

# A Jazz Improvisation Primer

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## 0. Preface

This primer began in 1992 as an attempt to put together some answers to questions commonly asked by beginning improvisers in the rec.music.bluenote newsgroup on the Internet computer network. In the process of putting the text together, however, it gradually grew into a more comprehensive treatise hopefully suitable as a beginning guide to the self-study of jazz improvisation.

As I expanded the scope of this work from the simple question and answer sheet to what it is now, one of my objectives was to make it also useful to people who have no intention of becoming jazz performers, but who wish to increase their understanding of the music in order to gain a better appreciation for it. Some listeners delight in not knowing what goes into the music, considering it in the same vein as sausages in that respect, but I sincerely believe that one's enjoyment of music can almost always be enhanced by a better understanding of it.

This primer assumes the reader has a certain familiarity with basic concepts of terminology and notation, but no more than one might have learned in a few music lessons as a child. From this foundation, the primer gradually delves into relatively advanced theory. The amount of information presented here may appear overwhelming to all but the most ambitious of non-performing listeners, but I believe the study is well worth the effort.

The theory discussed in this primer could easily take hundreds of pages to cover adequately, and should be accompanied by transcriptions of musical examples and excerpts from actual solos. However, it is not my intention here to write the Great American "How To Play Jazz" Manual (but see below for information about the CD-ROM I am developing). Think of this primer more as an introduction to the subject, or as a survey of the various topics to be covered by other texts. I also feel that jazz improvisation cannot be understood or mastered without a feel for the history of jazz, so I have included a section on history. Again, my treatment here is rather cursory, and should be considered only an introductory survey.

One could argue that instead of reading this primer, one would be better off just reading a history text and a theory text. There is probably some truth to this. However, this primer tries to relate these approaches in a manner that cannot be done with separate texts, to give you a broad idea of what jazz improvisation is all about. It also takes a less pedantic approach than most improvisation texts, encouraging you to find your own voice rather than merely teaching you how to play the "right" notes. I think you will find that the

history, theories, and techniques discussed here go a long way toward explaining what is behind most of the jazz you hear, but are not necessarily enough on its own to allow you to reproduce it or even fully analyze it. If it points anyone in the right direction, encourages them to check out more comprehensive texts, or motivates them to take some lessons or a class, then it has succeeded.

Because this primer was written before the advent of the Web, before the days of on-line graphics and sound on the Internet, this primer is all text. This is unfortunate, since it makes the sections on chords, scales, and voicings much more confusing than they deserve to be. It also makes for an overly technical and dry discussion of such a free and creative art form as jazz. It would be nice to be able to target this primer at the more typical beginning improviser, the high school or college student who is not necessarily especially technically inclined. Musical examples would undoubtedly help me make some of my points that are probably being lost now in the bewildering verbiage. Also, I think using examples to streamline some of the more tedious explanations would help me focus the primer a little better.

I am currently working on a multimedia CD-ROM version of the primer, one that would include hypertext, graphics, and sound. It will also be greatly expanded; probably on the order of three times as much text, in addition to all the examples I'll be able to include. Based on my progress thus far (as of 1/96), I am projecting it would be available by the beginning of 1997, but I've never done anything like this before, so it's hard to guess what exactly will be involved in actually releasing it.

While this primer continues to be freely available, you may wish to consider it as shareware. The CD-ROM itself will be a commercial product, but I could use a little extra capital up front to help fund the project, so donations would be most appreciated. You can send a check to me at my address below (I'm not planning on moving any time soon). The amount is up to you, but I figure \$10 or \$20 would be nice. I will keep track of donations and offer them back to you as rebates should you buy the CD-ROM when it becomes available. Anyone interested in more substantial investment in the CD-ROM project may contact me directly. If any readers have any suggestions for my CD-ROM project or have any other comments or feedback for me on this primer, please let me know. My electronic mail address is [marc@fortnet.org](mailto:marc@fortnet.org), and my Web page is at <http://www.fortnet.org/~marc/>. A note posted to [rec.music.bluenote](mailto:rec.music.bluenote) will generally get my attention as well. I can be reached by telephone at (970)493-4856. My US mail address is Marc Sabatella, 511 East Myrtle Street, Fort Collins, CO 80524.

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For persons on the Internet, the latest version of this primer can be accessed using a web browser such as Netscape, NCSA Mosaic, or Lynx. The URL for the primer is <http://www.fortnet.org/~marc/primer/>. Postscript, DVI, troff -me, and ASCII versions are

also available, from that location or by anonymous ftp to ftp.njit.edu in the /pub/jazz-primer directory. From time to time, I may make other formats available as well. If you cannot print out the primer from any of these forms, you can get hardcopy from me by sending \$20 to me at my address above; \$5 to cover my copying and mailing costs, and \$15 which I will consider a donation that will be rebated to you if you buy the CD-ROM when it becomes available.

Finally, I would like to thank some people who contributed to this primer. Solomon Douglas, Jonathan Cohen, and Sue Raul reviewed the early drafts and gave me lots of good suggestions, most of which were incorporated into the first edition. Jonathan also contributed some material for the discussions on modal music. Since the first edition was made available, thousands of people have downloaded it or viewed it via the Web, and many others have obtained copies by other means as well. I have received many comments and have tried to incorporate as many of the suggestions as possible. While it would be difficult to list everyone who gave me feedback, I would like to especially acknowledge Russ Evans, Jos Groot, Jason Martin Levitt, Scott Gordon, Jim Franzen, David Geiser, and Malte Rogacki, as well as Ed Price, who converted the text into hypertext form for the World Wide Web.

## 1. Goals

For the purposes of this primer, we are all musicians. Some of us may be performing musicians, while most of us are listening musicians. Most of the former are also the latter. I will try to use the term *performer* and *listener* respectively, rather than the terms musician or non-musician, when addressing my audience. This primer is intended primarily for performers who wish to learn jazz improvisation. It is also intended for listeners who wish to increase their understanding of the music. I believe that all musicians can benefit from a fuller understanding of jazz, as this can lead to an enhanced enjoyment of the music.

Some basic knowledge of music, including familiarity with standard music notation, is assumed in many places throughout the primer. I highly recommend that you have access to a piano and the ability to play simple examples on it. Performers should already possess basic technical proficiency on your instruments in order to gain the most from this primer. Listeners should try to bear with the more technical discussions and not get too bogged down with the details where it seems too far over your head.

There are three main goals of this primer. They are to teach you the language of jazz, to increase your understanding of jazz as performed by others, and, for performers, to get you started on improvising. The language of jazz is mostly a language of styles, history, and music theory. It is the language of liner notes, interviews, and textbooks, and contains terms such as “bebop”, “Trane”, and “lydian dominant”. Learning this language will also provide a framework for understanding the music itself. While it is certainly possible to enjoy John Coltrane without understanding anything about music theory, a working knowledge of harmony can provide a new basis for appreciation. It is also possible to improvise without much theoretic background, but stories of famous musicians who were unable to read music are generally greatly exaggerated, and I believe any

musician's playing can be improved by learning more theory.

### 1.1. Outline

This primer is organized as a series of steps toward becoming a jazz musician, either as a performer or as a more informed listener. Most of the steps are geared for the performer, but the non-performing listener is encouraged to try out as many of the playing examples as possible. This should help broaden your ear and help you recognize aspects of the music you might not have otherwise.

The steps outlined in this primer are:

1. listen to many different styles of jazz
2. understand jazz fundamentals
3. learn chord/scale relationships
4. learn how to apply the theory to jazz improvisation
5. learn how to accompany other soloists
6. play with others
7. listen analytically
8. break the rules

These will each be described in some detail later.

Some of the material presented here is very basic, and some of it is rather advanced. Those of you who have listened to a lot of jazz but are not performers yourselves will probably find the history discussions to be simplistic, but find the theoretical discussions overwhelming. Others may grow impatient at the explanations of such basic concepts as the major scale, but will be bewildered at the number and variety of musicians discussed. You may wonder why such a broad array of information has been squeezed into this one primer. I believe that, in order to understand jazz improvisation, it is necessary to understand the history, the theory, and the techniques of jazz. I feel that it is important to merge these avenues if one is to develop a broad understanding.

### 1.2. Other Resources

This primer is not the only source of information you can or should be using in learning jazz improvisation. There are books by Jerry Coker, David Baker, and others that can be used as an aid to learning jazz improvisation. Some of these are relatively basic and do not cover much more material than this primer. Others are quite advanced, and this primer will hopefully provide the necessary background to tackle these texts.

In addition to textbooks, another important resource for performers is the *fakebook*. A fakebook typically contains music for hundreds of songs, but it contains only the melody, lyrics if appropriate, and chord symbols for each. A description of some of the available textbooks and fakebooks can be found in the bibliography.

When practicing, it is often useful to play along with a rhythm section (piano, bass, and drums). This is, of course, not always practical. Jamey Aebersold has produced a series of play-along albums to remedy this situation. These records, cassettes, or CD's come with books containing the music, in fakebook form, for the songs on the record. The

recordings contain only accompaniment; there is no melody or solos. Providing them is your job. The piano and bass are on different stereo channels, so they can be turned off individually if you play one of those instruments. I recommend all performers pick up a few of these. Advertisements are run in *Down Beat* magazine.

Another option is the computer program *Band-In-A-Box*. This program runs on several different hardware platforms. It allows you to enter the chords for a song in ASCII format, and it then generates rhythm section parts and can play them via a MIDI port through a synthesizer. It actually does a very good job of generating realistic parts, and if your synthesizer can generate realistic sounds, you may not be able to tell you are not playing with a recording of a real rhythm section. Disks are available containing hundreds of songs already entered. Advertisements are run in *Keyboard* magazine.

## 2. A Brief History Of Jazz

Listening to other jazz musicians is by far the most important single thing you can do to learn about jazz improvisation. Just as no words can ever describe what a Monet painting looks like, no primer I can write will describe what Charlie Parker sounds like. While it is important for a performer to develop his own style, this should not be done in isolation. You should be aware of what others have done before you.

Having established the importance of listening, the question remains, “What should I listen to?” Most likely, you already have some idea of jazz musicians you like. Often, you can start with one musician and work outwards. For example, the first jazz musician I listened to extensively was the pianist Oscar Peterson. After buying half a dozen or so of his albums, I found I also liked some of the musicians with whom he had performed, such as trumpet players Freddie Hubbard and Dizzy Gillespie, and started buying their albums as well. Then, upon hearing pianist Herbie Hancock with Hubbard, I found a new direction to explore, one which led me to trumpet player Miles Davis, and thereby to saxophonist John Coltrane, and the process is still continuing.

Part of the goal of this primer is to help direct you in your listening. What follows is a brief history of jazz, with mention of many important musicians and albums. Note that the subject of jazz history has generated entire volumes. A few of these are listed in the bibliography.

This primer gives a cursory overview of major periods and styles. There is a lot of overlap in the eras and styles described. The later sections on jazz theory are based primarily on principles developed from the 1940’s through the 1960’s. This music is sometimes referred to as *mainstream* or *straightahead* jazz.

Your local library can be an invaluable asset in checking out musicians with whom you are unfamiliar. Also, you may wish to share albums with friends. Taping records or CD’s for use by others is, of course, in violation of copyright law, however, and it devalues the musicians’ economic reward. You should use the library, and other people’s collections, to give you an idea of what you like, and then go out and buy it.

## 2.1. Early Jazz

The earliest easily available jazz recordings are from the 1920's and early 1930's. Trumpet player and vocalist Louis Armstrong ("Pops", "Satchmo") was by far the most important figure of this period. He played with groups called the Hot Five and the Hot Seven; any recordings you can find of these groups are recommended. The style of these groups, and many others of the period, is often referred to as *New Orleans jazz* or *Dixieland*. It is characterized by collective improvisation, in which all performers simultaneously play improvised melodic lines within the harmonic structure of the tune. Louis, as a singer, is credited with the invention of *scat*, in which the vocalist makes up nonsense syllables to sing improvised lines. Other notable performers of New Orleans or Dixieland jazz include clarinetist Johnny Dodds, soprano saxophone player Sidney Bechet, trumpeter King Oliver, and trombonist Kid Ory.

Other styles popular during this period were various forms of piano jazz, including *ragtime*, *Harlem stride*, and *boogie-woogie*. These styles are actually quite distinct, but all three are characterized by rhythmic, percussive left hand lines and fast, full right hand lines. Scott Joplin and Jelly Roll Morton were early ragtime pioneers. Fats Waller, Willie "The Lion" Smith and James P. Johnson popularized the stride left hand pattern (bass note, chord, bass note, chord); Albert Ammons and Meade Lux Lewis developed this into the faster moving left hand patterns of boogie-woogie. Earl "Fatha" Hines was a pianist who was especially known for his right hand, in which he did not often play full chords or arpeggios, playing instead "horn-like" melodic lines. This has become commonplace since then. Art Tatum is considered by many to be the greatest jazz pianist ever; he was certainly one of the most technically gifted, and his harmonic insights paved the way for many who came after him. He is sometimes considered a precursor of bebop.

## 2.2. Big Band Jazz And Swing

Although the big bands are normally associated with a slightly later era, there were several large bands playing during the 1920's and early 1930's, including that of Fletcher Henderson. Bix Beiderbecke was a cornet soloist who played with several bands and was considered a legend in his time.

The mid 1930's brought on the *swing era* and the emergence of the big bands as the popular music of the day. Glenn Miller, Benny Goodman, Tommy Dorsey, Artie Shaw, Duke Ellington, and Count Basie led some of the more popular bands. An important feature of the big bands, as opposed to most other jazz, is that they usually required their members to be able to read complex arrangements. There were also some important small group swing recordings during the 1930's and 1940's. These differed from the big bands in size, obviously, and in the fact that they often played without written arrangements. They also differed from earlier small groups in that these swing groups featured very little collective improvisation, emphasizing instead the individual soloists. Goodman, Ellington, and Basie recorded often in these small group settings. Major saxophonists of the era include Johnny Hodges, Paul Gonsalves, Lester Young, Coleman Hawkins, and Ben Webster. Trumpet players include Roy Eldridge, Harry "Sweets" Edison, Cootie Williams, and Charlie Shavers. Pianists include Ellington, Basie, Teddy Wilson, Erroll Garner, and

Oscar Peterson; guitarists include Charlie Christian, Herb Ellis, Barney Kessell, and Django Reinhardt; vibraphonists include Lionel Hampton; bassists include Jimmy Blanton, Walter Page, and Slam Stewart; drummers include Jo Jones and Sam Woodyard. Billie Holiday, Dinah Washington, and Ella Fitzgerald were important singers in this era. Most of these musicians recorded in small groups as well as with big bands. The styles of these musicians can best be summarized by saying they concentrated primarily on playing melodically, on the swing feel, and on the development of an individual sound. The blues was, as in many other styles, an important element of this music.

### 2.3. Bebop

The birth of *bebop* in the 1940's is often considered to mark the beginning of modern jazz. This style grew directly out of the small swing groups, but placed a much higher emphasis on technique and on more complex harmonies rather than on singable melodies. Much of the theory to be discussed later stems directly from innovations in this style. Alto saxophonist Charlie "Bird" Parker was the father of this movement, and trumpet player Dizzy Gillespie ("Diz") was his primary accomplice. Dizzy also led a big band, and helped introduce Afro-Cuban music, including rhythms such as the *mambo*, to American audiences, through his work with Cuban percussionists. But it was the quintet and other small group recordings featuring Diz and Bird that formed the foundation of bebop and most modern jazz.

While, as with previous styles, much use was made of the blues and popular songs of the day, including songs by George Gershwin and Cole Porter, the original compositions of the bebop players began to diverge from popular music for the first time, and in particular, bebop was not intended to be dance music. The compositions usually featured fast tempos and difficult eighth note runs. Many of the bebop standards are based on the chord progressions of other popular songs, such as "I Got Rhythm", "Cherokee", or "How High The Moon". The improvisations were based on scales implied by those chords, and the scales used included alterations such as the flatted fifth.

The development of bebop led to new approaches to accompanying as well as soloing. Drummers began to rely less on the bass drum and more on the ride cymbal and hi-hat. Bass players became responsible for keeping the pulse by playing almost exclusively a *walking bass line* consisting mostly of quarter notes while outlining the chord progression. Pianists were able to use a lighter touch, and in particular their left hands were no longer forced to define the beat or to play roots of chords. In addition, the modern jazz standard form became universal. Performers would play the melody to a piece (the *head*), often in unison, then take turns playing *solos* based on the chord progression of the piece, and finally play the head again. The technique of *trading fours*, in which soloists exchange four bar phrases with each other or with the drummer, also became commonplace. The standard quartet and quintet formats (piano, bass, drums; saxophone and/or trumpet) used in bebop have changed very little since the 1940's.

Many of the players from the previous generation helped pave the way for bebop. These musicians included Lester Young, Coleman Hawkins, Roy Eldridge, Charlie Christian, Jimmy Blanton, and Jo Jones. Young and Hawkins in particular are often considered two

of the most important musicians in this effort. Other bebop notables include saxophonists Sonny Stitt and Lucky Thompson, trumpeters Fats Navarro, Kenny Dorham, and Miles Davis, pianists Bud Powell, Duke Jordan, Al Haig, and Thelonious Monk, vibraphonist Milt Jackson, bassists Oscar Pettiford, Tommy Potter, and Charles Mingus, and drummers Max Roach, Kenny Clarke, and Roy Haynes. Miles, Monk, and Mingus went on to further advances in the post-bebop eras, and their music will be discussed later.

#### **2.4. Cool Jazz**

Although Miles Davis first appeared on bebop recordings of Charlie Parker, his first important session as a leader was called *The Birth Of The Cool*. An album containing all the recordings of this group is available. The *cool jazz* style has been described as a reaction against the fast tempos and the complex melodic, harmonic, and rhythmic ideas of bebop. These ideas were picked up by many west coast musicians, and this style is thus also called *West Coast jazz*. This music is generally more relaxed than bebop. Other musicians in the cool style include saxophonists Stan Getz and Gerry Mulligan, and trumpet player Chet Baker. Stan Getz is also credited with the popularization of Brazilian styles such as the *bossa nova* and *samba*. These and a few other Latin American styles are sometimes collectively known as *Latin jazz*.

Many groups in the cool style do not use a piano, and instead rely on counterpoint and harmonization among the horns, usually saxophone and trumpet, to outline chord progressions. Pianist-led groups that developed from this school include those of Dave Brubeck (with Paul Desmond on saxophone), Lennie Tristano (with Lee Konitz and Warne Marsh on saxophones), and the Modern Jazz Quartet or MJQ (featuring John Lewis on piano and Milt Jackson on vibraphone), which also infuses elements of classical music. The incorporation of classical music into jazz is often called the *third stream*.

#### **2.5. Hard Bop**

In what has been described as either an extension of bebop or a backlash against cool, a style of music known as *hard bop* developed in the 1950's. This style also downplayed the technically demanding melodies of bebop, but did so without compromising intensity. It did this by maintaining the rhythmic drive of bebop while including a healthier dose of the blues and gospel music. Art Blakey And The Jazz Messengers were, for decades, the most well-known exponent of this style. Many musicians came up through the so-called "University Of Blakey". Blakey's early groups included pianist Horace Silver, trumpet player Clifford Brown, and saxophonist Lou Donaldson. Clifford Brown also co-led a group with Max Roach that is considered one of the great working quintets in history. Several albums from these groups are available today and all are recommended. Miles Davis also recorded several albums in this style during the early 1950's. There were also a number of groups led by or including organists that came from this school, with even more of a blues and gospel influence. Organist Jimmy Smith and tenor saxophonist Stanley Turrentine were popular players in this genre.

## 2.6. Post Bop

The period from the mid 1950's until the mid 1960's represents the heyday of mainstream modern jazz. Many of those now considered among the greatest of all time achieved their fame in this era.

Miles Davis had four important groups during this time. The first featured John Coltrane ("Trane") on tenor saxophone, Red Garland on piano, Paul Chambers on bass, and "Philly" Joe Jones on drums. This group is sometimes considered the single greatest jazz group ever. Most of their albums are available today, including the series of *Workin' ...*, *Steamin' ...*, *Relaxin' ...*, and *Cookin' with the Miles Davis Quintet*. Miles perfected his muted ballad playing with this group, and the rhythm section was considered by many to be the hardest swinging in the business. The second important Davis group came with the addition of alto saxophonist Julian "Cannonball" Adderly and the replacement of Garland and Jones with Bill Evans or Wynton Kelly and Jimmy Cobb. The album *Kind Of Blue* from this group is high on most lists of favorite jazz albums. The primary style of this group is called *modal*, as it relies on songs written around simple scales or *modes* that often last for many measures each, as opposed to the quickly changing complex harmonies of bebop derived styles. The third Davis group of the era was actually the Gil Evans orchestra. Miles recorded several classic albums with Gil, including *Sketches Of Spain*. The fourth important Miles group of this period included Wayne Shorter on saxophone, Herbie Hancock on piano, Ron Carter on bass, and Tony Williams on drums. The early recordings of this group, including *Live At The Plugged Nickel*, as well as the earlier *My Funny Valentine*, with George Coleman on saxophone instead of Wayne Shorter, mainly feature innovative versions of standards. Later recordings such as *Miles Smiles* and *Nefertiti* consist of originals, including many by Wayne Shorter, that largely transcend traditional harmonies. Herbie Hancock developed a new approach to harmonization that was based as much on sounds as on any conventional theoretical underpinning.

John Coltrane is another giant of this period. In addition to his playing with Miles, he recorded the album *Giant Steps* under his own name, which showed him to be one of the most technically gifted and harmonically advanced players around. After leaving Miles, he formed a quartet with pianist McCoy Tyner, drummer Elvin Jones, and a variety of bass players, finally settling on Jimmy Garrison. Coltrane's playing with this group showed him to be one of the most intensely emotional players around. Tyner is also a major voice on his instrument, featuring a very percussive attack. Elvin Jones is a master of rhythmic intensity. This group evolved constantly, from the relatively traditional post bop of *My Favorite Things* to the high energy modal of *A Love Supreme* to the wailing avant garde of *Meditations* and *Ascension*.

Charles Mingus was another influential leader during this period. His small groups tended to be less structured than others, giving more freedom to the individual players, although Mingus also directed larger ensembles in which most of the parts were written out. Mingus' compositions for smaller groups were often only rough sketches, and performances were sometimes literally composed or arranged on the bandstand, with Mingus calling out directions to the musicians. Alto saxophonist, bass clarinetist, and flautist Eric Dolphy was a mainstay of Mingus' groups. His playing was often described *angular*,

meaning that the interval in his lines were often large leaps, as opposed to *scalar* lines, consist mostly of steps. The album *Charles Mingus Presents Charles Mingus* featuring Dolphy is a classic.

Thelonious Monk is widely regarded as one of the most important composers in jazz, as well as being a highly original pianist. His playing is more sparse than most of his contemporaries. Some of his albums include *Brilliant Corners* and *Thelonious Monk With John Coltrane*. Pianist Bill Evans was known as one of the most sensitive ballad players, and his trio albums, particularly *Waltz For Debby*, with Scott LaFaro on bass and Paul Motian on drums, are models of trio interplay. Wes Montgomery was one of the most influential of jazz guitarists. He often played in groups with an organist, and had a particularly soulful sound. He also popularized the technique of playing solos in octaves. His early albums include *Full House*. Later albums were more commercial and less well regarded. Tenor saxophonist Sonny Rollins rivaled Coltrane in popularity and recorded many albums under his own name, including *Saxophone Colossus* and *The Bridge*, which also featured Jim Hall on guitar. Sonny also recorded with Clifford Brown, Miles Davis, Bud Powell, Thelonious Monk, and other giants.

Other noteworthy musicians of the era include saxophonists Jackie McLean, Dexter Gordon, Joe Henderson, and Charlie Rouse; trumpet players Freddie Hubbard, Lee Morgan, Woody Shaw, and Booker Little; trombonists J. J. Johnson and Curtis Fuller; clarinetist Jimmy Guiffre, pianists Tommy Flanagan, Hank Jones, Bobby Timmons, Mal Waldron, Andrew Hill, Cedar Walton, Chick Corea, and Ahmad Jamal; organist Larry Young, guitarists Kenny Burrell and Joe Pass; guitarist and harmonica player Toots Thielemans; vibraphonist Bobby Hutcherson; bassists Ray Brown, Percy Heath, Sam Jones, Buster Williams, Reggie Workman, Doug Watkins, and Red Mitchell; drummers Billy Higgins and Ben Riley; and vocalists Jon Hendricks, Eddie Jefferson, Sarah Vaughan, Betty Carter, Carmen McRae, Abbey Lincoln, and Shirley Horn. Big bands such as those of Woody Herman and Stan Kenton also thrived.

## 2.7. Free Jazz And The Avant Garde

During these same decades of the 1950's and 1960's, some musicians took jazz in more exploratory directions. The terms *free jazz* and *avant garde* are often used to describe these approaches, in which traditional forms, harmony, melody, and rhythm were extended considerably or even abandoned. Saxophonist Ornette Coleman and trumpet player Don Cherry were pioneers of this music through albums such as *The Shape Of Jazz To Come* and *Free Jazz*. The former album, as well as several more recorded with a quartet that also include either Scott LaFaro or Charlie Haden on bass and either Billy Higgins or Ed Blackwell on drums, still retains the basic feel of traditional post bop small group jazz, with alternating soloists over a walking bass line and swinging drum beat. This style is sometimes known as *freebop*. The album *Free Jazz* was a more cacophonous affair that featured collective improvisation.

Another major figure in the avant garde movement was pianist Cecil Taylor. His playing is very percussive, and includes dissonant clusters of notes and fast technical passages that do not appear to be based on any particular harmonies or rhythmic pulse.

John Coltrane, as already mentioned, delved into the avant garde in the mid 1960's. Albums such as *Ascension* and *Interstellar Space* show Coltrane absorbing both *Free Jazz* and the works of Cecil Taylor. Later Coltrane groups featured his wife Alice on piano and Rashied Ali on drums, as well as Pharoah Sanders on tenor saxophone. He also recorded an album *The Avant Garde* with Don Cherry that is interesting for its parallels with *The Shape Of Jazz To Come* and other Ornette Coleman quartet recordings. Coltrane influenced many other musicians, including saxophonists Archie Shepp, Sam Rivers, and Albert Ayler.

Sun Ra was a somewhat enigmatic figure in the avant garde, claiming to be from the planet Saturn. He played a variety of keyboard instruments with his big bands that range from 1920's style swing to the wilder free jazz of Coltrane and others.

## 2.8. Fusion

Miles Davis helped usher in the *fusion* of jazz and rock in the mid to late 1960's through albums such as *Bitches Brew* and *Jack Johnson*. His bands during this period featured Herbie Hancock, Chick Corea, and Joe Zawinul on electric piano, Ron Carter and Dave Holland on bass, John McLaughlin on guitar, and Tony Williams and Jack DeJohnette on drums. Tony Williams formed a rock oriented band called Lifetime with John McLaughlin, who also formed his own high energy group, the Mahavishnu Orchestra. Through the 1970's Miles continued to explore new directions in the use of electronics and the incorporation of funk and rock elements into his music, leading to albums such as *Pangea* and *Agharta*.

Other groups combined jazz and rock in a more popularly oriented manner, from the crossover Top 40 of Spyro Gyra and Chuck Mangione to the somewhat more esoteric guitarist Pat Metheny. Other popular fusion bands included Weather Report, featuring Wayne Shorter, Joe Zawinul, and bass players Jaco Pastorius and Miroslav Vitous; Herbie Hancock's Headhunters group; Return To Forever, featuring Chick Corea and bassist Stanley Clarke; The Crusaders, featuring saxophonist Wilton Felder and keyboardist Joe Sample; the Yellowjackets, featuring keyboardist Russell Ferrante; and the Jeff Lorber Fusion, which originally featured Kenny G on saxophone. In recent years, several fusion bands have achieved much commercial success, including those of Pat Metheny and Kenny G.

## 2.9. Post Modern Jazz

While fusion seemed to dominate the jazz market in the 1970's and early 1980's, there were other developments as well. Some performers started borrowing from 20th century classical music as well as African and other forms of *world music*. These musicians include Don Cherry, Charlie Haden, saxophonists Anthony Braxton, David Murray, and Dewey Redman, clarinetist John Carter, pianists Carla Bley and Muhal Richard Abrams, the World Saxophone Quartet, featuring four saxophonists (most often Oliver Lake, Julius Hemphill, David Murray, and Hamiett Bluiett) with no rhythm section, and the Art Ensemble Of Chicago, featuring trumpet player Lester Bowie and woodwind player Roscoe Mitchell, among others. Their music tended to emphasize compositional

elements more sophisticated than the head-solos-head form.

Some groups, such as Oregon, rejected the complexity and dissonance of modern jazz and played in a much simpler style, which has given rise to the current *New Age* music. On the other extreme are musicians like saxophonist John Zorn and guitarists Sonny Sharrock and Fred Frith, who engaged in a frenetic form of free improvisation sometimes called *energy music*. Somewhere in between was the long lived group formed by saxophonist George Adams, who was influenced by Coltrane and Pharoah Sanders, and pianist Don Pullen, who was influenced by Cecil Taylor. This group drew heavily from blues music and well as the avant garde. Other important musicians during the 1970's and 1980's include pianists Abdullah Ibrahim, Paul Bley, Anthony Davis and Keith Jarrett.

Not all developments in jazz occur in the United States. Many European musicians extended some of the free jazz ideas of Ornette Coleman and Cecil Taylor, and further dispensed with traditional forms. Others turned toward a more introspective music. Some of the more successful of the European improvisers include saxophonists Evan Parker, John Tchicai, John Surman, and Jan Garbarek, trumpet players Kenny Wheeler and Ian Carr, pianist John Taylor, guitarists Derek Bailey and Allan Holdsworth, bassist Eberhard Weber, drummer John Stevens, and arrangers Mike Westbrook, Franz Kogelman, and Willem Breuker.

### **2.10. The Present**

One of the big trends of today is a return to the bebop and post bop roots of modern jazz. This movement is often referred to as *neoclassicism*. Trumpeter Wynton Marsalis and his brother, saxophonist Branford Marsalis, have achieved much popular success playing music that is based on styles of the 1950's and 1960's. The best of this group of young musicians, including the Marsalises and their rhythm sections of Kenny Kirkland or Marcus Roberts on piano, Bob Hurst on bass, and Jeff "Tain" Watts on drums, manage to extend the art through new approaches to melodicism, harmony, rhythm, and form, rather than just recreate the music of past masters.

An exciting development since the mid 1980's has been a collective of musicians that refers to its music as *M-Base*. There seems to be some disagreement, even among its members, as to what this means exactly, but the music is characterized by angular melodic lines played over complex funky beats with unusual rhythmic twists. This movement is led by saxophonists Steve Coleman, Greg Osby, and Gary Thomas, trumpet player Graham Haynes, trombonist Robin Eubanks, bass player Anthony Cox, and drummer Marvin "Smitty" Smith.

Many other musicians are making strong music in the modern tradition. Among musicians already mentioned, there are Ornette Coleman, David Murray, Joe Henderson, Dewey Redman, Cecil Taylor, Charlie Haden, Dave Holland, Tony Williams, and Jack DeJohnette. Others include saxophonists Phil Woods, Frank Morgan, Bobby Watson, Tim Berne, John Zorn, Chico Freeman, Courtney Pine, Michael Brecker, Joe Lovano, Bob Berg, and Jerry Bergonzi; clarinetists Don Byron and Eddie Daniels; trumpet players Tom Harrell, Marcus Belgrave, and Arturo Sandoval; trombonists Steve Turre and Ray

Anderson; pianists Geri Allen, Mulgrew Miller, Kenny Barron, Gonzalo Rubalcaba, Eduard Simon, Renee Rosnes, and Marilyn Crispell; guitarists John Scofield, Bill Frisell, and Kevin Eubanks; vibraphonist Gary Burton; bassists Niels-Henning Oersted Pedersen and Lonnie Plaxico; and vocalists Bobby McFerrin and Cassandra Wilson. This is by no means a complete list, and you are encouraged to listen to as many musicians as possible to increase your awareness and appreciation for different styles.

### **2.11. Top Ten List**

It is certainly not expected that you run out and purchase albums by all of the artists mentioned above. In general, the artists described first and in the most detail within a given style are considered the most important. A fairly non-controversial “Top Ten List”, containing representatives of several styles and instruments, would be Louis Armstrong, Duke Ellington, Billie Holiday, Charlie Parker, Art Blakey, Charles Mingus, Thelonious Monk, Miles Davis, John Coltrane, and Ornette Coleman. These are among the true giants of jazz. After this, personal preferences begin to come more into play.

## **3. Jazz Fundamentals**

Now that you are listening to jazz, you need to be more conscious of what you are hearing. The most important aspects to which you should pay attention are structure, swing, and creativity.

### **3.1. Structure**

Most jazz since the bebop era is based on a form that is actually quite similar in concept to the sonata allegro form from classical theory: an optional introduction, the exposition or theme (possibly repeated), the development section, and the recapitulation, possibly followed by a coda. The introduction, if present, sets the tone for the piece; the exposition is the main melody; the development section is where the composer extends the ideas of the exposition; the recapitulation is a restatement of the theme; and the coda is an ending. In jazz terms, these sections of a piece would be called the the intro, the head (possibly repeated), the solo section, the head out, and possibly a coda or tag ending. The intro establishes the mood; the head is the main melody; the solo section is where the soloists improvise on the melody and/or chord progression of the tune; the head out is a restatement of the theme; and the coda or tag is an ending.

While not every piece follows this form, the vast majority of traditional jazz stays very close to it. During the solo section, the rhythm section generally keeps following the chord progression of the head while the soloists take turns improvising. Each time through the progression is called a *chorus*, and each soloist may take several choruses. In this respect, the theme-and-variations form of classical music is a more valid analogy, since the development section of a sonata usually takes considerably more liberties, often changing key and introducing entirely new harmonic material. In jazz, each player plays what is essentially a series of variations on the theme.

The improvisation is the most important aspect of jazz, just as the development is often considered the most important part of the classical sonata, or the variations the most

important part of a theme-and-variations. While listening to a piece, try to sing the theme to yourself behind the solos. You may notice that some soloists, particularly Thelonious Monk and Wayne Shorter, often base their solos on the melodic theme as much as on the chord progression. You will also notice that liberties are often taken with the theme itself; players such as Miles Davis, Coleman Hawkins, Sonny Rollins, and John Coltrane were especially adept at making personal statements even while just playing the head.

There are two very common forms for a head or theme in jazz. The first is the *blues* form, which is normally a twelve bar form. There are many variants on blues chord progressions, but most are based on the idea of three four bar phrases. In its original form, the second phrase would be a repeat of the first, and the third would be an answer to that phrase, although this convention is rarely adhered to in jazz. You may wish to check out the blues progressions listed later to get an idea of what they sound like, so you can recognize blues forms when you hear them. Liner notes and song titles will also often help identify which tunes are based on the blues. Some well known jazz tunes based on blues progressions include “Now’s The Time” and “Billie’s Bounce” by Charlie Parker, “Straight, No Chaser” and “Blue Monk” by Thelonious Monk, and “Freddie Freeloader” and “All Blues” by Miles Davis.

The other common form in jazz is the *AABA song form*, used extensively in popular music from the turn of the century until the dawn of rock and roll. This form consists two sections, called the *verse* or *A-section* and the *bridge*. The form is verse 1, verse 2, bridge, verse 3. The verses are similar or identical except for the lyrics and perhaps the last two bars. The song “I Got Rhythm” by George Gershwin, is one example of an AABA form. There are literally hundreds of tunes based on the chord progression to that tune, including “Anthropology” by Charlie Parker and “Oleo” by Sonny Rollins. Other songs with the AABA form include “Darn That Dream” by Jimmy Van Heusen, and “There Is No Greater Love” by Isham Jones. Songs such as these, popular songs from the first half of the century that have been interpreted by many jazz musicians, are often called *standards*.

These structures are only guidelines. Musicians such as Cecil Taylor showed us long ago that it is possible to express oneself without such well defined structures, and indeed this type of expression is often more personal than any more organized form. I have described these common structures to help you understand the context in which many musicians work, not to suggest that they are the only way. You should learn to discern for yourself when listening to other musicians what type of structures they are using, if any. You should also decide for yourself which structures to use in your own playing.

### 3.2. Swing

Understanding the structure of the music is the first step toward an increased appreciation of it. The rest of this primer will deal mainly with hands-on musical examples. Before you delve into the theory, however, you need to develop a feel for *swing*. This is part of the rationale behind doing so much listening, since it is virtually impossible to teach swing analytically. Nonetheless, I will try to explain what you should be hearing and trying to achieve in your own playing.

### 3.2.1. Definition

The most basic element of swing is the *swing eighth note*. In classical music, a set of eighth notes in 4/4 time are meant to take exactly one-half of a beat each. This style is called *straight eighth notes*. Play a C major scale “C, D, E, F, G, A, B, C” in straight eighth notes. If you have a metronome, set it to 96 beats per minute. Those are quarter notes, “one, two, three, four”. Subdivide this in your mind, “one and two and three and four and”.

A common approximation to swing eighth notes uses triplets. The basic beats are be subdivided in your mind as “one-and-uh two-and-uh three-and-uh four-and-uh”, and you play only on the beat and on the “uh”. The first note of every beat will be twice as long as the second. This will sound like Morse Code dash-dot-dash-dot-dash-dot-dash-dot and is far too exaggerated for most jazz purposes. Somewhere in between straight eighth notes (1:1 ratio between first and second note) and triplets (2:1 ratio) lie true swing eighth notes. I cannot give an exact ratio, however, because it varies depending on the tempo and the style of the piece. In general, the faster the tempo, the straighter the eighth notes. Also, pre-bebop era players often use a more exaggerated swing than later performers, even at the same tempo. In addition, the second “half” of each beat is often accented slightly, and beats two and four are usually accented as well. Again, the amount of accent depends on the player and the situation.

There is also the issue of playing behind or ahead of the beat. When Dexter Gordon plays, even the notes that should fall on the beat are usually played a little bit late. This is often called *laying back*. It can lend a more relaxed feel to the music, whereas playing notes that should fall on the beat a little bit early can have the opposite effect. Bassists often play slightly ahead of the beat, particularly at faster tempos, to keep the music driving forward, while soloists may be laying back. Note that accenting the second half of each beat as mentioned above can also contribute to a laid back feel.

Not all styles of jazz use swing in the same way. Most Latin jazz styles and many fusion and modern styles use straight eighths, or eighth notes that are only slightly swung. Shuffles and some other rock styles may use a very exaggerated swing, often a straight triplet feel, or else the eighth notes will be straight but the sixteenth notes will swing. Listen closely to recordings in different styles, paying attention to the differences. Do not be fooled into thinking that swing is a universal constant.

### 3.2.2. Practicing Swing

Learning to play natural sounding swing eighth notes is often the hardest part of learning to play jazz, since it can sound so bad until you can do it well. There are some techniques that can help you overcome this initial awkward stage.

If you have been listening carefully to other musicians, you may be better at recognizing swing than at playing it. Therefore, I highly recommend recording yourself playing swing eighth notes at various tempos, and then listening to yourself on tape. You can judge for yourself whether your swing sounds natural or forced. It has been said that if you cannot swing unaccompanied, you cannot swing. It is important to work on your own concept of swing in this way so that your perception of how you sound is not

influenced by the sound of your accompanists.

You should work on your swing no matter what you are playing. When you practice scales, work on swing as well as simply playing the right notes. Try varying the rhythm you use to play the scale. In addition to scales, you should try practicing swing when playing other exercises or songs. Any practice method book or fakebook will probably contain several appropriate pieces. Try playing songs with many consecutive eighth notes, but also try songs with longer notes and rests. Having to play many consecutive eighth notes can make you too self-conscious of your swing.

While being able to swing unaccompanied is important, it is not easy to do at first, and when developing your swing concept, it can also help to hear it occasionally in the context of a group performance. One thing that would help at times is to have a rhythm section accompaniment. If you have *Band-In-A-Box*, you can program it to play endless choruses of C major, and then you can practice playing or improvising on your C major scale while working on your swing. Aebersold records can provide accompaniment as well, but be aware that most of the tunes have many chord changes and are too complex to use for this purpose. There are a few suitable tracks, however, such as some of those on Volumes 1, 16, 21, 24, and 54, which are geared toward beginners. The books included with these, especially the first four, also contain some useful instructional material.

If you have a partner, or a tape recorder, or a *sequencer* (computer hardware and/or software to record and play back on a synthesizer) you can create do-it-yourself accompaniment. The basic components of a swing drum beat are the *ride pattern* and the *hi-hat pattern*. The ride cymbal pattern, at its most basic, is “1, 2 and, 3, 4 and”; or, phonetically, “ding ding-a ding ding-a”. The eighth notes on 2 and 4 should be swung, of course. The hi-hat is closed (with the foot pedal) on 2 and 4. Walking bass lines can be constructed by following a few simple rules. First, play quarter notes. Second, keep them in the two octaves below middle C. Third, play only notes from the scale on which you are working. Fourth, most notes should be only a step away from the previous note, although occasional leaps are acceptable. For instance, a C major bass line might consist of “C, D, E, F, G, E, F, G, A, B, A, G, F, E, D, B, C”. You will need a lot of patience to create your own accompaniment with a tape recorder, since you will want to record many measures so you do not have to keep rewinding the tape when improvising later. A sequencer will allow you to set up loops, so you can record only a few measures and have them repeat endlessly.

### 3.3. Creativity

The most important aspect of improvisation is creativity. This is the most vital concept for an improviser to understand. The goal is to hear something interesting in your head and be able to play it immediately. Your understanding of music fundamentals is one ally in this endeavor. It can help you interpret the sounds you hear in your head by relating them to sounds you know and understand. Your technical proficiency on your instrument is another ally. It can help you accurately execute what you conceive. Inspiration, however, is what enables you to hear interesting ideas to begin with. That creative spark is

what distinguishes the true artist from the mere craftsman. While no primer can show you how to be creative, I can try to shed a little light on creativity as it pertains to improvisation.

### 3.3.1. The Creative Process

Trumpet player Clark Terry summarizes the creative process as “imitate, assimilate, innovate”. Listening to other musicians can give you ideas you may wish to develop further, and being able to successfully duplicate what they are doing is one step toward being able to express yourself. Next, you must understand why the things you are playing sound the way they do, so that when you want to create a particular sound, you will know how to achieve it. The theory presented in the following sections can help you structure your thoughts, and can also help you identify the sounds you hear. However, analytic processes are an aid to the creative process, not a replacement for it. Two analogies, one with language and one with mathematics, should help make this clear.

When you began to speak, you learned at first by listening to others and imitating them. Gradually, you became aware of grammar, and eventually the grammar was codified for you in English classes. Your vocabulary has probably been growing ever since you spoke your first word. In both writing and conversation, your tools are your knowledge of grammar, vocabulary, and appropriate subject matter. To write or say anything interesting, however, you must have a certain amount of inspiration. It is not sufficient to merely string together grammatically correct phrases of words. What you have to say is generally more important than how you say it, although proper use of the language can help to get your point across. Similarly, in music, knowledge of theory and fundamentals are the tools of composition and improvisation, but inspiration plays the most important role in determining your success. It is not enough to merely play the “right” notes; you must also play interesting music. Jazz improvisation is often likened to “telling a story”, and, like a good story, should be well structured and also convey something interesting to the listener.

In mathematics, creativity can often be crucial as well. Learning the various axioms, formulas, and equations normally does not tell you how to solve a particular word problem, integrate a certain function, or prove a new theorem. Some ingenuity is required to be able to apply your knowledge to the problem at hand. Often, knowing how similar problems have been solved in the past can give you an idea of where to start, and experience working with a particular type of problem can help direct you. In all but the simplest of math problems, however, some original thinking is required. Similarly, in jazz, your familiarity with the works of other musicians can help you get started, and your knowledge of theory can help direct you, but in order to be a successful improviser, you will need to be creative. Just as long columns of numbers are not particularly interesting, even if they add up correctly, neither is an improvisation that consists of nothing but scales and patterns based on those scales.

Your listening experience, your knowledge of music theory, and experimentation on your instrument will define the musical context in which you are able to express yourself. You should continually strive to expand that context by listening to many different musicians,

analyzing what you hear, and practicing as much as possible. Still, the final ingredient, the inspiration, you will have to find on your own.

### 3.3.2. Playing

You should by now, if you have not already, be starting to improvise. You should start the same way you began to practice swing: alone and unaccompanied at first, with a tape recorder if possible, and then with some sort of rhythm section accompaniment. Again, *Band-In-A-Box*, Aebersold records, or do-it-yourself accompaniment will be invaluable.

For your first attempts at improvisation, pick a key with which you are comfortable and then start to play whatever comes into your head. Invent little melodies that use mainly notes from the selected scale. Do not try to fill all available space with notes. Instead, concentrate on hearing a short phrase in your head, and then try to play that phrase. Do not worry if this means there are breaks of several seconds or more between phrases. Miles Davis used this style of phrasing all the time.

At some point while improvising in a given key, try playing notes that are not in that key. Playing notes that are not in the current key is sometimes called playing *outside*. You will find that in many cases, it sounds very natural, while in other cases, it sounds *dissonant*, or harsh. The later sections on theory may help you understand why this is so, but your ear is the ultimate judge. When you finally run out of ideas in one key, you may wish to switch to another. You may also wish to try improvising without any key center at all. I believe this should be just as natural as improvising within a key.

Transcribing solos played by other musicians is one way to get some ideas of what to play. You can examine the structure of the solo, see how they use the various chord/scale relationships discussed later in this primer, and try to apply what you learn to your own playing. One of the best solos for a beginner to study is Miles Davis' solo on "So What" from the album *Kind Of Blue*. The chord structure is simple: sixteen bars of D minor, followed by 8 bars of Eb minor, and then 8 bars of D minor again. Miles' lines are easy enough to transcribe note for note. The theory sections below will help you understand the framework in which Miles was working, but transcribing his solo will help you see what he was doing within that framework.

Another way to get ideas for soloing is by using *patterns*, or short phrases that you have practiced beforehand and know will fit the chord changes at a particular point. In general, improvising is much more than simply stringing together patterns, but pattern practicing can be a good way to develop your technique as well as your ear, particularly if you practice your patterns in all twelve keys. There are several books, including Jerry Coker's *Patterns For Jazz*, that give some useful patterns.

A technique used often in the bebop era and since is *quoting*, or using a recognizable phrase from another composition or well-known recorded improvisation as part of one's own improvisation. This is also sometimes called *interpolation*. You may have noticed this taking place in solos you have heard. There is usually some humor value in quoting, particularly if the interpolated work is something silly like "Pop Goes The Weasel".

The most important obstacles for a beginning improviser to overcome are his or her own inhibitions. At first, when practicing improvisation by yourself, you may feel you have no idea what to play. Once you have reached the point where you feel comfortable in the practice room and decide it is time to play with other musicians, you may feel self-conscious about playing in front of your peers. Finally, when you can play with other musicians in private, you may feel nervous when you first perform in public. I have no miracle cures for these problems. I can only suggest you play as much as possible at each stage, and continually push yourself to take chances.

#### 4. Chord/Scale Relationships

Most improvisation in mainstream jazz is based on chord progressions. The chord progression is the sequence of chords that harmonizes the melody. Usually each chord lasts a measure; sometimes two, sometimes only half. A fakebook will give the symbol representing a particular chord above the corresponding point in the melody.

Even more important than the actual chords, however, are the scales implied by those chords. An improviser, when playing over a D minor chord, whose symbol is Dm, will normally play lines built from notes in the D dorian scale. This section documents the various chords and associated scales used in jazz. Familiarity with note names and locations is assumed.

If your aim is to become a jazz performer, you should practice improvising lines based on all the scales presented here, and in all twelve keys. Otherwise, you may stick to just one key per scale, but you should still practice improvising over each chord/scale relationship in order to better recognize their sounds.

##### 4.1. Basic Theory

This section reviews the concepts of intervals, scales, keys, and chords from classical theory. Those readers with basic classical theory training should be able to skip this section if they wish.

###### 4.1.1. Intervals

There are twelve different notes in traditional music: C, C#/Db, D, D#/Eb, E, F, F#/Gb, G, G#/Ab, A, A#/Bb, and B. After the B comes the C an octave higher than the first C, and this cycle continues. This sequence is called the *chromatic scale*. Each step in this scale is called a *half step* or *semitone*. The *interval* between two notes is defined by the number of half steps between them. Two notes a half step apart, like C and Db, define a *minor second*. Notes that are two half steps apart, like C and D, define a *major second*. This is also called a *whole step*. Expanding by half steps, the remaining intervals are the *minor third*, *major third*, *perfect fourth*, *tritone*, *perfect fifth*, *minor sixth*, *major sixth*, *minor seventh*, *major seventh*, and finally, the *octave*.

Most of these intervals have other names, as well. For example, a tritone is sometimes called an *augmented fourth* if the spelling of the notes in the interval appears to describe a fourth. For example, the tritone interval from C to F# is called an augmented fourth, because the interval from C to F is a perfect fourth. Conversely, if the spelling of the

notes in the interval appears to describe a fifth, then the tritone is sometimes called a *diminished fifth*. For example, the tritone interval from C to Gb, which is actually the same as the interval from C to F#, is called a diminished fifth, because the interval from C to G is a perfect fifth. In general, if any major or perfect interval is expanded by a half step by changing an *accidental* (the flat or sharp indication on the note) the resultant interval is called augmented, and if any minor or perfect interval is reduced by a half step by changing an accidental, the resultant interval is called diminished.

#### 4.1.2. Major And Minor Scales

All scales are simply subsets of the chromatic scale. Most scales have 7 different notes, although some have 5, 6, or 8. The simplest scale, which will be used as an example for the discussion of chords, is the *C major scale*, which is “C, D, E, F, G, A, B”. A major scale is defined by the intervals between these notes: “W W H W W W (H)”, where “W” indicates a whole step and “H” a half. Thus, a G major scale is “G, A, B, C, D, E, F#”, with a half step leading to the G that would start the next octave.

The scale consisting of the same notes as the C major scale, but starting on A (“A, B, C, D, E, F, G”) is the *A minor scale*. This is called the *relative minor* of C major, since it is a minor scale built from the same notes. The relative minor of any major scale is formed by playing the same notes starting on the sixth note of the major scale. Thus, the relative minor of G major is E minor.

A piece that is based on a particular scale is said to be in the *key* of that scale. For instance, a piece based on the notes C, D, E, F, G, A, and B is said to be in the key of either C major or A minor. The chord progression of the piece may distinguish between the two. Similarly, a piece based on the notes G, A, B, C, D, E, and F# is either in G major or E minor. If the word “major” or “minor” is omitted, “major” is assumed. The collection of flat and sharp notes in a scale defines the *key signature* of the associated key. Thus, the key signature of G major is F#.

You should try playing various major and minor scales. You may wish to write out the notes for each, or buy a book like Dan Haerle’s *Scales For Jazz Improvisation*, which contains many scales already written out for you. The more complex scales described below should be written out and practiced as well. Listeners should try enough of each scale to become familiar with the sound. In many cases, just one key will suffice. Performers should practice each scale in all twelve keys over the entire range of their instruments until they have complete mastery over all of them. However, do not become so bogged down in the various scales that you become frustrated and never advance to the next sections on applying the theory. You should start on the applications once you have some command of the dorian, mixolydian, lydian, and locrian modes discussed below.

#### 4.1.3. Chords

A *chord* is a set of notes, usually played at the same time, that form a particular harmonic relationship with each other. The most basic chord is the *triad*. A triad, as the name implies, is composed of three notes, separated by intervals of a third. For instance, the notes C, E, and G played together comprise a *C major triad*. It is so called because the

three notes come from the beginning of the C major scale. The interval from C to E is a major third, and from E to G a minor third. These intervals define a major triad. A G major triad is composed of G, B, and D; other major triads are constructed similarly.

The notes A, C, and E comprise an A *minor triad*, so called because the notes come from the beginning of the A minor scale. The interval from A to C is a minor third, and from C to E a major third. These intervals define a minor triad. An E minor triad is composed of E, G, and B; other minor triads are constructed similarly.

The two other types of triads are the *diminished triad* and the *augmented triad*. A diminished triad is like a minor triad, but the major third on top is reduced to a minor third. Thus, an A diminished triad would be formed by changing the E in an A minor triad to an Eb. An augmented triad is like a major triad, but the minor third on top is increased to a major third. Thus, a C augmented triad would be formed by changing the G in a C major triad to a G#. Note that a diminished triad can be formed from three notes of the major scale; for example, B, D, and F from C major. However, there are no naturally occurring augmented triads in the major or minor scales.

A triad can be extended by adding more thirds on top. For instance, if you take the C major triad (“C E G”), and add B, you have a *major seventh chord* (Cmaj7 or CM7), so called because the notes come from the C major scale. Similarly, if you take an A minor triad (“A C E”), and add G, you have a *minor seventh chord* (Am7 or A-7), so called because the notes come from the A minor scale. The most common type of seventh chord in classical harmony, however, is the *dominant seventh*, which is obtained by adding a minor seventh to the major triad built on the fifth note of the major scale, also called the dominant. For instance, in the key of C major, the fifth note is G, so a G major triad (G B D) with a seventh added (F) is a dominant seventh chord (G7).

These three types of seventh chords have a very important relationship to each other. In any major key, for example, C, the chord built on the second step of the scale is a minor seventh chord; the chord built on the fifth step of the scale is a dominant seventh chord; and the seventh chord built on the root of the scale, also called the *tonic*, is a major seventh chord. Roman numerals are often used to indicate scale degrees, with capital letters indicating major triads and their sevenths, and lower case letters indicating minor triads and their sevenths. The sequence Dm7- G7- Cmaj7 in the key of C can thus be represented as ii-V-I. This is a very common chord progression in jazz, and is discussed in much detail later. The motion of roots in this progression is upwards by perfect fourth, or, equivalently, downward by perfect fifth. This is one of the strongest resolutions in classical harmony as well.

Sevenths can also be added to diminished triads or augmented triads. In the case of a diminished triad, the third added can either be a minor third, which creates a *fully diminished seventh* (for example, A C Eb Gb, or Adim) or a major third, which creates a *half diminished seventh* (for example, B D F A, or Bm7b5). A minor third can be added to an augmented triad, although this is a very rarely used chord that does not have a standard name in classical theory. Adding a major third to an augmented triad would create a seventh chord in name only, since added note is a duplicate an octave higher of the root (lowest note) of the chord. For example, C E G# C. Technically, the seventh is a B# instead

of a C, but in modern tuning systems these are the same note. Two notes that have different names but the same pitch, like B# and C or F# and Gb, are called *enharmonic*. Classical theory is usually very picky about the correct enharmonic spelling of a chord, but in jazz, the most convenient spelling is often used.

More extensions to all types of seventh chords can be created by adding more thirds. For instance, the C major seventh chord (C E G B) can be extended into a C major ninth by adding D. These further extensions, and alterations formed by raising or lowering them by a half step, are the trademarks of jazz harmony, and are discussed in sections below. While there is an almost infinite variety of possible chords, most chords commonly used in jazz can be classified as either major chords, minor chords, dominant chords, or half diminished chords. Fully diminished chords and augmented chords are used as well, but as will be seen, they are often used as substitutes for one of these four basic types of chords.

#### 4.1.4. The Circle Of Fifths

The interval of a perfect fifth is significant in many ways in music theory. Many people use a device called the *circle of fifths* to illustrate this significance. Picture a circle in which the circumference has been divided into twelve equal parts, much like the face of a clock. Put the letter C at the top of the circle, and then label the other points clockwise G, D, A, E, B, F#/Gb, C#/Db, G#/Ab, D#/Eb, A#/Bb, and F. The interval between any two adjacent notes is a perfect fifth. Note that each note of the chromatic scale is included exactly once in the circle.

One application of the circle of fifths is in determining key signatures. The key of C major has no sharps or flats. As you move clockwise around the circle, each new key signature adds one sharp. For example, G major has one sharp (F#); D major has two (F# and C#); A major has three (F#, C#, and G#); E major has four (F#, C#, G#, and D#); and so forth. Also note that the sharps added at each step themselves trace the circle of fifths, starting with F# (added in G major), then C# (in D), then G# (in A), then D# (in E), and so forth. Conversely, if you trace the circle counterclockwise, the key signatures add flats. For example, F major has one flat (Bb); Bb major has two (Bb and Eb); Eb major has three (Bb, Eb, and Ab); and so forth. The flats added at each step also trace the circle of fifths, starting with Bb (added in F major), then Eb (in Bb), then Ab (in Eb), and so forth.

The circle of fifths can also define scales. Any set of seven consecutive notes can be arranged to form a major scale. Any set of five consecutive notes can be arranged to form a pentatonic scale, which is discussed later.

If the labels on the circle of fifths are considered as chord names, they show root movement downward by perfect fifth when read counterclockwise. This root movement has already been observed to be one of the strongest resolutions there is, especially in the context of a ii-V-I chord progression. For example, a ii-V-I progression in F is Gm7- C7- F, and the names of these three chords can be read off the circle of fifths. One can also find the note a tritone away from a given note by simply looking diametrically across the circle. For example, a tritone away from G is Db, and these are directly across from each

other. This can be useful in performing tritone substitutions, discussed later.

## 4.2. Major Scale Harmony

A large part of jazz harmony is based on the major scale. As discussed earlier, every major scale has a relative minor that is formed by playing the same sequence of notes but starting on the sixth step of the scale. In fact, a scale can be formed using the sequence of notes from a major scale starting on any step of the scale. These scales are called modes of the scale. The major scale itself is called the *ionian* mode. The sixth mode, the relative minor, is called the *aeolian* mode. The names of these modes, as well as the others discussed below, come from ancient Greece, although the names are rumored to have been mixed up in translation long ago. While the Greek modes are mainly only of historical interest in classical theory, they are fundamental to jazz.

### 4.2.1. Major Scale

The major scale, or ionian mode, should be quite familiar by now. It is associated with major seventh chords. In the key of C, for example, the C major seventh chord, notated  $C_{maj7}$  (or C with a little triangle next to it, or sometimes  $CM7$ ), is “C E G B”, and these notes outline the C major scale. If a measure in a piece of music is harmonized with a  $C_{maj7}$  chord, then the C major scale is one appropriate scale to use when improvising. The only note in this scale that sounds bad when played against a  $C_{maj7}$  chord is the fourth note, F. You may wish to convince yourself of this by going to a piano and playing  $C_{maj7}$  in your left hand while playing various notes from the C major scale in your right. The fourth of the major is often called an *avoid note* over a major seventh chord. This does not mean you are not allowed to ever play F over a  $C_{maj7}$ , of course, but you should be conscious of the dissonant effect it produces.

The chord obtained by adding another third on top (“C E G B D”) would be called a  $C_{maj9}$ , and it implies the same scale. Adding another third on top would yield “C, E, G, B, D, F”, and this chord would be called a  $C_{maj11}$ . Because of the dissonant nature of the F in this context, however, neither this chord, nor the  $C_{maj13}$  chord obtained by adding an additional third (A), are used very much, although the thirteenth is often added to a major ninth chord, omitting the eleventh. Also, the notation  $C6$  is sometimes used to indicate the presence of the thirteenth (sixth) but no seventh or higher extension.

### 4.2.2. Dorian Mode

The *dorian* mode is built on the second step of the major scale, using the same notes. For example, the D dorian scale is built from the notes of the C major scale, starting on D, and consists of “D, E, F, G, A, B, C”. The dorian mode is a lot like minor scale, but the sixth step is raised a half step. That is, the D minor scale would have a  $Bb$  while the dorian has a B. Because it is so similar to the minor scale, it is natural to play this scale over a minor seventh chord. In fact, it is used more often than the minor scale itself. If you go to a piano and play a  $Dm7$  chord (“D F A C”) in your left hand, and play notes from the D dorian and D minor scales in your right, you will probably find that the dorian mode sounds better, because the B is less dissonant against the  $Dm7$  than the  $Bb$  is. If

you use the dorian mode over a minor seventh chord, there are no notes to avoid.

Like the major seventh chord, you can add more thirds to the minor seventh chord to obtain  $Dm9$ ,  $Dm11$ , and  $Dm13$ . These chords still imply the same dorian mode. If you use the natural minor scale, the thirteen chord contains the note  $Bb$ , which is somewhat dissonant in this context. This chord is seldom used, but when it is called for, it is often notated  $Dm7b6$  or  $Dm7b13$ . The notation  $Dm6$  is sometimes as a synonym for  $Dm13$  when the  $B$  natural is explicitly meant, although as mentioned previously, the sixth chord notation is usually used to indicate no seventh or any other higher extension is desired.

### 4.2.3. Phrygian Mode

The third mode of the major scale is called the *phrygian* mode. In the key of  $C$ , a phrygian scale is built on  $E$ , and consists of “ $E, F, G, A, B, C, D$ ”. This scale, like the dorian mode, is also similar to the minor scale, except that the second step in the phrygian mode is lowered by a half step. That is, an  $E$  minor scale would have an  $F\#$  while the phrygian has an  $F$ . If you try playing the phrygian scale over a minor seventh chord, you will probably find it more dissonant than the minor scale, because of the lowered second. The phrygian mode is used occasionally over a minor seventh chord, although often the chord is written as  $m7b9$  as a hint to the improviser that the phrygian scale is to be used. There are certain other situations in which the phrygian scale sounds good. One is over a dominant seventh chord with a suspended fourth (see mixolydian mode, below) and a lowered ninth, notated  $susb9$ . Another is over a particular chord that I will simply call a phrygian chord. A phrygian chord in  $E$  would be “ $E F A B D$ ”. When the phrygian mode is played over this type of chord, the result is a somewhat Spanish sound, particularly if you add a  $G\#$  to the scale, yielding what is sometimes called the *Spanish phrygian* scale. Several Chick Corea tunes, including “*La Fiesta*”, and much of the music from Miles Davis’ *Sketches Of Spain* feature this sound extensively.

### 4.2.4. Lydian Mode

The fourth mode of the major scale is the *lydian* mode. In the key of  $C$ , a lydian scale is built on  $F$ , and consists of “ $F, G, A, B, C, D, E$ ”. This scale is like the major scale except that it contains a raised fourth step. That is, an  $F$  major scale would contain a  $Bb$  while the lydian contains a  $B$ . Since the fourth step of the major scale is an avoid note over a major seventh chord, this scale gives the improviser an alternative. While the raised fourth might sound a little unusual at first, you should find that it is in general preferable to the natural fourth of the major scale. When the symbol  $Cmaj7$  appears, you have a choice between the major and lydian scales. Often, if the lydian mode is specifically intended, the symbol  $Cmaj7\#11$  will appear instead. Recall that  $Cmaj11$  contains an  $F$  as the eleventh;  $Cmaj7\#11$  denotes that this note should be raised by a half step.

### 4.2.5. Mixolydian Mode

The fifth mode of the major scale is the *mixolydian* mode. In the key of  $C$ , a mixolydian scale is built on  $G$ , and consists of “ $G, A, B, C, D, E, F$ ”. This scale is like the major scale except that the seventh step is lowered a half step. That is, a  $G$  major scale would

contain an F# while the mixolydian contains an F. Since the seventh chord built on the fifth degree of the major scale is a dominant seventh, it is natural to play lines based on the mixolydian mode over a dominant seventh chord. For instance, the G mixolydian scale might be used over a G7 chord.

As with the major scale over a major seventh chord, the fourth step of the scale (C in the case of G mixolydian) is somewhat of an avoid note over a dominant seventh chord. However, there is a chord called a *suspended chord*, notated Gsus, Gsus4, G7sus, G7sus4, F/G, Dm7/G, or G11 over which there are no avoid notes in the G mixolydian mode. The notation F/G indicates an F major triad over the single note G in the bass. The term “suspension” comes from classical harmony and refers to the temporary delaying of the third in a dominant chord by first playing the fourth before resolving it to the third. In jazz, however, the fourth often is never resolved. The suspended chord consists of the root, fourth, fifth, and usually the seventh as well. Herbie Hancock’s tune “Maiden Voyage” consists solely of unresolved suspended chords.

#### 4.2.6. Minor Scale

The aeolian mode, or minor scale, has already been discussed. It can be played over a minor seventh chord, although the dorian or phrygian modes are used more often. It is most often played over a m7b6 chord.

#### 4.2.7. Locrian Mode

The seventh and final mode of the major scale is the *locrian* mode. In the key of C, a locrian scale is built on B, and consists of “B, C, D, E, F, G, A”. The seventh chord built on this scale (“B D F A”) is a half diminished seventh chord, Bm7b5. This symbol comes from the fact that this chord is similar to a Bm7, except that the fifth is lowered by a half step. The classical symbol for this chord is a circle with a “/” through it. The locrian scale can be used over a half diminished (also called a minor seven flat five) chord, but the second step is somewhat dissonant and is sometimes considered an avoid note.

### 4.3. Melodic Minor Harmony

In classical theory, there are three types of minor scale. The minor scale we have already discussed, the aeolian mode, is also called the *natural minor* or *pure minor*. The two other minor scales were derived from it to provide more interesting harmonic and melodic possibilities. If you construct a ii-V-I progression in a minor key, you will find that the seventh chord built on the root is a minor seventh chord, and the seventh chord built on the second step is a half diminished seventh chord. For example, Am7 and Bm7b5 in the key of A minor. The chord built on the fifth step of this scale is a minor chord, for example Em7 in A minor. The resolution of Em7 to Am7 is not as strong as E7 to Am7. Also, the Am7 does not sound like a tonic; it sounds like it should resolve to a D chord. By raising the seventh degree of the minor scale by a half step (that is, raising the G of A minor to G#), these problems are solved. The chord built on the fifth is now E7, and the seventh chord built on the root is an A minor triad with a major seventh, often

notated  $A_m-maj7$ . This creates a much stronger ii-V-i. The resultant scale, “A, B, C, D, E, F, G#”, is called the *harmonic minor*, since it is perceived to yield more interesting harmonies than the natural minor.

The seventh degree of a major scale is sometimes called the *leading tone*, since it is only a half step below the tonic and leads very well into it melodically. The seventh degree of the natural minor scale, on the other hand, is a whole step below the tonic and does not lead nearly as well into it. Although the harmonic minor scale contains a leading tone, if you play that scale, you may note that the interval between the sixth and seventh steps (the F and G# in A harmonic minor) is awkward melodically. This interval is called an *augmented second*. Although it sounds just like a minor third, there are no scale tones between the two notes. This interval was considered to be dissonant in classical harmony. In order to rectify this situation, the sixth can be raised a half step as well (from F to F#) to yield the *melodic minor*. In classical theory, this scale is often used ascending only. When descending, since the G# is not used to lead into the tonic A, the natural minor is often used instead. Jazz harmony does not normally distinguish these cases, however. The melodic minor scale “A, B, C, D, E, F#, G#” is used both when ascending and descending.

Both the harmonic and melodic minors outline a  $m-maj7$  chord, for example  $A_m-maj7$  (“A C E G#”) in A minor. Either of the harmonic or melodic minor scales can be used on this chord. The melodic minor is also used on chords marked simply  $m6$ , although, as was noted earlier, this symbol can also imply the dorian mode. Several of the modes of the melodic minor scale yield particularly interesting harmonies and are commonly played in jazz. These scales are not commonly described in classical theory, so their names are less standardized than the modes of the major scale.

#### 4.3.1. Phrygian #6

There is no common term for the second mode of the melodic minor scale. The second mode of A melodic minor is “B, C, D, E, F#, G#, A”. This scale is similar to the phrygian mode except that it has a raised sixth. For this reason it can be called *phrygian #6*, although that name is not by any means standard. It is most often used as a substitute for the phrygian mode.

#### 4.3.2. Lydian Augmented

The third mode of the melodic minor scale is known as the *lydian augmented* scale. In A melodic minor, a lydian augmented scale is built on C and consists of “C, D, E, F#, G#, A, B”. This scale contains an augmented major seventh chord “C E G# B”. There is no standard symbol for this chord, but  $Cmaj7\#5$  is used occasionally, as is  $Cmaj7-aug$  or  $Cmaj7+$ . When this chord is called for, the lydian augmented scale is an appropriate choice. The  $maj7\#5$  chord is mostly used as a substitute for an ordinary major seventh.

#### 4.3.3. Lydian Dominant

The fourth mode of the melodic minor scale is often called the *lydian dominant* or the *lydian b7*. If you construct it, you should see why. In A melodic minor, a lydian

dominant scale is built on D and consists of “D, E, F#, G#, A, B, C”. This scale resembles the D major scale “D, E, F#, G, A, B, C#” but with two alterations: the raised fourth characteristic of the lydian mode, and the lowered seventh characteristic of the mixolydian mode. The mixolydian mode was described as a possible scale choice to use over a dominant seventh chord, but the fourth step was an avoid note. The lydian dominant scale does not contain this avoid note. As with the lydian scale and the raised fourth over a major seventh chord, the lydian dominant may sound unusual at first, but it is generally more interesting than the mixolydian when played over a dominant seventh.

This particular sound, the raised fourth over a dominant seventh chord, was widely used in the bebop era, and earned the early bebop musicians a lot of criticism for their use of such non-traditional sounds. This sound was also the genesis of the Thelonious Monk composition “Raise Four”, which prominently features the raised fourth in the melody. The use of this scale is often explicitly indicated by the symbol  $D7\#11$ . Bebop musicians often called this a flatted fifth, writing the chord symbol as  $D7b5$ , although this normally implies the diminished scale, which is discussed later.

#### 4.3.4. Fifth Mode

The fifth mode of the melodic minor scale has no common name, and is normally used only over the V chord in a minor key ii-V-i progression. This usage will be discussed later.

#### 4.3.5. Locrian #2

The sixth mode of the melodic minor is often called *locrian #2*, since it is actually the locrian mode with a raised second step. For example, the F# locrian mode is based on G major and consists of “F#, G, A, B, C, D, E”, but the F# locrian #2 scale is based on A melodic minor and consists of “F#, G#, A, B, C, D, E”. Since the second step of the locrian mode is an avoid note over a  $m7b5$  chord, the locrian #2 scale is often used instead. This scale is also sometimes called the *half diminished scale*.

#### 4.3.6. Altered Scale

The seventh mode of the melodic minor scale is often called the *diminished whole tone scale*, because it combines elements of the diminished and whole tone scales discussed later. Another name for this scale is the *altered scale*. To see why, recall the introductory discussion on chords. Chords are constructed by stacking thirds. Triads consisting of three notes were discussed, as were seventh chords consisting of four notes. In the key of C, G7 is the dominant seventh chord. It contains a root (G), a third (B), a fifth (D), and a seventh (F). If we add another third on top, A, we have a ninth chord G9. If we add another third, C, we have an eleventh chord G11. The C is the fourth of the scale, and is normally an avoid note. This symbol is normally used only when the fourth is explicitly required, as in a suspended chord. If we then add another third, E, we have a thirteenth chord G13. The C is normally omitted from this chord. Another third would bring us back to G.

This chord can be altered by raising or lowering individual notes by a half step. The root, third, and seventh are not normally altered, since they are in large part what define the chord. A change to any of these destroys the dominant feel of the chord. The raised eleventh has already been discussed. The other interesting alterations are to the fifth and the ninth. For a G7 chord, this means the lowered or flat fifth (Db), the raised or sharp fifth (D#), the lowered or flat ninth (Ab), and the raised or sharp ninth (A#).

So now let us return to the so-called altered scale. A G altered scale can be built from Ab melodic minor, and consists of “G, Ab, Bb/A#, Cb/B, Db, Eb/D#, F”. First note that this scale contains G, B, and F, the root, third, and seventh of the G7 chord. The rest of the notes, Ab, Bb, Db, and Eb, are respectively, the flattened ninth, the raised ninth, the flattened fifth, and the raised fifth. In other words, all the possible alterations in a ninth chord are included in this scale. The chord implied by this scale is often notated simply G7<sub>alt</sub>, although G7#9#5 is used as well, as is G7#9. The b9 and b5 symbols are not normally used in this context, despite being present in the scale, because they imply the diminished scale which is discussed later.

The sound of the altered scale and the chord it implies is much more complex than any other dominant seventh chord/scale so far presented, and it is one of the most important sounds in post bop jazz. You may wish to spend more time on this scale to get used to it. Try going to a piano and playing the root, third, and seventh in your left hand while playing the altered scale, and lines based on it, in your right. You may use this scale even when the chord appears to be an ordinary dominant seventh, but you should do so cautiously in a group setting, because other members of the group may be playing mixolydian or lydian dominant sounds, and your altered scale will sound dissonant against them. This is not necessarily wrong, but you should be conscious of the effect produced.

#### 4.4. Symmetric Scales

When a mode of given scale produces the same type of scale as the original, the scale is said to be *symmetric*. Several of the important scales used by jazz musicians are symmetric. For instance, the chromatic scale is symmetric, in that every single mode of it is another chromatic scale. In this case, there is really only one unique chromatic scale; all others are just modes of it. In general, if N modes of a given scale produce the same type of scale (including the first mode, the original scale itself), then there are only 12/N different scales of that type.

One thing to watch out for in the scales discussed in this section is that they seem to lend themselves to playing patterns, and sometimes it is difficult to avoid sounding cliched when using these scales. When you have several measures of a given chord, a common technique is to play a short figure in the associated scale and repeat it transposed to several different positions. For instance, a possible pattern in C major would be “C, D, E, G”. This pattern could be repeated several times starting at different positions, perhaps as “D, E, F, A” or “E, F, G, B”. For some reason, many of the scales listed below invite this type of approach, and it is easy to end up with with a few cliches you use every time you are confronted with these scales. Always be conscious of this. You should not feel that a scale is dictating to you what you can or should play.

#### 4.4.1. Whole Tone Scale

A particularly easy scale is the *whole tone scale*, so called because all the steps in the scale are whole steps. A C whole tone scale consists of “C, D, E, F#, G#, Bb”. It has only six notes, and all six of its modes (including itself) form whole tone scales. There are thus only 12/6 or 2 different whole tone scales. The other one is “Db, Eb, F, G, A, B”.

Since the first, third, and fifth degrees of this scale form an augmented triad, this scale can be played over augmented chords. This scale also contains the note that would be the seventh in a dominant chord (that is, Bb in a C7). The chord implied by this scale is written either as C7aug, C<sup>aug</sup>, C7+, C+, or C7#5.

#### 4.4.2. The Diminished Scales

Another symmetric scale is the *diminished scale*. This scale is also called the *whole step half step scale*, or the *half step whole step scale*, because it is constructed from alternating half and whole steps. A whole step half step (abbreviated WH) scale on C consists of “C, D, D#, F, F#, G#, A, B”; a half step whole step (abbreviated HW) scale consists of “C, Db, Eb, E, F#, G, A, Bb”. These scales each contain eight notes. Note that, in addition to the original scale, the third, fifth, and seventh modes of either a WH or HW scale (in addition to the first mode) form another WH or HW scale, so there are only 12/4 or 3 different diminished scales of each type. Also, note that the WH diminished scale is just the second mode of the HW diminished scale, so that in fact, there are only three distinct diminished scales in all. The WH and HW versions of this scale are used in different situations, however.

The HW diminished scale outlines a dominant seventh chord with a lowered ninth and fifth. For example, C7b9b5 is “C E Gb Bb Db” and these notes, as well as the sixth, the natural fifth and the raised ninth, are all present in the C HW diminished scale. The HW scale is thus a good choice to use over dominant seventh b9b5 chords. John Coltrane used this sound a lot.

This scale is very similar to the altered scale, which you may recall is also called the diminished whole tone scale. The C altered scale contains the first five notes of the C HW diminished scale and the last four (overlapping the E and F#) of the C whole tone scale. Since both scales contain lowered fifths and lowered and raised ninths, they are sometimes used interchangeably over dominant seventh chords. Try going to a piano and practicing both scales in your right hand over the root, third, and seventh in your left. They sound very similar. Many fakebooks are inconsistent in using the symbols alt, #9, b9, b5, #9#5, and b9b5. The lesson here is, you will have to depend on your ears and common sense to guide you in the use of these two scales.

The WH diminished scale outlines a fully diminished seventh chord and is thus used over diminished chords. For instance, the C WH diminished scale “C, D, D#, F, F#, G#, A, B” can be played over Cdim or Cdim7. The classical symbol for diminished, a small circle, is sometimes used as well. Note that this scale is the same as the D#, F#, and A WH diminished scales, and in fact Cdim7, D#dim7, F#dim7, and Adim7 are all inversions of the same chord. They may be used interchangeably.

More importantly, this scale is also the same as the D, F, G#, and B HW diminished scales. These scales are associated with their respective  $b9b5$  dominant chords. The C, Eb, F#, and A diminished chords are thus often used as *chord substitutions* for the associated dominant chords, and vice versa. In most places where you see a diminished chord, you can substitute one of the related dominant chords. One particularly common chord progression is  $Cmaj7 | C\#dim | Dm7$ . The  $C\#dim$  chord here implies the C# HW diminished scale, which is the same as the C, Eb, F#, and A HW diminished scale. In this case, the  $A7b9b5$  chord can be substituted for the  $C\#dim$  chord. Not only do  $A7b9b5$  and  $C\#dim$  share the same scale, but the A dominant chord also resolves well to the D minor chord. Any of the scales associated with A dominant chords, such as A mixolydian, A lydian dominant, A altered, or A blues, can thus be played over the  $C\#dim$  chord in this context.

#### 4.5. Pentatonic Scales

There are a group of five note scales known collectively as *pentatonic scales*. Intervals in a traditional pentatonic scale are normally limited to whole steps and minor thirds. Many performers use these relatively simple scales to good effect, including McCoy Tyner and Woody Shaw. The two basic pentatonic scales are the *major pentatonic scale* and the *minor pentatonic scale*. A C major pentatonic scale is “C, D, E, G, A”, and a C minor pentatonic scale “C, Eb, F, G, Bb”. Note that the C minor pentatonic scale is actually the fifth mode of an Eb major pentatonic scale. Other modes of the pentatonic scales are used as well, such as “C, D, F, G, Bb”, which is the second mode of the Bb major pentatonic scale. This scale can be called the *suspended pentatonic scale*, although this usage is by no means standard.

As their names imply, the major, minor, and suspended pentatonic scales can be used over major, minor, and suspended chords respectively. For instance, the C major pentatonic scale can be used over  $Cmaj7$ . Sometimes this chord is written  $C6$  to imply more strongly that the major pentatonic scale is to be used. The C minor pentatonic scale can be used over  $Cm7$ . The C suspended pentatonic chord can be used over a  $C7sus$  chord.

Other five note scales are used occasionally as well. For instance, the scale “E, F, A, B, D” is the traditional Japanese “in sen scale”. It can be used as a substitute for the E phrygian mode (note it in fact defines the E phrygian chord) to impart an Asian flavor to the music. Useful variations of this scale include the second mode, “F, A, B, D, E”, which can be used over a  $Fmaj7\#11$  chord; the fourth mode, “B, D, E, F, A”, which can be used over a  $Bm7b5$  chord; and the fifth mode, “D, E, F, A, B”, which can be used over a  $Dm6$  chord.

Since there are relatively few notes in a pentatonic scale, one pentatonic scale can often be used over several different chords with no real avoid notes. For instance, the C major pentatonic scale “C, D, E, G, A” could be used over  $Cmaj7$ ,  $C7$ ,  $D7sus$ ,  $Dm7$ ,  $Em7b6$ ,  $Fmaj7$ ,  $G7sus$ ,  $Gm7$ , or  $Am7$ .

## 4.6. Derived Scales

The scales in this section are mostly derived from chord progressions rather than specific chords. For the most part, they can be used as bridges between chords, allowing you to play either the same or very closely related scales over two or more different chords. This is sometimes called *harmonic generalization*.

### 4.6.1. The Blues Scale

The *blues scale* is often the first scale, after the major scale, taught to beginning improvisers, and is in some cases the only other scale they ever learn. This scale supposedly has its roots in African American music dating back to the days of slavery, but the exact origins of its modern incarnation are unknown. The C blues scale consists of “C, Eb, F, F#, G, Bb”. The second degree of this scale, which is the flatted third of the minor scale, is called a *blue note*. In vocal music, it is often sung somewhere between an Eb and an E. In instrumental music, various techniques are employed to achieve the same effect, such as stretching the string while playing an Eb on a stringed instrument, lipping down an E on a wind instrument, or striking both the Eb and E simultaneously on a keyboard instrument. The flatted seventh and fifth are also sometimes called blue notes, and are not always sung or played exactly on the notated pitch. Variations on the blues scale that include the natural third, fifth, or seventh can be used as well. Also, note that if the flatted fifth is omitted, the resultant scale is the minor pentatonic scale. The minor pentatonic scale can thus be used as a substitute for the blues scale, and vice versa.

The beauty of the blues scale is that it can be played over an entire blues progression with no real avoid notes. If you try playing lines based on this usage, for instance, a C blues scale over a C7 chord, you get instant positive feedback, since almost everything you can do sounds good. This unfortunately leads many players to overuse the scale, and to run out of interesting ideas quickly. There are only so many phrases (*licks*) that can be played over a six note scale, and most of them have already been played thousands of times by now. This is not to say you should never use the blues scale; on the contrary, it is vitally important to jazz. But do not become so enamored of the easy gratification it can yield that you practice blues licks over and over rather than expand your harmonic vocabulary.

The language metaphor is a good one. It is hard to say interesting things with a limited vocabulary. Often players like Count Basie are offered as examples of musicians who manage to make a lot out of a little, but there is a difference between saying few words because you are choosing them carefully, and saying few words because you have nothing to say or because your vocabulary is too limited to express your thoughts. This advice transcends the blues scale, of course.

It is not always necessary to vary the harmonic content of your playing if you are sufficiently creative with other aspects. One way to introduce added interest when using the blues scale is to use any special effects at your disposal to vary your sound. This can include honking and screaming for saxophonists, growling for brass players, or using clusters on the piano.

### 4.6.2. Minor Scales

The harmonic minor scale is sometimes played over  $m-maj7$  chords. Its modes have no common names, and they are rarely used by jazz musicians except as bridges over a  $ii-V-i$  chord progression. For example, consider the chord progression  $Bm7b5 | E7alt | Am-maj7$ . An A harmonic minor scale can be played over all three of these chords, instead of the traditional B locrian, E altered, and A melodic minor scales. Another way of saying this is that the second mode can be played over a  $m7b5$  chord, and that the fifth mode can be used over an altered dominant chord. Even when you are not using the harmonic minor scale over an entire progression, you may wish to use its fifth mode over the V chord in a minor key  $ii-V-i$  progression. The advantage of using this scale in this example is that it differs from the B locrian and A melodic minor scales by only one note each. The disadvantage is that the root of the scale is an avoid note in this context.

The melodic minor can be used in this same way; its fifth mode can be used over the V chord in a  $ii-V-i$  progression to keep some commonality between the scales used. Note however that the second mode of the A melodic minor is not an ideal choice over the  $Bm7b5$  chord, because this scale has  $F\#$  instead of  $F$ . This is the only difference between the harmonic and melodic minor scales. Your choice of whether to use the fifth mode of the harmonic or melodic minor scales over a dominant seventh chord may partially depend on the key of the tune. If  $F\#$  is in the key signature, then the melodic minor may sound more diatonic. You may choose that scale if this is the sound you are trying to achieve, or the harmonic minor if you are trying to avoid sounding diatonic. Conversely, if  $F\#$  is not in the key signature, then the harmonic minor may sound more diatonic. Another issue to consider is which of these scales is closer to the scale you are using on the preceding or following chord. Depending on the sound you are trying to achieve, you may wish to choose the scale that has either more or fewer notes in common with the surrounding scales.

### 4.6.3. Bebop Scales

The *major bebop scale* is a major scale with an added raised fifth or lowered sixth. The C major bebop scale is “C, D, E, F, G,  $G\#$ , A, B”. This scale can be used over major seventh or major seventh augmented chords. The C major bebop scale can also be used as a bridge between chords in a progression like  $Cmaj7 | Bm7b5- E7 | Am$ ; that is, the same scale can be played over the entire progression. Another way of looking at this is to say that we are playing the C major bebop scale itself over the  $Cmaj7$  chord, playing its eighth mode over the  $Bm7b5$  chord, playing its third mode over the  $E7$  chord, and playing its seventh mode over the  $Am$  chord. These modes closely resemble the major, locrian, altered and minor scales respectively. Note that we are using the C major bebop scale over a  $ii-V-i$  progression in A minor. In general, we can use the major bebop scale in any given key over a  $ii-V-i$  progression in the relative minor to that key.

Other bebop scales include the *dominant bebop scale*, which is similar to the mixolydian mode but with an additional major seventh. The C dominant bebop scale is thus “C, D, E, F, G, A,  $Bb$ , B”. This scale can be used over dominant seventh chords. The major seventh is not really an avoid note if you use it as a *passing tone* between the C and  $Bb$ . It

also serves as the raised fourth in the Fmaj7 chord that is likely to follow the C7 chord. There is also the *minor bebop scale*, which is a dorian scale with an added raised third. The C minor bebop scale is thus “C, D, Eb, E, F, G, A, Bb”. This scale can be used over minor seventh chords, and is often used in minor key blues progressions to give more of a dominant seventh feel to the chords.

#### 4.6.4. Synthetic Scales

The blues and bebop scales are sometimes called *synthetic scales*, because they do not fit in well with classical theory and appear to have been invented to fit a particular situation. In general, any number of synthetic scales can be constructed using just intervals of minor, major, and augmented seconds. You may wish to try experimenting with developing your own scales and looking for opportunities to use them.

#### 4.7. Chord/Scale Chart

The accompanying chart lists the most commonly occurring chords in jazz harmony along with the scales normally associated with each. The chords are grouped into the four basic categories of major, minor, dominant, and half diminished. In a pinch, any scale from any chord in any one of these categories can be used for any other chord in that category. There is an additional category for miscellaneous chords at the end. There are many more possible scales and chords. However, these are the most important ones in traditional jazz harmony.

### 5. Applying The Theory To Improvisation

The basis of traditional forms of improvisation is to create spontaneously and play melodies that are built on the basic chord progression of the song. At the most basic levels, the notes you choose for your improvisation are partially dictated by the scale associated with each chord. This is called *playing changes*. More advanced forms of improvisation give the performer more melodic and harmonic freedom, either by reducing the number of chord changes, or by making the chords progressions more ambiguous in tonality, to the point of eliminating these structures entirely. These approaches are discussed separately below.

Pianists, guitarists, or other instrumentalists who accompany themselves while improvising should read the section on accompanying along with this section and try to apply both sets of concepts at once when improvising.

#### 5.1. Melodic Development

One of your prime concerns should be playing melodically. This does not necessarily mean playing prettily, but there should be some sense of continuity to your lines, and they should be interesting in themselves. You should also be conscious of the rhythmic and harmonic development of your improvisations; I include these concepts in the term “melodic development”. This is hard to teach, and is probably the aspect of improvisation that requires the most creativity. Anyone can learn chord/scale relationships; it is

Chord	Scale
Cmaj7, Cmaj9, C6, C	C major, C lydian, C major bebop C major pentatonic, G major pentatonic
Cmaj7#11	C lydian, B in sen
Cm7, Cm9, Cm11, Cm	C dorian, C minor bebop, C minor pentatonic F major pentatonic, Bb major pentatonic Eb major bebop, C blues, C minor
Cm6, Cm	C dorian, C melodic minor, C minor pentatonic, F major pentatonic, Bb major pentatonic, C minor bebop, Eb major bebop, D in sen
Cm-maj7	C melodic minor, C harmonic minor, Eb major bebop
Cm7b6	C minor, Ab major pentatonic
Cm7b9	C phrygian, C phrygian #6
C7, C9, C13, C	C mixolydian, C lydian dominant, C dominant bebop, C blues, C major pentatonic
C7sus, Csus, C11 Bb/C, Gm7/C	C mixolydian C suspended pentatonic, F major pentatonic
C7#11, C7	C lydian dominant
C7alt, C7#9#5, C7#9	C altered, F harmonic minor, F melodic minor
C7b9b5, C7b9	C HW diminished, F harmonic minor, F melodic minor
C7aug, C7+, C7#5	C whole tone
Cm7b5	C locrian #2, C locrian
Cdim7	C WH diminished
Cphryg	C phrygian, C phrygian #6, C Spanish phrygian C in sen
Cmaj7#5	C lydian augmented, C major bebop
C7susb9	C phrygian #6, C phrygian

what you do with this knowledge that determines how you sound. Hal Crook's book *How To Improvise* has a lot of information on melodic development, especially on rhythmic variation, geared toward the intermediate player, while George Russell's *The Lydian Chromatic Concept Of Tonal Organization For Improvisation* and David Liebman's *A Chromatic Approach To Jazz Harmony And Melody* contain advanced and very technical discussions on harmonic development.

### 5.1.1. Pacing

You should be aware of the contour of your solo. A common way to structure a solo is based on the model of telling a story. You start simply, build through a series of smaller peaks to a climax, and then come to a concluding phrase. This works well in most situations. However, you may wish to vary from this format occasionally. You can decide to start more strongly to introduce your solo, or you may wish to finish right at the climax and forego the denouement. You may wish to keep the entire solo at a low intensity level to convey a lazy feel, although you probably don't want to bore the listeners, either. You may wish to keep the intensity level at a controlled simmer. Much like a standup comic working a room, you may want to alter your strategies as you assess the mood of the audience. You should strive to be in control of the emotional response you generate in your listeners.

There are some common devices that can be used in structuring your solo. One of the most important is repetition. After a soloist plays a phrase, he often repeats it, or a variation of it. Often the phrase, or a variation of it, is played three times before moving on to something else. The variation might be to transpose the phrase, or to alter key notes within it to conform to a new chord/scale. The variation might consist simply of starting the phrase at a different point in the measure, such as on beat three instead of on beat two. The phrase itself may be altered rhythmically, either by playing it faster or slower.

Related to the idea of repetition is the concept of *call and response*. Rather than repeat the original phrase, you can consider the phrase as a question or call, and follow it up with an answer or response. This is the musical analogue to asking, "did you go to the store today?", and then responding "yes, I went to the store today".

On most instruments, you can increase intensity by playing louder, higher, and faster; playing softer, lower, and slower usually reduces intensity. Playing simple rhythms such as quarter notes and eighth notes where the accents fall on the beats is usually less intense than playing more complex rhythms such as *syncopated* rhythms, where most accents fall off the beat. A *hemiola* is a particular type of rhythmic device where one meter is superimposed on another. An example of this is the use of quarter note triplets when playing in 4/4 time.

One long held note can also generate intensity on most instruments, although pianists may have to use trills or rollings octaves to achieve this type of sustain. A single note or short lick repeated over and over can generate a similar sort of intensity. You have to use your judgement in deciding how much is enough.

### 5.1.2. Phrase Construction

The relationships between chords and scales should not be seen as limiting or determining your choice of notes. They are merely an aid, a way to help you relate ideas you may have to fingerings on your instrument. Your ideas should not be dictated by the scales, however. Note that very few jazz singers use scales extensively; they generally are able to translate an idea more directly into their voices. For this reason, instrumentalists should practice improvisation by singing, in addition to practicing their instruments. No matter how untrained your voice may be, it is more natural to you than your instrument,

so you may find you are able to develop ideas better by singing them than by attempting to play them. Singers also are usually limited in their ability to sing complex harmonic ideas, however, because they do not have well-practiced fingerings to fall back on. Scale theory can indeed be a source of ideas; just make sure it is not your only source.

Try playing scalar lines that are based mostly on steps, angular lines that are based mostly on leaps, as well as lines that combine these approaches. In addition to being concerned over your choice of notes, you try to vary the rhythmic content of your ideas. Beginning improvisers often unwittingly play almost all their phrases with just a few underlying rhythms. Try playing lines that are based mostly on half notes and quarter notes, lines that are based mostly on eighth notes and triplets, as well as lines that combine the two approaches.

## 5.2. Playing Changes

Once you have some idea of the association between chord symbols and scales, and how to develop a melodic line, you can start improvising over chord progressions. In performance situations, the rhythm section will be outlining the chord progressions in tempo, while you play improvised lines based on the associated scales. Often the chords will change every measure, and you must keep changing scales to keep up. However, you should not think one chord at a time. You should be trying to construct lines that lead from one chord to the next.

The third and seventh of each chord are the notes that most define the sound of the chord. If you emphasize these notes in your improvisation, it will help guarantee that your lines will accurately imply the changes. Conversely, if you emphasize the other scale tones, it can add a harmonic richness to the sounds. You are also free to use notes not in the scale at all. Bebop players often use a device called the *enclosure*, in which a target note is preceded by notes a half step above and below. This is related to the idea of a passing tone, except in the enclosure, the chromaticism is used to emphasize or delay a particular note rather than to connect two other notes. Other non-scale tones can be used as you see fit.

While there are many possible chord progressions, there are a few basic building blocks that account for many of the chord changes you will see. If you become familiar with these basics, you will be well on your way to being able to play over any set of changes that might come your way. Performers should practice the chord progressions described below in all twelve keys to gain the most fluency. You may wish to try out some specific patterns on these progressions, but more importantly, you should simply explore many different ideas on each progression in each key so you will be comfortable truly improvising on them, rather than just playing the licks with which you are comfortable in that key. You should experiment with different approaches and learn how to tailor your note choices for a given chord type in a given situation for the sound you are trying to achieve.

In addition to reading about these concepts you should try to listen specifically for these techniques being applied by other musicians. The most popular jazz musicians of the 1950's make a good starting point. These include Miles Davis, Clifford Brown, Sonny Rollins, John Coltrane, Cannonball Adderly, Art Pepper, Red Garland, Hank Jones, Herb

Ellis, Joe Pass, Paul Chambers, and Ray Brown. Any albums from that time period featuring one or more of these musicians are recommended for learning about playing changes.

### 5.2.1. ii-V

The most important chord progression in jazz is the *ii-V*, which may or may not resolve to I. Most tunes will have ii-V progressions in several different keys sprinkled throughout. For example, consider the chord progression Cma j7 | Dm7- G7 | Em7 | A7 | Dm7 | G7 | Cma j7. There are three ii-V progressions here. Bar two forms a ii-V in the key of C, although there is no actual C (I) chord in bar three. Bars three through five form a ii-V-I in the key of D minor, and bars five through seven form a ii-V-I in C again. There are many devices that can be used when playing over ii-V progressions. Some of these are described below.

#### 5.2.1.1. Major Keys

In a major key, the ii-V-I progression consists of a minor seventh chord, a dominant seventh chord, and a major seventh chord. The first scale choices you learned for these chords are dorian, mixolydian, and major. In the key of C, the chords are Dm7- G7- Cma j7, and the associated scales would thus be D dorian, G mixolydian, and C major. As you may have noticed, these are all modes of the same C major scale. Thus when you see a ii-V progression in a major key, you can play the major scale of the I chord for the whole progression. This makes it somewhat easier to construct lines that lead from one chord to the next, or transcend the individual chords. This type of progression, where the scales associated with each of the chords are all modes of each other, is called a *diatonic* progression. While diatonic progressions are easy to play over, they can quickly become boring, since you are playing the same seven notes for an extended period of time. You can add a little variety by using one of the other scales associated with each chord, such as D minor, G dominant bebop, C lydian.

The most common way to add interest to a ii-V progression is to alter the dominant (V) chord. Often the alteration will already be specified for you, but even when it is not, you generally have the freedom to add alterations to dominant chords. It helps if the soloist and the accompanists are playing the same alterations, but this is not always practical when improvising unless your accompanist has incredible ears and can hear the alterations you are making, and in any case it is not actually all that important.

In the key of C, you might replace the G7 chord with a G7#11, a G7alt, a G7b9b5, or a G7+ chord, all of which still fulfill the dominant function in C but imply different scales. For instance, if you choose G7#11, the progression then becomes D dorian, G lydian dominant, C major.

Another possible alteration to the dominant is called the *tritone substitution*. This means replacing the dominant chord with a dominant seventh chord a tritone away. In the key of C, this would mean replacing the G7 with a Db7. This may seem a strange thing to do, but there are some very good reasons why it works. The third and seventh of a chord are the two most important notes in defining the sound and function of the chord. If you look

at a Db7 chord, you will see it contains Db, F, Ab, and B, which are respectively the b5, 7, b9, and 3 of a G7 chord. The third and seventh of the G7 chord (B and F) become the seventh and third of the Db7 chord. Thus, Db7 is very similar to a G7b9b5 chord in sound and function. Furthermore, the melodic resolution of Db to C in the bass is very strong, functioning almost as a passing tone.

Once you have made the chord substitution, you can then play any scale associated with the Db7 chord, for instance yielding a progression of D dorian, Db mixolydian, C major. Using a scale other than mixolydian will yield some surprising things. Try a Db lydian dominant scale, which implies a Db7#11 chord for the substitute dominant. Does this look or sound familiar? It should, because the Db lydian dominant and G altered scales are both modes of the same Ab melodic minor scale. When you play lines based on Db lydian dominant, you are playing lines that are also compatible with G altered. Conversely, Db altered and G lydian dominant are both modes of the same D melodic minor scale, and can be used interchangeably. Furthermore, the Db and G HW diminished scales are identical, as are the respective whole tone scales. These are other reasons the tritone substitution works so well.

#### 5.2.1.2. Minor Keys

ii-V progressions in a minor key generally do not suffer the problem of sounding too diatonic. Since the harmonic minor is normally used to generate chord progressions in a minor key, a ii-V progression in A minor might consist of Bm7b5- E7| Am-maj7. If we try to build a ninth chord from the E7, we see that the F natural in the key of A harmonic minor generates an E7b9 chord. Without any special alterations, this progression could imply B locrian, E HW diminished, and A melodic minor. These scales are sufficiently rich that further alterations are not necessary.

However, most of the same techniques from major keys can be used in a minor key as well. We can use the melodic or harmonic minor scales from the i chord, or the major bebop scale from its relative major, over the entire progression. We can use a different variation of the E7 chord such as E7alt or E7+, or even E7sus; we can make a tritone substitution to yield Bb7; and so on. We can also substitute for the ii chords, for example using the locrian #2 scale, or replacing the Bm7b5 with an ordinary Bm7 chord, where the F# comes from the key of A melodic rather than A harmonic minor. If we were to make a ninth chord, the C natural in the key of A melodic minor generates a Bm7b9 chord, which implies a B phrygian scale. We can even replace the ii Bm chord with a II B7 chord, especially a B7alt chord, which contains the D natural from the Bm chord. We can also alter the i chord, replacing it with a simple Am7 chord, and using any of the various possible scales associated with that chord such as A minor, A phrygian, A minor pentatonic, and so on.

#### 5.2.2. Blues

The term “blues” is somewhat overloaded, describing a general style of music and a more specific category of chord progressions, as well as its colloquial meaning of a particular mood, as in the phrase “I’ve got the blues”. The blues as a style has a rich history that is

beyond the scope of this primer. The basic twelve bar blues form was mentioned earlier. In its original form, still played often in rock and R&B music, only three chords are used: the I chord, the IV chord, and the V chord. The basic blues progression is “I | I | I | I | IV | IV | I | I | V | IV | I | I |”, which, in the key of F, yields F| F| F| F| Bb| Bb| F| F| C| Bb| F| F|. The chords are usually all played as dominant seventh chords, although they are not actually functioning as dominant chords in that they do not resolve to a tonic. The F blues scale can be played over this entire progression. While the blues progression can be played in any key, the most popular keys among jazz musicians seem to be F, Bb, and Eb, whereas rock musicians often prefer E, A, D, or G. This has a lot to do with the way instruments are tuned. Popular jazz instruments such as the trumpet and the various members of the saxophone family are usually tuned in Bb or Eb, meaning that the notated “C” played on these instruments actually sounds like a Bb or Eb respectively. Music written for these instruments is therefore transposed. The fingerings for the instruments favors playing in the key of C, which is actually Bb or Eb, depending on the instrument. Guitars tend to dominate rock music, and guitars are tuned to favor the keys containing sharps.

Playing the blues scale over the basic three chord blues progression in a jazz setting gets old very quickly. Starting around the swing era, and most notably in the bebop era, musicians began to make additions to this simple formula. One common adaptation of the blues progression, which is still considered the standard for jazz jam sessions, is F7| Bb7| F7| F7| Bb7| Bb7| F7| D7alt| Gm7| C7| F7| C7|. This progression offers a wider range of scale possibilities than does the basic three chord blues. For example, bars 8 and 9 form a V-i in G minor, and bars 9-11 form a ii-V-I in F.

The idea of adding ii-V's to the blues progression yields more variations. For example, consider F7| Bb7| F7| Cm7- F7| Bb7| Bdim| F7| Am7b5- D7alt| Gm7| C7alt| F7- D7alt| Gm7- C7alt|. This particular progression is especially common in bebop and later styles. Note the substitution of a Bb ii-V-I in bars 4-5, a G minor ii-V-i in bars 8-9, and a G minor V-i in bars 11-12. Also note the diminished chord in bar 6. This diminished chord is serving as a substitute for the dominant seventh, since both Bdim and Bb7b9 share the same Bb HW (B WH) diminished scale. This same substitution can be made for the second half of bar 2.

Other variations can be made using tritone substitutions. For example, Ab7 can be played instead of D7alt in the second half of bar 8. You can also change the qualities of the chords, for instance replacing that Ab7 with an Abm7. Another common substitution is A7alt for the F7 in bar 11. This substitution works because the chords share several notes, including the tonic, F, and because the A7alt forms part of a G minor II-V-i progression with the D7alt and Gm7 that follow.

Charlie Parker carried these types of substitutions to an extreme in “Blues For Alice”. The chord progression in that tune is Fmaj7| Em7b5- A7b9| Dm7- G7| Cm7- F7| Bb7| Bbm7- Eb7| Am7- D7| Abm7- Db7| Gm7| C7| Fmaj7- D7alt| Gm7- C7|. This uses most of the techniques described above. You may wish to play with this progression for a while.

### 5.2.3. Rhythm Changes

The George Gershwin song “I Got Rhythm” is the source for one of the most popular chord progressions of the bebop era, second only to the blues progression. This form is often called simply *rhythm changes*. As with the blues progression, there are many possible variations on rhythm changes. Most tunes based on rhythm changes are played in the key of Bb, and are played at very fast tempos, often well over 200 beats per minute. These songs have a 32 bar AABA form based on the chord progression: Bbma j7- G7| Cm7- F7| Bbma j7- G7| Cm7- F7| Fm7- Bb7| Ebma j7- Ab7| Dm7- G7| Cm7- F7|| Bbma j7- G7| Cm7- F7| Bbma j7- G7| Cm7- F7| Fm7- Bb7| Ebma j7- Ab7| Cm7- F7| Bbma j7|| Am7| D7| Dm7| G7| Gm7| C7| Cm7| F7|| Bbma j7- G7| Cm7- F7| Bbma j7- G7| Cm7- F7| Fm7- Bb7| Ebma j7- Ab7| Cm7- F7| Bbma j7||.

This progression contains many ii-V progressions. Any of the standard alterations described under ii-V progressions above can be used when playing rhythm changes. Many tunes contain slight alterations to this basic progression, especially in the last four measures of the A sections. Some of the common alterations are to replace the second chord G7 with a diminished chord Bdim, or to replace the fifth chord Bbma j7 with Dm7. The former substitution has already been described under the diminished scale. The latter replaces a I chord with a iii chord, which has three of four notes in common, and the respective scales differ by only one note. Furthermore, the Dm7 and following G7 form a ii-V in C minor, so this is an especially strong substitution harmonically.

The important characteristics of rhythm changes are the repeated I-VI-ii-V (or substitutes) in the first four bars of the A sections, and the basic tonality movements by fifths in the bridge, leading back to the original tonic in the last A section. If you intend to become an improvising musician, you should become fluent in the basic rhythm changes, particularly in the key of Bb, and become familiar with the particular variations associated with specific tunes. This is also a good opportunity to try out what you have learned about ii-V's, and to work on your up tempo playing.

### 5.2.4. Coltrane Changes

John Coltrane, through original compositions such as “Giant Steps” and “Countdown” on the album *Giant Steps*, and arrangements of standards such as “But Not For Me” on the album *My Favorite Things*, became known for using a particularly complex progression that is often called *Coltrane changes*, although he was not the first or only musician to make use of it.

The primary characteristic of Coltrane changes is tonality movement by major thirds. The progression to “Giant Steps” is Bmaj7- D7| Gmaj7- Bb7| Ebmaj7| Am7- D7| Gmaj7- Bb7| Ebmaj7- F#7| Bmaj7| Fm7- Bb7| Ebmaj7| Am7- D7| Gmaj7| C#m7- F#7| Bmaj7| Fm7- Bb7| Ebmaj7| C#m7- F#7|. The first key center here is B, then G, then Eb, and it continues to cycle through these three keys, which are a major third apart.

Coltrane was able to develop this idea in many ways. For example, he used it as a substitute for an ordinary ii-V progression. The progression to “Countdown” is loosely based on that to the Miles Davis composition “Tune-up”. The latter tune begins with the four measure progression Em7| A7| Dmaj7| Dmaj7, which is a vanilla ii-V-I progression in D

major. The first four bars of “Countdown” are Em7- F7| Bbma j7- Db7| Gbma j7- A7| Dma j7. Coltrane starts with the same ii chord, and then modulates to the dominant seventh chord one half step higher. From there, he launches into the cycle of major thirds, going from the key of Bb to Gb and finally back to D. The next four bars of the tune are identical harmonically, except they are based on a ii-V in the key of C; the next four bars are the same in the key of Bb.

Soloing over Coltrane changes can be challenging, since the apparent key center changes so often. You cannot simply play a single diatonic scale across several measures. The tunes are usually played at fast tempos, and it is also easy to fall into the trap of playing nothing but arpeggios outlining the chords. You must try to be especially conscious of playing melodically when soloing over a progression as complex as Coltrane changes.

### 5.3. Modal Improvisation

A typical modal tune may have only two or three chords, and each may last 8 or even 16 measures. In one sense, modal playing is much easier than playing changes, since it does not require your brain to do as much fast computation to constantly change scales. In another sense, however, it is more challenging, since you cannot merely string together rehearsed ii-V licks, nor can you rely on clever scale use and chord substitution to cover up basic problems thinking melodically.

Some music is often considered modal even though it follows traditional chord progressions such as the blues. The concept of modality has as much to do with what is done with the harmony as with its rate of change. In bebop derived styles, a soloist may sustain interest by his choice of notes over the harmony, including dissonances, tensions, and releases. For example, bebop players often enjoyed ending phrases on the raised fourth over a dominant chord, just for the effect that one note had. When soloing over modal music, there is less emphasis on harmonic choices, and more on melodic development. The ballad “Blue In Green” from Miles Davis’ *Kind Of Blue* has as much harmonic motion as many other tunes, and the chords themselves are relatively complex chords such as Bbma7#11 or A7alt. Yet the solos on this track do not exploit the harmony; instead they focus on melodicism of individual phrases. Bebop improvisers may emphasize the chordal extensions in their solos, whereas modal improvisers tend to emphasize basic chord notes. Bebop players are often more inclined to fill up all spaces with notes to completely define the harmony, whereas modal players are more likely to use rhythmic space as a melodic structuring element. Both approaches are valid, but it is important to understand the differences between them.

The Miles Davis tune “So What” on the album *Kind Of Blue* is the classic example of a modal tune. It follows a basic AABA structure, where the A section consists of the D dorian mode, and the B section consists of the Eb dorian mode. This yields 16 consecutive bars of D dorian at the beginning of each chorus; 24 counting the last 8 of the previous chorus. You may find yourself running out of ideas quickly if you limit yourself to just the seven notes in the D dorian scale, but that is the challenge. You cannot rely on the consciously hip sound of an F# over a C7 chord; you must play melodically with the notes you are given.

You are not completely restricted to the notes of the scale, however. As with ii-V progressions, there are some devices that you can use in a modal setting to add tension. One of the most popular of such devices is called *sideslipping*. Over a D dorian background, try playing lines based on Db or Eb scales for a measure or two. This dissonance creates a tension, which you can release by returning to the original scale. You can also use chromatic passing tones. For instance, over a D dorian scale, you might try playing “G, G#, A”, where the G# is a passing tone.

You can also vary the scale used. For instance, instead of D dorian, try a D natural minor, or a D minor pentatonic, for a few measures. You can also use alternate a tonic chord with the dominant seventh chord in that key. For example, the chord associated with D dorian is Dm7. If you treat that as a i chord, the V7 chord is A7. So you can use lines from any of the scales associated with A7, A7b9b5, A7alt, or other A dominant seventh chords, at points in your improvisation. This will create a kind of tension that you can resolve by returning to the original D dorian scale.

For the most part, however, you should try to stick to the modal philosophy when playing modal tunes, and concentrate on being as melodic as possible with the basic chord and scale tones. Pentatonic scales are an especially appropriate choice in modal playing, since they narrow your choices to only five notes instead of seven, and further force you to think about using space and playing melodically. A similar sound is achieved by playing lines built from the interval of a fourth. This is called *quartal harmony*. It is particularly effective in modal tunes with few chord changes, although these types of lines can be used in other situations as well.

#### 5.4. Chromaticism

Bebop styles were characterized above as exploiting the harmonies by choosing scales with a lot of color tones, whereas modal playing was characterized as emphasizing the basic chord tones. Both of these approaches still use chord/scale relationships in the traditional manner of choosing a scale that implies the sound of the chord to some degree, and playing mostly within that scale. Another approach is to maintain the sense of chord progressions but play lines that lie largely outside the associated scales. This is sometimes called *chromaticism*. Eric Dolphy used this approach when playing with Charles Mingus and on some of his own albums such as *Live At The Five Spot* and *Last Date*. Woody Shaw and Steve Coleman are also chromatic players.

You have by now probably played some outside notes, say an Ab against a Cmaj7 chord, possibly by accident. These notes may sound wrong when played in the context of an otherwise inside melody. By playing a melody derived from a scale, you establish a particular sound, and one wrong note will sound out of place. However, when playing a melody that lies mostly outside the scale, the same notes may fit in much more logically. That is to say, non-scale tones used melodically can often sound *consonant* (the opposite of dissonant).

The aforementioned musicians often play very angular melodic lines, meaning they consist of large or unusual intervals and change direction often rather than being primarily stepwise and scalelike. This often seems to establish a sound in which wrong notes

sound perfectly natural. Interestingly, the opposite approach works as well: lines that contain a lot of half steps often sound right even though they consist of many wrong notes. These lines are sometimes called *chromatic*.

You can continue to use your knowledge of chord/scale relationships when playing chromatically. For example, you know that a Db Lydian scale is not normally an appropriate choice to play over a Cmaj7 chord, and you probably have some idea why. These same wrong notes, however, if used melodically over the chord, create a sound that is not all that dissonant and has a harmonic richness that is very modern sounding. In fact, even simple melodic ideas like arpeggios and scales can sound complex in this context.

You can practice these ideas with Aebersold albums, or Band-In-A-Box, or your fellow musicians, although you should be prepared for some strange looks. It has been said that there are no wrong notes, only wrong resolutions. This certainly explains why passing tones and enclosures sound consonant, but I feel it still places too high a value on playing the notes suggested by the standard chord/scale relationships. I would restate this; the only wrong notes are notes you didn't intend to play. Any note you play is right if it is in a meaningful context and it does not sound like an accident. There is even value in making mistakes. The trick is in forming a coherent whole.

### 5.5. Non-tonal Improvisation

The terms *pan-tonal*, *non-tonal*, and *atonal* all describe the blurring or elimination of traditional tonality. The distinction between these terms is not always clear, so I will use most general of these, "non-tonal", to describe music that has no specific key center, or over which standard chord/scale relationships do not always apply.

Although non-tonal music may appear to have chord progressions, the individual chords are often chosen for their overall sound rather than for their resolutions. Any chord from any key is likely to be used if it has the right sound. For example, many of the tunes on Miles' albums *E.S.P.*, *Nefertiti*, *Miles Smiles*, and *Sorcerer* have no specific key centers, nor do they contain many traditional ii-V's that would indicate temporary key centers. Many of the chords are relatively complex, for example Abmaj7#5, and each chord is chosen for its individual sound, not because the previous chord resolves to it naturally or because it resolves to the next chord. A traditional functional analysis of the harmony (that is, analyzing chords in terms of their relationship to the key) is not always the best way to approach this sort of music.

You may wish to treat this music modally, and let the chords themselves dictate the scale choices. You should be careful in doing this, however. Many of the standard chord/scale relationships were established with traditional resolutions in mind. Your phrases may seem random and disconnected if you blindly change scales according to the chord progression in non-tonal music. You should be prepared to treat the chord/scale relationships more loosely than you would when simply playing changes.

In tonal music, alterations to a chord are often considered merely color tones that do not affect the basic function of a chord, and improvisers are free to make their own alterations to the basic chord. For example, a G7b9 chord is likely to be a dominant chord, resolving to Cmaj7. Any other chord that serves this function, such as G7#11, or even a

tritone substitution like Db7, can be used instead without radically changing how the phrase is perceived, so tonal improvisers will often make this sort of alteration freely, either explicitly, or implicitly by their scales choices. In non-tonal music, however, a chord is often specifically called for because of its unique sound, and not because of how it functions in a progression. The same G7b9 chord may have been chosen because of the particular dissonance of the G against the Ab, or because that happened to be the most convenient way to spell the chord *voicing* the composer intended (a voicing is simply a way of specifying the particular notes to be played for a given chord). Changing this chord to G7#11 may change the sound of the chord more radically than substituting an otherwise unrelated chord that has the same G/Ab dissonance, such as Abmaj7, or one that may be voiced similarly, such as E7#9. You may find scale choices associated with these chords to be more appropriate substitutions than ones based on the traditional dominant function of G7b9.

The real intent of non-tonal music, however, is to free you from the specifics of chord/scale relationships and allow you to concentrate on the sounds themselves. The lines you play need not be analyzed in terms of their relationships to the notated chords, but may instead be thought of in terms of how they fit the sound of the phrase at that point. If the chord in a given measure is a maj7#5 chord, then you should hear the sound of that chord, and feel free to play any lines that imply that sound. This is as much an emotional implication as a rational one. For me, that particular chord has an open, questioning, sound that I associate with wide intervals and the use of rhythmic space. I would probably tend to play lines that reflect this feeling, regardless of the actual notes involved. Furthermore, the sound of that chord may also be affected by its context in the piece itself. For instance, a chord played for two measure in a ballad may sound entirely differently from the same chord used as an accent in a driving up-tempo piece. Chord scale relationships may still help define which notes tend to be more or less dissonant against a given chord, but you should try organize your thinking along lines of sounds, and use the chord/scale relationships only as tools to help you achieve the desired sounds.

Even in tonal music, of course, chord/scale relationships can be considered as tools, and one could claim the goal is always to represent sounds. However, you may find tunes with many ii-V's in them tend to "sound" the same in this respect. Non-tonal music was created to provide a more varied palette of sounds, to encourage thinking along these lines. As with chromaticism in tonal music, you can deliberately play lines that contradict the sound of the chord, if that is the effect you desire. The important thing is that you perceive a non-tonal chord progression as a recipe of sounds over which you improvise, not as a specific pattern of chord resolutions.

## 5.6. Free Improvisation

The next of level of freedom in improvisation is to eliminate chords entirely. Depending on how far you are willing to go, you can also dispense with traditional melody, rhythm, timbre, or form. There are many different approaches to free playing, but by its very nature, there are no rules. Instead of technical details, examples of other musicians will be used for the most part.

Many of Ornette Coleman's compositions have no chords at all. Most of his freebop quartet recordings with Don Cherry for Atlantic fall into this category. The head consists of a melody only, and the solos are variations on the melody or on the feel of the piece in general, not on any chord progression. For the most part, these recordings still show a very melodic approach and are accessible to many listeners. A walking bass line and 4/4 swing drum beat are constant throughout, and the forms are the standard head-solos-head forms.

Ornette's album *Free Jazz*, featuring a double quartet including Eric Dolphy and Freddie Hubbard, is decidedly different. Here Ornette is not only putting aside traditional concepts of harmony, but also of melody. There is no definable head to the one performance that comprises this album, and the improvisations are less melodic than on the quartet albums. The double quartet also experiments with form on this album, often having several improvisers playing at once. This idea is as old as jazz itself, but was largely forgotten with the advent of the swing era. The free players' idea of collective improvisation is much less structured than the dixieland players', and the results are more cacophonous.

John Coltrane made similar advances late in his career, in albums such as "Ascension". Coltrane also experimented with rhythm, especially in albums like "Interstellar Space" that do not feature any definable pulse. Both Coleman and Coltrane, as well as musicians influenced by them such as Archie Shepp and Albert Ayler, also experimented with timbre, finding new ways to get sounds out of their instruments, even to the extent of playing instruments on which they had little or no training, as Ornette did with the trumpet and the violin.

Cecil Taylor plays the piano in a completely free manner, utilizing it as much as a percussion instrument as a melodic or chordal instrument. His performances generally do not contain any traditional harmonic, melodic, or rhythmic structuring elements. He creates his own structures. When playing free music in a solo setting, you have complete freedom to change the directions of the music at any time, and are accountable only to yourself. You can change tempo, you can play without tempo, you can vary the intensity of your performance as you see fit. When playing music with no set form in a group setting, communication becomes especially important, because there is no automatic frame of reference to keep everyone together. Cecil Taylor does play in a group setting as well, and other groups such as the Art Ensemble Of Chicago are known for this type of freedom.

It is hard to analyze these styles of music in terms we are accustomed to using. The music must reach us on an emotional level in order to be successful, and each person's emotions may be affected differently. It often seems to be that the more free the music, the more intensely personal the statement. You will need to decide for yourself how far you are willing to go in your own playing, as well as in your own listening. You should also be aware that this type of music is often more fun to play than to listen to for many people. The challenge of the communication and the excitement of the free exchange of ideas are things that some listeners are unable to appreciate. This a gentle way of saying that your experimentation may alienate some of your original audience. However, there are audiences that do appreciate this music. You should not be discouraged from playing as freely as you desire.

## 6. Accompanying

Accompanying, or *comping* as pianists often call it, is a vital skill for rhythm section players, because they usually spend more time comping than soloing. An understanding of accompanying is also useful for other instrumentalists, because it can foster better musical communication between the soloist and the accompanists. Pianists are in the unique position of providing much of their own accompaniment, which allows especially tight interaction. Some of the musical devices used by accompanists can also be adapted to be used more directly in solos by any instrumentalist.

### 6.1. Chordal Instruments

The main concerns for *polyphonic* instruments, or instruments that can easily play more than one note at time, such as piano, organ, guitar, and the various mallet instruments, are voicing chords, reharmonizing, and playing rhythms.

#### 6.1.1. Chord Voicings

In jazz, when the music calls for a Cmaj7 chord, this almost never implies a pianist should play “C E G B”. Usually, the pianist will choose some other way of playing the chord, even if it is simply an inversion of the basic root position chord. There have been entire books written on the subject of chord voicings. The discussion here only scratches at the surface of the possibilities. I have loosely categorized the voicings described here as 3/7 voicings, quartal voicings, polychord voicings, close position and drop voicings, and other scale based voicings.

##### 6.1.1.1. 3/7 Voicings

It is somewhat of a shame that the most common type of voicing used by most pianists since the 1950’s has no well established name. I have seen these type of voicings called Category A and Category B voicings, Bill Evans voicings, or simply left hand voicings. Because they are based on the third and seventh of the associated chord, I call them *3/7 voicings*.

The basis of these voicings is that they contain both the third and seventh of the chord, usually with at least one or two other notes as well, and either the third or the seventh is at the bottom. Because the third and the seventh are the most important notes that define the quality of a chord, these rules almost always produce good sounding results. Also, these voicings can automatically produce good *voice leading*, meaning that when they are used in a chord progression, there is very little movement between voicings. Often, the same notes can be preserved from one voicing to the next, or at most, a note may have to move by step.

For instance, consider a ii-V-I progression in C major. The chords are Dm7, G7, and Cmaj7. The simplest form of the 3/7 voicing on this progression would be to play the Dm7 as “F C”, the G7 as “F B”, and the Cmaj7 as “E B”. Note that in the first chord, the third is at the bottom; in the second chord, the seventh is at the bottom; in the third chord, the third is at the bottom. Also note that, when moving from one voicing to the next, only one note changes; the other notes stay constant. This is an important characteristic of 3/7

voicings: when they are used in a ii-V-I progression, or any progression in which root movement is by fourth or fifth, you alternate between the third and the seventh at the bottom. An analogous set of voicings is obtained by starting with the seventh at the bottom: “C F”, “B F”, “B E”.

Normally, you would use more than just the third and seventh. Often, the added notes are the sixth (or thirteenth) and ninth. For example, the C major ii-V-I could be played as “F C E”, “F B E”, “E B D”, or as “F A C E”, “F A B E”, “E A B D”. The added notes are all sixths or ninths, except for a fifth in the first chord of the second example. When playing these four note voicings on guitar, any added notes will usually be added above the third and the seventh, or else your voicing may end up containing several small intervals, which is usually possible to play only with difficult hand contortions. Thus, the C major ii-V-I might be played with four note voicings on guitar as “F C E A”, “F B E A”, “E B D A”.

Note that none of these voicings contain the roots of their respective chords. It is assumed that the bass player will play the root at some time. In the absence of a bassist, pianists will often play the root in their left hand on the first beat, and then one of these voicings on the second or third beats. Actually, you can often get away with not playing the root at all; in many situations, the ear anticipates the chord progression and provides the proper context for the voicing even without the root. It is not forbidden to play the roots in these voicings, but it is neither required nor necessarily better to do so.

These basic voicings can be modified in several ways. Sometimes, you may wish to omit either the third or the seventh. Often, a minor or major chord that is serving as a tonic will be voiced with the third, sixth, and ninth, and these voicings might be interspersed with regular 3/7 voicings. Also, voicings with the fifth or some other note at the bottom can be interspersed with true 3/7 voicings. This might be done for any of several reasons. For one thing, when played on the piano, note the voicings described thus far all tend to slide down the keyboard as the roots resolve downward by fifth. The normal range for these voicings is in the two octaves from the C below middle C on the piano to the C above middle C. As the voicings settle downward, they will start to sound muddy, at which time you might want to jump up. For instance, if you have ended up on a Dm7 as “C F A B” below middle C, and need to resolve to G7 and then Cmaj7, you might want to play these two chords as “D F G B” and “E A B D” respectively to move the voicing upward while preserving good voice leading. Also, roots do not always move by fifths; in a progression such as Cmaj7 to A7, you might want to voice this as “G B C E” to “G B C# F#” to preserve good voice leading.

One thing to note about these voicings in the context of a diatonic ii-V-I is that, because the chords imply modes of the same scale (D dorian is the same as G mixolydian is the same as C major), a given voicing can sometimes be ambiguous. For example, “F A B E” might be either a Dm7 with the seventh omitted, or a G7. In the context of a modal tune like “So What”, it clearly defines the Dm7 or D dorian sound. In the context of a ii-V progression, it probably sounds more like a G7. You can use this ambiguity to your advantage by making one voicing stretch over several chords. This technique is especially useful when applied to the more general scale based voicings discussed later.

Another thing you can do with 3/7 voicings is alter them with raised or lowered fifths or ninths. For instance, if the G7 chord is altered to a G7b9 chord, then it might be voiced as “F Ab B E”. In general, the notes in the voicing should come from the scale implied by the chord.

These voicings are well suited on the piano for playing in the left hand while the right hand is soloing. They can also be played with two hands, or with all strings on a guitar, by adding more notes. This provides a fuller sound when accompanying other soloists. One way to add more notes is to choose a note from the scale not already in the basic voicing and play it in octaves above the basic voicing. For instance, on piano, for Dm7 with “F A C E” in the left hand, you might play “D D” or “G G” in the right. In general, it is a good idea to avoid doubling notes in voicings, since the fullest sound is usually achieved by playing as many different notes as possible, but the right hand octave sounds good in this context. The note a fourth or fifth above the bottom of the octave can often be added as well. For example, with the same left hand as before, you might play “D G D” or “G D G” in the right hand.

The 3/7 voicings are perhaps the most important family of voicings, and many variations are possible. You should try to practice many permutations of each in many different keys.

#### 6.1.1.2. Quartal Voicings

A style of voicing made popular by McCoy Tyner is based on the interval of the fourth. This type of voicing is used most often in modal music. To construct a *quartal voicing*, simply take any note in the scale associated with the chord, and add the note a fourth above, and a fourth above that. Use perfect fourths or augmented fourths depending on which note is in the scale. For instance, quartal voicings for Cm7 are “C F Bb”, “D G C”, “Eb A D” (note the augmented fourth), “F Bb Eb”, “G C F”, “A D G”, and “Bb Eb A”. This type of voicing seems to work especially well for minor chords (dorian mode), or dominant chords where a suspended or pentatonic sound is being used.

These voicings are even more ambiguous, in that a given three note quartal voicing can sound like a voicing for any number of different chords. There is nothing wrong with this. However, if you wish to reinforce the particular chord/scale you are playing, one way to do this is to move the voicing around the scale in parallel motion. If there are eight beats of a given chord, you may play one of these voicings for the first few beats, then move it up a step for a few more beats. The technique of alternating the voicing with the root in the bass, or the root and fifth, works well here, too. On a long Cm7 chord, for instance, you might play “C G” on the first beat, then play some quartal voicings in parallel motion for the duration of the chord.

As with the 3/7 voicings, these voicings are convenient left hand voicings on the piano or three or four string voicings on the guitar. They can also be made into two handed or five or six string voicings by stacking more fourths, fifths or octaves on top. For instance, the Cm7 chord can be voiced as “D G C” in the left hand and “F Bb Eb” in the right, or “Eb A D” in the left and “G C G” in the right. The tune “So What” from the album *Kind Of Blue* used voicings consisting of three fourths and a major third. On a Dm7 chord, the

voicings used were “E A D G B” and “D G C F A”.

### 6.1.1.3. Polychord And Upper Structure Voicings

The basis of a *polychord voicing* is to play two different chords at the same time, such as one in the left hand and one in the right on a piano. The relationship between the two chords determines the quality of the resultant chord. These are always two handed voicings on a piano, or five or six string voicings on the guitar. They produce a very rich, complex sound compared to the voicings presented so far.

The simplest style of polychord voicing is to play two triads; for instance, a C major triad in the left hand on a piano, and a D major triad in the right. This will be notated D/C. This notation is overloaded in that it is usually interpreted as meaning a D triad over the single note C in the bass; it is not always clear when a polychord is intended. Polychords are seldom explicitly called for in written music, so there is no standard way to notate them. You must normally find your own opportunities to play polychords.

If you take all the notes in this D/C voicing and lay them in a row, you will see that this describes either the C lydian or C lydian dominant scales. Therefore, this voicing can be used over any chord for which those scales are appropriate. If you experiment with other triads over a C major triad, you will find several combinations that sound good and describe well known scales. However, many of these combinations involve doubled notes, which can be avoided as described below. Among the polychords that do not involve doubled notes are G $\flat$ /C, which produces a C HW diminished scale, B $\flat$ /C, which produces a C mixolydian scale, D $\flat$ /C, which produces a C major or C mixolydian scale, E $\flat$ m/C, which produces a C HW diminished scale, F $\sharp$ m/C, which also produces a C HW diminished scale, and Bm/C, which produces a C lydian scale. These polychords may be used as voicings for any chords that fit the corresponding scales.

You may have noticed that D $\flat$ /C, A $\flat$ m/C, B $\flat$ m/C, and B/C also involve no doubled notes and sound very interesting, although they do not obviously describe any standard scales. There are no rules for when these polychords may be played as voicings. When your ear becomes accustomed to the particular nuances and dissonances of each, you may find situations in which you can use them. For example, the last polychord listed, B/C, sounds good when used as a substitute for C $\flat$ 7, particularly in the context of a ii-V-I progression, and especially at the end of a song. You may resolve it to a normal C $\flat$ 7 voicing if you wish.

You can construct similar polychords with a minor triad at the bottom. D $\flat$ /C $\flat$ m produces a C phrygian scale; F/C $\flat$ m produces a C dorian scale; F $\sharp$ m/C $\flat$ m produces a C minor scale; A/C $\flat$ m produces a C HW diminished scale; B $\flat$ /C $\flat$ m produces a C dorian scale; and B $\flat$ m/C $\flat$ m produces a C phrygian scale. In addition, D/C $\flat$ m produces an interesting, bluesy sounding scale.

I mentioned before the desire to avoid doubled notes. One way to construct polychords that avoid doubled notes is to replace the triad at the bottom with either the third and seventh, the root and seventh, or the root and third of a dominant chord. Voicings constructed in this fashion are also called *upper structures*. They always imply some sort of dominant chord.

For example, there are several possible C7 upper structures. A Dbm triad over “C Bb” yields a C7b9b5 chord. A D triad over “E Bb” yields a C7#11 chord. An Eb triad over “C E” yields a C7#9 chord. An F#m triad over “C E” yields a C7b9b5 chord. An F#m triad over “E Bb” yields a C7b9b5 chord. An Ab triad over “E Bb” yields a C7#9#5 chord. An A triad over “C Bb” yields a C7b9 chord.

You will find it takes a lot of practice to become familiar enough with these voicings to be able to play them on demand. You may wish to choose a few tunes and plan ahead of time where you will use these voicings. It is well worth the effort. The richness and variety introduced by these voicings can add a lot to your harmonic vocabulary.

#### 6.1.1.4. Close Position And Drop Voicings

The simplest voicing for a four note chord is the *close position voicing*, in which all the notes in the chord are arranged as close together as possible. For example, a C7 chord might be voiced in close position as “C E G Bb”. This is referred to as *root position*, since the root, C, is at the bottom. The chord might also be voiced in close position as “E G Bb C”, which is also called the first *inversion*, since the bottom note has been inverted to the top. The second inversion is “G Bb C E” and the third “Bb C E G”.

A *drop voicing* is created from a close position voicing by dropping one of the notes down an octave. If the second note from the top is dropped, the voicing is called a *drop 2 voicing*; if the third note from the top is dropped, the voicing is called a *drop 3 voicing*. For a C7 chord in root position, “C E G Bb”, the corresponding drop 2 voicing is “G C E Bb”. The second note from the top, G, has been dropped down an octave. The corresponding drop 3 voicing would be “E C G Bb”. Drop 2 and drop 3 voicings can be constructed from any of the inversions of the chord as well. On the piano, the dropped note must normally be played in the left hand, so these are almost always two handed voicings. The intervals in these voicings make them perfectly suited for guitar.

Close position and drop voicings are effective when used to harmonize a melody, particularly in a solo setting. Each melody note may be harmonized by a different drop voicing, with the melody note on top. Pianists and guitarists often use this type of approach in their own solos. A phrase in which every note is accompanied by close position or drop voicings is said to be harmonized with *block chords*. Red Garland, Dave Brubeck, and Wes Montgomery all regularly played block chord solos.

#### 6.1.1.5. Other Scale Based Voicings

There are other logical ways of constructing voicings; too many to describe individually here. Most approaches are similar in that they they associate a scale with each chord and construct the voicing from notes in that scale. By using a scale approach, you can devise your own patterns for voicings. For instance, a second with a third stacked on top is a somewhat dissonant but not too cluttered sound that many pianists use extensively. For a chord such as F $\text{m}\text{a}\text{j}7$ , you can apply this format at any position in the associated F Lydian or F major scale. Since the F major scale contains an avoid note (Bb) in this context, one would normally opt for the Lydian scale and the B natural, so that none of the generated voicings would contain any avoid notes. The particular pattern described above yields “F

G B”, “G A C”, “A B D”, “B C E”, “C D F”, “D E G”, and “E F A” over the F Lydian scale.

Most of these voicings are very ambiguous, in the sense that they do not readily identify the chord. As with the 3/7 and quartal voicings, however, you will find that the presence of a bass player, or just the context of the chord progression being played, will allow almost any combination of notes from a given scale to make an acceptable voicing for the associated chord.

You may wish to experiment with different patterns and different scales to see if you can find any voicings you particularly like. Often, the goal is not to find a voicing that completely describes a given chord, but rather to find a voicing that conveys a particular sound without seriously corrupting the chord. You may find that at a given point in the music, you may wish to hear the characteristic authority of a perfect fifth, or the characteristic dissonance of a minor ninth or of a cluster of several notes a second apart, but without the characteristic wrong note sound of a completely random selection of notes. Thinking of the associated scale and putting your sound into that context gives you a logical and reliable way to get the sound you want without compromising the harmony.

### 6.1.2. Reharmonizing

An accompanist may occasionally *reharmonize* a chord progression to sustain interest, introduce contrast, or create tension. This involves replacing some of the written or expected chords with other unexpected chords. Substitutions such as the tritone substitution are one type of reharmonization.

Some musicians spend a lot of time trying different reharmonizations when working on a tune. However, unless they tell the soloist what they are doing beforehand, many of the reharmonizations they may come up with are not suitable for use in accompanying, since the soloist will be playing from a different set of changes. There are some simple reharmonizations that can be used without disturbing the soloist too much. The tritone substitution is one example; at any time a dominant seventh chord is called for, the accompanist may substitute the dominant seventh chord a tritone away. This creates exactly the same type of tension that is created when the soloist performs the substitution. Another simple reharmonization is to change the chord quality. That is, play a D7alt in place of a Dm, and so forth.

Another common reharmonization is to replace a dominant chord with a ii-V progression. This was already demonstrated when discussing the blues progression; one of the progressions replaced the F7 chord in bar 4 with a Cm7- F7. This is especially common at the end of a phrase, leading to the tonic at the start of the next phrase. Most of the scale choices the soloist may have been using over the F7 chord will also work over the Cm7 chord, so this reharmonization doesn't usually create too much tension. This technique can be combined with the tritone substitution to create a more complex reharmonization. Rather than replace the V with a ii-V, first replace the V with its tritone substitution, and then replace that with a ii-V. For example, in bar 4 of the F blues, first replace the F7 with B7, and then replace that with F#m7- B7.

Another type of reharmonization involves the use of alternation. Rather than play several measures of a given chord, the accompanist may alternate between it and the chord a half step above or below, or a dominant chord a fifth below. For instance, on a G7 chord, you might alternate between G7 and Ab7, or between G7 and F#7, or between G7 and D7. This is especially common in rock based styles, where the alternation is performed in rhythm. If the alternation is performed regularly, such as throughout an entire chorus, or even the whole tune, the soloist should be able to pick up on it and control the amount of tension produced by playing along with the reharmonization or by playing against it. That is, the soloist can lessen the tension by changing scales as you change chords, or increase tension by keeping to the original scale.

### 6.1.3. Comping Rhythms

Once you have decided what notes you want to play, you must decide when to play them. You do not want to simply play whole notes or half notes; your accompanying generally should be rhythmically interesting, although not distracting to the soloist or listener.

There are few guidelines that can be given for playing comping rhythms. Because there is very little theory to fall back on, the first piece of advice I can give is to listen to other accompanists. Too often we tend to ignore everyone but the soloist anyhow. Be sure to choose albums that have solo instrumentalists other than the accompanist on them. Pianists to listen to include Bud Powell, Thelonious Monk, Horace Silver, Bill Evans, Wynton Kelly, Herbie Hancock, and McCoy Tyner. Pianists should also listen to guitarists and mallet players; often the constraints of those instruments can lead to ideas you might not have thought of otherwise.

Guitarists should listen to pianists, but also to guitarists such as Herb Ellis, Joe Pass, and Wes Montgomery. Often, guitarists work in tandem with pianists, and their style when there is a pianist in the group may differ from how they play when they are the only chordal accompanists. For instance, some guitarists play only short chords on every beat if there is a pianist providing most of the rhythmic interest. Others will *lay out* (stop playing) entirely. For this reason, it is especially important to listen to guitarists in several different types of settings.

You should also listen to recordings that do not have any chordal accompaniment, such as any of several Gerry Mulligan, Chet Baker, or even Ornette Coleman quartet albums. Try to play along with these. This will often be difficult, since the music was recorded with the knowledge that there was no chordal accompaniment, so the soloist and other accompanists generally left little room for a piano or guitar. Practicing accompanying in this type of situation can help you avoid over-playing. Most beginning accompanists, like many beginning soloists, tend to play too much. Just as space can be an effective tool while soloing, it can be even more so when accompanying. Let the soloist work with only the bassist and drummer for a few measures, or longer, every so often. Laying out and leaving the soloist with no chordal accompaniment is sometimes called *strolling*. McCoy Tyner, Herbie Hancock, and Thelonious Monk often laid out for entire solos.

Sometimes it helps to imagine yourself as a background part in a big band arrangement. When you are comfortable with a particular chord progression, and no longer are having

to concentrate fully just on playing the “right” notes, you can concentrate on the rhythmic and even melodic content of your comping. Listen to the horn backings in some big band recordings, such as those of Count Basie, to see how melodic accompaniment can be.

Certain styles of music call for particular rhythmic patterns. For instance, many forms of music before the bebop era used the stride left hand pattern, which consists of alternating a bass note on one and three with a chord voicing on two and four. Many rock based styles also depend on rhythmic patterns, often specific to the individual song. While the Brazilian derived styles such as the bossa nova and samba, as played by most jazz musicians, do not have well-defined comping patterns, other Latin jazz styles, particularly the Afro-Cuban forms sometimes collectively referred to as *salsa*, use a two measure repeating motif called a *montuno*. A typical rhythmic pattern is “and-of-one, and-of-two, and-of-three, and-of-four; one, two, and-of-two, and-of-three, and-of-four”. These two measures may be reversed if the underlying drum pattern (see below) is reversed as well. A full description of the role of the piano in Latin jazz and other styles is beyond the scope of this primer. A good discussion can be found in Mark Levine’s *The Jazz Piano Book*.

The most important aspect of accompanying in most styles is to communicate with the soloist. There are several forms this communication can take. For instance, there is call and response, in which you essentially try to echo back or answer what the soloist has played. This is particularly effective if the soloist seems to be playing short, simple phrases, with pauses between them. If the soloist is working on a repeated rhythmic motif, you can often anticipate the echo and actually play right along with the soloist. Sometimes you can also lead the soloist in directions he might not have tried otherwise. For instance, you might start a repeated rhythmic motif, which might encourage the soloist to echo you. Some soloists like this type of aggressive comping, and others do not. You will have to work out with each soloist how far you may take him.

## 6.2. Bass

The function of the bass in a traditional rhythm section is somewhat different than that of a chordal instrument. Like a pianist, a bassist must normally outline the chord changes, but the bass usually emphasizes the roots, thirds, and fifths rather than any extensions or alterations. In traditional jazz forms, the bass player also has a very important role as a timekeeper; as much as a drummer, if not more so. That is why bass players so often play walking bass lines that consist almost exclusively of quarter notes or rhythms that strongly emphasize the beat.

In this respect, learning to play bass lines is often easier than learning to solo or play voicings. You do not have to worry much about what rhythms to play, and your note choices are more limited as well. When you listen to great bass players like Ray Brown or Paul Chambers, you will see that a large part of their playing is quarter notes and scale based lines.

When a pianist plays in a solo setting, he must often provide his own bass line accompaniment, so pianists should learn how to construct good bass lines as well.

### 6.2.1. Walking Bass Lines

There are some simple guidelines you can use to produce good sounding bass lines. First, you generally should play the root of the chord on the first beat of that chord. The previous beat should be a note a step away. For instance, if the chord F7 appears on beat “one” of a measure, then you would normally play F on that beat. You would normally play E, Eb, G, or Gb on the last beat of the previous measure, depending on the chord. If the chord was C7, then you might play either E or G, since they are in the associated mixolydian scale. Or, you might think HW diminished or altered scale for the C7 and play the Eb or Gb. The Gb is also the root of the dominant chord a tritone away, which has already been described as a good substitution, so Gb makes a particularly good choice. The note does not necessarily have to be justifiable in the context of the chord; it can be thought of as a passing tone to reach the first beat (the *downbeat*) of the next measure.

These first two guidelines take care of two beats for each chord. In some tunes, such as any song based on the rhythm changes, that is all you get for most chords, so your bass line can be almost completely determined by the chord progression. Of course, you will probably want to vary your lines. You are not required to play the root on the one, nor are you required to approach it by step. Remember, these are only guidelines to get you started.

If you have more than two beats to fill for a particular chord, one way to fill the remaining beats is to simply choose notes from any associated scale in mostly stepwise motion. For instance, if your chord progression is C7 to F7, and you have already decided to play “C, x, x, Gb” for the C7 chord, then you can fill in the x’s with D and E, implying the lydian dominant scale, or Bb and Ab, implying the altered scale. Either of these choices might also imply the whole tone scale. Another popular pattern would be “C, D, Eb, E”, where the Eb is used as passing tone between the D and the E. You will probably discover other patterns that you will tend to use a lot. Playing patterns is generally frowned upon when soloing, where you are expected to be as creative as possible. When accompanying, however, patterns, like those given for voicings, can be an effective way to outline the harmony consistently. As a bass player, you are expected to play virtually every beat of every measure for the entire piece. It is usually more important to be solid and dependable than to be as inventive as possible.

### 6.2.2. Pedal Point

The term *pedal point*, often shortened to simply *pedal*, refers to a bass line that stays on one note over a changing harmony. Certain songs, such as John Coltrane’s “Naima”, from the album “Giant Steps”, are written with explicit pedal point, either with the notation “Eb pedal” over the first four measures, or through the notation of the chords as Dbma7/Eb| Ebm7| Amaj7#11/Eb- Gmaj7#11/Eb| Abmaj7/Eb. When you see a song explicitly call for pedal point, that is usually an indication to stop walking and instead play only whole notes.

You can also find your own opportunities to use pedal point. In a ii-V-I progression, the fifth can often be used as a pedal note. For example, you can play G under the

progression Dm7| G7| Cmaj7, or just under the first two bars. Under the Dm7 chord, the G in the bass makes the chord function as a G7sus chord. The resolution to the G7 chord then mimics the traditional classical use of suspensions, which always resolve in this manner. This is also commonly done in progressions that alternate between the ii and the V, as in Dm7| G7| Dm7| G7| Dm7| G7| Dm7| G7.

### 6.2.3. Counterpoint

Scott LaFaro started a small revolution in jazz bass playing in the early 1960's through his use of *counterpoint*. His bass lines had almost as much rhythmic and melodic interest as the melody or solo he was accompanying. This can be distracting to some soloists, and to some audiences, but many find the effect exciting.

One opportunity to use counterpoint is in ballads or medium tempo swing tunes where the melody has long notes or rests. One of the most famous examples of Scott LaFaro's counterpoint is on the version of "Solar" recorded by Bill Evans, Scott LaFaro, and Paul Motian on the album *Sunday At The Village Vanguard*. The melody is mostly quarter notes, with whole notes at the end of each phrase. Scott plays long notes while the melody is moving, and moving parts where the melody is staying still.

Bob Hurst has a different approach to counterpoint. Rather than playing lines that sustain their own melodic or rhythmic interest, he plays lines that create rhythmic tension in their interaction with the beat. One technique he uses often is playing six notes against four beats, or two quarter note triplets per measure. It sounds like he is playing in three while the rest of the band is in four. This type of rhythmic counterpoint is difficult to sustain for any length of time, and may confuse inexperienced musicians.

When experimenting with counterpoint, remember your role is usually still that of an accompanist. Your goal is to support the musicians you are accompanying. If they are being thrown off by the resultant complexity, or are producing enough rhythmic tension on their own, then this may not be a good technique to use. You will have to use your own judgement to decide when the music will benefit from the use of counterpoint.

### 6.2.4. Other Bass Patterns

The techniques described above are applicable to most styles of jazz. Some particular styles impose their own particular requirements on the bassist, however. A *two-beat* or *half-time* feel means playing only on beats one and three in 4/4 time. A two-beat feel is often used on the head for standards. When playing in 3/4 time, you may either play walking lines or just play on the first beat of each measure. Many of the Latin Jazz styles use a simple pattern usually based on alternating roots and fifths. The bossa nova, a Brazilian derived style, uses the root on "one" and the fifth on "three", with an eighth note pickup on the "and-of-two" and either another pickup on the "and-of-four" or a quarter note on "four". The samba, another Brazilian derived style, is similar, but is played with a *double-time* feel, meaning it sounds as if the basic beat is twice as fast as it really is. The root is played on "one" and "three" while the fifth is played on "two" and "four", with a sixteenth note *pickup* before each beat. The mambo and other Cuban derived styles use the rhythm "and-of-two, four". The latter beat is tied over to the "one"

of the following measure.

A full description of all the different styles is beyond the scope of this primer. There are a few books that can help you in constructing patterns for various styles; one such book is *Essential Styles For The Drummer And Bassist*. For now, all I can do is repeat Clark Terry's advice, "imitate, assimilate, innovate". Listen to as many different styles as you can and learn from what you hear.

### 6.3. Drums

As with the bassist, one of the roles of the drummer in traditional forms of jazz is to play a steady beat in the style of the song. By steady, I mean with regards to tempo, and do not mean to imply that you should not be creative and vary your patterns. I cannot shed much light on the specifics of drum techniques, but I can describe some basic patterns and styles, and give you some hints on other aspects of the role of the drummer.

The basic 4/4 swing beat consists of two components: the ride pattern and the hi-hat pattern. The fundamental ride pattern is the "1, 2 and, 3, 4 and" or "ding ding-a ding ding-a" pattern played on the ride cymbal with swung eighth notes. The hi-hat is normally closed sharply on "two" and "four". This is what most simple drum machines will play when the "swing" setting is selected. This pattern is appropriate for many jazz songs, especially medium or up-tempo standards or bebop tunes. Slower songs like ballads often call for the use of brushes on the snare drum rather than sticks on the cymbals as the main pattern. There are a few books that can help you in constructing patterns for other styles; one such book is *Essential Styles For The Drummer And Bassist*. The most important of the styles you may be expected to play are described below.

The basic *shuffle* beat consists of eighth notes on the ride cymbal and possibly snare. The second and fourth beats are usually more strongly emphasized as well. The basic *jazz waltz* or 3/4 swing pattern consists of "one, two, and-of-two, three" or "ding ding-a ding" on the ride cymbal, with the hi-hat on "two". Other variations include using the hi-hat on "two" and "three", or on all three beats; adding the snare on the "and-of-two" or on the "and-of-one" and on "three".

Three forms of Latin jazz you should be able to play include the bossa nova, the samba, and the mambo. The essence of most forms of Latin jazz is the *clave*, which is a type of rhythmic pattern. The basic clave is two measures long, and consists of "one, and-of-two, four; two, three". There is also an *African clave* or *Rumba clave* in which the third note is played on the "and-of-four" rather than on the beat. The bossa nova uses a variation of the basic clave in which the last note falls on the "and-of-three" rather than on the beat. These clave patterns can also be inverted, meaning the two measures are swapped. The clave would usually be played as hits on the rim of the snare on a traditional drum set, although it is often not played explicitly by the drummer at all, in which case an auxiliary percussionist may play it.

The clave is supplemented with other patterns on other drums. The bass drum may play on "one" and "three" with eighth note pickups. The hi-hat is closed on "two" and "four". Other patterns may be played on a cymbal or on a cowbell. Typical mambo patterns include "one, two, three, and-of-three, and-of-four; one, two, and-of-two, and-of-three,

and-of-four” or “one, two, three, and-of-three; one, and-of-one, and-of-two, and-of-three, four”. A simple pattern consisting of “two, four, and-of-four” is played on the snare rim and the mounted tom instead of a clave. Bossa novas may use a pattern consisting of straight eighth notes on the ride cymbal. Sambas have a double-time feel. The cymbal pattern is usually straight eighth notes, and is often played on a closed hi-hat. The snare drum may be simply hit on “four” instead of playing the clave.

Certain compositions, such as Lee Morgan’s “The Sidewinder” or Tony Williams’ “Sister Cheryl”, have unique drum patterns that are indelibly associated with the particular song. Listening to recordings of a song to be performed before trying to play it is probably more helpful for drummers than for any other musicians, since fakebooks generally do not provide many hints for the drummer.

A good drummer will not simply play the same pattern over and over for an entire song. For one thing, you may vary the pattern, perhaps by playing only quarter notes on the ride cymbal, or occasionally varying the rhythm to “ding-a ding ding-a ding”. Or, you could play the hi-hat on every beat. You may also want to use the other drums, such as the toms, as part of your basic beat for a song. Tony Williams is a master at varying his patterns in this way.

Often, a drummer will play a simple two-beat during the head, and switch to straight four for the solos. One of the easiest ways to change the feel of a piece is to simply switch cymbals for the ride pattern, for instance when there is a change in soloist, or to mark the bridge of a song. Marking the form of a tune is another important role of the drummer. Most typical song forms have 4 or 8 bar phrases. At the end of each phrase, the drummer often plays a more complex pattern or *fill* to lead into the next phrase. Another tactic is to change the basic beat from phrase to phrase. As a drummer, you should always be conscious of the form of the song, and know where any breaks, special introductions, or codas are. You should be able to sing to the melody to yourself during solos if necessary, so that you can outline the form for the soloist. This will help the soloist keep his place, by allowing him to recognize when you have reached the bridge, for example. Also, the soloist is usually structuring his own phrases along the lines of the original form. By adhering to that form yourself, you will usually be supporting the development of his ideas. Art Blakey is a master of playing the form and supporting soloists in this way.

During a solo, an instrumentalist may leave deliberate breaks in his phrases. As with the pianist and bassist, the drummer may decide to fill those spaces with some sort of answering phrase or counterrhythm. Drummers may also create tension through the use of *polyrhythm*, which is two or more different rhythms superimposed on each other; for instance, three against four. A drummer can either try to play two different rhythms himself, or work with the bassist or another accompanist, or the soloist, to create a polyrhythm between them. As with the use of counterpoint in bass lines, however, you need to balance the desire for rhythmic variation with the realization that clutter or chaos can result if you go too far.

Since everyone depends on the drummer to keep accurate time, rhythmic stability is essential. However, the rhythmic interest of the drum part is also important, and it is vital during drum solos. Percussion is not only about rhythm, either. As a drummer, you

cannot play lines that are interesting in a traditional melodic or harmonic sense, but you can vary the timbre of your lines by playing across drums or cymbals of different pitches. You should still think melodically when playing the drums.

#### 6.4. Other Instruments

The use of other instruments, such as brass or woodwind instruments, as accompanying instruments is usually limited to a few background *riffs*, or repeated phrases. This type of accompaniment is popular in blues bands. Usually one horn player will play a simple line based on the blues scale, and other horn players will pick it up and repeat it.

Free jazz forms allow for less structured accompaniment. If you listen to Ornette Coleman's *Free Jazz*, or John Coltrane's *Ascension*, you will notice that the horn players who are not soloing are free to play whatever background figures they want. The result is often cacophonous, but if that is the desired effect, then that is not bad in itself.

At the other end of the spectrum are big band arrangements, which often have intricate written out horn backgrounds for solos. Arranging for horn sections is similar to accompanying on piano in that the parts generally form voicings of chords and are used in a rhythmically interesting way. The parts are generally smoother and more melodic than a typical piano accompaniment, however, both because the piano part is usually improvised whereas the horn arrangement can be preplanned, and because it is easier for a horn section to play melodic lines voiced in chords than it is for a pianist. Horn section arrangements often emphasize *articulation*, or variations in attack and dynamics, more so than a piano is normally capable of. Commonly used devices in horn section arranging include the use of *sforzando*, or notes of sudden loudness; alternating *staccato*, or short note, and *legato*, or long note, passages; *bent notes*, or notes in which the player alters the pitch briefly while playing, and *falloffs*, or notes in which the player rapidly lowers the pitch, sometimes by an octave or more, usually to end a phrase.

You do not have to play in a big band or be an accomplished arranger to use horn section accompaniment. Often two or three horns are enough to play interesting background figures. Most of the same principles used in piano voicing can be used in horn section voicing. Drop voicings are especially effective. When there are only two horns, lines moving in parallel thirds often work well. Listen to Miles Davis' *The Birth Of The Cool*, or any of Art Blakey's recordings with the Jazz Messengers, for ideas on how one can arrange for relatively small ensembles. David Baker's book *Arranging And Composing* can help get you started as well.

### 7. Playing With Others

As soon as you can get an appropriate group of musicians together, you should begin to play in a group setting. This is helpful for many reasons. First, if several players are at approximately the same level of ability, then they can learn together. If one member is more advanced than the others, he can help them along. A good rhythm section can often give a soloist ideas or help provide the confidence to allow him to take more chances. On the other hand, you should avoid the temptation to have too many horn players, as you will find the tunes dragging out longer and longer as everyone gets their solos in. The

rhythm section will tire of the chord progression, and the soloists will grow impatient waiting their next turn. It is probably counterproductive to have more than eight or so players together at once for this purpose.

## **7.1. Organization**

Once an appropriate group of people has been assembled, you must decide what to play. It helps if everyone in the group has access to the same fakebooks. That way, when a person calls out a tune, you can be reasonably sure everyone will have it in their books. *The New Real Book* by Chuck Sher is recommended, since it is available in transposed versions for most wind instruments, and contains a good variety of tunes. You may wish to agree in advance on the tunes to be worked on, so everyone has the chance to familiarize themselves with the changes.

Although it is not necessary to designate a leader for a group, it does help if there is someone to choose songs, decide on the order of soloists, pick a tempo, count the song off, and generally keep things moving along. It is not essential that this person be the best musician in the group, but it should be someone with some leadership or organizational skills.

### **7.1.1. Beginnings**

Once you have selected a song to play, you need to keep in mind the things we have observed about form. Normally, the group would play the melody first. While learning a song, you may decide to have everyone play it in unison, but you should eventually give each performer a chance to play a head by himself, to allow everyone to work on making a personal statement even while simply playing the melody. In performance situations, it is also usually more interesting for the listener to hear a melody interpreted by one individual, rather than stated in unison. This is particularly true for ballads. Fast bop tunes are normally played in unison, however.

For songs with 32 bar forms, the head is usually played only once. For blues tunes or other shorter forms, it is often played twice. The melodies of many songs end on the second to last measure of the form. For instance, Clifford Brown's twelve bar blues "Sandu" ends on the first beat of the eleventh measure. Usually the rhythm section stops playing for the last two bars of the form to allow the first soloist an unaccompanied two measure lead in, or *solo break*. In some tunes, such as John Coltrane's "Moment's Notice", this break is traditionally observed on every chorus, but usually it is done only as a lead in to the first solo, or at most as a lead in to each solo.

### **7.1.2. Middles**

Once you are into your solo, you are largely on your own, although you should listen to what everyone else is doing around you, feeding off what they are playing, and leading them with your own playing. This is your chance to apply the techniques you have learned so far. Think melodically. Take chances. Have fun!

I have said several times that a solo should tell a story. This means it should have a clear exposition, development, climax, and release. If you were to chart the intensity level of a

good solo, you would often find that it starts at a low level and slowly builds to a climax, after which it tapers off quickly to lead into the next soloist or whatever else comes next. Beginners often have difficulty deciding how many choruses to play. This is something that varies for each performer. Charlie Parker normally took only one or two in recordings, although this was partially because of the limitations of the 78 RPM format. John Coltrane often took dozens of choruses, particularly in live performances. When there are many soloists, you probably should try to keep it on the short side, to keep everyone else from getting bored. In any case, when you are approaching the end of your solo, you should somehow convey this fact to the other musicians so they can decide who goes next, or whether they want to trade fours, or take the head out.

If you intend to trade fours after the last solo, someone usually indicates this by holding out four fingers where everyone can see them. Usually, you will go through the soloists in the same order in which they originally played, giving them four measures each. The bass player is often skipped; sometimes the pianist is as well. Often, the drummer will take four measures in between each of the other soloists. More so than during the original solos, the intensity of the four bar phrases will usually be at a consistently high level, and the soloists should try to develop and build upon each other's ideas. This cycle may be repeatedly as long as is desired; someone will usually tap their head to indicate when to return to the head.

### 7.1.3. Endings

The endings of songs are, without question, the most difficult to keep together. When you have played a given song several times with the same group of people, you may have planned and rehearsed endings. But when playing a song for the first time with a particular group, chaos almost always results at the end. There are a few standard tricks you can use to end songs, however. Once you are familiar with the basic endings, then all it takes is one person to act as leader to get everyone to follow along.

The easiest ending, used in fast bebop tunes, is to simply cut the tune off short after the last note. This works for rhythm changes tunes such as "Oleo", and other bop forms such as "Donna Lee". As a variation, you may wish to hold the last note out. Or, you may cut the last note short, but then repeat it and hold it out after a few beats rest. This is done especially on 32 bar forms in which the melody ends on the first beat of measure 31. This note is cut short, but then repeated and held on the first beat of measure 32, or as an anticipation on the fourth beat or on the "and" of the fourth beat of measure 31.

Another ending commonly used on ballads and slow swing songs is the *ritardando*. Simply slow down over the last two or three measures, and end on the last note of the melody, which may be held out as long as desired. A variation on this technique is to stop on the second to last note, or on any note near the end that falls on the penultimate chord, and have one soloist play an unaccompanied *cadenza*, signaling the rest of the band to rejoin him for the last note.

When playing medium tempo or faster tunes, a popular ending is to play the last several bars three times before the last note. In a 32 bar form in which the last note is the first beat of measure 31, you would play the form through the end of measure 30, then play

measures 29 and 30 again, and then once more, before finally playing measure 31. This can be combined with the ritardando or the cadenza approaches, or the last note can simply be played short.

Another approach is the III-VI-ii-V turnaround. If the song ends with a ii-V-I cadence in the last four bars, then you can replace the final I chord with the four bar progression III-VI-ii-V, which may be repeated several times. For instance, in the key of F, if the song ends Gm7| C7| F| F, then you can replace this with Gm7| C7| A7alt| D7alt| Gm7| C7| A7alt| D7alt| Gm7| C7|... You can also use tritone substitution on any of the dominant chords. In addition, you can use the I chord F instead of the A7alt chord. You may continue this chord progression as long as you like, soloing or collectively improvising on top of it. This is called a *vamp*. The song is finally ended with a I chord, usually preceded by frantic hand waving to ensure that everyone ends together.

Another popular ending is sometimes called the Duke Ellington ending, because it is associated with arrangements of tunes like “Take The A Train” that were written by Duke or performed by his band. This ending assumes the song ends on the first beat of the second to last measure of the form, that the last chord is a I chord, and that the last note is the root of that chord. Assuming the piece in in C major, you simply replace the last two measures with “C, E, F, F#, G, A, B, C”, where the second note is a sixth below the first, not a third above. If you try to play this line, I think you will recognize the intended rhythm, so I will not try to notate it.

## 7.2. Dealing With Problems

You should be prepared for any number of things to go wrong. If you lose your place in the form, or sense that someone else has lost theirs, do not panic. If you have become lost, stop playing for a little while to see if you can hear where everyone else is. This should not be too difficult if you are familiar with the song and the other musicians are reasonably secure about their own places. Someone who is sure of where they are may wish to call out changes, or shout out “BRIDGE!” or “TOP!” at the appropriate times, to get things back on track. If one person is clearly in the wrong place, and everyone else is sure of where that person is, they can attempt to move over to match the out of place performer, but this is difficult to coordinate. Also, it is better to try to correct the person who is out of step than to have everyone be out of step together, because ideally, you want the form to continue uninterrupted.

Another thing that can go wrong is an unintended tempo change. Some people tend to rush, some tend to drag. Sometimes the interaction between two musicians with good time may cause the tempo to shift. For instance, if a pianist and bassist both play behind the beat, this may make the tempo appear to drag, and the drummer may slow down to not appear ahead of them. If you are convinced the tempo is moving, you may wish to try to conduct a few measures to right the tempo. A metronome can help keep you honest, but playing with a metronome will usually be hopelessly frustrating, because it is virtually impossible to keep a group synchronized with one. For one thing, it is often difficult to hear a metronome when several people are playing. For another, it is difficult to get everyone in the group to adjust at the same time and in the same way should the group

collectively get ahead or fall behind. Nonetheless, practicing with a metronome can be a useful way to solidify your concept of time. One particularly sadistic band director I know used to start us off with a metronome, turn the volume down after a few measures, then turn it back up a minute or so later to see if we had drifted.

### **8. Listening Analytically**

Now that you have some idea of what it takes to play jazz, you should have a much more critical ear. You will be less likely to be impressed with mere technical facility, and can listen for melodic, harmonic, and rhythmic sophistication. On the other hand, if the music still reaches you emotionally, do not worry that it does not seem particularly adventurous when scrutinized closely. Do not let your analysis of the theoretical aspects of music interfere with your reaction on an emotional level. The theoretical knowledge should be a tool to help you understand music you might not have otherwise appreciated; it should not detract from your enjoyment of any music.

As a performer, now that you have some idea of the things a jazz musician is expected to do, you can listen to the great ones and learn from them. You can listen to the early Bill Evans trios and see examples of interplay within a rhythm section, and try to develop ears as big as theirs. You can listen to Thelonious Monk and analyze the way he used dissonance and syncopation, and see if you can achieve the same effects. You can listen to the emotional outbursts of John Coltrane or Cecil Taylor and expand your concept of how directly you can express yourself.

### **9. Breaking The Rules**

Charles Ives was a composer who wrote music that was considered avant garde in its day. His father is rumored to have taught him, “you must learn the rules first so that you will know how to break them”. This is especially true in music like jazz, where you are constantly expected to be creative. Following the rules all the time would lead to predictable and boring music. Paying no attention whatsoever to the rules could easily lead to music that was ultimately boring in its randomness.

There are many rules and conventions that have been presented here. There are no criminal penalties associated with breaking any of them, however. You should experiment as much as possible to find new ways of doing things. The rules of harmony presented here form a framework, but it is not a rigid one. I have already suggested that the manner in which you utilize these rules will shape how you sound. How you break the rules will similarly help define your own style. Experimenting with the rules of harmony is just the beginning of individuality, however. Look for other non-traditional ways to express yourself. Try hitting the piano keys with your fist. Try overblowing your saxophone. Try removing the first valve slide on your trumpet. There are an infinite number of possible things you can do with your instrument.

Also, expand your listening to include other types of music such as classical or reggae, and see if you can learn from them and apply those lessons to whatever you play. It is severely limiting to think that all jazz music should consist of 32 bar songs, walking bass lines, swing ride cymbal patterns, and head-solos-head forms. The world does not beat in

four-four time.

## 10. Appendix A: Annotated Bibliography

My personal experience with other books on jazz improvisation is limited; my ears have been my best teachers. Here is a listing of some of the books with which I am somewhat familiar, or which have been recommended to me. Most of the instructional books and legal fakebooks are available at any well-stocked music store, or can be ordered through Jamey Aebersold. The ordering information can be found in his ads in *Down Beat* magazine.

### 10.1. Fakebooks

Chuck Sher, *The New Real Book*, Sher Music. This is probably the most popular legal jazz fakebook around today, and perhaps the best in terms of broadness of selection, accuracy, and readability. Many of the most commonly played tunes from other popular fakebooks are included here. It is available in Bb and Eb editions for transposing instruments, and like all of Chuck Sher's books, it contains lyrics where appropriate. It contains standards like "Darn That Dream", jazz classics like Sonny Rollins' "Oleo", and some contemporary pieces such as Michael Brecker's "Nothing Personal". It also contains some pop songs like Roberta Flack's "Killing Me Softly". Because of its diversity, it does not contain as much straightahead jazz as most of the other books listed here, and therefore, while this book is still highly recommended, you may need to find something else to supplement it to fill out the selection of mainstream jazz.

Chuck Sher, *The New Real Book Volume 2*, Sher Music. This is a good companion to the first volume, since there is no overlap, and this book adds a good helping of classic jazz from the 1950's and 1960's, including several tunes each by John Coltrane and Horace Silver. There are also arrangements of complex modern compositions by Michael Brecker and others, as well as a few standards. It is available in Bb and Eb versions.

Chuck Sher, *The World's Greatest Fakebook*, Sher Music. This was Chuck's first fakebook, but it was not as well received as *The New Real Book* since it contains even fewer jazz standards. It still makes a good companion to his other books.

Herb Wong, *The Ultimate Jazz Fakebook*, Hal Leonard Publishing. This has hundreds of tunes in it, but is printed in very small typeset to fit them all in, and as a result is very hard to read. Many of the songs are old Tin Pan Alley songs not commonly played any more, so the selection of true jazz standards is not as broad as it looks at first. It is available in Bb and Eb editions, and contains lyrics.

*The Real Book*. This was the standard for many years. It contains a broad selection of standards and jazz classics, and indeed helped define those terms over the last couple of decades. There are many errors in this book, and many of the recordings I hear of tunes from this book over the last twenty years duplicate these errors, which shows that the *Real Book* has been a primary source of tunes for many professional musicians. It is only recently that *The New Real Book* has begun to supplant it. The original *Real Book* is not legal, however, since the authors did not obtain copyright permission for the selected songs, and they do not pay royalties to the copyright owners. For the most part, the

original authors do not make any money themselves from this book; most people obtain copies by photocopying a friend's copy, or from someone who photocopies the books and sells them at a small profit under the counter. If you can find a copy, and your conscience does not bother you too much, it is worth picking up. There are versions in Bb and Eb, and also a vocal version. There are several slightly different editions, with the Pacific Coast Edition and the Fifth Edition being most common. Being of questionable origin, it is hard to tell how these differences evolved, or what exactly the differences are between them, but be forewarned that not all copies will contain exactly the same set of tunes.

*The Real Book Volume 2.* This book, like the original, is illegal. It is not nearly as popular as the first volume, but it does contain a lot classic jazz.

*Spaces Bebop Jazz.* This book is actually available in several forms, none of which are legal as far as I know. The one I have is spiral bound and is printed on standard sized paper, although the music itself is printed small. I have also seen it printed on half size paper and separated into two or three volumes. It contains mostly songs from the swing, bebop and cool eras.

*Think Of One.* I have no idea where this book came from, but someone apparently decided Thelonious Monk, Wayne Shorter, and Horace Silver were shortchanged in the original *Real Book* and produced this rather sloppily transcribed book that is equally illegal and consists almost exclusively of tunes not in the *Real Book*, many by the aforementioned composers. Very few people seem to know of this book, which is too bad, because there are a lot of wonderful compositions here that are not in any other fakebook I've ever seen.

## 10.2. Instructional Books

There are dozens, if not hundreds, of books on practice methods, theory, and analysis methods out there. I've only seen a handful of them, and no good, holistic, general purpose introduction to improvisation, which is why I wrote this primer. The comments below vary in amount of detail included. Predictably, I have more to say about the books with which I am more familiar, while the ones with one sentence summaries are, for the most part, books that I have never seen but that have been recommended to me.

The books below are listed in the following general order: background material; basic, intermediate, and advanced general instruction; instrument specific instruction; and composing/arranging.

Jerry Coker, *How To Practice Jazz.* This is not so much how-to book as a how-to-learn book. It has many practice tips, as the name implies, as well as many pointers to other books, mostly by David Baker or Coker himself, that contain more specific information on improvisation.

Jerry Coker, *Listening To Jazz.* This book is a good introduction to jazz from a listener's perspective. There is discussion of history, the roles of the various instruments, various styles and forms of jazz compositions and performances. There is a straightforward discussion of common techniques and devices. Coker also walks the listener through several famous recordings, pointing out how particular techniques or devices he has described are

used. Since most of the available theory texts do a poor job of putting their instruction into a broad context, this volume is recommended as a companion to whatever other beginning or intermediate method books you may read.

Dan Haerle, *The Jazz Language*. This book is concerned with the theory and terminology used in jazz, and is not necessarily organized as a how-to book.

Jerry Coker et al, *Patterns For Jazz*. This book presents a series of patterns based on particular chords and scales, and has you practice them in all keys. The patterns are related to specific chord progressions.

Dan Haerle, *Scales For Jazz Improvisation*. This book lists most of the scales used by jazz musicians and writes them out for practice purposes. It is useful if you wish to see all the scales in one place, but really does not contain that much information that cannot be found in most of the basic or intermediate instructional texts, or in this primer, for that matter.

Jerry Coker, *Improvising Jazz*; David Baker, *Jazz Improvisation*. These are probably the most widely used introductory texts on improvisation. Coker and Baker are among the most respected authorities on jazz pedagogy. They write from similar perspectives. The emphasis in both of these texts is on basic scale theory and melodic devices.

Mark Boling, *The Jazz Theory Workbook*. This is primarily a beginning and intermediate text.

Scott Reeves, *Creative Jazz Improvisation*. This book has been recommended as one of the most useful texts on improvisation. Like this primer, it places an emphasis on historical context, rather than simply presenting the theory.

David Baker, *How To Play Bebop*. This actually consists of three volumes that are mostly dedicated to developing the melodic line. The bebop scales are emphasized.

Hal Crook, *How To Improvise*. This is an intermediate to advanced level text in that it assumes some knowledge of scale theory. It stresses the use of harmonic and rhythmic devices in melodic development.

Steve Schenker, *Jazz Theory*. This is an intermediate to advanced text.

Jerry Coker, *Complete Method For Improvisation*; David Baker, *Advanced Improvisation*. These are more advanced versions of their introductory texts.

Walt Weiskopf and Ramon Ricker, *Coltrane: A Players Guide To His Harmony*. This is an entire book dedicated to Coltrane changes.

Gary Campbell, *Expansions*. This intermediate to advanced text goes through various scales, including some rather esoteric ones, and shows how to construct lines that take advantage of them over specific chords. It assumes familiarity with the basic scales described in this primer.

John Mehegan, *Jazz Improvisation*. This is a series of several volumes published in the 1960's. At the time, they were considered quite comprehensive, but they contain very little information on developments since that time, or even on advances that were being made at that time, like the Coltrane substitutions and quartal harmonies.

George Russell, *The Lydian Chromatic Concept Of Tonal Organization For Improvisation*. This is an advanced theory text that describes some unique applications of scale theory to improvisation. It uses some unusual scales, and shows how to construct complex chromatic melodic lines using these scales as a basis. The process is rather involved, and involves the use of a slide-rule-like device for associating scales with chords. It was considered a landmark when it first came out in the 1960's, although the theories never really gained widespread usage except among a relatively small group of musicians, perhaps because they are so complex.

David Liebman, *A Chromatic Approach To Jazz Harmony And Melody*. This is a thorough discussion of melodic chromaticism and what I have called non-tonal music. It contains many examples of lines from recorded solos by John Coltrane, Herbie Hancock, and other modern players.

David Baker, *The Jazz Style Of ...*. This is a series that include volumes on Miles Davis, John Coltrane, Cannonball Adderly, Sonny Rollins, Fats Navarro, and Clifford Brown. Each volume includes a brief biography and summary of the musical style of the subject. Several transcribed solos and analyses of them make up the bulk of each volume.

Martin Mann, *Jazz Improvisation For The Classical Pianist*. This is an introduction to jazz improvisation aimed at the musician accustomed to a structured approach to learning. There is a lot of emphasis on scales and exercises.

Mark Levine, *The Jazz Piano Book*. This is the most complete book I have ever seen for jazz pianists. It covers scales, voicings, comping, and other topics also discussed in this primer, but it is able to go into greater depth. It contains many useful musical examples, which makes it much more readable. It also contains a very good discussion of Latin jazz, including information that is of use to bassists and drummers. However, it does have its shortcomings. It glosses over the blues, not even listing the blues scale or describing a blues progression except in passing. Also, while it does attempt to put some of its content into a broad context of history and playing situations, this is done in a somewhat haphazard manner.

Dan Haerle, *Jazz Improvisation For Keyboard Players*. This was my favorite book on jazz piano until Levine's came along a few years ago. Although it claims to flow logically from the beginner level to the advanced level, most of the information is really oriented toward the intermediate. It is not, to me, as entertaining as Levine's book, and it does an even less convincing job of putting its instruction into context. It is available either as three separate volumes (Basic, Intermediate, and Advanced) or as a complete set.

Dan Haerle, *Jazz/Rock Voicings For The Contemporary Keyboard Player*. Most of the information here is duplicated in his book on keyboard improvisation, or in Levine's, but there is some value in having everything you wanted to know about voicings all laid out in detail in one place. However, it really does not cover as wide a variety of voicings as one might expect for a book dedicated to that purpose.

Frank Mantooth, *Voicings*. The emphasis on this book is on voicings one would use when comping, as opposed to voicings one might use when soloing. Most attention is

given to quartal and other more contemporary voicings. It also has more explanatory material than Haerle's book on voicings.

Garrison Fewell, *Jazz Improvisation*. This is fairly broad text that covers some basic chord/scale theory, chord progression analysis, and construction of melodic lines. It contains many examples, and attempts to explain why the examples sound good. It is geared toward guitarists, but its methods can be applied to any instrument, as they are not concerned with techniques specific to the guitar, such as voicings, picking, or fretting.

Paul Lucas, *Jazz Chording For The Rock/Blues Guitarist*. This book is intended for the musician who knows how to play the guitar, but is familiar only with the five common open string chords used in rock music (C, A, G, E, and D). Other common jazz chords are then presented as variations on these patterns. Some more advanced material on voice leading, chord substitution, quartal harmonies, polychords, and scales is included as well.

Joe Pass and Bill Thrasher, *Joe Pass Guitar Style*. This book covers harmony and applications to improvisation, including chord construction, voicing, substitution, and voice leading.

Chuck Sher, *The Improvisor's Bass Method*. This book starts with the most basic instruction on playing the bass, including fingering charts and how to read music, and progresses to conventional jazz music theory with applications to playing the bass. It also contains several transcribed bass lines and solos by well-known bass players such as Scott LaFaro, Charles Mingus, Paul Chambers, Ron Carter, and others.

Steve Houghton and Tom Warrington, *Essential Styles For The Drummer And Bassist*. This book is a recipe of basic patterns for 30 styles of music, from pop to funk to reggae to Latin to jazz. It includes a CD.

Peter Erskine, *Drum Concepts And Techniques*. This book explains the basics of drum set technique.

Frank Malabe and Frank Weiner, *Afro-Cuban Rhythms For The Drum Set*. This book describes the various African and Latin American percussion styles and how to play them on the drum set.

Ed Thigpen, *The Sound Of Brushes*. This book explores techniques of brushwork for drummers.

Andy Laverne, *Handbook Of Chord Substitutions*. This book, useful for pianists and arrangers, discusses various ways to reharmonize songs. The substitutions are much more advanced than the tritone and Coltrane ii-V types discussed in this primer.

P. Rinzler, *Jazz Arranging And Performance Practice: A Guide For Small Ensembles*. This book is geared more toward group performance than individual improvisation.

David Baker, *Arranging And Composing*. The emphasis is on arranging for small groups, from trios to groups with four or five horns.

### 10.3. History And Biography

As with the instructional literature, my knowledge of the history and biography literature is also limited. The following books are listed roughly from the more general to the more specific.

Bill Crow, *Jazz Anecdotes*. This book contains short stories told by and about jazz musicians.

Nat Hentoff, *Jazz Is, The Jazz Life, Hear Me Talkin' To Ya*. Nat Hentoff is a noted jazz historian and critic. These books include stories from his personal experience and anecdotes told to him by other musicians.

Brian Case, Stan Britt, and Chrissie Murray, *The Harmony Illustrated Encyclopedia Of Jazz*. This book contains short biographies and discographies of hundreds of musicians.

Joachim Berendt, *The Jazz Book: From Ragtime to Fusion and Beyond*. This book organizes its discussions by decade, by instrument, and by major musicians and groups. Each section can be read independently.

Ian Carr, *The Essential Jazz Companion*. This covers the history of jazz throughout the 20th century, discussing many artists and styles, and describing specific recordings. Carr has also written biographies of Miles Davis and Keith Jarrett.

James Lincoln Collier, *The Making Of Jazz*. This is an in-depth survey of jazz history.

Frank Tirro, *A History Of Jazz*. This is a relatively technical survey of jazz history.

Gunther Schuller, *Early Jazz, The Swing Era*. These books by noted historian, critic, and composer Schuller are considerably more detailed than most, as they are more focused on specific periods. There may be more volumes in this series as well.

Richard Hadlock, *Jazz Masters Of The ...*. There are volumes in this series for different decades. Each contains biographies of twenty or so major musicians of the era.

Leonard Feather, *Inside Bebop*. Feather wrote this book to try to explain bebop to skeptics back in the days when the music was new and controversial.

Valerie Wilmer, *Jazz People*. This book contains interviews with various legends of the 1950's and 1960's.

Valerie Wilmer, *As Serious As Your Life*. This book concentrates on the avant garde and new music of the subsequent decades. It is highly political in nature.

Ross Russell, *Bird Lives*. This is an anecdotal biography of Charlie Parker.

Gary Giddens, *Celebrating Bird*. This book contains many photographs.

Dizzy Gillespie, *To Be Or Not To Bop*. This is Dizzy's autobiography.

J.C. Thomas, *Chasin' The Trane*. This is an anecdotal biography of John Coltrane.

Miles Davis and Quincy Troupe, *Miles*. This is a colorful historical perspective by the man who was perhaps the most influential jazz musician ever, with a career marked by innovations spanning almost half a century. However, be forewarned that the language is often crude.

Charles Mingus, *Beneath The Underdog*. Mingus' biography is even cruder than Miles', and is less interesting as a historical document, except in as much as it documents Mingus' sexual history.

Graham Lock, *Forces In Motion*. Lock provides a fascinating insight into the music and philosophy of Anthony Braxton.

## 11. Appendix B: Annotated Discography

The best readily available jazz discography of which I am aware is the *Penguin Guide To Jazz On Compact Disc*, which contains listings and reviews of virtually all jazz albums that were in print in the early 1990's. The book was edited in the United Kingdom, and there is a slight European avant garde slant to the ratings, but it is still the most complete, accurate, and generally useful discography of all types of jazz available to the general public.

The following discography is included to supplement the history discussion. Many of the specific artists and albums mentioned there are listed here, with a brief description of each. The albums listed are from my personal collection, and are listed in roughly chronological order, organized by style. I have tried to include mainly albums that I know are readily available, especially those that have been reissued on CD.

### 11.1. Basic Recommendations

I encourage you to check out any album mentioned more than once by name in the text of this primer. These albums include Miles Davis' *Kind Of Blue* and John Coltrane's *Giant Steps*. These two albums illustrate many of the ideas and techniques discussed in this primer, and are considered among the most important jazz albums of all time.

To supplement these classic albums, you should consider some recordings by the remainder of the musicians in the "Top Ten List". Most of Louis Armstrong's important recordings were made before the advent of the LP, so any album of his you buy today is probably a compilation. Look for something that contains recordings made in the 1920's with the Hot Five or the Hot Seven. Duke Ellington led one of the greatest big bands ever, but also made many recordings in small group settings. Look for recordings that feature Cootie Williams, Johnny Hodges, Ben Webster, or Jimmy Blanton. Billie Holiday's voice developed and changed over her career; you may wish to check out something from early and late in her life. Charlie Parker's greatest and most influential recordings were as the leader of a quartet or quintet; there are hundreds of compilations to choose from.

Art Blakey was the first musician on this list to record extensively in the LP format. Any of the albums by the Jazz Messengers from the late 1950's or early 1960's, such as *Moanin'* or *Ugetsu*, are good choices. The quintessential Charles Mingus album is *Charles Mingus Presents Charles Mingus*, which features Eric Dolphy. For Thelonious Monk, the compilations on Blue Note are excellent, as are albums from the 1950's and 1960's such as *Brilliant Corners* and *Monk's Dream*. For Ornette Coleman, try one of the early quartet albums like *The Shape Of Jazz To Come*, and when you are feeling braver, *Free Jazz*. Ornette also leads a fusion oriented group called Prime Time; you may wish to check out some of their albums as well.

Miles Davis can hardly be fairly represented by only *Kind Of Blue*; you should also consider *The Birth Of The Cool*, *Miles Smiles*, *Sketches Of Spain*, and *Bitches Brew* at the very least, as they represent very different periods in his career, all of them innovative. Similarly, John Coltrane is not sufficiently represented by only *Giant Steps*; you should supplement this with something from the classic quartet like *A Love Supreme*, and, if you are feeling adventurous, one of the later albums such as *Ascension*.

## 11.2. Listing

Louis Armstrong, *The Louis Armstrong Story*, Columbia - several volumes, including records with the Hot Five and the Hot Seven, as well as recordings with Earl Hines and others

Art Tatum, *The Complete Capitol Recordings*, Capitol - solo and trio recordings

Bix Beiderbecke, *Bix Beiderbecke*, Columbia - several volumes, including recordings with various big bands

Duke Ellington, *Duke Ellington*, Laserlight - a sampler including recordings from the 1930's through the 1960's, featuring Johnny Hodges, Cootie Williams, Ben Webster, and Paul Gonsalves

Errol Garner, *Concert By The Sea*, Columbia - this was for a long time the best selling jazz album ever

Charlie Parker, *Bebop & Bird*, Hipsville/Rhino - several volumes, including sessions with Bud Powell, Fats Navarro, Miles Davis, J.J. Johnson, Art Blakey, and Max Roach

Charlie Parker, *The Quintet*, Debut/OJC - a famous live concert with Dizzy Gillespie, Bud Powell, Charles Mingus, and Max Roach

Bud Powell, *The Amazing Bud Powell*, Blue Note - trio and small group recordings with Fats Navarro and Sonny Rollins

Thelonious Monk, *The Best Of Thelonious Monk*, Blue Note - early boppish recordings

Miles Davis, *The Complete Birth Of The Cool*, Capitol - nine piece group with Lee Konitz, J.J. Johnson, Gerry Mulligan, and John Lewis

Lennie Tristano, *Wow*, Jazz - a sextet with Lee Konitz and Warne Marsh

Dave Brubeck, *Time Out*, Columbia - featuring Paul Desmond and "Take Five"

Art Blakey And The Jazz Messengers, *A Night At Birdland*, Blue Note - featuring Horace Silver and Clifford Brown

Art Blakey And The Jazz Messengers, *Moanin'*, Blue Note - featuring Lee Morgan and Bobby Timmons

Art Blakey And The Jazz Messengers, *Ugetsu*, Milestone - featuring Wayne Shorter, Freddie Hubbard, and Curtis Fuller

Clifford Brown, *Study In Brown*, EmArcy - the quintet with Max Roach

Horace Silver, *The Best Of Horace Silver*, Applause - several of his most well-known compositions

Miles Davis, *Walkin'*, Prestige - one of Miles' favorite albums; hard bop with J.J. Johnson and Horace Silver

Lee Morgan, *The Sidewinder*, Blue Note - hard bop

Miles Davis, *Workin' With The Miles Davis Quintet*, Prestige - the first great quintet with John Coltrane, Red Garland, Paul Chambers, Philly Joe Jones

Miles Davis, *Kind Of Blue*, Columbia - the quintessential modal album, with John Coltrane, Cannonball Adderly, Bill Evans, and Wynton Kelly

Miles Davis, *Complete Concert 1964*, Columbia - the forerunner to the second great quintet, with George Coleman, Herbie Hancock, Ron Carter and Tony Williams, playing standards

Miles Davis, *Miles Smiles*, Columbia - the second great quintet with Wayne Shorter, at its peak

Miles Davis, *Sketches Of Spain*, Columbia - with the Gil Evans Orchestra

John Coltrane, *Soul Trane*, Prestige - one of Coltrane's favorites of his early albums, with Red Garland and Philly Jo Jones

John Coltrane, *Giant Steps*, Atlantic - the album that established Coltrane as one of the most important improvisers of his day

John Coltrane, *My Favorite Things*, Atlantic - the forerunner to his long lived quartet with McCoy Tyner and Elvin Jones

John Coltrane, *A Love Supreme*, Impulse - the crowning modal achievement of the quartet

Charles Mingus, *Charles Mingus Presents Charles Mingus*, Candid - the classic album with Eric Dolphy

Charles Mingus, *Mingus Ah Um*, Columbia - contains his most well-known compositions

Charles Mingus, *Let My Children Hear Music*, Columbia - supposedly Mingus' favorite of his own albums; his music arranged for a large ensemble

Thelonious Monk, *Monk's Music*, Riverside - with John Coltrane, Coleman Hawkins, and others

Thelonious Monk, *Monk's Dream*, Columbia - his long-lived quartet with Charlie Rouse

Bill Evans, *Sunday At The Village Vanguard, Waltz For Debby*, Riverside - available as a combined set; a live recording from the trio with Scott LaFaro and Paul Motian

Wes Montgomery, *Full House*, Riverside - an early hard boppish recording

Sonny Rollins, *Saxophone Colossus*, Prestige - one of his most popular albums

Sonny Rollins, *The Bridge*, RCA - with Jim Hall

Chick Corea, *Inner Space*, Atlantic - an album of mostly straightahead jazz with Woody Shaw

Herbie Hancock, *Maiden Voyage*, Blue Note - modal, non-tonal, and avant garde compositions with Freddie Hubbard, Ron Carter, and Tony Williams

Wayne Shorter, *Speak No Evil*, Blue Note - some of his best compositions, with Freddie Hubbard and Herbie Hancock

VSOP, *The Quintet*, Columbia - live recording with Freddie Hubbard, Wayne Shorter, Herbie Hancock, Ron Carter, and Tony Williams

Eric Dolphy, *Eric Dolphy At The Five Spot*, Prestige - with Booker Little and Mal Waldron

Eric Dolphy, *Out To Lunch*, Blue Note - influential avant garde recording

Andrew Hill, *Point Of Departure*, Blue Note - with Eric Dolphy and Joe Henderson

Max Roach, *The Max Roach Trio Featuring The Legendary Hassan*, Atlantic - Hassan Ibn Ali is a little known pianist who combines aspects of Thelonious Monk, Cecil Taylor, and Don Pullen; this is his only known recording, and is highly recommended

Ornette Coleman, *The Shape Of Jazz To Come*, Atlantic - one of his best freebop quartet albums

Ornette Coleman, *Free Jazz*, Atlantic - a collective free improvisation with Don Cherry, Freddie Hubbard, and Eric Dolphy

John Coltrane, *New Thing At Newport*, Impulse - live concert; half of this album is the Archie Shepp quartet

John Coltrane, *Interstellar Space*, Impulse - free duets with Rashied Ali

John Coltrane, *Ascension*, Impulse - free large ensemble improvisation

Albert Ayler, *Witches & Devils*, Freedom - avant garde

Pharoah Sanders, *Live, Theresa* - similar in style to Coltrane's *A Love Supreme*, but more free

Cecil Taylor, *Jazz Advance*, Blue Note - relatively straightahead music, including some standards, but with Taylor's sense of harmonic freedom

Cecil Taylor, *For Olim*, Soul Note - free solo piano

Cecil Taylor, *Spring Of Two Blue J's*, Unit Core - free group improvisation

Sun Ra, *Out There A Minute*, Restless/BlastFirst - avant garde big band

Miles Davis, *Bitches Brew*, Columbia - early, relatively free fusion with Chick Corea, Joe Zawinul, John McLaughlin

Mahavishnu Orchestra, *Inner Mounting Flame*, Columbia - heavy rock oriented fusion with John McLaughlin

Tony Williams' Lifetime, *Emergency*, Polydor - heavy rock oriented fusion with John McLaughlin

Herbie Hancock, *Headhunters*, Columbia - funk oriented fusion

Weather Report, *Heavy Weather*, Columbia - pop oriented fusion with Wayne Shorter, Joe Zawinul, Jaco Pastorius

Chick Corea and Return To Forever, *Light As A Feather*, Polydor - Latin oriented fusion with Stanley Clarke and vocalist Flora Purim

- Pat Metheny, *Bright Size Life*, ECM - esoteric fusion with Jaco Pastorius
- Steps Ahead, *Modern Times*, Elektra Musician - tight modern fusion with Michael Brecker
- Miles Davis, *You're Under Arrest*, Columbia - funkier modern fusion
- Ornette Coleman and Prime Time, *Virgin Beauty*, Portrait - free modern fusion
- Art Ensemble Of Chicago, *Nice Guys*, ECM - post modern jazz, world music, and free-bop with Lester Bowie and Roscoe Mitchell
- World Saxophone Quartet, *Dances And Ballads*, Elektra Nonesuch - *a capella* (unaccompanied) saxophone quartet with David Murray
- David Murray, *New Life*, Black Saint - octet with Hugh Ragin on trumpet
- Anthony Braxton, *Composition 98*, hat ART - a post modern suite featuring Marilyn Crispell, Hugh Ragin, and Ray Anderson
- John Carter, *Castles Of Ghana*, Gramavision - a suite of post modern compositions
- Willem Breuker, *Bob's Gallery*, BVHaast - avant garde big band
- Don Pullen / George Adams Quartet, *Don't Lose Control*, Soul Note - blues oriented post modern jazz
- Improvised Music New York 1981*, MU - energy music with Derek Bailey, Sonny Sharrock, Fred Frith, and John Zorn
- Oregon, *45th Parallel*, Portrait - New Age pioneers
- Paul Bley, *Floater*, Savoy - harmonically liberated trio doing compositions by Paul and Carla Bley as well as Ornette Coleman
- Abdullah Ibrahim, *African Dawn*, Enja - solo piano with South African influences
- Keith Jarrett, *Mysteries*, Impulse - quartet with Dewey Redman doing relatively free post bop with world music influences
- Wynton Marsalis, *Think Of One*, Columbia - adventurous neoclassic quintet with Branford Marsalis, Kenny Kirkland, and Jeff Watts
- Wynton Marsalis, *Marsalis Standard Time*, Columbia - standards with rhythmic twists, featuring Marcus Roberts
- Branford Marsalis, *Crazy People Music*, Columbia - adventurous neoclassic quartet with Kenny Kirkland and Jeff Watts
- Steve Coleman, *Motherland Pulse*, JMT - acoustic M-Base
- Steve Coleman, *Drop Kick*, Novus - electric M-Base
- Gary Thomas, *The Kold Kage*, JMT - electric M-Base
- Cassandra Wilson, *Jump World*, JMT - vocal and electric M-Base with Steve Coleman, Gary Thomas, and Greg Osby
- Dave Holland, *Extensions*, ECM - mostly acoustic modern quartet with Steve Coleman, Kevin Eubanks, and Marvin "Smitty" Smith

Tim Berne, *Pace Yourself*, JMT - frenetic post modern jazz  
 Michael Brecker, *Michael Brecker*, Impulse - modern acoustic and electric post bop  
 Charlie Haden, Paul Motian, Geri Allen, *Etudes*, Soul Note - modern acoustic post bop  
 Steve Lacy, *Live At Sweet Basil*, Novus - modern acoustic post bop  
 Phil Woods, *Heaven*, Blackhawk - post bop with Tom Harrell  
 Gonzalo Rubalcaba, *Discovery*, Blue Note - post bop with Cuban influences  
 Don Byron, *Tuskegee Experiments*, Elektra Nonesuch - post modern, post bop  
 Don Pullen, *Kele Mou Bana*, Blue Note - post modern with world music and blues influences  
 David Murray, *Shakill's Warrior*, DIW - post modern blues with Don Pullen on organ

## 12. Appendix C: Jazz Standards

The following tunes are among those most commonly played by jazz musicians. I have made an attempt to categorize them based on how they are usually played. Most of the compositions are by jazz musicians, except for the ones marked "standard".

You should try to become familiar with as many of these tunes as possible. Most of them can be found in the *Real Book* or in Chuck Sher's books.

All Blues	blues, modal
All Of Me	standard
All The Things You Are	standard
Anthropology	rhythm changes, swing
Au Privave	blues, swing
Autumn Leaves	standard
Beautiful Love	standard
Beauty And The Beast	rock
Billie's Bounce	blues, swing
Black Orpheus	Latin
Blue Bossa	Latin
Blue In Green	ballad, modal
Blue Monk	blues, swing
Blue Train	blues, swing
Blues For Alice	blues, swing
Bluesette	3/4, swing
Body And Soul	ballad, standard
C Jam Blues	blues, swing
Caravan	Latin, swing
Ceora	Latin

Cherokee	swing
Confirmation	swing
Darn That Dream	ballad, standard
Desafinado	Latin
Dolphin Dance	modal, non-tonal
Donna Lee	swing
Don't Get Around Much Anymore	swing
E.S.P	non-tonal
A Foggy Day	standard
Footprints	3/4, blues, modal
Freddie Freeloader	blues, modal
Freedom Jazz Dance	non-tonal
Four	swing
Giant Steps	swing
The Girl From Ipanema	Latin
Goodbye, Pork Pie Hat	ballad, swing
Have You Met Miss Jones	standard
I Mean You	swing
I Remember Clifford	ballad, swing
I Thought About You	standard
If I Were A Bell	standard
Impressions	modal
In A Sentimental Mood	ballad, swing
In Walked Bud	swing
Joy Spring	swing
Just Friends	standard
Killer Joe	swing
Lady Bird	swing
Lullaby Of Birdland	swing
Mr. P.C.	blues, swing
Maiden Voyage	modal
Mercy, Mercy, Mercy	rock
Misty	ballad, standard
Moment's Notice	swing
My Favorite Things	3/4, modal, standard
My Funny Valentine	ballad, standard
My Romance	standard
Naima	ballad, modal
A Night In Tunisia	Latin, swing
Nica's Dream	Latin, swing
Nostalgia In Times Square	swing
Now's The Time	blues, swing
Oleo	rhythm changes, swing

On Green Dolphin Street	Latin, swing, standard
Ornithology	swing
Recorda Me	Latin
Red Clay	rock
Round Midnight	ballad, swing
St. Thomas	Latin
Satin Doll	swing
Scrapple From The Apple	swing
The Sidewinder	blues, swing
So What	modal
Solar	swing
Some Day My Prince Will Come	3/4, standard
Song For My Father	Latin
Speak No Evil	modal, non-tonal
Stella By Starlight	standard
Stolen Moments	blues, modal
Straight, No Chaser	blues, swing
Sugar	swing
Summertime	standard
Take Five	5/4, modal
Take The "A" Train	swing
There Is No Greater Love	standard
There Will Never be Another You	standard
Up Jumped Spring	3/4, swing
Waltz For Debby	3/4, swing
Wave	Latin
Well, You Needn't	swing
When I Fall In Love	ballad, standard
Yardbird Suite	swing

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# **A Jazz Improvisation Primer**

*Marc Sabatella*