

The Jazz Bass Scaling Project

A method for organizing performance observations
as applied to the double bass
featuring selected performances of Richard Davis and Ron Carter

The true jazz moment (as distinct from the uninspired commercial performance) springs from a contest in which each artist challenges all the rest, each solo flight or improvisation represents (like the successive canvases of a painter) a definition of his identity: as individual, as member of the collectivity and as link in the chain of tradition.¹

Ralph Ellison

The Jazz Bass Scaling Project was undertaken in an effort to better understand the performance nuances of jazz bassists. The heart of the project is the Jazz Bass Scaling Chart. The Jazz Bass Scaling Chart was designed to fulfill a perceived need for a study which helps to codify observations for analysis by placing the observations within a framework flexible enough to examine specific elements of an individual performance, yet general enough to allow comparisons between performances and artists. The chart serves to help further understand those elements that combine in unique ways to define musical personality profiles.

Developed after the model of Cantometrics by Alan Lomax,² the Jazz Bass Scaling Chart includes surface elements, such as timbral characteristics and embellishments, in a format that can be seen as an overview of a performance. The chart should not be viewed as a replacement for transcriptions, but as an organizational tool that can be used to enhance the knowledge gained from transcriptions, to summarize observations, help describe elusive performance elements that musical notation has difficulty capturing, and ultimately help to further the study of jazz by providing another alternative for the study of past practices.

The Jazz Bass Scaling Chart is comprised of thirty-five performance elements divided into three areas: accompaniment, solo, and timbral characteristics.³

Due to time and space limitations, only selected elements from the accompanying section will be discussed and demonstrated. There are twelve elements in the accompanying/walking section, thirteen in the solo features section and ten in the timbre quality section. Each performance element is rated on a scale of one to ten. If the performance of an element is more dramatic or emphasized in some way, then it will appear further to the right on the chart (See Jazz Bass Scaling Chart).

Jazz Bass Scaling Chart

Artist/Bassist _____

Recording _____ Cat.# _____

Tune _____ Date _____

Accompanying/Walking(tempo _____) 1 2 3 4 5 6 7 8 9 10

1. Interval size
(stepwise 1 - 8ve plus regularly 10)

2. Range of instrument used
(low register 1 - four octaves 10)

3. Dynamic contour/accent
(static 1 - dramatic changes 10)

4. Placement of pulse
(+, 0, -, v, see key)

5. Quarter note sustaining power
(articulate 1 - legato 10)

6. Sequences/frequency
(rarely 1 - every bar 10)

7. Sequences/length of gesture
(1 bar 1 - 8 or more bars 10)

8. Sequences/types
(see key)

9. Walking fills/frequency
(rarely 1 - every bar 10)

10. Walking fills/length of gesture
(1 beat 1 - many bars 10)

11. Walking fills/rhythmic complexity
(simple 1 - complex syncops 10)

12. Walking fills/types
(see key)

Notes:

More subdued performances will be charted to the left. By placing two charts next to one another and looking at the graphic profile created by the rating columns, one can easily compare how the various elements are treated from performance to performance. There is also a place for notes at the bottom of each section where specific comments and in-depth observations may be preserved.

With the exception of a few isolated lines, where coded specific gesture types are entered, the ratings are comparative and therefore subjective.

Disagreements may occur over the specific numeric representation of different elements for any given performance. However, the Jazz Bass Scaling Chart is designed to measure perceptions, not absolutes. By separating performance elements from one another, the listener is forced to consider each element individually, causing performances to be examined in great detail. The chart is designed to record these observations in a clear format and then enable the observations to be used to reach a more in-depth and complete understanding of jazz bass performances.

The first section of the Jazz Bass Scaling Chart concerns twelve elements associated with the bassist's accompanying role. Since the vast majority of a jazz bass performance is spent in accompanying other soloists, care should be taken not to overlook the subtle nuances of accompanying patterns. The interactive nature of jazz often requires a bassist to tailor an accompaniment for a particular soloist and in doing so may present different profiles within a single performance. It is also often the case that a bassist will alternate accompaniment patterns between a two-beat half note accompaniment and a straight quarter note walk during a performance, as well as change patterns to coincide with the introduction of a new structural section, such as at the top of a chorus or the beginning of the bridge. Observations concerning dramatic

deviations from the general performance profile can be entered in the space for notes at the bottom of the chart.

In order to demonstrate how the scaling chart might be used, several elements will be discussed. The discussion of each element will include a description of the rating range extremes, i.e. what would rate a 1 or a 10 for any specific line.

Most performances fall between these rating extremes. As more in-depth listening experiences are acquired, it is anticipated that the perceptions of different elements within the musical profile will become more efficient.

Many of these elements are relatively self explanatory. Interval size, for instance, describes the intervals used in an accompanying bass part. If the bassist chooses to use primarily stepwise intervals in accompanying the melody and soloists, then the rating entered on this line would be close to 1. If, however, the bassist frequently uses leaps greater than an octave, then the rating entered on this line would be closer to 10. Since accomplished jazz bassists may often change their accompanimental approach within a single performance, it may be necessary to make two or more entries on this line to accurately reflect the performance. If multiple entries are made, notes on the apparent reason for the change in accompanimental patterns, e.g. the beginning of an angular piano solo, may be entered in the 'notes' section.

Other elements, however, require more explanation. Lines 6 through 8 are used to describe the appearance of sequences in a bass accompaniment. A sequence can be defined as a short musical idea, usually only a few notes in length, which is repeated at different pitch levels. Sequences are often used by bassists as transitions from one register to another or as a way to add order and cohesion to a walking bass line.

Line 6 is used to describe how often the bassist chooses to use sequences in a performance. If only a single sequence appears then the rating for the line

would be 1. If sequences appear in almost every bar however, then the rating for the line would be 10. Although musical ideas that are used to create sequences are usually brief, the number of sequential repetitions may extend the idea for several bars. If the sequences appearing in a performance are primarily limited to a single repetition and last only a single bar, then the rating for line 7 would be 1. Sequences that extend for eight or more bars in length would be rated 10.

Line 8 uses a key code to describe different types of sequences. Four types of sequences have been identified:

1. Scalar
2. Octave displaced
3. Alternating registers
4. Lengthy or Odd number of pitches

These four types of sequences are used to describe the sequential pitch movement of a brief musical idea. If the idea is sequenced by stepwise motion, either ascending or descending, then the line would be coded with a 1. If the idea is displaced by octave motion, then the code would be 2. The code would be 3 if the musical idea is presented in different registers more than an octave apart. Finally, if the musical idea being sequenced is exceptionally long or of an odd length (five or six pitches) and consequently creates tension by overlapping the barline, regardless of how the idea was sequenced, then the code for the line would include a 4.

Bassist Ron Carter uses sequences frequently. One example of a broken octave gesture appears in descending scalar motion during his performance on

The final line of the section, line 12, is a coded entry which is used to describe twenty different specific embellishment types (see Jazz Bass Scaling Chart Embellishment Types).

Jazz Bass Scaling Chart Embellishment Types

1. Grace notes/pickups (1 to 3 pitches)
2. Runs (4 or more pitches in quick succession)
3. Dotted rhythms
4. Drops (usually triplets)
5. Hammer-ons (LH pizz)
6. Pull-offs (LH pizz)
7. Scoops (ascending portamento)
8. Fall-aways (descending portamento)
9. Glissando (more than a M2nd; Rhythmic or Free)
10. Double stops, broken
11. Double stops, strummed
12. Anticipations
13. Hesitations (dropped pulse)
14. Offbeats
15. Hemiola
16. Pedals/ostinatos
17. Trills
18. Tremolo
19. Vibrato on single pitch as effect
20. Alternate sounds, specify type: (e.g. ponticello, col legno, slapping the strings, etc.)

While many of the listed embellishment types are self explanatory and should be familiar to experienced bassists, it is important that a common understanding of these terms is established. A select number of embellishments will be discussed and demonstrated.

Two of the more common embellishing gestures are the left hand gestures described as "hammer-ons" and "pull-offs". Hammer-ons occur after the right hand has attacked and released the string being played. The left hand then articulates a higher pitch on the same string by violently depressing the still vibrating string. A hammer-on may occur above an already fingered note, in which case the interval produced is almost always a half step or whole step away, especially when the left hand is in the lower positions where most accompanying takes place. It may also occur over an open string, in which case it becomes possible to hammer-on almost any interval above the open string. In the case of pull-offs the left hand actually initiates an attack by grabbing the string and releasing it, in essence a left hand pizzicato. As with hammer-ons, the string is first sounded by the right hand. The finger on the left hand that has been used to depress the string, then plucks the same string. If a lower finger is being used to continue to depress the string, then the resultant pitch of the pull-off is usually either a half step or whole step lower. Occasionally hammer-ons and pull-offs are combined into a single gesture. In this case the same finger of left hand that "hammers-on" the vibrating string then proceeds to "pull-off" that string in a single motion. This creates a mordent effect in which the initial pitch played by the right hand before the hammer-on is embellished by an upper neighbor. The mordent gesture played in scalar sequences has become a trademark of Ron Carter's performances. A good example of this gesture can

be found on the Telephone⁸ recording, with guitarist Jim Hall (see example, *Two's Blues*).

(pull-offs) sim.

Two's Blues, Telephone

Scoops, fall-aways, and glissandi are all terms that describe a continuous sliding pitch motion. Scoops are created when the left hand depresses the string slightly below the intended pitch and then slides up into the pitch after the string is sounded. Fall-aways are gestures occurring after a pitch has been articulated. The left hand depresses the string at the intended pitch and then slides down slightly below the pitch after the string is sounded. The pitch change in scoops and fall-aways is usually not more than a Major 2nd and does not last longer than one or two beats. In the case of a glissando, the pitch must move in a continuous sliding motion more than a Major 2nd away from the initiating pitch. A glissando may move in either direction, ascending or descending. If a glissando is played with a strong rhythmic character it may be designated "R". If a glissando is played freely, suspending a sense of rhythm as well as pitch, then it may be designated "F". Bassist Richard Davis employs

(see key)

9. Walking fills/frequency X
(rarely 1 - every bar 10)

10. Walking fills/length of gesture X
(1 beat 1 - 8 or more bars 10)

11. Walking fills/rhythmic complexity X
(simple 1 - complex syncops 10)

12. Walking fills/types (1,4,6,7,9)
(see key)

Notes: Long quarter note sustain, especially in lower register. Left hand pull-offs, triplet drops, and offbeats, as well as scoops and grace notes. Use of descending glissandos in time (R) during head and long slow gliss in last head (second time).

Richard Davis Scaling Chart, 1970s

Artist/Bassist: Richard Davis

Recording: Epistrophy and Now's the Time Cat.# Muse 5002

Tune: Now's the Time Date: 1972

Accompanying/Walking (tempo 190) 1 2 3 4 5 6 7 8 9 10

1. Interval size (stepwise 1 - 8ve plus regularly 10) X

2. Range of instrument used (low register 1 - four octaves 10) X

3. Dynamic contour/accents (static 1 - dramatic changes 10) X

4. Placement of pulse (+) (+, 0, -, v, see key)

5. Quarter note sustaining power (articulate 1 - legato 10) X

6. Sequences/frequency (none 1 - every bar 10) X

7. Sequences/length of gesture (1 bar 1 - 8 or more bars 10) X

8. Sequences/types (1,2) (see key)

9. Walking fills/frequency (rarely 1 - every bar 10) X

10. Walking fills/length of gesture (1 beat 1 - 8 or more bars 10) X

11. Walking fills/rhythmic complexity (simple 1 - complex syncops 10) X

12. Walking fills/types (2,5,9,10,11,12,14,15,16,18) (see key) (also 20: ponticello)

Notes: ACTIVE! Very wide, large range, frequent dramatic changes of texture and dynamics - soft ponticello to dramatic accents. Extensive embellishment combinations - octave gliss., pedals, fast long gliss, unisons, complex rhythms, tremolo, etc.

While both bassists use wide intervals in constructing their accompaniments (line 1), Davis uses a much wider range of the instrument (line 2) and also is quite dramatic in changing dynamic contours (line 3). Carter uses sequences more frequently than Davis and tends to create longer phrases of sequenced ideas (lines 6, 7). However, both bassists employ the same types of sequences; scalar and octave displaced.

The most dramatic differences between the musical personality profiles of these two performances is demonstrated by the entries on the embellishment lines. While both bassists use embellishing gestures frequently, Davis's performance is much more aggressive and daring. The performance has very high ratings for length of gesture and rhythmic complexity. It appears from this Scaling Chart that at several times during the course of this performance he plays without regard to the underlying tempo. His performance is also striking when considering the variety of embellishments used in an accompaniment (line 12). Davis uses eleven of the twenty gestures from the embellishment chart list including ponticello, an alternate bowing effect. Carter incorporates several continuous sliding pitch gestures such as scoops and glissandi into his accompaniment, as well as the more frequently heard pull-offs and triplet drops. And while Carter uses embellishments quite frequently (line 9), his gestures serve to reinforce the underlying pulse (line 11).

The comparison of the two Jazz Bass Scaling Charts is intended to demonstrate how this system can be used in the study of recorded performances. While these performances should not be considered representative of these fine bassists contributions to jazz, the charts illustrate how Richard Davis and Ron Carter chose to use a number of performance elements in their respective performances and in what ways their choices were similar and different. Of course these observations are not pitch specific. However, when used in

conjunction with transcriptions, the chart has the ability to organize quite specific observations into a format that can be easily used for comparison.

This concludes the brief overview of the accompaniment section of the Jazz Bass Scaling Chart. Clearly, the art of jazz is much more subtle and complex than thirty-five individual elements would suggest. However, the Jazz Bass Scaling Chart is not intended to be used as a rigid model of performances or to take the place of detailed transcription analysis, but to be used as a way to stimulate new insights, as a way to organize observations about performances, and as a way to discover how artists combine elements in unique ways. The Jazz Bass Scaling Chart was designed as a tool to assist in understanding and assimilating the performance practices of jazz bass.

Footnotes

- ¹A photocopy of the Ellison quote was sent to me some years ago, however I have been unable to locate the original source.
- ²Alan Lomax, Cantometrics: A Method in Musical Anthropology (Berkeley, CA: University of California Extension, 1976).
- ³Elements were arrived at through discussion with several jazz pedagogues and bassists including Dr. Paul Berliner, Dr. Joan Wildman, and Dr. Leslie Thimmig.
- ⁴Eric Dolphy, Far Cry, 1960, New Jazz OJCCD 400 2. (CD)
- ⁵Miles Davis, Cookin' At the Plugged Nickel, 1965, Columbia CK 40645. (CD)
- ⁶Wayne Shorter, Speak No Evil, 1964, Blue Note CDP 7 46509 2. (CD)
- ⁷Herbie Hancock, A Tribute to Miles, 1992, Qwest 9 45059 2. (CD)
- ⁸Jim Hall, Telephone, 1984, Concord CCD 4270. (CD)
- ⁹Elvin Jones, Dear John C., 1965, Impulse GRD 126. (CD)
- ¹⁰Great Jazz Trio, Milestones, 1978, Inner City IC 6030. (LP)
- ¹¹Eric Dolphy, Out to Lunch, 1964, Blue Note BST 84163. (LP)
- ¹²Epistrophy and Now's the Time, 1972, Muse 5002. (LP)
- ¹³Great Jazz Trio, Milestones, 1978, Inner City IC 6030. (LP)