Blues

Bar 3 - Db Major

Bar 4 - Cb Blues

Here are the tonic stations from which we are getting our horizontal scales used in the last sequence of scales.

Bar 1 - Tonic Station F (F Lydian Chromatic Scale)

Bar 2 - Tonic Station Eb (Eb Lydian Chromatic Scale)

Bar 3 - Tonic Station Db (Db Lydian Chromatic Scale)

Bar 4 - Tonic Station Cb (Cb Lydian Chromatic Scale)

Now try this sequence of horizontal scales with the cycle of fifths progression (Ex. 29).

Bars 1 and 2 -

Eb Blues Scale

(Eb may be considered the tonic station for the first two bars because Eb is the tonic to which the first two bars tend to resolve temporarily...and we use the Eb Blues Scale from the horizontal scales of the Eb Lydian Chromatic Scale.)

Bars 3 and 4 -

Cb Blues Scale

(Tonic station Cb; Cb Lydian Chromatic Scale; Cb Blues Scale.)

Actually any scale may be used on this progression when used with aesthetic taste and good judgement.

(Try an Ab Auxiliary Diminished on bars 1, 2, 3 and 4.)

As you know, a harmonically simple song will have relatively few tonic stations. A harmonically complex song will have

many tonic stations. Locate the tonic stations and substitute applicable horizontal scales by considering the tonic stations as the Lydian Tonics; then use the horizontal scales of that Lydian Chromatic Scale with the chords in the tonic station area. Major, Blues, Auxiliary Diminished and possibly other scales will be used.

There are times when rapidly moving chord progressions make improvising difficult. The improviser isn't allowed time to create good melodic ideas when thinking vertically. (Try substituting vertical scales on the cycle of fifths progression at a fast tempo.) It is at times such as these that we find the use of horizontal scales to be more useful than vertical scales.

However, the use of horizontal scales has a tendency to lose harmonic color; a distinct disadvantage. Thus it is to the advantage of the player to use combinations of horizontal and vertical polymodality.

Outgoing Horizontal Melody

An outgoing horizontal melody is a melody derived from the intervals of the Lydian Chromatic Scale determined by the resolving tendency of two or more chords, the key of the music or your own aesthetic taste.

All that has been said concerning outgoing melodies applies to "Outgoing Horizontal Melodies." (See summation, Lesson IV.)

An Outgoing Horizontal Melody is derived from the intervals (rather than from the family of scales) of the Lydian Chromatic Scale to which you are relating your horizontal melody.

Here is an example of an Outgoing Horizontal Melody derived from the intervals of the F Lydian Chromatic Scale. The scale is inferred in the following example by the key of the music. The thematic interval on which the line is based is the interval of a minor seventh.

EX 30

Piano

COMPOSED BY
GEORGE RUSSE

SISTRATOSPHERE

F LYDIAN CHROMATIC SCALE

MUSIC STAFF 1 (Top):
F, E, D, C, B, A, G, F
Intervals: -1TH, -2ND, -3RD, -4TH
Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

MUSIC STAFF 2:
F, E, D, C, B, A, G, F
Intervals: -1TH, -2ND, -3RD, -4TH
Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

MUSIC STAFF 3:
B, A, G, F, E, D, C, B
Intervals: -5TH, -6TH, -7TH
Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

MUSIC STAFF 4:
B, A, G, F, E, D, C, B
Intervals: -5TH, -6TH, -7TH
Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

MUSIC STAFF 5 (Bottom):
G, F, E, D, C, B, A, G
Intervals: -5TH, -6TH, -7TH
Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

As you know, the intervals of an outgoing melody within the parent Lydian Chromatic Scale may assume the form of scale structures of any other Lydian Chromatic Scale. In horizontal situations this means that you have the freedom of imposing a scale of any Lydian Chromatic Scale upon a sequence of chords and justifying it as an "Outgoing Horizontal Melody" of your parent horizontal Lydian Chromatic Scale.

F LYDIAN CHROMATIC SCALE

EX. 31

You will notice that the "Outgoing" F Lydian Chromatic Scale melody in Bar 1 assumes the form of an F#-7chord. We know that the A Lydian Scale is the parent scale of an F#-7 chord so the outgoing melody is really an A Lydian Scale melody imposed on the G7th chord. We may incorporate the A Lydian Scale into our parent Lydian Chromatic Scale, F Lydian Chromatic Scale, because our parent Lydian Chromatic Scale contains all intervals, including those of the A Lydian Scale, or of any other scale. In the second bar we have a G Major 9th arpeggio on an F7th chord. This G Lydian melody is also an outgoing melody of the parent horizontal F Lydian Chromatic Scale.

Notice that Ex. 31 features a horizontal melody that is both ingoing and outgoing. In Horizontal Polymodality we have Ingoing and Outgoing melodies, just as we have in Vertical Polymodality. In both cases, the Ingoing melody will be an absolute and/or chromatically enhanced melody of a member scale of the parent Lydian Chromatic Scale. The Outgoing melody, in both cases, will be derived from the intervals of our parent Lydian Chromatic Scale.

If we are composing a melody on a single chord (Vertical

Polymodality), we may have a melody that ranges from ingoing (absolute or chromatically enhanced) to outgoing (and vice versa).

The same situation prevails when we impose one Lydian Chromatic Scale upon a sequence of chords (Horizontal Polymodality). Our horizontal melody within the parent Horizontal Lydian Chromatic Scale may range from ingoing to outgoing (and vice versa). We may create an ingoing effect by employing absolute or chromatically enhanced member scale structures of the Lydian Chromatic Scale to which we are relating, and an outgoing effect by employing outgoing structures (non-member scale structures) of our parent Horizontal Lydian Chromatic Scale.

This course does not attempt to legislate taste. Therefore we cannot suggest that a horizontal approach is better than a vertical approach. The student's aesthetic judgement must decide this for him. Both approaches are vital and basic to jazz. You should now have a working knowledge of both approaches and of the Chromatic Universe offered by each of them. An interesting melody should be one that is both horizontal and vertical, ingoing and outgoing.

It might be pointed out that the tones of the Major and Blues Scales may be combined and used together quite freely as one (Major Blues) Scale. The Blues Scale is simply a funky version of the Major Scale. The Blues Scale occurs when the 3rd, 5th and 7th degrees of the Major Scale are flattened.

The following example is an analysis of a very famous solo by Charlie Parker. It is a classical example of the use of vertical and horizontal thinking.

The entire melody may be termed an "Ingoing Vertical, Ingoing Horizontal" melody. There are numerous examples of chromatic enhancement, however there are no instances where outgoing vertical or outgoing horizontal melodies are employed.

This might indicate that the next cycle of jazz will be the "outgoing melody" cycle -- the exploration of the Chromatic Universe implied by vertical and horizontal Lydian Chromatic Scale choices.

In the Parker example, chords which have been treated verti-

G MAJOR / BLUES

G Maj 7 C7 C $\#$ -7 $b5$ F $\#$ 7 $+5$ B-7 E7 $+5$

G MAJOR / BLUES

A-7 E7 $b9$ Eb9 D7 G E7 A7 D7 $b9$

G MAJOR / BLUES

D LYD

G maj 7 C7 Db \circ B-7 A-7 Gmaj 7 [Bb-7/II]

C LYD

GMAJOR / BLUES

F LYD

[A-7/II] Eb9 D7 Gmaj 7 [D-7/II] [G7/II]

(13) (14) (15) (16)

G BLUES G MAJ. D LYD Ab LYD. AUG.

C7 C $\#$ \circ G F7 [E7/II] [Bb9/II]

(17) (18) (19) (20)

G LYD E b LYD C AUX. DIM.

[A7/II] [E-7/II] [A7/II] [A-7 $b5$ /+IV] [D7 $b9$ /II]

(21) (22) (23) (24)

G MAJOR

Gmaj7 C7 (F#7+5) B-7 Bb-7/VII

(25) (26) (27) (28)

C LYD A^b LYD GLYD G MAJ

A-7/VII Abmaj7/I D7/+IV Gmaj7/I A-7 D7

(29) (30) (31) (32)

G MAJOR

Gmaj7 C7 F#7+5 B-7 A-7 Gmaj7 E7+5

(33) (34) (35) (36)

C LYD E^b LYD AUG

A-7/VII A-7^{b5}/+IV D7/VII

(37) (38)

G MAJ E^b LYD G MAJ

Gmaj7 E7 A-7^{b5}/+IV D7/VII Gmaj7

(39) (40) (41)

B^b LYD G MAJ

C7/II Db^o B-7 A-7 Gmaj7 Bb9

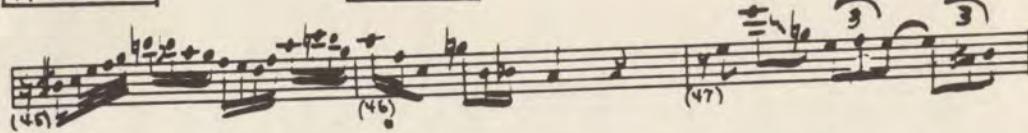
(42) (43) (44)

C LYD C LYD.DIM C LYD C AUX.AUG G BLUES/MAJ

A-7/II

D7/II

G maj7



F LYD

C LYD

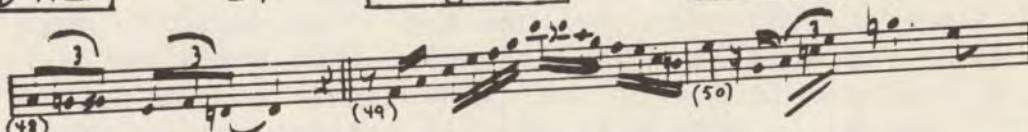
E♭ LYD

D-7/VII

G7

C maj7/I

C-7/VI



G MAJ

A♭ AUX.DIM.

G LYD

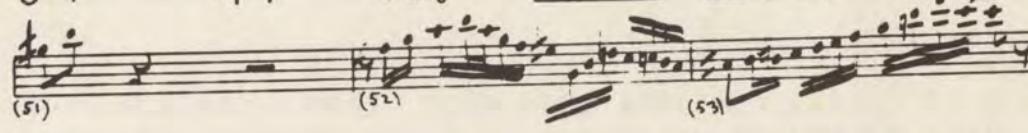
B-7

A-7

G maj7

E7/+IV

A7/II



G LYD

E♭ LYD

C LYD

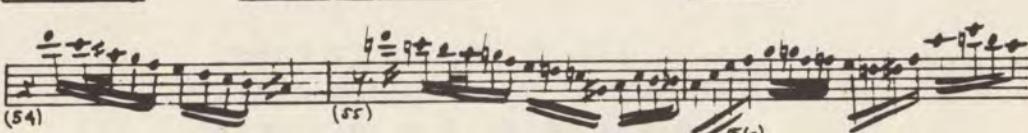
C AUX.DIM

E-7/VII

A7/II

A-7 B♭/+IV

D7/II



G MAJOR/BLUES

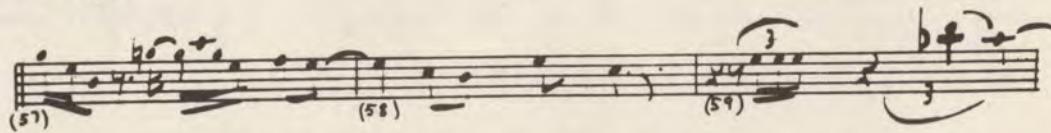
G maj7

C7

F#7+5

B-7

A-7



G maj7 E7

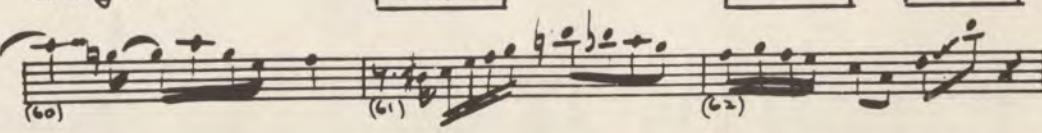
C LYD

C LYD

A-7/VI

A-7/VI

D7/II

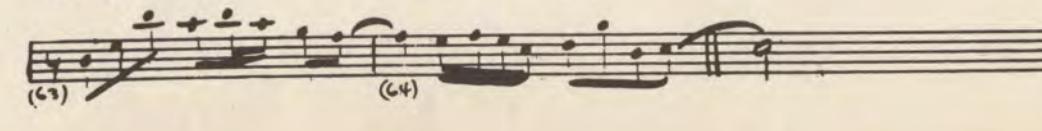


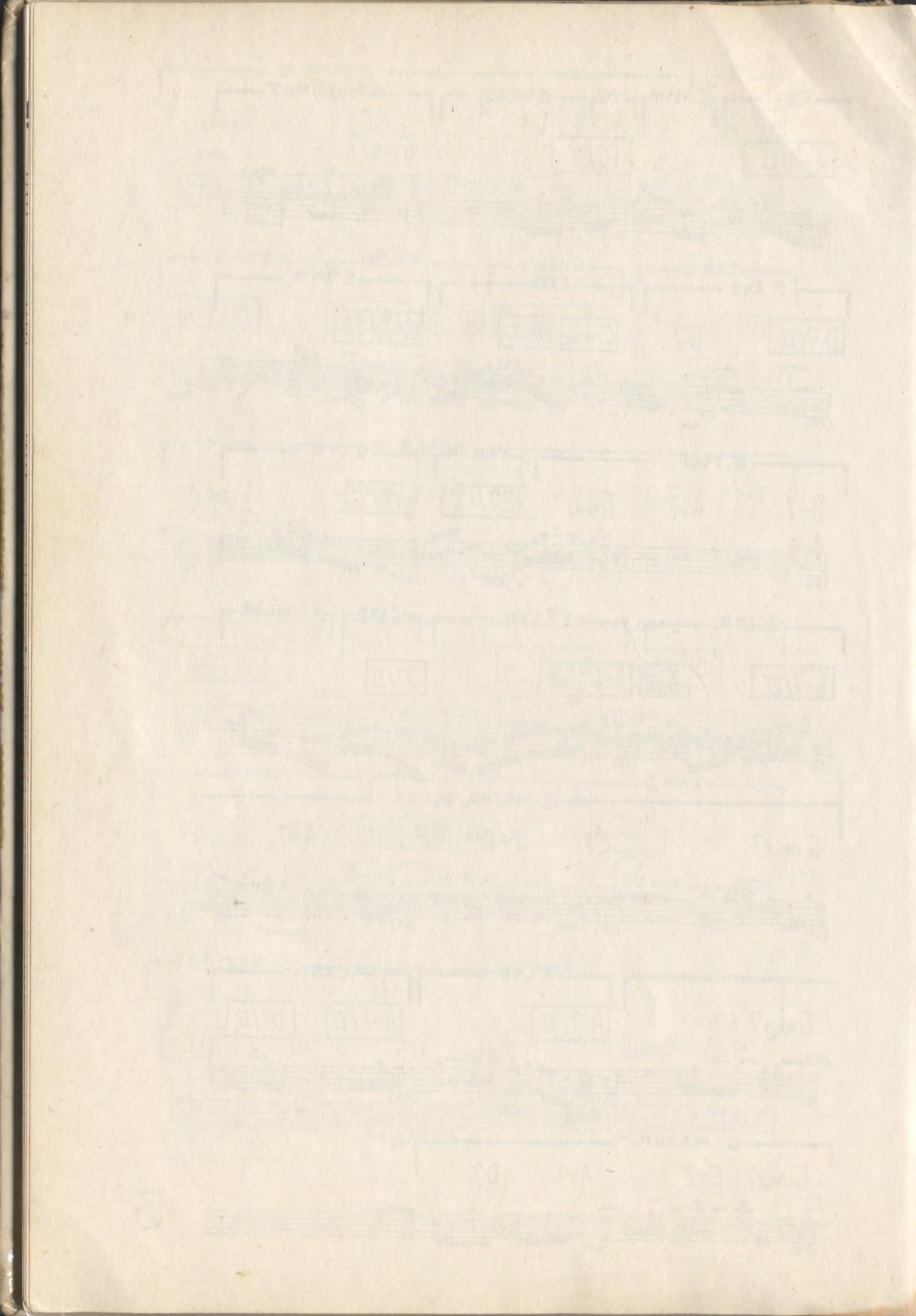
G MAJOR

G maj7 E-7

A-7

D7





cally will be enclosed in a box with the scale degree choice that has dictated the parent scale. The chords and scales are in the concert key G Major, while the melody is in the Alto Sax key, E Major.

LESSON VI

We have covered a great deal of ground in our first five lessons. In any type of complex thinking we can help our mind comprehend the material at hand with little tricks and memory aides. At first the Lydian Concept requires a new type of thinking -- but once we learn the fundamentals we can use short cuts. An engineer must know how to develop tables such as logarithms, but in actual practice he merely looks up the desired figures in a book of tables.

To understand the Lydian Concept it is necessary to work out many scales and write them down, but when we fully realize what the process is, we can find the notes a quicker way.

For many instruments such as guitar and piano, fingerings present a problem until we realize a Bb Lydian Scale can be fingered as an F Major Scale, beginning on the root of the chord.

Let's work out a few examples this way.

Chord C7 (C, E, G, Bb)
Scale choice - Bb Lydian (II)
Fingering - F Major Scale

EX. 32

A musical staff in common time with a treble clef. It consists of six horizontal lines. There are vertical bar lines dividing the staff into measures. The notes are black dots representing quarter notes. The first measure starts with a note on the second line, followed by notes on the first line, second line, and first line again. The second measure starts with a note on the third line, followed by notes on the second line and third line. The third measure starts with a note on the fourth line, followed by notes on the third line and fourth line. The fourth measure starts with a note on the fifth line, followed by a note on the fourth line. The fifth measure starts with a note on the fourth line, followed by a note on the fifth line. The sixth measure starts with a note on the fifth line, followed by a note on the fourth line.

Chord C7b5 (C, E, Gb, Bb)
Scale choice - Bb Lydian Augmented (II)
Fingering - F Major Scale with raised root (F#)

EX. 33

A musical staff in common time with a treble clef. It consists of six horizontal lines. There are vertical bar lines dividing the staff into measures. The notes are black dots representing quarter notes. The first measure starts with a note on the second line, followed by notes on the first line, second line, and first line again. The second measure starts with a note on the third line, followed by notes on the second line and third line. The third measure starts with a note on the fourth line, followed by notes on the third line and fourth line. The fourth measure starts with a note on the fifth line, followed by a note on the fourth line. The fifth measure starts with a note on the fourth line, followed by a note on the fifth line. The sixth measure starts with a note on the fifth line, followed by a note on the fourth line.

Chord C7b9 (C, E, G, Bb, Db)
Scale choice - Bb Lydian Diminished (II)
Fingering - F Major Scale with lowered sixth (Db)

EX. 34

Chord Eb7 (Eb, G, Bb, Db)
Scale choice - Db Lydian Augmented (II)
Fingering - Ab Major Scale with raised root (A)

EX. 35

Chord C7b9 (C, E, G, Bb, Db)
Scale choice - Db Lydian Diminished (VII)
Fingering - Ab Major with lowered sixth (E)

EX. 36

Chord Db Major 7 (Db, F, Ab, C)
Scale choice - Db Lydian (I)
Fingering - Ab Major Scale

EX. 37

Chord C-7b5 (C, Eb, Gb, Bb)
Scale choice - Gb Lydian (+IV)
Fingering - Db Major Scale

EX. 38

Chord C7b5+5b9 (C, A#, C#, E, F#, G#)
Scale choice - E Lydian Augmented (+V)
Fingering - B Major with raised root (C)

EX.39

You will notice that in all of these examples you may relate any type of Lydian Scale to an altered Major Scale a fifth above it.

LESSON VII

THE USE OF THE LYDIAN CHROMATIC SLIDE RULE

Now we come to the use of the slide rule for quick ease in locating notes of the scales.

Say we wish to find the scales for a Cm7b5 chord.

We look at the chord categories listed on our slide rule.

1. Category - Minor Seventh b5
2. Degrees of Lydian Chromatic Scale offered by the category.
3. Take +IV first (most consonant choice).
4. Move the slide rule until C is under +IV.
Now we see Cm7b5 appear on our slide rule.
5. At the left we find the name of our scale F#, or Gb Lydian, and the notes are spelled out under the Roman numerals. (Gb, Ab, Bb, C, Db, Eb, F) These are the notes of our first scale (parent scale) for Cm7b5.
6. Down a little further we see another Cm7b5. Its

scale is Gb Lydian Augmented. The notes spelled out on the slide rule are Gb, Ab, Bb, C, D, Eb, F.

7. Down further is another Cm7b5. The scale is Gb Auxiliary Diminished Blues. The notes spelled out by the slide rule are Gb, G, A, Bb, C, Db, Eb, E.
8. The second Roman numeral under which we find Cm7b5 families is Roman numeral VI.
9. Move the slide rule until C comes under VI.
10. Looking down the list of chord families we see another Cm7b5 chord listed.
11. At the left we find the scale to be Eb Lydian Diminished, and the notes spelled out by the slide rule are Eb, F, Gb, A, Bb, C, D.

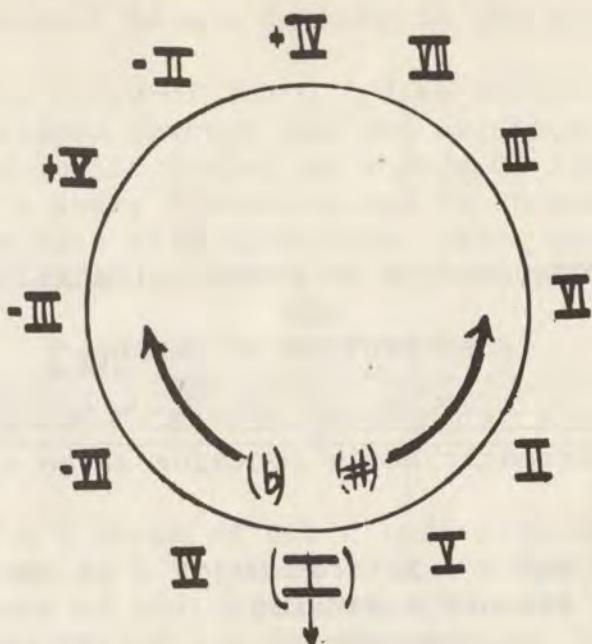
Now your slide rule has replaced the chart. It is the chart in fact, but it now enables you to mechanically locate the notes of the scales very quickly.

LESSON VIII

For the last lesson we shall discuss the construction of chord patterns and the substitution of chords.

As you know there are twelve Lydian Chromatic Scales. Each Lydian Chromatic Scale, its member scales and chords, is related to all other Lydian Chromatic Scales and their member scales and chords. 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. For example, if we are relating to the C Lydian Chromatic Scale, then G, D, A, E, B, F# will be the order in which Lydian Chromatic Scales, (their member scales and chords) will be related to the C Lydian Chromatic Scale (its member scales and chords) in a sharp direction. F, Bb, Eb, Ab, Db, Gb will be the order in which Lydian Chromatic Scales (their member scales and chords) will be related to the C Lydian Chromatic Scale in a flat direction. We call this interval of fifths relationship between Lydian Chromatic Scales the "Circle Of Close To Distant Relationships."

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)

If all Lydian Chromatic Scales are related to one another by intervals of fifths, then the chords which they produce must also be related to one another in the same way.

For example, any chord of the C Lydian Chromatic Scale is most closely related (except for its neighboring chords in the C Lydian Chromatic Scale) to chords of the G Lydian Chromatic Scale in a sharp direction, and to chords of an F Lydian Chromatic Scale in a flat direction. Take, for example, the simple progression --

A musical staff with two measures. The first measure shows a C major chord (C, E, G) with vertical stems pointing down. The second measure shows a G major chord (G, B, D) with vertical stems pointing up. The staff has four lines and a middle line.

C Major 7th is a I chord of the C Lydian Chromatic Scale, while D Minor 7th is a VI chord of the F Lydian Chromatic Scale; a distance of one-fifth away from the C Lydian Chromatic Scale. The C Major 7th and the D Minor 7th chord sound close together because their parent Lydian Chromatic Scales are close together. Instead of D Minor 7th (a VI degree chord of the F Lydian Chromatic Scale), we could have chosen any chord of the F Lydian Chromatic Scale -- G7thb5 (a II chord), Db7+5 (a +V chord), B-7b5 (a +IV chord), Ellthb9th (a VII chord), A Minor+5 (a III chord), or F Major (a I chord) -- the effect, allowing for differences of scale color, would have been the same closely related feeling between the C Major chord and the chord chosen from the F Lydian Chromatic Scale.

In this manner, the Circle Of Close To Distant Relationships sets up a connecting tissue between the chords of all twelve Lydian Chromatic Scales. It makes it possible to judge the tonal distance between one chord and another chord, consequently making it possible to construct chord patterns and make substitutions on the basis of our aesthetic need for a close or (to any degree) distant relationship between one chord and another.

For example, let's use the following chord progression:

F - 1 B^b - 7 E^b 7 B^b MAJ. 7

B^b LYD. CHROM. SCALE D^b LYD. CHROM. SCALE D^b LYD. CHROM. SCALE B^b LYD. CHROM. SCALE
 ONE FIFTH DOWN (FLAT) NO CHANGE ONE FIFTH UP (SHARP)

The first chord, F-7, is a VI chord of the Ab Lydian Chromatic Scale; the second, Bb-7, is a VI chord of the Db Lydian Chromatic Scale; so the progression has moved from the Ab Lydian Chromatic Scale to the Db Lydian Chromatic Scale, one fifth down (in a flat direction). Therefore, the F-7 and the Bb-7 chords are closely related, because their parent scales are very closely related.

In the second and third bars there is no change of Lydian Chromatic Scales. The Bb-7 chord, a VI degree chord of the Db Lydian Chromatic Scale, simply moves to a II chord (Eb7) of the same Lydian Chromatic Scale. The effect produced by this resolution is that of a very closely related chord progression indeed. We may therefore conclude that the most closely related chords to any single chord will be those neighboring chords on the other scale degrees of its own parent Lydian Chromatic Scale.

Try substituting C VI (A Minor), C II (D7), C + IV (F#-7b5), C +V (Ab or G#7+5), C VII (B11b9) and C III (E Minor + 5) chords for each other.

Continuing from the third bar of example 42, the II chord in the Db Lydian Chromatic Scale moves to a I chord in the Ab Lydian Chromatic Scale. This is a distance of one fifth upward (in a sharp direction), so it is a very close resolution.

Let's now consider the procedure for constructing chord patterns or making chord substitutions.

PROCEDURE FOR COMPOSING OR SUBSTITUTING CHORDS

1. Place the Lydian Tonic of the over-all parent Lydian Chromatic Scale (the fundamental tonic tone of the composition) under Roman numeral I of the Circle Of Close To Distant Relationships. The remaining eleven Lydian Chromatic Scales are now arranged in order (a circle of fifths) of their close to distant relationship to the over-all parent Lydian Chromatic Scale and to one another.
2. Locate the position in the Circle Of Close To Distant Relationships of the last permanently established Lydian Chromatic Scale (the parent scale determined by the chord which has most recently pleased your taste) and on the basis of your aesthetic judgement decide if the next chord is to come from a nearby Lydian Chromatic Scale, sounding a close relationship with the satisfactory chord, or

from a (to any degree) far removed Lydian Chromatic Scale, sounding a more distant relationship with the established chord. The over-all parent Lydian Chromatic Scale (Roman numeral I of the Circle Of Close To Distant Relationships) must serve as a reckoning source for this decision if the chord which we are trying to find is the first chord of the composition.

Consider especially the other chord choices offered by the last permanently established Lydian Chromatic Scale.

3. Analyze where you've traveled in terms of the over-all parent Lydian Chromatic Scale, the key of the music.
4. Repeat this procedure from step two for each new chord.

If the chords in example 42 are in the key of Ab, then the parent Lydian Chromatic Scales in bars 1 and 2 (Ab Lydian Chromatic and Db Lydian Chromatic) represent a I to IV movement (in a flat direction) of Lydian Chromatic Scales within the key of the music, the Ab Lydian Chromatic Scale. In this way we maintain not only a connecting tissue between one chord and another, but also between the chord progression itself and the key of the music. We may guide the progression in or out in relation to the key of the music.

Let us expand the version of the chord sequence in example 42.

Ex. 43

KEY OF
ME MUSIC

G_b7b5 F₇(+5) A₇b5 E-7b5 A₇(+5) Ab maj. 7

Ab LYD. CHROM. SCALE E LYD. CHROM. SCALE A LYD. CHROM. SCALE Bb LYD. CHROM. SCALE Bb LYD. CHROM. SCALE Ab LYD. CHROM. SCALE

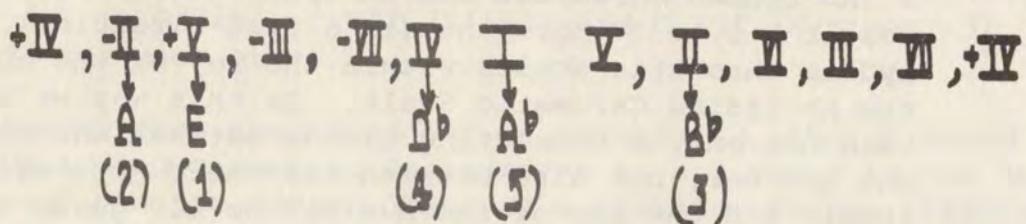
FOUR FIFTHS DOWN (FLAT)

You can see that the above example differs radically from example 42. We begin with a chord (Gb7b5) that is four-fifths removed, in a flat direction, from the key of the music (Ab). (In example 42 our first chord (F-7) is the VI chord of the key of the music, the Ab Lydian Chromatic Scale.) The Gb7b5 chord (a II chord of the E Lydian Chromatic Scale) resolves to a +V chord of the A Lydian Chromatic Scale one-fifth down, F7+5. The +V chord of the A Lydian Chromatic Scale resolves to a +IV chord (E-7b5) of the Bb Lydian Chromatic Scale five-fifths down (in a flat direction). The E-7b5 chord

resolves to an A7+5 chord, the +V chord of the Db Lydian Chromatic Scale three-fifths down from the Bb Lydian Chromatic Scale. The +V chord of the Db Lydian Chromatic Scale resolves to the (I) chord of the Ab Lydian Chromatic Scale a fifth above, Ab Major 7th.

In terms of the key of the music (the Ab Lydian Chromatic Scale) the four-bar progression of Lydian Chromatic Scales in example 43 was (+V) to (-II) to (II) to (IV) to I (Ab).

THE A^b LYDIAN CHROMATIC SCALE



TEST LESSON VII

1. Take any song and analyze its chord pattern, using the Circle Of Close To Distant Relationships.
2. Try improvising on the chord patterns offered by the song, using vertical and horizontal scales.
3. Make suitable chord substitutions in the song, using the Circle Of Close To Distant Relationships.
4. Improvise on the new changes of the song, using vertical and horizontal scales.
5. Construct your own chord patterns using the Circle Of Close To Distant Relationships.

FINAL COMMENT

In this eight-lesson course we have attempted to give you an insight into:

1. The relationship between chords and scales
2. The relationship between chords and other chords, and between chords and the key of the music
3. The melodic possibilities that exist on a single chord (vertical)
4. The melodic possibilities that exist in a tonic station area (horizontal)

It is hoped that you have found in this course the beginnings of a chromatic technique -- a way of exploring the chromatic possibilities that exist within our own traditional chord-based jazz frame. The Concept is of a jazz origin, but by no means is it applicable only to jazz music. The phase of the Lydian Chromatic Concept Of Tonal Organization that has been presented in this course is applicable to all music.

The Concept does not legislate taste. Hence, there are no "do's" and "don'ts" -- no laws. It is, rather, an attempt to organize all the tonal materials that the jazz improviser deals with, so that he may choose for himself on the basis of his own aesthetic needs. The Concept provides the possibilities -- it is for the musician to explore these possibilities. By analyzing his choices, the musician may broaden his taste vocabulary -- and possibly find his own concept within this one.

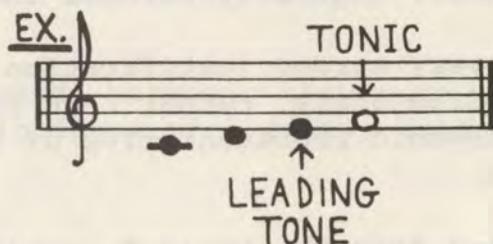
The manner in which people absorb knowledge varies greatly. There will be those who will incorporate the tool which this Concept offers with a minimum of difficulty, using it as a creative tool almost immediately. On the other hand, there will be those who will play and think as they have always played and thought preferring to use the Concept more as an analytical tool to relate and define what they are doing.

Both approaches are equally valid, for ultimately no concept alone can produce art. A concept, if it is a good one, can only organize the vast resources of our art, making us aware of materials that we might have been ignorant of and giving us some method of selecting these new materials. It is our own aesthetic judgement, finally, which must take these new resources and humanize them with our own personal touch, and if that touch is strong and beautiful, make art. To do this, one must absorb this new knowledge in his own personal way.

George Russell

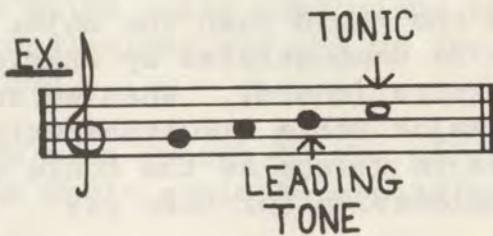
THEORETICAL FOUNDATION OF THE
LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION

The Lydian Chromatic Concept of Tonal Organization reveals the tonal relationship between scales and tonal centers. It is based upon a theory that a major scale does not completely fulfill, agree with or satisfy the tonality of its tonic major triad. It suggests that the major scale actually embodies two tonalities. These tonalities are represented by the two tetra-chords which, when combined, form the natural sequence of the major scale. Using the C Major Scale as an example, the first of these tetra-chords, beginning on the tonic of the scale (C,D,E,F), actually resolves to the F Major tonality, the leading tone (E) resolving to the tonic (F):



As a V-I (C-F) resolution in the key of F Major, this would be fulfilling. However, as a I-IV progression in the key of C Major, it tends to lead away from the tonality of the tonic major chord.

The second tetra-chord of the C Major Scale, beginning on G, and resolving to C, represents a V-I resolution in the key of C. It naturally agrees with the tonality of the tonic major chord:



The second tetra-chord of the C Major Scale is also the first tetra-chord of the G Major Scale. This fact led to experiments in which the G Major Scale was superimposed upon the C Major chord. The first tetra-chord of the G Major

Scale (G to C), naturally, would not clash with a C Major chord. The second tetra-chord of the G Major Scale (D to G) resolves to a tone which is the fifth of the C Major chord, and for this reason is much more compatible with the tonality of the C Major chord than the first tetra-chord of the C Major Scale. Consequently, the G Major Scale was accepted as the most closely related scale to the tonality of the C Major chord in a vertical harmonic (scale) sense.

chord

With the major scale a 5th above a major chord being accepted as its closest related scale in a vertical harmonic sense, it follows that the Lydian Mode of the major scale a fifth above a major chord will even better suit the tonality of the major chord, because the tonic of that mode is identical with the tonic of the major chord. Thus, for instance, the Lydian Mode of the G Major Scale (C, D, E, F#, G, A, B) agrees completely with the tonic and tonality of the C Major chord and, therefore, logically becomes the C Lydian Scale.

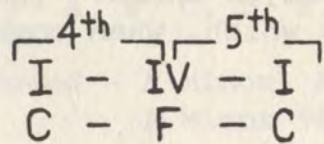
There is a very strong justification in the overtone system for the Lydian Scale, rather than the major scale, being the true harmonic representative of the tonality of its tonic major chord.

By proceeding from the tonic C upwards in fifths (the strongest harmonic interval of the overtone system) to the tone F#, a vertical structure containing the tones of the Lydian Scale will be produced (C, G, D, A, E, B, F#). In order to obtain the tones of a major scale by this method, the last fifth of the structure (B natural to F#) would have to be altered a half tone (B natural to F natural); thus interrupting the perfect symmetry of the fifths, and upsetting the harmonic logic implied by the structure.

Additional evidence that the Lydian Scale, beginning on the tonic of a major chord, is more closely related vertically to the tonality of the chord than the major scale, beginning on that tonic, can be demonstrated by examining the major scale as a harmonic structure (chord). When we strike all the seven tones of the C Major Scale simultaneously, the fourth of the scale (F) seems to emerge as the tonic of the harmonic structure. The explanation for this is:

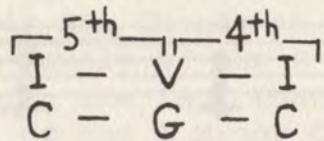
1. The first interval of harmonic significance that can be formed with the tonic of the scale (C) is

the interval of a fourth (C-F). Add a fifth (F-C) and we have the fundamental harmonic structure of the major scale:



2. According to Hindemith, the tonic of an interval of a fourth is the upper note, while the tonic of an interval of a fifth is the lower note. Consequently, in viewing the major scale as a chord, both intervals indicate that the tone on the fourth degree is the tonic of that chord. The C Major Scale, therefore, is actually an F Major chord.

The fundamental harmonic structure of the Lydian Scale is formed of an interval of a fifth, followed by an interval of a fourth:



It is evident that according to Hindemith's principles, the tonic of both intervals is the root of the scale.

The presence of the interval of a fourth in the lower structure of the major scale subdivides the tonality of that scale into two tonalities; the one on its fourth degree, and the one on its root.

The absence of a fourth in the structure of a Lydian Scale enables the whole scale to emphasize the root tonality.

The major scale probably emerged as the predominating scale of Western music, because within its seven tones lies the most fundamental harmonic progression of the classical

era -- the tonic major chord on C -- the subdominant major chord on F -- the dominant seventh chord on G -- thus, the major scale represents a crystallization of the fundamental harmonic progression of the classical era. The major scale resolves to its tonic major chord. The Lydian scale is the sound of its tonic major chord. The Lydian Scale is the first of six scales which, when combined, form a Lydian Chromatic Scale.

THE LYDIAN SCALE

The modes of the Lydian Scale produce chord families. (A mode is the complete circulation of a scale begun and completed on any one of its tones.)

The first mode of the Lydian Scale introduces the relative Major Chord Family of a Lydian Chromatic Scale.

1. Lydian Mode I
2. Structure - C, D, E, F#, G, A, B
3. Chords produced - C Major and Altered C Major Chords (C Maj.b5) (C Maj.+11)

EX.

A musical staff in G clef. It shows six chords: C Major (two dots), C 6th (one dot), C MAJ. 7th (two dots), C MAJ. 9th (three dots), C MAJ. 9th+11 (four dots), and C MAJ. b5 (one dot). The notes are positioned on the first, third, and fifth strings.

The second mode of the Lydian Scale, Lydian Mode II, produces the relative Seventh Chord Family of a Lydian Chromatic Scale.

1. Lydian Mode II
2. Structure - D, E, F#, G, A, B, C
3. Chords produced - D7th, D9th, D11th, D13th

EX.

A musical staff in G clef. It shows four chords: D 7th (two dots), D 9th (three dots), D 11th (four dots), and D 13th (five dots). The notes are positioned on the first, third, and fifth strings.

The sixth mode of the Lydian Scale, Lydian Mode VI, produces the relative Minor Chord Family of a Lydian Chromatic Scale.

1. Lydian Mode VI

2. Structure - A, B, C, D, E, F#, G

3. Chords produced - A Minor, A Minor 6th, A Minor 7th, A Minor 9th, A Minor 11th, A Minor 13th

EX.

A MIN. A MIN. 6th A MIN. 7th A MIN. 9th A MIN. 11th A MIN. 13th

It will be recalled that the C Lydian Scale is originally the Lydian Mode of the G Major Scale. It is worth noting that according to traditional music theory, the A Minor chord is the relative Minor Chord of the C Major Scale. However, the Lydian Concept contradicts this and claims that not only the A Minor Triad, but also the A Minor 7th and A Minor 6th Chords as well are in truth the relative Minor Chord Family of the G Major Scale. Evidence of this lies largely in the fact that the G Major Scale produces more chords of the A Minor Chord Family than the C Major Scale -- The G Major Scale produces the whole A Minor Chord Family, while the C Major Scale produces an A Minor Triad, and an A Minor 7th, but it cannot produce an A Minor 6th chord. This proves conclusively that harmonically, at any length, the A Minor tonality is not as closely related to the C Major Scale as it is to the G Major Scale.

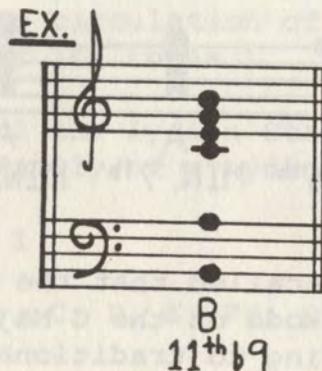
It has been illustrated how the Lydian Scale produces the relative Major, Minor and Seventh Chord Families of a Lydian Chromatic Scale; the Major Chord Family is produced on the I Mode (Lydian Tonic) of the Lydian Scale beginning on C; the relative Minor Chord Family is produced on the VI Mode of the Lydian Scale beginning on A; the relative Seventh Chord Family of a Lydian Chromatic Scale is produced on the II Mode of the Lydian Scale beginning on D - three of the five basic chord families living harmoniously under one roof, and being related to one another by the connecting

tissue of a common Parent Scale, the C Lydian Scale.

The +IV mode of the Lydian Scale (F#, G, A, B, C, D, E) produces an important chord, the minor seventh, b5 chord.



Another important chord is produced by the VII Mode of the Lydian Scale (B, C, D, E, F#, G, A), the eleventh, b9 chord



THE LYDIAN AUGMENTED SCALE

By raising the 5th degree of the Lydian Scale a half tone from G to G#, the C Lydian Augmented Scale is created.

Scale Structure - C, D, E, F#, G#, A, B

The Lydian Augmented Scale serves to augment the fundamental major, minor and seventh chord families already produced by the I, VI and II modes, respectively, of the Lydian Scale.

Mode I of the Lydian Scale produces the major chord family. Mode I of the Lydian Augmented Scale produces augmented 5th versions of that major chord family.

1. Lydian Augmented Mode I
2. Structure - C, D, E, F#, G#, A, B
3. Chords Produced - Augmented Major Chords

EX.

A musical staff in G major (one sharp) showing four chords. The first chord is labeled "C AUG MAJ.". The second chord is labeled "C AUG MAJ.7th". The third chord is labeled "C AUG MAJ.9th". The fourth chord is labeled "C AUG MAJ.9th+11".

Mode II of the Lydian Augmented Scale produces augmented 11th (or flattened 5th) versions of the dominant seventh chords produced by Mode II of the Lydian Scale.

1. Lydian Augmented Mode II
2. Structure - D, E, F#, G#, A, B, C
3. Chords Produced - D7(b5), D9(+11), D13(+11), etc.

EX.

A musical staff in G major (one sharp) showing three chords. The first chord is labeled "D 7th b5". The second chord is labeled "D 9th +11". The third chord is labeled "D 13th +11".

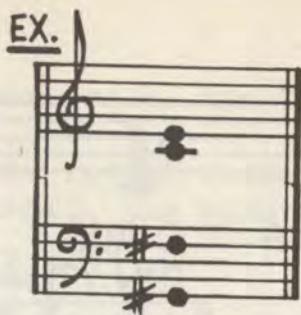
Mode VI of the Lydian Augmented Scale produces augmented seventh versions of the minor chords produced by Mode VI of the Lydian Scale.

1. Lydian Augmented Mode VI
2. Structure - A, B, C, D, E, F#, G#
3. Chords Produced - A Minor (+7), A Minor 9(+7)

EX.

A musical staff in G major (one sharp) showing two chords. The first chord is labeled "MIN.+7". The second chord is labeled "MIN.9th+7".

The +V Mode of the Lydian Augmented Scale (G#, A, B, C, D, E, F#) produces an important chord, the seventh, +5 chord.



G#
SEV. +5

THE LYDIAN DIMINISHED SCALE

Now four of the five basic chord categories (Major, Minor, Seventh and Augmented) dwell within one Lydian Chromatic Scale (in this case the C Lydian Chromatic Scale); along with the two scales which parented them, the C Lydian Scale and (its augmented derivative) the C Lydian Augmented Scale.

The only chord category remaining to be introduced into the Lydian Chromatic Scale is the diminished chord category. By lowering the third degree of a Lydian Scale (E to Eb), the Lydian Diminished Scale is born.

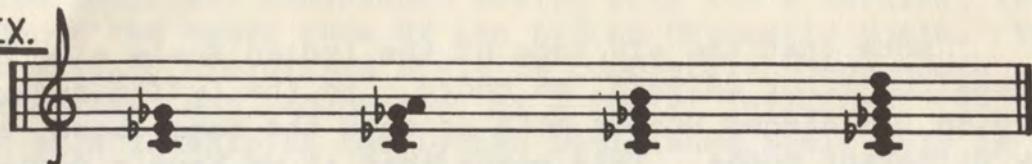
Scale Structure - C, D, Eb, F#, G, A, B

The Lydian Diminished Scale serves to introduce the Diminished Chord Family into the fold of a Lydian Chromatic Scale, thus gathering all the basic chord categories (Major, Minor, Seventh, Augmented and Diminished) together under one Lydian Chromatic Scale, in this case, the C Lydian Chromatic Scale. It also serves to diminish the fundamental Major, Minor and Seventh Chord Families, which are produced by the Lydian Scale.

Mode I of the Lydian Diminished Scale produces diminished (flattened 3rd) versions of the basic major chords produced by Mode I of the Lydian Scale.

1. Lydian Diminished Mode I
2. Structure - C, D, Eb, F#, G, A, B
3. Chords Produced - Diminished Major Chords

EX.



C DIM.
MAJ. TRIAD

C DIM.
TETRA CHORD

C DIM.
MAJ. 7th

C DIM.
MAJ. 9th

Mode II of the Lydian Diminished Scale produces flattened 9th versions of the dominant seventh chords produced by Mode II of the Lydian Scale.

1. Lydian Diminished Mode II
2. Structure - D, Eb, F#, G, A, B, C
3. Chords Produced - 7th(b9), 11th(b9), 13th(b9)

EX.



D
7th, b9 D
11th, b9 D
13th, b9

Mode VI of the Lydian Diminished Scale produces diminished 5th versions of the Minor Chords produced by Mode VI of the Lydian Scale.

1. Lydian Diminished Mode VI
2. Structure - A, B, C, D, Eb, Gb, G
3. Chords Produced - Minor 7(b5)

EX.



A
MIN. 7th b5

Note that the +IV Mode of the Lydian Scale also produces the minor seventh, b5 chord. So the Lydian and the Lydian Diminished Scales both produce the same chord, although by different modes. This means that if we have a D Minor Seventh, b5 Chord, for example; it may be given a +IV interpretation (Ab Lydian Scale), or a VI interpretation (F Lydian Diminished Scale).

THE NINE TONE SCALE

The Nine Tone Scale is the consonant nucleus of a Lydian Chromatic Scale because it is a synthesis of its three most consonant scales: the Lydian Scale, and its two derivative scales, the Lydian Augmented and the Lydian Diminished Scales. The Nine Tone Scale is not listed in the body of scales of a Lydian Chromatic Scale. However, it is available for use when the consonant nucleus of a Lydian Chromatic Scale is to be projected. Using C as an example, the structure of the Nine Tone Scale would be:

C, D, Eb, E, F#, G, G#, A, B

The Lydian Scale naturally is the most consonant scale of a Lydian Chromatic Scale. The Lydian Augmented Scale, with its +5 degree, and the Lydian Diminished Scale, with its b3 degree, follow in that order. These three scales establish nine tones of the Lydian Chromatic Scale.

AUXILIARY SCALES

There are three more scales, not of a Lydian derivation, which are included in the body of scales of a Lydian Chromatic Scale, because they represent basic and distinctive tonal shades of it.

AUXILIARY DIMINISHED SCALE

The first of these scales is the eight-toned Auxiliary Diminished Scale. Using C as an example, the structure of the scale would be:

C, D, Eb, F, F#, G#, A, B

The Auxiliary Diminished Scale, with its F natural, introduces the tenth tone of the Lydian Chromatic Scale. The Auxiliary Diminished Scale is completely homogeneous in tonality, and independent of a Lydian influence. It bears a relationship to the Lydian Diminished Scale only in that its modes duplicate some of the chords produced by the modes of that scale. However, the Auxiliary Diminished Scale exercises a tonal authority over these chords that is entirely consistent with the tones of the scale.

Auxiliary Augmented Scale

The Auxiliary Augmented Scale ushers in the eleventh tone (A#) of the Lydian Chromatic Scale. It is completely homogeneous in tonality and independent of Lydian influence. It bears a relationship to the Lydian Augmented Scale only in that it duplicates some of the chords produced by the Lydian Augmented Scale. However, it exercises a tonal authority over these chords that is entirely consistent with its own scale tones. The structure of the scale, using C as an example would be:

C, D, E, F#, G#, A#

The Auxiliary Diminished Scale and the Auxiliary Augmented Scale have a corresponding feature in that when a diminished tetra-chord is combined with a diminished tetra-chord a major second above, it produces the Eight Tone Diminished Scale. The six tone (Whole Tone Scale) is produced when an augmented triad is coupled with an augmented triad a major second above. They differ, however, in that while the Auxiliary Diminished Scale is a scale of even symmetry applicable only to the tonality of the lower of its two scale producing diminished chords, the Whole Tone Scale is a scale of perfect symmetry equally applicable to the tonalities of both of its scale-producing augmented chords.

Auxiliary Diminished Blues Scale

The above scale is the final (and most distant) scale to be added to the group of scales of a Lydian Chromatic Scale. It is also completely homogeneous in tonality, and independent of Lydian influence. Its structure, using C as an example would be:

C, Db, Eb, E, F#, G, A, Bb

The Auxiliary Diminished Blues Scale introduces the twelfth and last tone (Db), forming the Lydian Chromatic Scale.

THE LYDIAN CHROMATIC SCALE

We see now how the six scales, the three scales of Lydian derivation and the three auxiliary scales, contribute to form the Lydian Chromatic Scale.

The five basic chord categories upon which traditional Western harmony is based -- Major, Minor, Seventh, Augmented and Diminished -- are produced by the Lydian, Lydian Augmented and Lydian Diminished Scales.

There are two more scales that must be added to the six scales of a Lydian Chromatic Scale because of their use in horizontal situations, and because of their social and historical significance. These are the Major and Blues Scales.

These eight scales are all contained within a single Lydian Chromatic Scale.

There are twelve Lydian Chromatic Scales, just as there are twelve Major Scales in traditional theory.

The Lydian Chromatic Scale itself will serve not only as a source of diatonic and modal melodies, furnished by its eight member scales; but it will serve also as a source of pan-diatonic, pan-modal, chromatic or atonal (serial) melodies. This is true of a Lydian Chromatic Scale inferred by the single chord, or of one inferred by a horizontal tonal center. The reason for this, as explained in Lesson IV of the course, is that any melody is merely a horizontal sequence of intervals, and all intervals are contained within one single chromatic scale. Therefore, any kind of melody that has ever been created could conceivably be related to any one single chromatic scale. This chromatic scale could be any one of twelve chromatic scales. Consequently, if we are relating to the Lydian Chromatic Scale, determined by a chord, then any melody that we might think of creating might be related to that single Lydian Chromatic Scale. The same holds true when we are relating to the Lydian Chromatic Scale determined by a horizontal tonal center.

HISTORICAL PERSPECTIVE

According to historical grouping the second stage of musical development was the polyphonic music of the middle ages. It is usual to cite as the first invented part-music, the so-called organum or diaphony, as originally described by the Flemish monk Hucbald at the beginning of the tenth century. In this, two voices are said to have proceeded in Fifths or Fourths, with occasional doublings of one or both in Octaves. This, one might say, is representative of the purely musical contrivance which made possible the composing of musical pieces on an extensive plan.

To this condition of the art corresponded the condition of the tonal system. The old ecclesiastical scales were retained in their essentials, the first from D to d, the second from E to e, the third from F to f, the fourth from G to g. Of these the scale from F to f was useless for harmonic purposes, because it contained the tritone F-B in place of the Fourth F-B flat. Again, there was no reason for excluding the scales from C to c and A to a. And thus the ecclesiastical scales altered the influence of polyphonic music.

Glarean, a learned theoretician, undertook in his Dodecachordon (Basle 1547) to put some order into the theory of modes. The following is Glarean's authentic ecclesiastical Lydian Mode (he assigned incorrect Greek names to them): F G A B c d e f. The Lydian Mode was scarcely ever used in polyphonic music, owing to the false Fourth F-B, and when it was employed it was altered in many ways.

Inability to judge of the musical significance of a connected tissue of harmonies again appears in the theory of keys, by the rule, that the key of a polyphonic composition was determined by considering the separate voices independently. Glarean in certain compositions attributes different keys to the tenor and bass, the soprano and alto. Zarlino assumes the tenor as the chief part for determining the key.

The practical consequences of this neglect of harmony are conspicuous in various ways in musical compositions. The

composers confined themselves on the whole to diatonic scale. "Accidentals," or signs of alteration of tone, were seldom used.

Great, then, as was the artistic advance in rhythm and the progression of parts, during this period, it did little more for harmony and the tonal system than to accumulate an undigested mass of experiments. Since the involved progression of the parts gave rise to chords in extremely varied transpositions and sequences, the musicians of this period could not help but hear these chords and become acquainted with their effects, however little skill they showed in making use of them. At any rate, their experiences prepared the way for harmonic music proper, and made it possible for musicians to produce it, when external circumstances forced on the discovery.

Modern harmonic music is characterized by the independent significance of its harmonies. Hence, although we recognize in Palestrina and Gabrieli a delicate artistic sensitiveness for the aesthetic effect of separate chords of various kinds, and in so far, a certain independent significance in their harmonies; yet we see that the means of establishing an internal connection in the tissue of chords has still to be discovered. This problem, however, required a reduction and transformation of the previous scales to our major and minor. On the other hand, this reduction sacrificed the great variety of expression which depended on diversity of scale. The old scales partly form transitions between major and minor, and partly enhance the character of the minor. This diversity being lost, it had to be replaced by new contrivances, such as the transposition of the scales for different tonics, and the modulatory passage from one key to another.

This transformation was completed during the seventeenth century, the most active cause having been the commencement of the opera; which necessitated the discovery of more powerful means of expression than were admissible in ecclesiastical music. Monteverde is the first composer who used chords of the dominant seventh without preparation. Generally in his music we find a bolder use of dissonances, which were employed independently, to express sharp contrast of expression, and not as before, as accidental results of the progression of parts. Also, the mode of connecting musical phrases hitherto in vogue -- canonic repetition of similar melodic figures -- had necessarily to be abandoned as soon as a simple harmonic accompaniment was subordinated to a melody. Hence, some new

means of artistic connection had to be discovered in the sound of the chords themselves. This was effected, first by giving fresh strength to the relations between the chords themselves, and between all other chords and the tonic chord.

In the Pythagorean system, which maintained its predominance over theory to the time of Zarlino in the sixteenth century, the tuning proceeded by ascending Fifths, thus:

C G D A E B F# C# G# D# A# E# B#

By means of mathematical computation we discover that herein the tone B# is higher than the Octave of C by the small interval of $1/73$ of a semitone. If we put $C=B\#$ and distribute this little deviation of $1/73$ equally among all the 12 Fifths of the cycle, each Fifth will be erroneous by about $1/60$ th of a semitone, which is certainly a very small interval. By this means all varieties of tonal degrees within an Octave are reduced to 12, as our modern keyed instruments. The equally tempered system is capable of effecting everything that can be done by the Pythagorean, and with less expenditure of means.

But, it must not be imagined that the difference between tempered intonation and pure intonation is a mere mathematical subtlety without any practical value. That this difference is very striking even to unmusical ears, is shown immediately by actual experiments with properly tuned instruments. Be this as it may, we cannot fail to recognize the influence of tempered intonation upon the style of composition. It allowed composers as well as players to move freely and easily into all keys, and thus opened up a new wealth of modulation. In fact, composers were well-nigh compelled to have recourse to some such wealth of modulation, for when the intonation of consonant chords ceased to be perfect, the differences between their various inversions and positions were, as a consequence, nearly obliterated. It was necessary to use more powerful means, to have recourse to a frequent employment of harsh dissonances, and to replace the characteristic expression which the harmonies proper to the key itself had ceased to possess. Hence, in many modern compositions, dissonant chords of the dominant Seventh form the majority and consonant chords the minority. Continual bold modulatory leaps threaten to destroy the feeling for tonality.

Into this era step the new musicians, the young. They are often inadequately oriented, and on the whole restless impatient. They inherit chaos and cannot clearly comprehend all they hear, nor all that they are told. They sense that something is awry, but they do not know what and follow the random leaders.

Nomenclature, language, definition, usefulness and practicality are the requisites for lessening, if not eliminating the confusion and recklessness in the direction which the highest excursionists will travel regardlessly. Let them have a new tonal organization language to describe their chords, modest or immodest as they may be. Let them find what they seek, namely, a new language with which to understand each other even in high waters.

An Evaluation of the Lydian Mode
As the Basis of a New Concept

1. The equal-tempered system of intonation equalizes the pitch vibrations between the 12 semitones (half-tone intervals) of an Octave.
2. The major scale, for example, is a mode or array of semitones, arranged in such a manner that its semitone structure (2 2 1 2 2 2) -- where one equals one semitone -- crystalizes the linking of two tetra chords by a whole step.
3. To obtain this major scale we go through the circle of Fifths. When we do so it can be observed that each consecutive Fifth is 7 semitones away from the other, except the sixth step in the circle. This one is 6 semitones away from the one before it.
4. In the Lydian mode of the major scale (2 2 2 1 2 2) when we go through the circle of Fifths to obtain its notes, we observe that every consecutive Fifth is 7 semitones away from the other, including the sixth step in the circle.
5. The Lydian mode thus exhibits a structural array of semitones which has the property of adding to the equal-tempered 12 divisions of the Octave interval an additional character of symmetry, by virtue of the fact that the structure of this mode is in it-

self completely symmetrical in its source, in the circle of Fifths. Furthermore, the mode structure is such that it contains a tone (F#) that is exactly mid-way in the Octave interval, thus symmetrically dividing the 12 semitones of the Octave at the sixth semitone. This additional aspect of symmetry, as well as the symmetry of the completely 7 semitonned circle of Fifths in its source, further "equalizes," even in the structural respect, the scale from which a new language can be built. This additional "equalization" aspect of the Lydian mode is both an accidental and a coincidental property of it.

6. The data gathered by Russell appears to enable him to simply relate every type of chord (and melodic note) to a parent scale. Everything comes under one roof. This is a new tonal organization, a new perspective. The relationships of the materials are now as coherent and unified as 'Relativity' has made 'Classical Physics and Philosophy.'

George T. Endrey

(1953)

THE "RIVER TRIP" EXPLANATION
OF JAZZ IMPROVISATIONAL STYLES

Let's take a large river, like the Mississippi for example, and call it a tune. Now suppose the small towns along its shores are chords, and the larger towns are not only chords, but tonic stations as well. (Tonic stations are points in any chord-built composition to which two or more chords tend to resolve. C Major or Minor would be the tonic station to which D-7 and then G7 would tend to resolve. Within a single song there may be a two-bar tonic station, a four-bar tonic station, and an eight-bar tonic station, etc. The big overall tonic station would be the key in which the music is written.)

Now let's say you're Coleman Hawkins and you're going to take a trip down the river on a steamer called "The Melody (parent scale) Inferred by each Chord." This steamer is a local and will make stops at all the towns along the river. Hawk's melodic trip then will be governed by the local gravities of each town. In other words his melody is dictated by the gravity of each chord. Occasionally the steamer will skip a couple of small towns and come to rest at a larger town (tonic station), but not too often.

Lester Young takes an express steamer that makes stops only at the larger ports along the river (the tonic stations). Occasionally the steamer might pull in at one or two small towns (chords), but generally it only makes stops at the larger cities. The name of the steamer is "The Melody (parent scale) Inferred by a Tonic Station." Lester's melodic trip is governed essentially by the gravity of these larger towns. By and large he will override the gravity of the smaller towns (chords).

John Coltrane takes the trip down the Mississippi. His trip will be like the one Coleman Hawkins makes in the steamer, in that his conveyance is also a local and will stop at every town. However his means of transportation is a rocket ship called "The Chromatic Melody (parent Lydian Chromatic Scale) Inferred by each Chord." This rocket ship jets off from one small town and soars into the chromatic universe, then descends upon the neighboring town a short distance away, repeating this process for the duration of the river trip.

Coltrane's melody, like Hawkins', is governed by the gravity of each chord, except that Coltrane ascends into the "chromatic sphere" of each chord, while Hawkins stays on the ground close to the sound of the chord. You might say that Hawkins stays close to home and visits with the local gentry.

Both Coltrane and Hawkins will occasionally by-pass a town or two and land at a tonic station. However Hawkins will be in his steamer, while Coltrane will be in his rocket ship.

Ornette Coleman also will make the trip down the river. His conveyance, like Coltrane's, will be a rocket ship. However the name of the rocket ship will be "The Chromatic Melody (parent Lydian Chromatic Scale) Inferred by the Over-all Tonic Station." The over-all tonic station is the key of the music. Once his rocket ship jets off from St. Louis and soars into the chromatic sphere, it may not touch ground again until it has reached New Orleans. It may occasionally descend upon a tonic station or even a chord, but it is keyed to the gravity of the single over-all tonic, which is the key of the music. However the gravity of this over-all tonic is so broad that it allows Coleman to concentrate on other things like the meaning of the tune, or the idea suggested by a single tone, or the idea suggested by the preceding idea. These elements serve as the propulsion fuel for Coleman's rocket ship, whereas the propulsion for Hawkins and Coltrane is the gravity of the chords. Lester Young's gravity, the tonic station, is a little less rigid.

It is conceivable that Ornette's rocket ship may not directly relate to the gravity of the over-all tonic at all. Therefore he may never actually resolve into it. He may remain aloft indefinitely, allowing his ideas to resolve themselves naturally.

The reference to John Coltrane in this article was based on his style up to and through the period during which he was a member of the Miles Davis group. The wide open modal style of that group ("So What" and "Milestones" built simply on two modes) seems to have converted Coltrane from pieces with complex chord progressions ("Moments Notice") to pieces with very little chordal motion ("My Favorite Things"). In this new approach, Coltrane is given the chance to 'stretch out' into the chromatic sphere of a given mode and, as a consequence, expand his phrases rhythmically. It would appear that he, like Coleman and Eric Dolphy, is relating his lines to the broader-based gravities.

ORNETTE COLEMAN AND TONALITY

GEORGE RUSSELL AND MARTIN WILLIAMS

This dialogue began as a conversation about an Ornette Coleman recording, and quickly spread to the theoretical implications of Ornette's tonal practices. Though George Russell's exposition of the tonal problem is lucid and supported by many illustrations, it is also, like one of Coleman's shrieks, an intense and deeply felt appeal for the liberation of the melodic idea from the chord prison.

George, you wanted to discuss Ornette Coleman. I have another subject too, but we'll get to that later. Well, you know, if there weren't new things happening in jazz since Charlie Parker, jazz wouldn't be ready to accept Ornette. I believe it now is ready to accept not only him, but other innovators as convincing as he is. The way has been paved and the ear prepared by rather startling, though isolated, developments in jazz since the 'forties. Since the bop period, a war on the chord has been going on, I think. You might characterize the whole era as the decline and fall of the chord.

In other words, Charlie Parker is a kind of end, or the beginning of an end. Is that it?

Yes. He probably represented the last full blossoming of a jazz music that was based on chords. Now, that isn't to say that after Charlie Parker there aren't people who play very well using chords, but over-all, this decline and fall of the chord has been happening. Back in the 'thirties, there was a pianist, Spaulding Givens, who played with great tonal freedom. Lester Young probably led the attack long ago, because you know Lester didn't really enunciate every chord, but he sort of felt where the chords were going and anticipated it by imposing a scale which would cover a series of chords. He played on top of the chords; he used a scale, and the scale implied the gravity, to sort of let the listener know where the chords are going. In jazz composition, I'd say of Gerry Mulligan that his main contribution was in horizontal thinking. That goes for Bill Holman too, and for Bobby Brookmeyer. The whole school of horizontal writing is updated from Count Basie via Tiny Kahn. Mulligan seemed able to impose on music, other than the blues, a scale, and to impose that scale on various tonal centers, but it was really the scale and all the contrapunctal things that were happening in the scale rather than the vertical tonal centers that gave the music motion. For instance in *Young Blood*, and in Bill Holman's wonderful *Theme and Variations*. Mulligan's whole approach to writing was horizontal. This is, in a sense, an assault on the chord. (That isn't to say that all these people were doing it consciously.) In being horizontal, or in using or feeling things horizontally, there's much more freedom of movement. When you're playing vertically, and you have to articulate each chord that comes up, it can be very inhibiting rhythmically and in line. The horizontal approach frees you to get something going in motion.

George, many people have wondered why Mulligan's playing and improvising remained conservative harmonically after he dropped the piano. The freedom that everybody expected never happened. This isn't about Gerry as a composer of course.

Well, I thought it happened; maybe only a beginning, but I thought it happened because Gerry was showing that you didn't need strongly implied vertical structures to make music. And so I thought that it was a very important thing even though harmonically he didn't venture out too far, he did show that the scale itself is strong enough to satisfy your feeling of tonality. But getting back to the main subject, between Charlie Parker and the present time, you have Mingus and Teddy Charles and Gil Evans and Johnny Carisi and any number of other people. They were people who in various ways were leading an assault on the chord. In Gil Evans, the motion he introduces into the orchestra is, in a sense, a rebellion against the set chord change. In Mingus and Charles, it was the extended form. The modal period that Miles Davis is in now is a rebellion against the chord—he plays perhaps, a whole piece that's built on just two modes. It's essentially a horizontal approach; it's a rebellion against the chord. I don't think Bill Evans plays chordally behind Miles on those things. He plays modally, in the prevailing mode. As I was saying before, even the need to do extended-form pieces, whether successful or not, is a desire to get away from a set chord change. And Ellington can't

be overlooked in a discussion of this kind, because he, like Charlie Parker, had a well-developed sense of both the horizontal and the vertical approaches to jazz, and like Charlie Parker, he let both influence his music. To me, vertical and horizontal thinking are the two basic forces underlying all jazz.

Let's take the vertical approach first; we'll call it the vertical assault on the chord. The logical end of vertical playing is playing by chord in vertical chromaticism. In other words, playing chromatically upon the single chord. And that doesn't mean just using chromatic half steps but using all the intervals. Schoenberg said that the twelve tones of the chromatic scale were equal. But to me the most important fact underlying modern music is that the chromatic scale, since it contains all twelve tones, contains all intervals, all chords and all scales. In other words, you have a C chromatic scale, then, it's possible to rationalize that D major scale is a part of that C chromatic scale, that Db major scale is a part and that the F chromatic scale is a part of that C chromatic scale. So all tonal elements are a part of that chromatic scale. So you might say that all the music that has ever been written is a part of that single chromatic scale.

Now, if you're an atonalist you will say that all the tones of that chromatic scale are equal and that there is no tonal center. In other words, it's not the C chromatic scale, it's just a chromatic scale. And so consequently there is no tonal center or tonel gravity or close to distant relationship of tones—so there are no definable chords and no definable scales. There are only vertical and horizontal rows or arrangements of the single chromatic scale. If you believe in a tonal center and yet you believe in a chromatic scale too, then you might say that all tones are relative to the tonal center and therefore all chords and all scales and all chromatic scales within this single chromatic scale are relative to the tonal center. You understand? Since it is a twelve-tone scale it contains all intervals. Now melody is a horizontal sequence of intervals, and chords are simply a vertical sequence of intervals. And if one chromatic scale contains all intervals then it also contains all melodies; it could conceivably contain all melodies and all chords, because it is all intervals and all chromatic scales. In other words, another chromatic scale might just be a mode of this one chromatic scale because chromatic scales are also intervals.

So, there seem to be two schools of modernism: those people who believe in a tonal center but also believe in chromaticism and those people who don't believe in a tonal center. One thing we all have in common is the chromatic scale. If we believe in a tonal center then we might be called pan-tonalists. In other words, we believe in a tonal center but we believe that all chords, all scales are relative to that tonal center. If we don't believe in the tonal center, then we are atonalists, and all tones are equal. But we still believe in the chromatic scale.

Now in jazz I believe that there are two melodic approaches, either vertical or horizontal, and the logical end of vertical playing is vertical chromaticism. The single chord does exist, each single chord does exist for the player. But rather than just using the intervals of the chord or the intervals around it, the player utilizes the chromatic scale implied by the chord—

and not just step-wise, he realizes the whole implication of the chromatic scale. He is relating to the chord, but he is relating to the chord chromatically. To me this is the logical, this is what Coltrane in his playing is illuminating, the vertical, the chromatic relationship to the chord. X number of chords upon one single chord. You can call it "sheets of sound," but that doesn't really say what it is. And I don't think that John has reached the end of that. I think that he is in it, though, and I think that he will probably go on. He really does believe in the chord. So if he does believe in the chord then this is the logical end of his playing—a kind of vertical chromaticism.

And so with the horizontal approach, and this has really been unexplored up until Ornette; the logical end of the way Lester Young started out playing is a horizontal chromaticism. That is, utilizing a chromatic scale that might be inferred by a series of chords.

Briefly could you make a comparison between Coltrane and Hawkins?

Well, Hawkins, to me, sticks very close to the sound of the chord. While Trane knows the chord exists but he also seems to sense that there is a whole unexplored universe that that chord implies.

But they're both vertical players.

To me, they're both essentially vertical players. Lester is essentially a horizontal player. But the interesting thing is that since the logical ends of both of these ways of playing is chromaticism then the result is the same. Ultimately, if you have a skillful vertical player who is chromatic and a skillful horizontal player who is also chromatic, it'll sound the same; their tonal things will be in the same area. These two things fuse when you really get them out. So Ornette cannot be called vertical or horizontal because he seems to be fully aware of both of these two aspects of music and where they lead.

Well, I think it might be a good idea if we made it clear that this is a matter of Ornette's inner demon and ear telling him these things.

Well, Martin, most worthwhile jazz knowledge has grown organically, right along with the growth of the music. Ornette through his own intuitive logic came to these conclusions. And from talking to him, I know he knows these things. He knows about these things; he's not just playing that way just because he feels it. He's playing that way because he feels it and knows it too.

I'm trying to make a distinction between, well, let's say it this way: there have been a couple of false prophets in the last fifteen years who have what I will call a "Juilliard guilt complex." They've gone to music school; they've learned theoretically what atonality is all about, and they think they're going to impose something "high-toned" and "meaningful" on jazz because of what they learned in school. But this is an organic growing. Ornette is not that kind of thing at all.

I agree. But back to the tonal problem. So there is a fusion of vertical and horizontal thinking when they are both approached chromatically. When the soloist does graduate into the chromatic implications of vertical playing and horizontal playing, then the two things fuse. Vertical thinking leads to chromatic freedom relative to a vertical tonal center; horizontal thinking leads to chromatic freedom relative to a horizontal tonal center. Then if a soloist chooses to be

completely free, it really makes no difference to which of these centers he attaches his thinking. A result in any given number of measures will be the same kind of what I call pan-modal chromatic expression. He will never be wrong, whatever he does; he'll only be in different stages of tonal gravity relative to existing vertical or horizontal tonal centers. Because once you say that the chromatic scale contains all intervals and therefore all of music, then all music must be relative. And if all music is relative then it can't be right or wrong. If you belong to the group that believes in the tonal center, then you have to believe in relativity, and if you believe in relativity, you have to believe in a gravity. Because the tonal center is the center of tonal gravity. So if a chromatic scale, let's say the C chromatic scale, contains all chords, then it contains Gb min7 as well as C major 7th and Abmin7. And these chords don't have a right-wrong relationship to each other, they have a relationship to the tonal center in terms of their closeness to each other; in terms of their closeness to the tonal center or in terms of their distance from the tonal center or each other. If you think this way and you're going to make a substitution for a chord in a song, it's impossible to choose the wrong chord. You may choose a chord that in relation to the key of the music is not as close as you would like it to be the key of the music or to the preceding chord, but it is not "wrong." It's just a matter of gravity.

The standard would be ultimately . . .

Just a matter of the closest gravity. In other words, everything in music is related in terms of close to distant relationships and there is no "right" and "wrong." You follow?

Yes. It frightens me, but I follow it. I know that a world without absolute rules is not necessarily a disorderly world.

It must have been frightening too when Schoenberg announced his theory, that all the tones of the chromatic scale are equal. Yet somehow music survived, and new values of good and bad evolved right along with music, to lead to the recognition of Alban Berg and Webern and a few others as true masters of music. To go on, now, let's say a horn player and the bass player improvise simultaneously and they both realize that there is no "right" and "wrong" in music, there's only relativity. They improvise simultaneously in this chromatic pan-modal way. (By pan-modal I mean, that since all things are relative then you can use all things; you are free to use anything with anything else.) If the horn player and the bass player improvise simultaneously in this chromatic pan-modal way, entirely new vertical centers are created just naturally; they just happen. And all of the horizontal centers, except maybe the one big over-all tonal center of the whole piece, are abolished, really. It even becomes academic whether the one big over-all tonal center of this improvisation exists or not. The over-all tonal center can exist for the performer or listener, or not, but it doesn't have to.

Well, this is what Ornette meant when he asked at Lenox last summer, "What is the tonic . . . or where is it?" The only answer that I know of is that vertical and horizontal tonics can exist for you if you choose to acknowledge them. You don't have to if you don't choose to. Actually in music everything is relative. The

fact that Ornette has liberated himself from tonal centers has a metric implication because since all tonalities are relative to each other, it doesn't really matter where he is in this tune. What he is doing is still relative to what the bass player is doing. So he might feel like saying the bridge in two bars while the bass player plays the full eight bar bridge. However, in listening to them, I don't think they do it this mechanically because Charlie Haden seems to sense where Ornette is going and is able to follow him. But if everything is relative, it's theoretically possible to do anything.

Pan-tonal jazz is here. It seems logical to me that jazz would by-pass atonality because jazz is a music that is rooted in folk scales, which again are rooted strongly in tonality. Atonality, as I understand it, is the complete negation of tonal centers, either vertically or horizontally. It would not support, therefore, the utterance of a blues scale because this implies a tonic. But pan-tonality is a philosophy which the new jazz may easily align itself with.

At the most elementary level, does a blues scale necessarily imply a tonic . . . to the performer at hand, I mean?

Well, yes. If I play a phrase of blues it implies the tonic. But does it in practice? I mean to a guy like Sonny Terry. He just runs blue notes to accompany his vocal lines usually, without worrying about keys or chords.

Well, I think guys have been thinking horizontally since jazz began, but they didn't rationalize it. I think there's been pan-tonal music before now, but I don't think people really thought about it in those terms. So, pan-tonality emerges to me as a kind of philosophy of the new jazz. Now, of course, to the listener and to the person who enjoys art, pan-tonality doesn't have to mean a thing. But I think it should mean something to musicians. Ornette is a pan-tonal musical thinker. I think it's wrong to think that you can just jump out there to pan-tonality without having evolved. Coltrane is showing us how to evolve there through vertical and super-vertical thinking. One great trumpet player, said that it's awfully easy to shuck if you ignore chords, and it is, if you don't have anything strong or convincing to put in their place. Of course, if you don't, then it will be pretty obvious that you're only shucking—if you don't have anything like Ornette has . . . the intensity, the belief.

On the other hand, chords have always helped the jazz player to shape melody, maybe to an extent that he now is over-dependent on the chord. Ornette seems to depend mostly on the over-all tonality of the song as a point of departure for melody. By this I don't mean the key the music might be in. His pieces don't readily infer key. They could almost be in any key or no key. I mean that the melody and the chords of his compositions have an over-all sound which Ornette seems to use as a point of departure. This approach liberates the improviser to sing his own song really, without having to meet the deadline of any particular chord. Not that he can't be vertical and say a chord if he chooses. I've heard Ornette stick pretty close to the changes when he wants to. And as I say, Coltrane, it seems to me, is just bursting at the seams to demolish the chord barrier, and because of this, he is enlightening everyone to what can happen on a single chord. However a person evolves, whether it's through their own intuitive logic or from outside influences, it has to be con-

vincing. If the artist really believes in what he is doing and is capable, the result will be satisfying. Maybe it won't satisfy us on the basis of our old criteria of good and bad. But our sense of good and bad is reconstructed every time there is valid artistic revolution anyway. And that's where we in jazz are today, in an artistic evolution or revolution.

As for Ornette's sense of form in improvising, I don't see how you can be a skillful improviser and not at least construct a solo that has over-all meaning in terms of feeling, even if its formal structure is not obvious. I believe Ornette's solos communicate powerfully. This is the most important thing. I think there are times in one single solo when he is more interested in intensity of statement than in thematic elaboration, but this is his own aesthetic decision. In fact, it may be in good taste to sacrifice thematic elaboration for the sake of over-all impact. There can be a great debate on whether innovations in form in improvised jazz outrank innovations in content in improvised jazz.

Though one may say that Bird's solos were not masterpieces of structure (I prefer to think that they are simply not rigidly designed nor needed to be), the rhythmic, melodic phrases and the message had an historical impact. Form can be anything that interrupts space. The only criterion of form is whether the content as a whole is believable. There are millions of forms. Coltrane's intense melodic and rhythmic phrases take on their own multi-forms and the result is one indigenous form. It seems to me perfectly logical that an improviser might have to play thematically. (He would have little choice in the matter if he is dogged by limited technique and still wants to be tasty.) On the other hand, the improviser who is the master of his instrument may or may not consider thematic development an important part of his vocabulary.

As for Ornette's composed jazz, well, the large-form work is the real test of the jazz composer's formal abilities, because it lends itself least to jazz. John Lewis and Jimmy Giuffre deserve praise as composers of larger forms; they have worked in large forms successfully. On the other hand, Monk, Miles, Bird, Mulligan have excelled in small forms. I'm sure it must be glaringly obvious that the examples of great large jazz works after Ellington have been few indeed. It therefore seems appropriate to me that when making a statement on the subject of a jazz composer's formal ability, one should specify in just what area of forms the composer excels. We've only seen Ornette working in smaller forms, so far.

But perhaps complete freedom all the time is not desirable. Perhaps it's only one of the many facets in idioms in the jazz vocabulary. Perhaps the ideal jazz player will be able to acknowledge tonal centers, or, to any degree, reject them. There is a lot of gorgeous music still left to be said between the two poles of tonal music and centerless music.

George, I want to ask some more questions, but before I do, there are a couple of incidents about Ornette I'd like to tell you about. One happened the night he opened at the Five Spot. He was very nervous, of course, and in the first two sets, I thought his rhythms and melodies were very fragmented. They kept coming, but they were agitated the whole time. He said, "I'm so nervous I don't know whether to play my fingers."

And someone answered, very casually, meaning not much, "Well, you're a man, why don't you play your mind?" After that, the set was flowing and really creative. Also, I've heard it said that so far on his recordings, that the up tempo things don't come off as units, that on them especially, things seem to fall into bits and pieces. Do you think this is true?

Well, with Ornette, I listen, so far, to the over-all impact first, because he comes through most of the time with such an intense statement. Ornette is the most dramatic example of a new music, I think. And he is that because he is as intense as he is.

A lot of people are saying (though this is bound to be said about anybody who does anything new) that when Bird came, Bird had it all ready, and they feel that Ornette has so much of it still to discover himself.

Well, I hope so.

Another thing I feel is that all the great innovators have reshuffled in all three areas; you know, rhythm, line and harmony or . . .

Yeah, tonality. What do you mean by shifting?

Well, of course, if you distinguish between rhythm and line you're obviously distinguishing between two things that aren't really distinguishable. But if the great innovators are Armstrong and Bird, then they really did bring about harmonic, rhythmic and linear revisions in the jazz language by what they played. There have been others who have attempted innovations—extreme harmonic ones like Tristano—that didn't take root because they were one-sided. See what I mean?

Oh yes, and I think Ornette is so satisfying because he is so complete in all these things.

How do Ornette and Don start playing together? John Lewis said he still didn't know by the end of the session at the school of jazz.

Ornette told me they just give a down beat, and somehow on that one beat, they know what the tempo's going to be. It seems rather fantastic.

Sometimes they don't even give the down beat; it's an implied down beat. And after it's passed, you know it was there, but you never saw it.

Which seems to say that any group in the future that's really going to be successful esthetically will have to be awfully close-knit. Well, Billy and Charlie, they're just amazing. Charlie Haden's sound is so beautiful on the Atlantic record. The whole thing is laying down a rhythmic palette for Ornette, you know, that is colored with the tonality of the bass. The whole thing forms a sort of tonal-rhythmic palette. And the way Billy feels drums, I don't think drums are an instrument to be pounded and wailed at you know. He doesn't play loud, but he plays with such intensity, and he really puts down a palette for Ornette.

And how he listens.

All of them listen.

Charlie listens to Billy as well as Ornette or Don . . . or Billy will pick up Charlie's pattern . . .

I think they're awfully good for jazz right now. I'm glad they happened.

Did you hear about the time when somebody asked him to play like Buster Smith, then play like Bird, then play like Ornette, and he did—each one?

Well, I suppose he can do it.

And he's got the hippies all shook up. But on the other hand, can you go on playing the alto like it was a kazoo all your life?

Reprinted from "Jazz Review" 1960

The Recorded Compositions of George Russell

Commissioned Compositions

- Cubana Be Cubana Bop (1947) Victor LJM 1009
(Dizzy Gillespie)
- Ezzthetic (1949) Prestige 116
(Lee Konitz)
- A Bird In Igor's Yard (1949) Capital M - 11060
(Buddy DeFranco) Jazz Classics, Vol. 14
- Lydian M1 (1955) Atlantic 1229
(Teddy Charles)
- Lydian Lullaby))
Miss Clara) (1956) Victor LPM 1366
The Day John Brown was Hanged)
(Hal McKusick)
- All About Rosie (1957) Columbia WL 127
(Commissioned by the Festival of Fine
Arts, Bradeis University)
- Stratusphunk (1958) Decca DL 9209
and arrangements (Hal McKusick)
- Nita (1958) Contemporary L 3554
(Art Farmer)
- Living Time (1972) Columbia KC 31490
(Bill Evans)
- Event V from Living Time Columbia KG 31574
(Columbia Progressive Music Sampler)

Albums Recorded Under the Leadership of George Russell

- George Russell - The Jazz Workshop (1956) Victor LPM 1372
Ye Hypocrite, Ye Beelzebub
Jack's Blues
Livingstone I Presume

Ezz-thetic		
Night Sound		
Round Johnny Rondo		
Witch Hunt		
Concerto for Billy the Kid		
Fellow Delegates		
The Sad Sergeant		
Knights of the Steamtable		
Ballad of Hix Blewitt		
New York, New York (1958)		Decca 79216
Big City Blues		
Manhatta-Rico		
A Helluva Town		
Jazz In The Space Age (1959)		Decca DL 79219
Chromatic Universe - Parts 1,2,3		
Dimensions		
The Lydiot		
Waltz From Outer Space		
George Russell Sextet at the Five Spot (1960)		Decca DL 1920
Swingdom Come		
Stratusphunk (1960)		Riverside 341
Stratusphunk		
New Donna		
Things New		
Ezzthetics (1961)		Riverside 375
Ezzthetic		
Lydiot		
Thoughts		
George Russell Sextet in Kansas City Theme (1961)		Decca DL 4183
Stratuseekers (1962)		Riverside 9412
The Outer View (1963)		Riverside 440

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Recorded Musical Examples Used in the Text

Charlie Parker's solo Verve MGV 8002

Lee Konitz' Atlantic 1258
"Kary's Trance"
(last hours only)

"Nita" Contemporary L 3554
(Art Farmer)

Explanation Of The Tonal Gravity Chart

The Tonal Gravity Chart represents the grading of all of the intervals of the chromatic scale according to their close to distant relationship with the tonal center, or tonic of that chromatic scale.

It also firmly establishes the concept of an existing tonal order within the chromatic scale itself -- an order that embraces the most consonant and traditional, as well as the most modern and dissonant sounding harmonies and melodies conceivable within equal tempered tuning.

Reading from left to right, the Chart contains each of the twelve interval categories of the chromatic scale, arranged in columns that contain twelve of their own kind of intervals. The intervals in each category have been graded according to the position which they occupy in a chromatic scale, relative to their close to distant relationship to the tonic, the center of tonal gravity of that chromatic scale.

The grading of the intervals is based upon the graduating order of dissonance of five of the six scales,

- | | |
|----------------------|-------------------------|
| 1. Lydian | 4. Auxiliary Diminished |
| 2. Lydian Augmented | 5. Auxiliary Augmented |
| 3. Lydian Diminished | |

and upon a cycle of intervals of fifths (the strongest harmonic interval) ascending from the tonic of that Lydian Chromatic Scale.

The Auxiliary Diminished Blues Scale has not been included on the Tonal Gravity Chart because the important chord categories of a Lydian Chromatic Scale (major, minor, seventh, augmented, diminished) are created by the five scales above -- the Auxiliary Diminished Blues makes no important contribution to these chord categories. Once the five important chord-producing scales are combined into one eleven-tone scale, the Lydian Chromatic Scale itself can furnish the single remaining tone to be introduced into the chromatic scale -- the tone on its minor 2nd degree. The Auxiliary Diminished Blues Scale represents just one of the many melodic scales that may be formed within

a Lydian Chromatic Scale using that tone.

The tonics of the following intervals are the upper tones:

-2nd, 4th, -3rd, + 5th, -7th

The remaining intervals of the chromatic scale

2nd, 3rd, +4th, 5th, 6th, 7th, octave

have lower note tonics. The tonic of the minor 2nd interval from B to C is, therefore, the upper tone (c). Either tone of the octave interval may, of course, be the tonic.

The concept of interval tonics has been applied in the grading of the intervals of each category.

The intervals within a category have been arranged vertically (from top to bottom) in the order of their diminishing consonance to the tonal center or tonic of a chromatic scale (Lydian Chromatic Scale). The Roman numerals represent the position of the lower note of the interval in the chromatic scale. (As has been illustrated, the lower note of an interval need not necessarily be its tonic.)

The first Roman numeral at the top of a category, for example, represents the position in the chromatic scale of the lower tone of the most closely related interval to the chromatic scale within that category. The Roman numeral under it represents the chromatic scale position of the lower tone of the next most closely related interval within that category.

For example, to find the most closely related interval of a fourth in the C Lydian Chromatic Scale, we look for the first Roman numeral under the "fourths" category, and we find that it is V. This tells us that the most closely related interval of a fourth in the C Lydian Chromatic Scale rests on the Vth degree of that scale (G). The interval would, therefore, be G - C. (The tonic of an interval of a fourth is the upper note.) The interval is introduced into the "fourths" category initially by the Lydian Scale.

We know that of all the scales within a Lydian Chromatic Scale, the Lydian Scale is the most closely related to the tonic tonality. It follows that if the Lydian Scale is the most closely related scale to the tonal center of a Lydian Chromatic Scale, then the intervals of the Lydian Scale will probably produce an order of the most closely related intervals to the tonal center of the Lydian Chromatic Scale.

If a rule should be formed in advance to reject all of the intervals that the cycle of fifths ascending from the tonic of the Chromatic Scale would provide, except those within the Lydian Scale, an order or arrangement of the most closely related intervals to the tonic tonality of a Lydian Chromatic Scale will be produced.

Let's take intervals of major thirds and begin to grade them, applying the cycle of fifths measuring tool, and the rule rejecting all non-Lydian Scale intervals. The cycle of fifths ranging upward from C, the tonic of the Lydian Chromatic Scale to which we shall relate, gives us the following intervals of major thirds that are in the Lydian Scale:

I	C - E	The closest
V	G - B	The next closest
II	D - F#	The next closest

A - C# would be the next interval of a major third provided by the cycle of fifths, however that interval is not in the C Lydian Scale, the closest related scale to the C Lydian Chromatic Scale.

In fact none of the major third intervals that the cycle of fifths would provide following D - F# are contained within the C Lydian Scale. So we go to the next scale in the order of scales, the C Lydian Augmented, and examine it for the major third intervals it produces. We shall proceed from the last graded interval using the cycle of fifths measuring stick and applying the rule of rejecting all of the intervals not contained in the scale being examined.

Proceeding from D - F# we again get A - C#. However, A - C# is not in the C Lydian Augmented Scale either. The next interval is E - G#. That major third interval is contained in the C Lydian Augmented Scale and its lower note resides on the IIIrd degree of the C Lydian Chromatic Scale, so we place Roman numeral III under the Roman numerals already provided by the Lydian Scale in our column of major thirds.

Lydian	I
	V
	II
Lydian Augmented	III

This process continues through all of the five scales and the composite scales, the nine-tone, the eleven-tone and the chromatic scale itself, until we have graded all of the twelve

intervals of major thirds within the C Lydian Chromatic Scale. The nine-tone and eleven-tone scales are of little practical value in composition or improvising. However they have been included on the Tonal Gravity Chart because they produce intervals that cannot be produced by the regular scales. There are certain intervals, for example, that can only be produced by the chromatic scale exclusively.

None of the three scales which when combined form the nine-tone scale (Lydian, Lydian Augmented and Lydian Diminished Scales) can produce an interval of a fifth on the +V degree of the Lydian Chromatic Scale (Ab - Eb in the C Lydian Chromatic Scale). It is only when these three scales have been combined into one nine-tone scale that this interval can be produced.

The nine-tone scale is a composite of the Lydian, Lydian Augmented and Lydian Diminished Scales, and together with them represents the Consonant Nucleus, or most consonant area, of a Lydian Chromatic Scale. When we have dissipated the intervals of a composite scale, then we have truly drained the intervals from the area of tonal gravity represented by it.

The eleven-tone scale produces an interval which can be duplicated by none of the five scales of which it is a composite. It is an interval of a fourth whose lower note rests on the IVth degree of a Lydian Chromatic Scale (F - Bb in the C Lydian Chromatic Scale). Neither the C Lydian, C Lydian Augmented, C Lydian Diminished, C Auxiliary Diminished or C Auxiliary Augmented Scales produce the interval. However when they are combined into one eleven-tone scale, the interval is then produced and can be graded and given its position in its own category of intervals within the Lydian Chromatic Scale.

There are some intervals which the Lydian Chromatic Scale alone produces -- for example the interval of a major 2nd whose lower note resides on the major VIIth degree of a Lydian Chromatic Scale (B - C# in the C Lydian Chromatic Scale).

In using the Tonal Gravity Chart, one may determine just how "far out" (to use a not-in-the-least inaccurate jazz term) a melody or vertical structure might be in relation to its parent Lydian Chromatic Scale.

Examining the melody in the first three bars of "Stratusphunk," we may ascertain just how far out the melody is in relation to its parent Lydian Chromatic Scale, the F Lydian Chromatic Scale.

Ex.(a) F LYDIAN CHROMATIC SCALE

The first interval that is encountered in the melody is one of a descending minor seventh (Db down to Eb). The lower note of the interval resides on the -VIIth degree of the F Lydian Chromatic Scale. The minor seventh interval category on the Tonal Gravity Chart indicates that this particular minor seventh interval occupies a position near the bottom of its interval category (having been contributed by the Auxiliary Augmented Scale) and that it consequently maintains a relationship with its parent Lydian Chromatic Scale, that is rather distant or "far out."

The following interval in the melody is an ascending minor 2nd, Eb to E natural. The lower note of this minor 2nd interval resides on the -VIIth degree of the F Lydian Chromatic Scale. Scanning the minor 2nd interval category on the Tonal Gravity Chart, we discover that the interval occupies a position even further down the Tonal Gravity Chart than the preceding interval. This is because the minor second interval (Eb to E natural), residing on the -VIIth degree of the F Lydian Chromatic Scale, can only be produced by the composite eleven-tone scale -- a scale which is more distantly related to the F Lydian Chromatic Scale than any of its five member scales.

With the introduction of the second interval in the melody of "Stratusphunk," we may positively say that the melody itself thus far is "outgoing" in its relation to the gravity of its parent Lydian Chromatic Scale.

The next interval of the melody is an ascending interval of a major seventh, E natural to Eb. The lower note of the interval resides on the major VIIth degree of the F Lydian Chromatic Scale. Looking through the major seventh interval category, we see that again we have an interval which is produced by the eleven-tone scale exclusively. (This is logical since the major seventh interval E natural to Eb is merely an inversion of the preceding minor second interval Eb to E natural.) The melody has not moved

out of the eleven-tone area of gravity and its relation thus far to its parent Lydian Chromatic Scale is indeed "far out."

The next interval to be introduced into the melody is a descending interval of a major second, Eb to Db. The lower note of the interval, Db, rests on the +Vth degree of the F Lydian Chromatic Scale. In the major 2nd interval category we discover that a major 2nd interval whose lower note resides on the +Vth degree of a Lydian Chromatic Scale is contributed by the Auxiliary Augmented Scale. Since Auxiliary Augmented Scale intervals are a bit more consonant with the parent Lydian Chromatic Scale than eleven-tone scale intervals, we may conclude that the melody of "Stratusphunk" has moved a bit inward in its relation to the center of gravity, the tonic F.

Now we shall use the Tonal Gravity Chart to examine briefly one of the monumental works of the twentieth century, the Concerto For Violin and Orchestra by Alban Berg.

The work, which is based upon a twelve-tone row (an arrangement of the twelve tones of the chromatic scale) might officially be termed an atonal composition, since the row is the fundamental principle of atonality. However, in one of the most probing books on the subject of tonality, "Tonality - Atonality - Pan-tonality" by Rudolph Reti (Macmillan, 1958) the author makes the following statement:

"This concerto, apart from its artistic value, is in a sense a historic document within the development of modern music. Written in 1935, that is at a comparatively early stage of the twelve-tone era, it constitutes in many of its parts the first, already far-reaching relaxation of the rules established by Schoenberg. The actual twelve-tone technique is to a great extent abandoned, yet its spirit is maintained and even enriched through new variants and freer ways of application."

The following arrangement of the twelve tones of a chromatic scale, or row, is used by Berg as a basis for the violin concerto:

Ex.(b)

1 2 3 4 5 6 7 8 9 10 11 12

1 2 3 4 5 6 7 8 9 10 11

The example below is quoted from the first 3 bars of the concerto.

(c)

pp

It has been mentioned that the work does not rigidly employ the techniques of atonality. It is nevertheless based on the row, the most fundamental of the atonal principals. The purpose of the row, in which every tone is considered to be equal in its relationship to all of the other tones, is to destroy the attraction of tones to a tonic or center of tonal gravity. Perhaps it is because the row serves as a basis of Berg's composition that no key signature is indicated in the beginning of the work. However, because of certain trends that occur within the composition itself, it is safe to deduce that if any tonic did exert an influence on the composer, then it probably was the tone Bb. The reasons for this assumption are as follows:

1. The row itself (example b) is based on a relative minor chord of the Bb Lydian Chromatic Scale -- the G minor, +7th chord (G, Bb, D, F#). The first four tones of the row produce this chord. The first seven tones of the row (G, Bb, D, F#, A, C, E) are the seven tones of the Bb Lydian Augmented Scale.
2. The first tone of the composition Bb, serves as the root for an ascending cycle of fifths into the Bb Lydian Scale (Bb, F, C, G) returning again to Bb. The Lydian Scale itself, it will be remembered, is formed with an ascending cycle of fifths from the root (Bb, F, C, G, D, A, E). If the second tone of this cycle is raised a half-step from F to F#, the sequence of tones gained will be those of the Lydian Augmented Scale -- Bb, (F#) C, G, D, A, E. Continuing from the first bar, the remaining cycle of fifths common to both the Lydian and Lydian Augmented Scales (G, D, A, E) are sounded in the second bar along with the other three tones of the Bb Lydian Augmented Scale Bb, F#, and C. All of the tones of this scale are utilized in the second bar.

In being able to relate the first bar of the concerto to a Bb Lydian Scale and the second bar to a Bb Lydian Augmented Scale, it is possible to say that the opening tonalities of the work were firmly imbedded in the tonal gravity of Bb.

3. In referring to the Bach Choral (or more correctly the Choral by Johann Rudolf Ahle as it appears in J. S. Bach's Cantata "O Ewig keit du Donner Wort") which Berg introduced into the final section of the concerto, Reti comments, "Yet we see here the clear attempt to blend the twelve-tone technique, that is, atonality, and tonal ideas into one unified style. How strongly the composer wished to emphasize this intention can be seen in the fact that he introduced the chorale melody with the key signature of B-flat major, which he then notated in parenthesis, and that he later, before the entrance of the fully harmonized chorale inserted the same key signature, this time without parenthesis."
4. The final group of tones sounded at the very end is a very strongly defined Bb major sixth chord.

On the basis of these facts we shall, for the purpose of this brief analysis, relate the violin concerto to the Bb Lydian Chromatic Scale.

It has been established that the first seven tones of the row (example b) are identical with the tones of the Bb Lydian Augmented Scale. For this reason the intervals created by these tones (minor and major third intervals ascending from the VIth of the scale, G) are sure to be found somewhere in the Consonant Nucleus area of the Tonal Gravity Chart. In fact most of these intervals are introduced into the Consonant Nucleus area of the Tonal Gravity initially by the Lydian Scale.

For instance, the first two intervals of the row, the minor 3rd on the VIth degree of the Bb Lydian Chromatic Scale (G - Bb) and the major third on the 1st degree of the Bb Lydian Chromatic Scale (Bb - D), are the most consonant intervals in their respective categories to the Bb Lydian Chromatic Scale. They both belong to the Lydian and Lydian Augmented Scales, however, they are initially introduced into the Tonal Gravity Chart by the Lydian Scale.

The third and fourth intervals of the row (D - F#) and (F# - A) are introduced into their respective interval categories initially by the Bb Lydian Augmented Scale. Their position in the Tonal Gravity Chart indicates that they are less consonant with the

Bb Lydian Chromatic Scale than the first two intervals of the row. This represents an "outgoing tendency" for the row.

The fifth and sixth intervals of the row (A - C) and (C - E) represent intervals which, according to the Chart, are high-ranking in their order of consonance with the parent Lydian Chromatic Scale. Both intervals rank third in order of consonance in their own respective categories, and both intervals are introduced into their categories initially by the Bb Lydian Scale, although they both are to be found in the Lydian Augmented and Lydian Diminished Scales as well. Their use in the row indicates that the row itself has taken an "ingoing" turn in its relationship to the Bb Lydian Chromatic Scale. However, these particular intervals have, in this instance, been derived from a structure ascending in thirds from the sixth of the Bb Lydian Augmented Scale (G). The structure of thirds inducts all of the tones of that scale -- with the intervals (A - C) and (C - E) being the last intervals of the scale to be incorporated. These latter intervals seem to represent the outer expansion of the tertian structure.

The conclusion to be drawn here is as follows:

An interval may maintain an ingoing relationship to its parent Lydian Chromatic Scale, but may sound outgoing in relation to a single vertical structure.

Or conversely --

An interval may maintain an outgoing relationship to its parent Lydian Chromatic Scale, and sound ingoing in relation to a single vertical structure.

In any event, the tonal gravity of the row, relative to the Bb Lydian Chromatic Scale, has taken a slight turn inward with the induction of the intervals (A - C) and (C - E).

The row continues from the last interval (C - E) with the induction of another major third interval, E - G#, the seventh interval of the row. This is the major third residing on the + IVth of the Bb Lydian Chromatic Scale. Looking at the Tonal Gravity Chart we see that it is introduced into the category of major thirds by the Auxiliary Augmented Scale. Its low position in that category indicates that the row has taken a very definite turn in the outgoing direction in relation to its center of gravity, Bb.

The eighth and ninth intervals of the row (G# - B) and (B - C#)

represent an even further progression in an outgoing direction. Both of these intervals are introduced into their respective categories initially by the Bb Lydian Chromatic Scale. With the induction of these intervals, the row has progressed to the outer limits of the Bb tonal hierarchy.

The row is concluded with the induction of two major second intervals (C# - Eb) and (Eb - F). According to their position in the Tonal Gravity Chart, these intervals suggest that the row has taken an ingoing turn (C# - Eb) and then is a bit more outgoing (Eb - F) in its relation to the center of gravity Bb.

Now we shall very briefly analyze the tonalities in the first three bars of the Violin Concerto (example c) using the Tonal Gravity Chart.

We know that the intervals of fifths in the first bar can be reconciled with the Bb Lydian Scale, and that all of the intervals in the first two bars of the concerto will be found to be in the Consonant Nucleus section of the Tonal Gravity Chart, although they will maintain various positions, or ranks of consonance in their own respective interval categories.

The first bar, for example, represents a vertical descent down the "fifths" interval category, (I) Bb-F (V) F-C (II) C-G and then a return to the tonic, Bb.

In the second bar, the eighth note melody continues the descent down the "fifths" category from the interval on the VIth degree of the Bb Lydian Chromatic Scale (VI) G-D (III) D-A (VII) A-E and returns again to the tone G. The accompanying quarter note melody, in the upper staff of the second bar, forms certain Lydian Augmented Scale intervals with the tones of the eighth note melody in the lower staff that tend to direct the tonality of the second bar outward from Bb, the center of gravity. For example, the two eighth note tones on the second beat of the bar (A and E) form an interval of a minor third and then an interval of a minor seventh, with the quarter note tone F# below them (F# - A) and (F# - E). Both of these intervals reside on the +Vth degree of the Bb Lydian Chromatic Scale. A quick glance at the chart shows us that these are Lydian Augmented Scale intervals. It is apparent that the tone (F#) is exerting an outgoing influence on the tonality of the second bar.

The first interval to be formed between the upper and lower staff melodies in the third bar is the interval of a major third residing on the -IIId degree of the Bb Lydian Chromatic Scale (C# - F). The Chart indicates that this is a Lydian Diminished

Scale interval. The next interval to be formed with the sustained (C#) is an interval of an augmented fifth (C# - A). The chart indicates that this interval is also a Lydian Diminished Scale interval.

Following this, the tone D# is introduced. It forms an interval of an augmented fourth with the sustained tone beneath it, A natural (this is the +4th interval residing on the major VIIth degree of the Lydian Chromatic Scale.) The chart indicates that this is an Auxiliary Diminished Scale interval, so we may conclude that the tonality is moving farther out from the center of gravity, Bb. The tone (D#) also forms an interval of a major second with the tone (C#) sustained from the first beat of the bar. The chart shows that a major second interval residing on the -IIIrd degree of a Lydian Chromatic Scale is also an Auxiliary Diminished Scale interval.

The next tone to be introduced by the lower staff melody is B natural. This tone forms an interval of a major second with the sustained A natural below it. The chart indicates that the interval of a major second on the major VIIth degree of a Lydian Chromatic Scale is next to the most far out interval of a major second in relation to the tonal gravity of the Bb Lydian Chromatic Scale. The tone B natural forms an interval of a minor seventh with the sustained tone C# beneath it (the minor seventh interval on the -IIIrd degree of a Lydian Chromatic Scale). The Tonal Gravity Chart indicates that this interval is the most far out interval of a minor seventh in relation to the gravity of Bb.

The tone B natural also forms an interval of an augmented fifth, D# - B, with its preceding tone in the lower staff melody. The Tonal Gravity Chart indicates that the augmented fifth interval residing on the IVth degree of the Bb Lydian Chromatic Scale (D# - B) is the most distantly related interval of an augmented fifth to the gravity of Bb. No new intervals are formed in the remainder of the bar.

On the basis of the analysis of these three bars of the concerto, it is safe to conclude that the tonality has moved from very ingoing to the tonal center (Bb) in the first bar, to very outgoing in the third bar.

If one had the inclination and the patience, the entire Violin Concerto could be analyzed for its outgoing/ingoing tendencies relative to the Bb Lydian Chromatic Scale, or, for that matter, relative to any Lydian Chromatic Scale.

It is not suggested here that the Tonal Gravity Chart is an answer to all of the tonal problems of modern composition, for it deals

only with one single aspect of tonality -- the close to distant relationship of melodic and harmonic structures to a fundamental tonal center.

The most important idea that the Tonal Gravity Chart conveys is that there is an order based very soundly on a central tone or tonic that can embrace any music conceived within equal temperament, whether it be classical, jazz, folk, popular, tonal, polytonal, pantonal, or atonal. It suggests that "atonality" is only one of the orders within an organization of tonality that is founded on the principal of all tonal elements being related to a fundamental tone or tonic.

Instead of a complex work such as the Violin Concerto, we might have reconciled the tones of a simple melody composed in the Gb major scale, or in any scale, and related it to the Bb Lydian Chromatic Scale with the aid of the Tonal Gravity Chart. The chart seems to substantiate the theory that there is an order within the chromatic scale that will permit the composer and/or improviser, the jazz and/or the classically-orientated musician to be as traditional or as modern as he may choose to be, and as equal temperament will permit him to be.

TECHNICAL APPENDIX

It is customary for a book dealing with the elusive elements of an art form to suffer certain misinterpretations for a period of time after its initial publication. This is especially true when the object of a book is to give a new perspective on a subject so laden with misinformation and as ill-defined as modern tonal practices. Fortunately, in the eleven-year period since it was first published, the Lydian Chromatic Concept of Tonal Organization seems to have escaped the fate of being grossly misunderstood. However, one serious false notion continues to persist: that the Lydian Chromatic Concept of Tonal Organization restricts one to the use of Lydian Scales. In dispelling this notion, I hope that I may give the reader more insight into the nature of the resources offered by the chromatic scale. It is hoped that the student will find in the "Concept" the pathway to his own individual freedom.

This investigation into the tonal resources provided by equal tempered tuning began in 1945 as a purposeful means of self-education. I would have felt morally bound to keep it a purely personal approach had I not encountered new and irrefutable facts that come from the very core of the nature of music. I believe that music does come inherently from nature and therefore is free. However, one of man's profound pursuits is the taming of nature by imposing systems of organization upon it that synthesize and coordinate its unwieldy elements. God creates, man coadunates. Nevertheless, all systems of organization are eventually doomed to a common fate, for as the need of man to assimilate more of nature grows, so does his need to construct organizational systems that will explain more with less expenditure of means. The life span of an organizational system is therefore in direct proportion to the scope of its knowledge and the lack of prejudice therein.

Equal temperament (the division of the octave into twelve equally tempered tones) represents an organizational system of great magnitude and one that is relatively free of prejudice. It is capable of effecting everything that can be done by the Pythagorean tuning system (see the Lydian Chromatic Concept of Tonal Organization, page XV), which it supplanted, and with far less expenditure of means. However, even equal temperament, which has maintained its predominance over music theory to the present 1960's, is buckling under the aggressive challenges of twentieth century composers like Varese, Partch and Stockhausen. There will undoubtedly come a theory which will embrace equal temperament and the new developments as well. The Lydian Chromatic Concept of Tonal Organization

does not undertake the rationalization of quarter tone or multi-tonal music. It is a tonal gravity concept based upon an order of tonal gravity that exists in the chromatic scale. It proposes that equal temperament is a tonal universe providing us with the twelve chromatic scales, and that the twelve chromatic scales are individual tonal galaxies having in themselves a tonal order that is founded upon their tonic tone. A chromatic scale contains twelve different interval categories. Each interval category contains twelve of its own kinds of intervals. The intervals in each category are arranged in an order of diminishing tonal gravity in relation to the tonic tone of the chromatic scale, from the most consonant interval to the least consonant interval. It is as if the most consonant interval of an interval category is the sun, and the remaining eleven intervals are the planets. There is a total of one hundred and forty-four intervals in a chromatic scale, the whole spectrum of equal temperament.

The scope of the Lydian Chromatic Concept is as large as all of the music that has been written or that could be written in the equal tempered tuning system. It is a verbalization or explanation of music as varied as nursery rhymes, Charlie Parker, Bach, Ornette Coleman, Schoenberg or W. C. Handy. It is an organization of all the tonal resources offered by equal temperament. It is free of rules, laws and biases. There are no wrong notes or wrong progressions. It does not attempt to legislate or dictate, but merely to make the composer or improviser aware of the tonal and non-tonal resources of the chromatic scale.

All tonal music (based upon traditionally definable chords or modes) projects tonal centers that exert gravitational pulls upon the music vertically and horizontally. (In the less tonal forms of music, i.e., pan-modal and chromatic music, vertical and horizontal tonal centers are also inferred. However, the duration of each tonal center is more fleeting. Even in the most extreme form of chromaticism, atonality, "overtone relationships or implications of them sporadically sound through."*) Atonality is the arrangement of the twelve tones of a chromatic scale in a tone row that evidences no gravitational pull toward a tonic tone. The row is constantly reiterated and may appear in a horizontal and/or vertical position. Mirrored forms of the row may also occur, i.e., inversion, retrogression and inversion of retrogression. The row may also be transposed freely.) The Concept apprises the student of which Lydian Chromatic scale to employ if he is relating vertically (to a chord), or which one to employ if he is relating to a horizontally inferred tonal center. The Lydian Chromatic scale to which we relate, whether implied by a vertical or by a horizontal source, is called the parent

* Tonality, Atonality, Pantonality, by Rudolph Reti,
The Macmillian Company, New York

Lydian Chromatic scale -- the closest sounding Lydian Chromatic scale to the inferred tonality. The student is shown which one of the eight basic scales of the parent Lydian Chromatic scale actually sounds closest to the implied tonality. This is the actual parent scale of the inferred tonality. The practitioner is not bound to use the parent scale or any of the other related scales of his parent Lydian Chromatic scale. The Lydian Chromatic scale is a chromatic scale with 144 different intervals with which he may form his own scales, pan-modal or chromatic (including atonal) melodies. The eight relative scales of a Lydian Chromatic scale are all termed "ingoing" scales because they are the closest scale colors to the inferred tonality. Original scales and pan-modal or chromatic melodies are termed "outgoing" melodies because they come from the body of intervals of the chromatic scale. The term "Lydian Chromatic Scale" merely informs the practitioner of the tonal order existing within the chromatic scale. He may be far in (ingoing) within that order, or far out (outgoing) in relationship to it. He has the freedom to choose and create.

The Lydian scale (C D E F# G A B in the tonality of C) is the strongest tonality or chord producing scale that can be derived from a cycle of intervals of fifths, which, if carried farther, will produce all the twelve tones of the chromatic scale. (The fifth is the strongest harmonic interval of the overtone series. It rests at the base of the overtone series and therefore supports it.)

Chromatic Scale

C G D A E B F# C# G# D# A# E#

Lydian Scale

The Lydian scale produces the major chord family on its tonic degree (C), the seventh chord family on its second degree (D), and the minor chord family on its sixth degree (A). It can be described as the tonality-producing half of the chromatic scale -- the missing link that unites tonality with chromaticism. It carries tonality to the point where it begins to lose its identity.

The Lydian Chromatic Concept of Tonal Organization, the first in-depth inquiry into the potentials of the Lydian Scale, was inspired by the tendency of the jazz artists of the late 1940's, the so-called "Be Boppers" (Charlie Parker, Dizzy Gillespie, et al), to end their compositions on the flattened fifth tone of the key of the music.

We have touched upon the outgoing melodies provided by a Lydian Chromatic Scale. Outgoing melodies are not derived from any of the

eight relative scales of a Lydian Chromatic Scale, but rather from its interval resources. Ingoing melodies are derived from any of the eight relative scales of a Lydian Chromatic Scale. The one hundred and forty-four intervals of a Lydian Chromatic Scale provide three types of outgoing melodies:

- (1) Outgoing Modal Melodies
- (2) Pan-modal Melodies
- (3) Chromatic Melodies

Here are three examples illustrating them. We shall use the (C) Lydian Chromatic Scale for our examples.

1. Outgoing Modal Melody

----- C LYDIAN CHROMATIC SCALE -----

A musical staff in G clef. The first measure shows notes G, A, B, C, D, E, F, G. The second measure shows notes Gb, Ab, Bb, Cb, Db, Eb, Gb. Brackets above the staff group these into 'A Lydian' and 'Gb Lydian' respectively.

The above example uses the A Lydian and the Gb Lydian Modes from the C Lydian Chromatic Scale. Each chromatic scale contains 144 intervals and therefore embodies the intervals of all scales and all melodies. Consequently we can reconcile the intervals of the A and the Gb Lydian Scales, or those of any melody or scale with the C Lydian Chromatic Scale. This, of course, includes any original scale that might be invented by the student.

2. Pan-Modal Melody

----- C LYDIAN CHROMATIC SCALE -----

A musical staff in G clef. The notes G, B, Ab, A, and Db are shown. Brackets above the staff group them into 'G major', 'B blues', 'Ab major', 'A major', and 'Db major' respectively.

The line of demarcation between an outgoing modal melody that uses two or more outgoing modes and the pan-modal (or pan-diatonic) melody is admittedly thin. The pan-modal melody may be described as a rapidly modulating outgoing modal melody.

Scale degree modulation is the technique used for constructing a pan-modal melody in the parent Lydian Chromatic Scale, the one to which the melody is being related.

Scale degree modulation is based upon the fact that each one of the twelve tones of a Lydian Chromatic Scale occupies twelve scale degree positions -- the scale degree position which it holds in the parent Lydian Chromatic Scale, and the eleven other scale degree positions which it occupies in the eleven other Lydian Chromatic Scales. For example: if the C Lydian Chromatic Scale is the parent Lydian Chromatic Scale, then the tone (A) natural occupies the sixth scale degree position in the scale. However, the tone (A) is not only the sixth degree of the C Lydian Chromatic Scale, it is also the minor third of the Gb Lydian Chromatic Scale, the fourth of the E Lydian Chromatic Scale, the augmented fifth of the Db Lydian Chromatic scale, etc. It can be eleven different positions in eleven Lydian Chromatic Scales, other than the C Lydian Chromatic Scale in which it is the sixth scale degree. If we are constructing a pan-modal melody (a melody which uses many scales or tonalities) in the parent Lydian Chromatic Scale, then any tone of any scale may function as a modulatory tone. However, it is much more fundamental to use only the tonic tone of a prevailing tonality in this capacity when practicing scale degree modulation. In order to demonstrate the technique of scale degree modulation, we shall examine the pan-modal melody above.

The melody uses the following tonalities of the C Lydian Chromatic Scale.

1. G major
2. B blues
3. Ab major
4. A major
5. Db major

The pan-modal melody starts by using a passage from the G major scale. For the purpose of modulating from the G major tonality, we shall assign the scale degree position (+5) to the tonic tone (G). Thus, the tone (G) becomes the augmented fifth scale degree of the new tonality, the B blues scale. To modulate from the B blues scale, we shall assign the scale degree position (-3) to the tonic tone (B). Thus it becomes the minor third of the new tonality Ab major. To modulate from the Ab major scale we shall assign the scale degree position (+7) to the tonic tone (Ab). It becomes the major seventh scale degree of the new tonality, A major. From the A major tonality we modulate to the Db major tonality by assigning the scale degree position (+5) to the tonic tone A natural.

3. Chromatic Melody

----- C LYDIAN CHROMATIC SCALE -----



It is worth noting again that a chromatic melody comes from the body of intervals of the Chromatic Scale itself, rather than from a modal source. The Chromatic melody above is built primarily upon the thematic intervals of minor sevenths and augmented fifths. It is practically an atonal row. Of its fifteen tones, only the tenth, eleventh and fifteenth tones are repeated. Chromatic melodies need not be as rigidly atonal as this example. Intervals other than the thematic intervals may be introduced into the melodic line to any degree desirable. A strictly atonal (twelve tone) row would be considered an outgoing chromatic melody of the Lydian Chromatic Scale to which it is being related.

Summation

An outgoing melody, as stated previously, may be reconciled with the Lydian Chromatic Scale inferred vertically by a chord (D minor seventh would infer the F Lydian Chromatic Scale; A seventh +5 would infer the Db Lydian Chromatic Scale, etc.), or it may be related to the Lydian Chromatic Scale whose tonal center (or Lydian Tonic) is inferred by any one of the following horizontal factors:

1. The Lydian Tonic to which two or more chords tend to resolve
2. The Lydian Tonic sounded by the key of the music
3. The Lydian Tonic sounded by the dominant melody in a given area

The composer or improvisor may reconcile his melody (or harmony) with any Lydian Chromatic Scale suggested by a vertical or a horizontal source.

It was not intended that this text should deal with the formation of harmonic structures. This is a subject to be treated fully in

in a second book now being prepared. However, in the interest of completeness, I think that some brief mention of the subject should be made.

In essence, the basic fundamentals of harmony seem to mirror those of melody, for harmony, like melody, is divided into three categories:

1. Modal Harmonic Structures (chords and modal vertical structures)
2. Poly-modal Harmonic Structures (chords upon chords)
3. Chromatic Harmonic Structures (non-modal harmonic structures composed of chromatic interval combinations)

Like melody, all three forms of harmonic structures may be reconciled with a single Lydian Chromatic Scale, and this Lydian Chromatic Scale may be inferred vertically by a single chord, or horizontally by previously stated factors that determine a horizontal Lydian Chromatic Scale.

Here are examples of the three forms of harmonic structures:

x 1. Modal Harmonic Structures

Modal Chord Structures

D7 Eb^{Maj 7} Bb-7 G#-7^(b5) D7+5

Modal Vertical Structures

F Lydian

Ex 2. Poly-Modal Harmonic Structures

The Parent Lydian Chromatic Scale

A hand-drawn musical staff in G major (G clef) and common time. It shows three chords: F#7, G7, and A7. Brackets below the staff group notes into vertical structures. The first bracket groups the bass note of F#7 with the bass note of E-7. The second bracket groups the bass note of G7 with the bass note of F#-7, which is labeled with a superscript '(b5)'. The third bracket groups the bass note of A7 with the bass note of Eb-, which is labeled with a superscript '(+7)'.

Ex 3. Chromatic Structures

The Parent Lydian Chromatic Scale

A hand-drawn musical staff in G major (G clef) and common time. It illustrates intervals of fourths and augmented fifths. The staff shows a sequence of notes: G, D, A, E, B, F#, C, G. Brackets below the staff group notes into vertical structures, corresponding to the intervals of fourths and augmented fifths mentioned in the text.

(Intervals Of Fourths And Augmented Fifths)

Example 1

Modal harmonic structures are divided into two groups, definable chords and non-definable vertical structures. As the "Concept" shows, every definable chord is produced by its parent mode. In example #1, we have six definable chords, each parented basically by its own scale in its own Lydian Chromatic Scale, and six non-definable vertical structures coming from a single mode, the F Lydian scale. Each definable chord could establish its own Lydian Chromatic Scale as the parent Lydian Chromatic Scale, if we are relating vertically to the single chord. The sequence of six

non-definable structures is primarily in the F Lydian mode, and consequently the F Lydian Chromatic Scale. If one scale (F Lydian for example) is being related to for a considerable time, then it is proper to justify the situation horizontally (i.e., the F Lydian Chromatic Scale will be the parent Lydian Chromatic Scale). Once the parent Lydian Chromatic Scale is established either vertically or horizontally, the harmony becomes completely free to move in any form (i.e., definable and/or non-definable modal structures, poly-modal structures and/or chromatic structures) within the parent Lydian Chromatic Scale.

Example 2

Here we have definable chords superimposed upon definable chords forming poly-modal harmonic structures. If we are viewing the situation horizontally, the three vertical structures can have any Lydian Chromatic Scale as their parent Lydian Chromatic Scale. On the other hand, the situation can be treated vertically by letting the lower chord of each poly-modal structure determine the parent Lydian Chromatic Scale to which the entire structure shall be related. The E minor seventh chord would cause the first poly-modal structure to have the G Lydian Chromatic Scale as its parent Lydian Chromatic Scale. The F# minor seventh (b5) chord would cause C to be the parent Lydian Chromatic Scale of the second structure. And the Eb minor (+7) chord would cause Gb to be the parent Lydian Chromatic Scale of the third poly-modal structure. Once the parent Lydian Chromatic Scale is vertically or horizontally established, modal, poly-modal and/or chromatic structures may move freely within it.

Example 3

Chromatic structures are formed from the body of intervals of a Lydian Chromatic Scale. In example 3, we have structures formed of intervals of fourths and augmented fifths. We might have chosen any combination from the twelve kinds of intervals the Chromatic Scale makes available to us. The use of a thematic interval motif (such as fourths and augmented fifths) tends to give chromatic harmony, the most dissonant type of harmony, a continuity and consistency. Once the parent Lydian Chromatic Scale is vertically or horizontally established, modal, poly-modal and/or chromatic structures may circulate freely within it.

GEORGE RUSSELL

March 1964

2 ons, which includes most of the northern and central parts of the
region. It includes the Atlantic coast from the Gulf of Mexico to the
Rocky Mountains, and the Great Lakes. The climate is
temperate, with a mean annual temperature of about 50° F. The
annual rainfall varies from about 20 inches in the arid regions to
about 40 inches in the more humid areas. The soil is
generally good, but subject to erosion in some areas. The
economy is based on agriculture, with cotton, tobacco, and
rice being the chief crops. The state has a large
population, with a density of about 100 people per square mile.

3. Illinois

The state of Illinois is located in the midwestern United States, bordering on the Mississippi River to the west. The state has a total area of about 55,000 square miles, and a population of about 12 million people. The climate is temperate, with a mean annual temperature of about 55° F. The annual rainfall is about 35 inches, with the highest amounts occurring in the southern part of the state. The soil is generally good, but subject to erosion in some areas. The economy is based on agriculture, with corn, soybeans, and wheat being the chief crops. The state has a large
population, with a density of about 150 people per square mile.

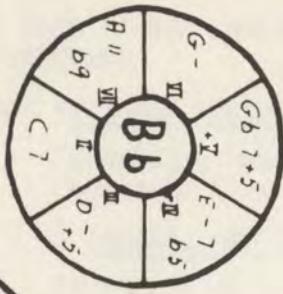
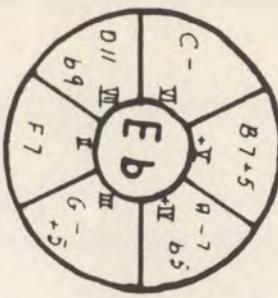
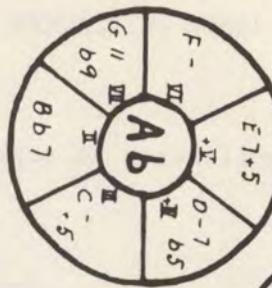
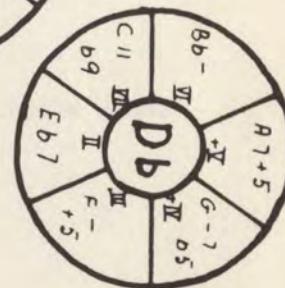
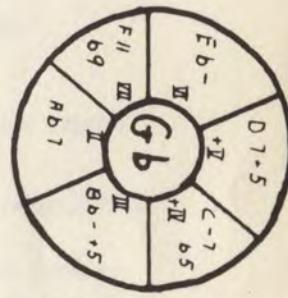
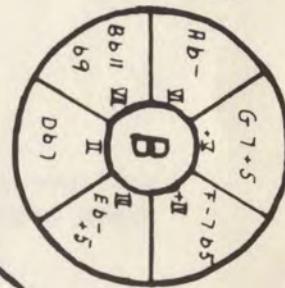
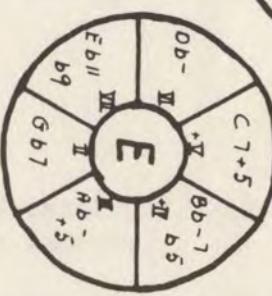
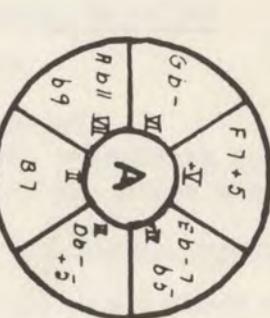
4. Indiana

The state of Indiana is located in the midwestern United States, bordering on the Ohio River to the west. The state has a total area of about 36,000 square miles, and a population of about 6 million people. The climate is temperate, with a mean annual temperature of about 52° F. The annual rainfall is about 38 inches, with the highest amounts occurring in the southern part of the state. The soil is generally good, but subject to erosion in some areas. The economy is based on agriculture, with corn, soybeans, and wheat being the chief crops. The state has a large
population, with a density of about 140 people per square mile.

5. Michigan

The state of Michigan is located in the midwestern United States, bordering on Lake Huron to the north and Lake Michigan to the south. The state has a total area of about 58,000 square miles, and a population of about 10 million people. The climate is temperate, with a mean annual temperature of about 54° F. The annual rainfall is about 36 inches, with the highest amounts occurring in the southern part of the state. The soil is generally good, but subject to erosion in some areas. The economy is based on agriculture, with corn, soybeans, and wheat being the chief crops. The state has a large
population, with a density of about 160 people per square mile.

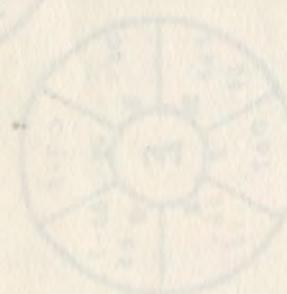
RELATIONSHIPS BETWEEN CHORDS



RELMES CHORDE

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CIRCLE OF



THE LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION

A SUMMARY

To have a thorough knowledge of the material in this book you must have a complete understanding of the following subjects;

- I. THE SCALES
- II. THE USES OF THE SCALES DETERMINED BY THE PREVAILING TONAL ENVIRONMENT

(A) Vertical Approach

Prevailing chord determines the choice of prevailing Lydian Chromatic Scale.

- Ingoing Vertical Melodies

(absolute or chromatically enhanced)

Melodies formed of any member scale of the L.C. Scale determined by the chord.

- Outgoing Vertical Melodies

(a) Outgoing Modal

(b) Pan-Modal

(c) Chromatic Interval

melodies of the L.C. Scale determined by the chord.

(B) Horizontal Approach

The prevailing L.C. Scale is determined by one of these three factors;

1. the major or minor tonic station inferred by the resolving tendency of two or more chords.....
2. the tonic station inferred by the key of the music (overall major or minor tonic station).....
3. your aesthetic judgement

- Ingoing Horizontal Melodies

(absolute or chromatically enhanced)

Melodies formed of the horizontal scales of the prevailing horizontal L.C. Scale determined by one of the three above factors.

- Outgoing Horizontal Melodies

(a) Outgoing Modal

(b) Pan-Modal

(c) Chromatic Interval

melodies of the prevailing horizontal L.C. Scale determined by one of the three above factors.

III. THE CIRCLE OF CLOSE TO DISTANT RELATIONSHIPS(chapter VIII)

1. Chord Categories (page three of chart)
2. The Chord Wheel (preceeding page)

IV. TONAL GRAVITY

V. HARMONIC STRUCTURES

- (a) Modal Verticale Structures (defineable and nondefinable)
- (b) Poly-Modal Vertical Structures
- (c) Chromatic Interval Vertical Structures of the vertically or horizontally determined prevailing L.C. Scale.

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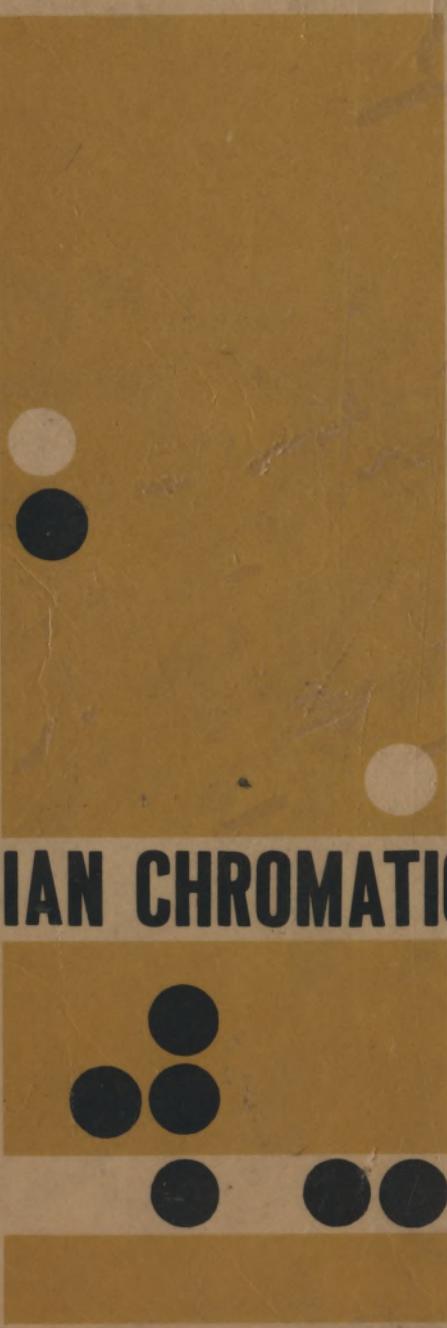
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p5 white w/ thin coarse lines all out in 5
8 mostly yellowish green & blue



THE LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION

Russell

the
LYDIAN CHROMATIC CONCEPT



BY
**GEORGE
RUSSELL**

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.b9+11	MODAL TONIC	MIN. SEV.	
MAJ. SEV.+11	THIRTEENTH	OF	I CHORDS	MIN. NINTH	SEV. b9 th	
		MODAL TONIC (MAJ. b5B)		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. 7B)
AUG MAJ. NINTH	THIRTEENTH	"	MODAL TONIC	NINTH +11	SEV. +9 th , +5 th	SEV. b9
			I CHORDS	THIRTEENTH +11 (MIN. +7B)		SEV. +9
					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	SEV. b9+5
DIM. MAJ. NINTH					

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	SEV. b9, b5

I II -III +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	I CHORDS	MODAL TONIC	MIN. SEVENTH

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

MAJOR AND ALTERED MAJOR CHORDS

I

MINOR AND ALTERED MINOR CHORDS

VI, +IV

SEVENTH AND ALTERED SEV. CHORDS
(SEVENTH bNINTH CHORDS)

(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 -

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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^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	G	A ^b	A	B ^b

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

CHORD CATEGORIES

SCALE DEGREES

MAJOR + ALTERED MAJOR CHORDS (DIM. AND AUG. TRIADS)

I

MINOR + ALTERED MINOR CHORDS

SEVENTH ← ALTERED SEVENTH CHORDS

(SEVENTH b9 CHORDS,

$$\begin{array}{c} \text{VII} \\ + \text{IV} \\ \hline \text{II} \\ + \text{V} \\ (\text{II} \\ + \text{I}) \end{array}$$

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 G A^b A B^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 G A^b A B^b

**MINOR SEVENTH b5 (MINOR 6B) CHORD
SEVENTH + 5 (MINOR + 7 B) CHORD
ELEVENTH b9, (MINOR 9B) CHORD
MINOR + 5 (MAJOR 3B) CHORD**

•IV
•V
•VI
•VII

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 G A^b A B^b

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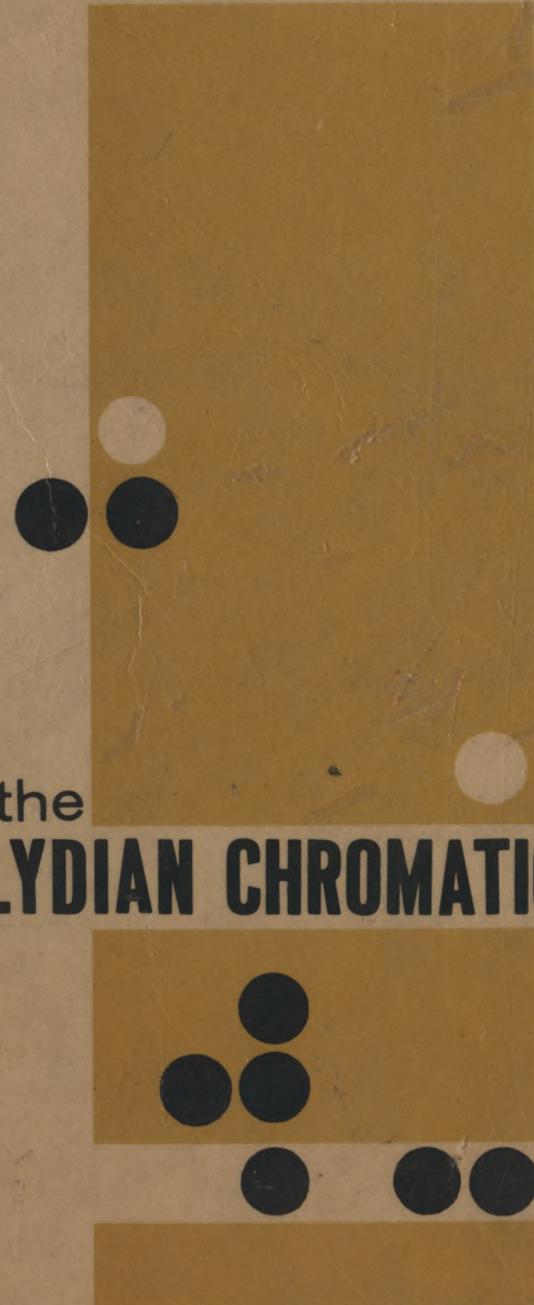
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	I	II	III	+IV	V	VI	VII
LYD							
	MA TRIAD MA SIXTH MA SEV. MA SEV. + II	7TH 9TH 11TH 13TH		MIN + 5	-7b5 7b9+11		11 b9 7b9
LYD	I	II	III	+IV	V	VI	VII
RUG							
	RUG MA TRIAD RUG MA SEV. RUG MA NINTH	7b5 9+11 13+11			-7b5	+V	VII
LYD	I	II	-III	+IV	V	VI	VII
DIM							
	DIM MA TRIAD DIM MA SEV. DIM MA NINTH	7b9 11b9 13b9				MIN 7b5 MIN 9b5	7+9 7+5 7b9
AUX	I	II	-III	IV	+IV	VI	VII
DIM							
	DIM MA TRIAD DIM MA SEV. DIM MA NINTH	7b9 7b5 7b9 b5		7b9 7+9 7b5	7b9 7+9 7b5	MIN 6+5	7b9 7b5 7b9+5
AUX	I	II	III	+IV	+V	-VII	
RUG							
	RUG MA TRIAD	7TH+5 9TH+11 7TH b5		7+5 9+11 7b5		7+5 9+11 7b5	
AUX	I	-II	-III	III	+IV	-VII	
DIM							
BLUES	MA TRIAD MA b5			MIN + 5	-7b5	VI	-VII
BLUES	I	-III	III	IV	+IV	VI	-VII
MAJ	I	II	III	IV	V	VI	VII

The Tonal Gravity Chart of A Lydian Chromatic Scale

the
LYDIAN CHROMATIC CONCEPT
BY
GEORGE RUSSELL



THE LYDIAN CHROMATIC CONCEPT OF TONAL ORGANIZATION

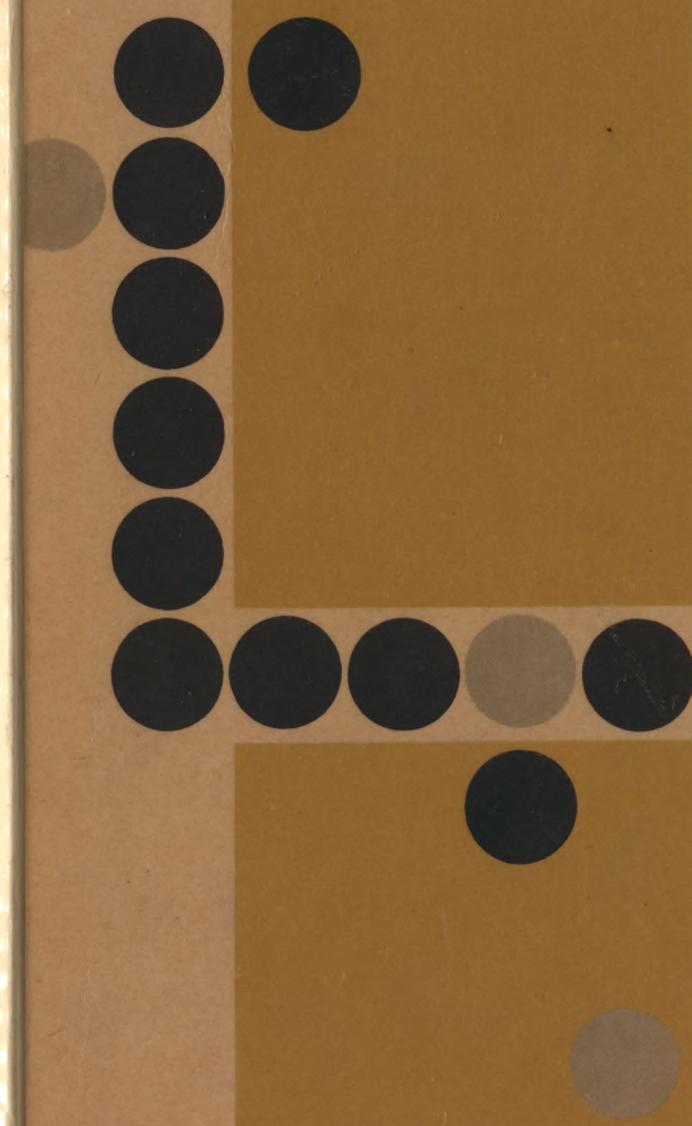
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