The Development Of Style, Part Two.

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By Hal Galper (Copyright 2000 All rights reserved)

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In Part One the processes involved in the development of style was discussed. The proposition being that style is based on the selective process . That you use your intuition and your emotions to select those musical ideas you wish to copy. This article examines the questions: how much copying do you need to do and what to do with the ideas you've copied?

"The Myth Of Information."

When I first started at Berklee College in the early 50's I was under the impression that to become an improviser one had to learn thousands licks, practice them in all 12 keys, and string them together when soloing. It appeared to be an awesome and mechanical task. However, over the decadesas I learned more about the learning and playing processes, I began to see these processes in a completely different light.

When I had my quintet in the 70's, every time we went to the bandstand Mike Brecker would say " oh man, you're going to have to listen to my twelve licks again." I had a similar experience when I was playing with John Scofield's quartet . He'd say " Oh man, you're going to have to listen to my seven licks all night. " I thought they were kidding. Then Mike and John would get on the bandstand and play every kind of idea under the sun.

It wasn't until I examined Coltrane's solo on Giant Steps and isolated seven of his solo's most repeated 4 note groups that I realized the key to improvisation wasn't the information but the attitude toward the information that was crucial. I transposed these seven groups into all the keys finding infinite ways of using them to spell out any set of changes inside or outside of a key. In a very true sense, what Mike and John were talking about wasn't very far from the truth.

This truth was best expressed by the great jazz educator David Baker who once said "If you want to learn how to improvise, take one bebop head a month and learn it in all twelve keys. By the end of a year you'll end up with enough of a musical vocabulary to be an excellent improvisor." The point being that you don't need to collect massive amounts of licks, you need to collect a small amount of the right kind of information and learn how to get the most out of it.

"The Big Picture."

What you get from applying the following techniques is what I call "The Big Picture." Contrary to popular thought, you don't memorize a bunch of licks and then try to play them as a solo. That's not improvisation, that's craftsmanship. You'll discover that although you might be making some nice sounds by playing rote ideas , you will be, guaranteed, bored to tears and so will your listeners. It won't be what Wayne Shorter call "spontaneous composition." You don't want to play what you practiced. That's not what practicing is for. Both you and your audience want the adventure of making stuff up as you go along, playing ideas you never practiced. That's why it's called improvisation.

In Part 1 I defined the goal of practicing as a quest for self knowledge. That, however, is just one of our practicing goals. Another goal of practicing is the development of an intuitive understanding of how musical ideas relate to each other. How they work together. It's the cultivation of this understanding that eventually leads to an underlying concept of how things work, or the big picture. It's this deep understanding of "how things work" that you take to the bandstand with you when you play. It develops your musicality so that while improvising, it's working in the background, on an intuitive level, helping you to spontaneously make up strong ideas .

Understanding how the mind collects and manages it's information can be best explained by combining two of science's most current discipines: "Chaos Theory," and "Information Theory."

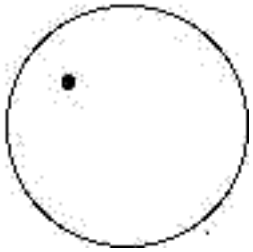
The premise of Chaos Theory is that there are no isolated events. Apparently isolated events are an

illusion. Though their relationship may not be readily observable, all events are related to each other. They appear to be unconnected because we lack the information needed to achieve a perception or point of view with which to observe their connections.

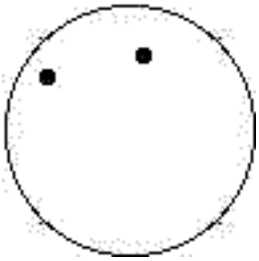
Information Theory studies how the mind stores and utilizes it's information. The mind collects and stores individual bits of information. As the number of bits increase, some of them eventually combine to form a concept, which, when further combined with other concepts, becomes a perception or point of view.

For example:

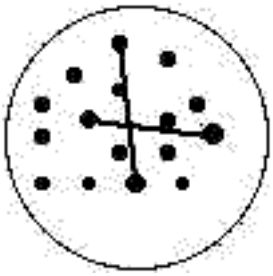
If you don't have another idea to compare or relate it to, it's difficult to understand a single idea in a vacuum. It has no meaning.



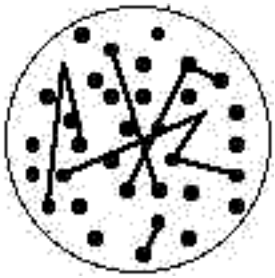
As soon as you add a second idea to a vacuum, although not readily apparent, the possibility beings to exist that the two ideas may have some relationship to each other and may mean something.



When you introduce a sixteen ideas, the possibilities increases exponentially and two ideas may interelate creating the beginning of meaning.



With 32 ideas in the pot you begin to see how more single and grouped ideas relate to each other making the information even more meaningful.



As more connections between ideas and concepts are established, a kind of "critical mass" (to borrow a phrase from nuclear physics) occurs and you begin to acquire an overall intuitive understanding of the information and get "The Big Picture" of "how things work." The concepts acquire meaning. At that point you transcend mere information collection and become a user of the concepts derived from your overall understanding of the information. This is a very dynamic process. As more ideas are added to the concept, the concept expands exponentially and begins to create more new ideas on it's own.

Although it would appear that this process leads to more complexity it actually does the reverse by simplifying and reducing apparently complex ideas to their most simple and basic elements. If a musical concept appears complicated it's because you're looking at it wrong. Behind every complex idea is an elegantly simple one. If an idea looks complicated it's only because you are looking at the results of what it's simple basis can produce. Mathematicians use the term "elegant" to describe a formula that is in essence very simple but has the potential for infinite complexity. For an example of this see my article "Melody and Embellishment" on my web site at halgalper.com.

It's generally accepted that music and mathematics are close cousins. Joseph Schillinger demonstrated how any musical idea can be reduced to a mathematical formula. This idea was further confirmed by an experience I had in the 70's while performing with the Donald Byrd Quintet at Howard University.

I met a musical mathematician who was a professor at Harvard University. He had invented a computer into which he had programmed thousands of bebop melodies. The purpose of this was to create a machine that you could play for and it would analyze your playing in terms of it's strongest and weakest attributes. A musician could then work on eliminating the weak ideas and enhancing the strong ones. He told me Coltrane had played for this machine.

His theory was that any strong musical idea has, as it's basis, a strong mathematical formula. That what we do when improvising is intuitively sense the strength of various ideas while playing. He suggested was that, and it had, from personal experience, a "ring of truth" to it, when we play a note at a certain point in time and space (the changes and meter) it's sets up a certain number of possible strong (and weak) choices of a second note. Of these possibilities we select one of the strong ones. This now becomes two notes in time and space and these two notes create another set of possibilities for a strong third note. We select one of them and the process continues. Each time you add another note to the series it suggests new sets of strong possible next notes based on the previous ones. As we begin a solo the number of possible good note choices is small. As we progress through a solo sensing the direction the solo is taking, the number of choices expands. As we proceed toward the resolution of a solo the number of good note choices begins to reduce again to the point that there are only a limited number of choices left from which we select a strong ending.

Graphically represented a solo takes the following shape:

Beginning of solo----------End of solo

Naturally, the intellect works too slow to make these decisions on a conscious level. We intuit the mathematical logic of these choices. It has been suggested that the intuition makes decisions at a speed 20,000 times faster the speed of intellectual thought. The quality of these decisions are based on each player's sense of musicality and one's aural imagination (hearing) working in conjunction with each other. This sense of musicality is acquired by practicing as many strong melodic ideas as possible.

By practicing and experimenting with strong melodic ideas, we eventually come to realize, not only on an intuitive level but an intellectual level as well, the elegantly simple basis's of various musical concepts.

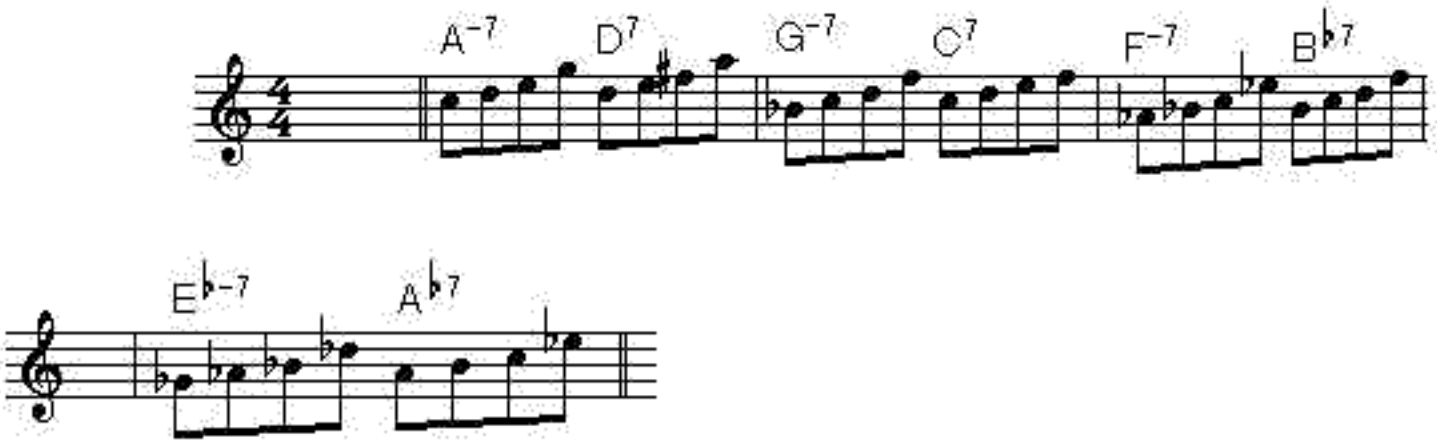
For example; in the early '70's I began to work on pentatonic playing. I started with the one basic component I new, the pentatonic scale. As time went by I learned, through experimentation and suggestions from other musicians, the second, third, fourth and fifth components of the pentatonic concept. At first the concept seemed complicated. When I finally learned these five components, the concept became simpler.

"Idea Expansion"

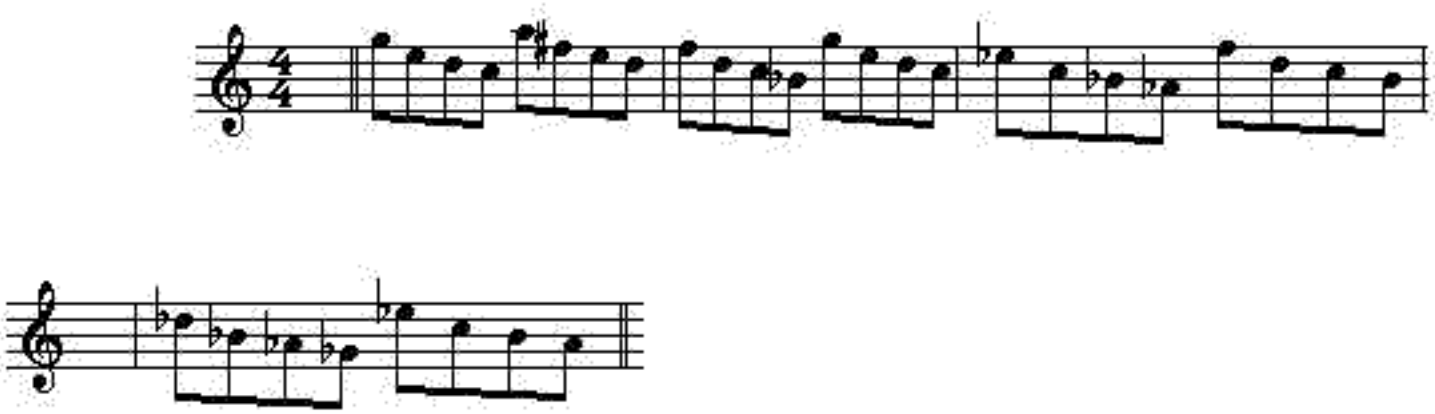
This process of interrelating single ideas to create more infinite possibilities of ideas can be musically demonstrated in the following examples.

To demonstrate how to achieve the maximization of a small number of ideas I've selected one of the most common 4-note groups used in the history of jazz, the major and minor triad with an added note. Taking the groupings 1, (2), 3, 5 and 1, (2), flat 3, 5 we'll see how many potentially infinite ways they can be used on a set of II-V's, descending in whole steps, two beats per chord. The directions of the notes within each grouping may be either ascending or descending.

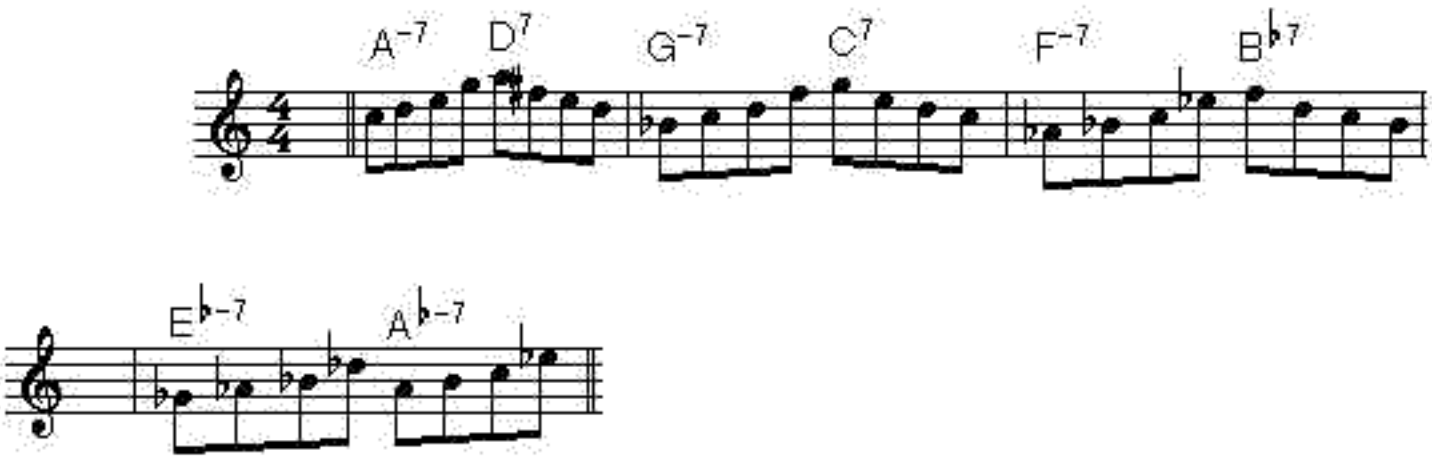
Calling the first grouping (1, 2, 3, 5) Idea "A" ascending, we'll find places where "A" will fit on the changes.



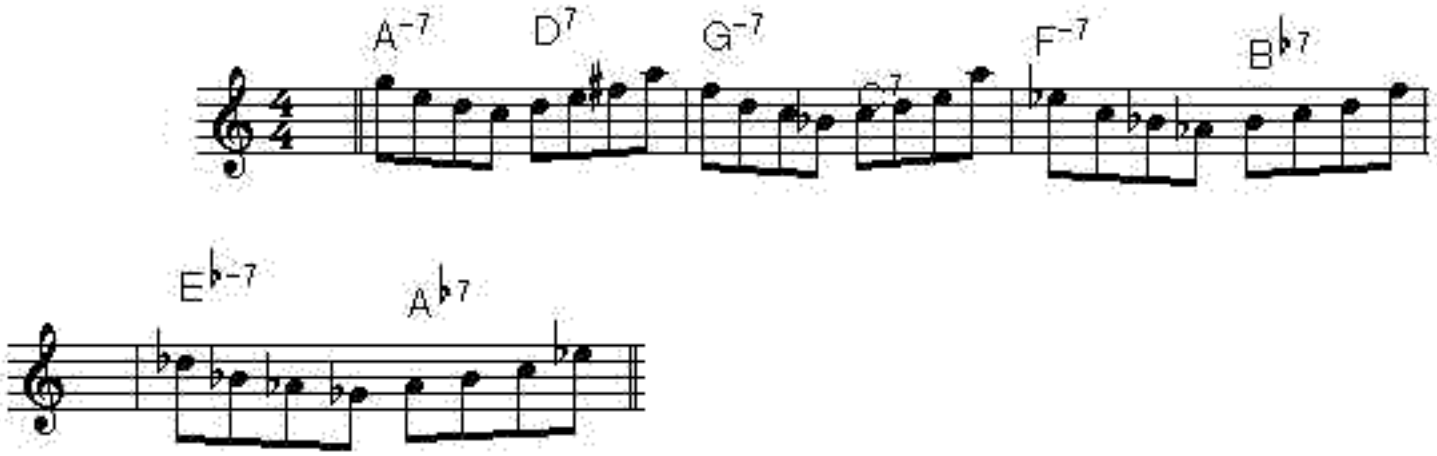
Over the same set of changes we'll use Idea "A" with the notes in the groupings desending.



Using Idea"A" again, we'll alternate directions.

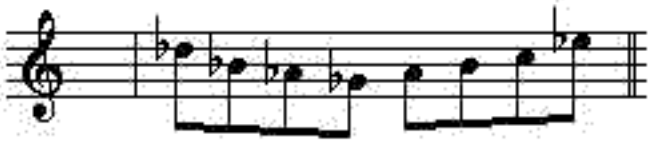


Using Idea"A" again, we'll reverse the alternating directions.

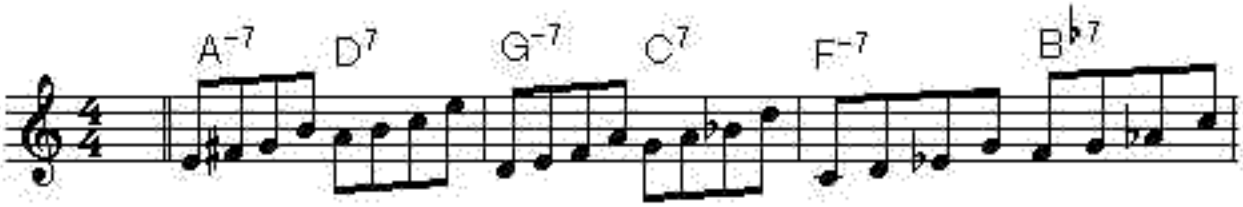


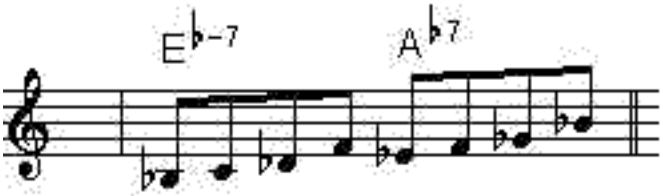
At this point the possible uses of only one idea have increased dramatically.

Combine each of the above examples into a single line, when played, it begins to take on the quality of an improvised melody.



Apply the above process to the grouping 1, 2, flat 3, 5, calling it <u>Idea "B," ascending and descending,</u> to increase the number of possible ideas.

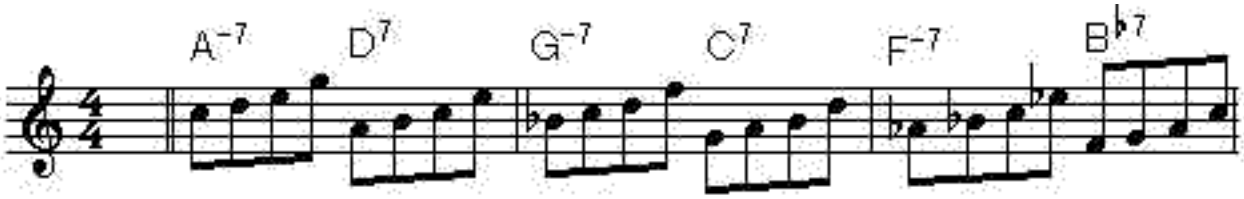


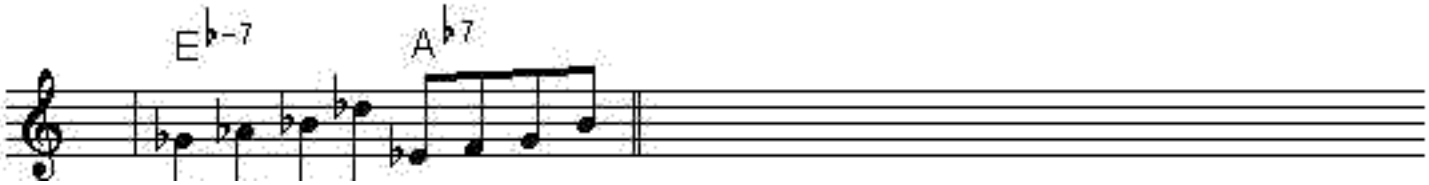


Combine these groupings and directions as in examples 2-5.

At this point it appears as if we are beginning to collect quite a bit of information from just two ideas. But we have just begun.

Lets combine <u>Ideas "A" and "B" ascending</u>:

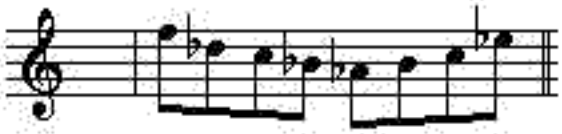




Combine these groupings and directions as in examples 2-5.

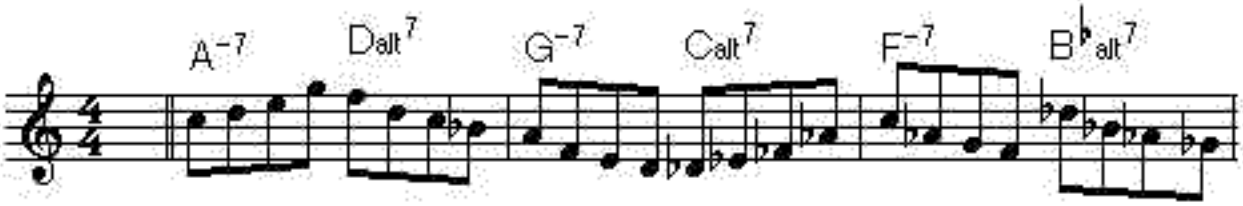
Change the order of the ideas and try <u>Ideas "B" and "A" ascending</u> over the same set of changes:

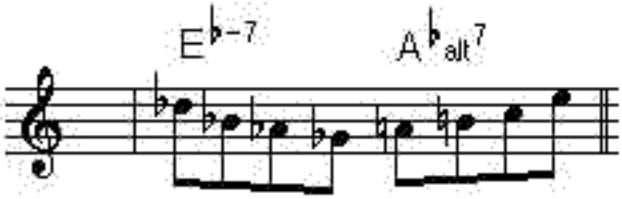
And now <u>Ideas "B" and "A" ascending and desending</u>:



The number of ideas increase exponentially by combining the two groupings and directions in as many way as possible. So much so that limitations of space will not allow us to show every possible example of the many ways these groupings can be combined to come up with new uses for them.

However, just to show you how this concept continues to expand, try it using them on some altered II - V's.





It should be apparent by now that applying the above techniques to a small amount of information can greatly expand it's potential.

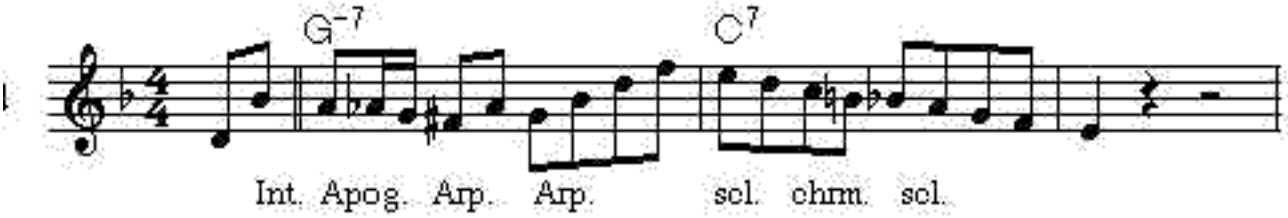
Before we go any further with these techniques lets backtrack a little to Part One and and how it

relates to what we've done here in Part 2. When you use your emotions and intuition to select an idea to copy you've embarked upon an adventure of self discovery . When the preceding techniques are applied to copied ideas, you further clarify your personal style, learning more about your individual way of hearing.

You'll note that the above triadic examples contain no chromatics. Melodies that contain other types of melodic components need to be treated with different techniques.

Except for the preceding triadic examples, most tonal melodies are composed of four basic components in any number, order, direction or combination: scales, arpeggios, chromatics (appoggiaturas and approach notes), and intervals larger than a fourth (usually broken arpeggios) and their "connecting intervals" (the interval between the last note of one component and the first note of the next).

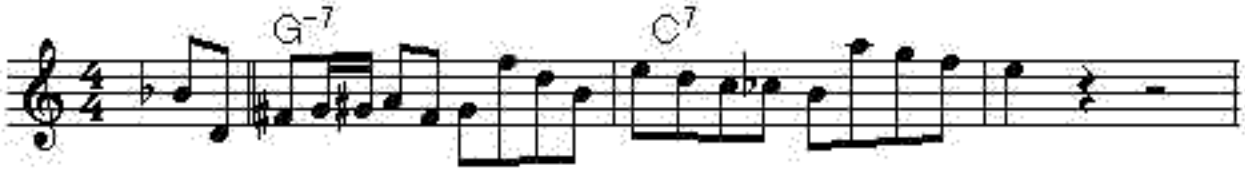
The following example contains all four components:



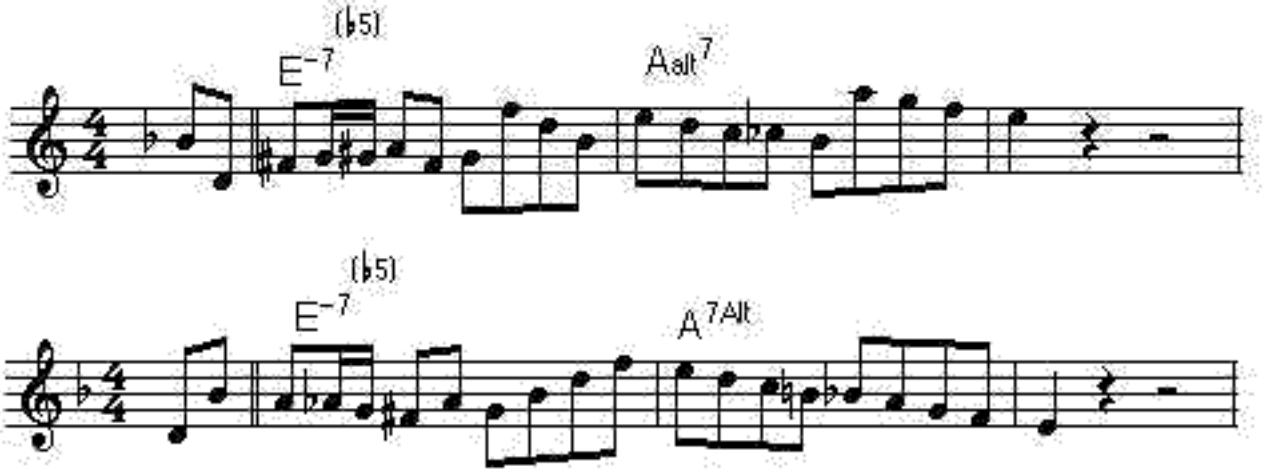
Analysis: An ascending interval, to a descending half step connector, to a descending chromatic appoggiatura, to a descending half step connector to a ascending two-note arpeggio to a descending whole step connector, to a ascending four-note arpeggio, to a descending half step connector, to a descending three-note scale, to a chromatic approach note, to a four-note descending scale.

Reorder the components, their direction and shape, to find other ways to use a melody's content.

For example:



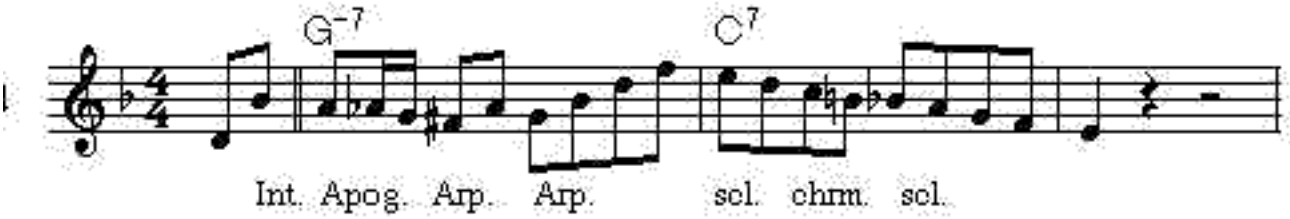
Discover other ways to use a melody on other chord changes and chord qualities. The melody line may also be applied to other chord changes as well.



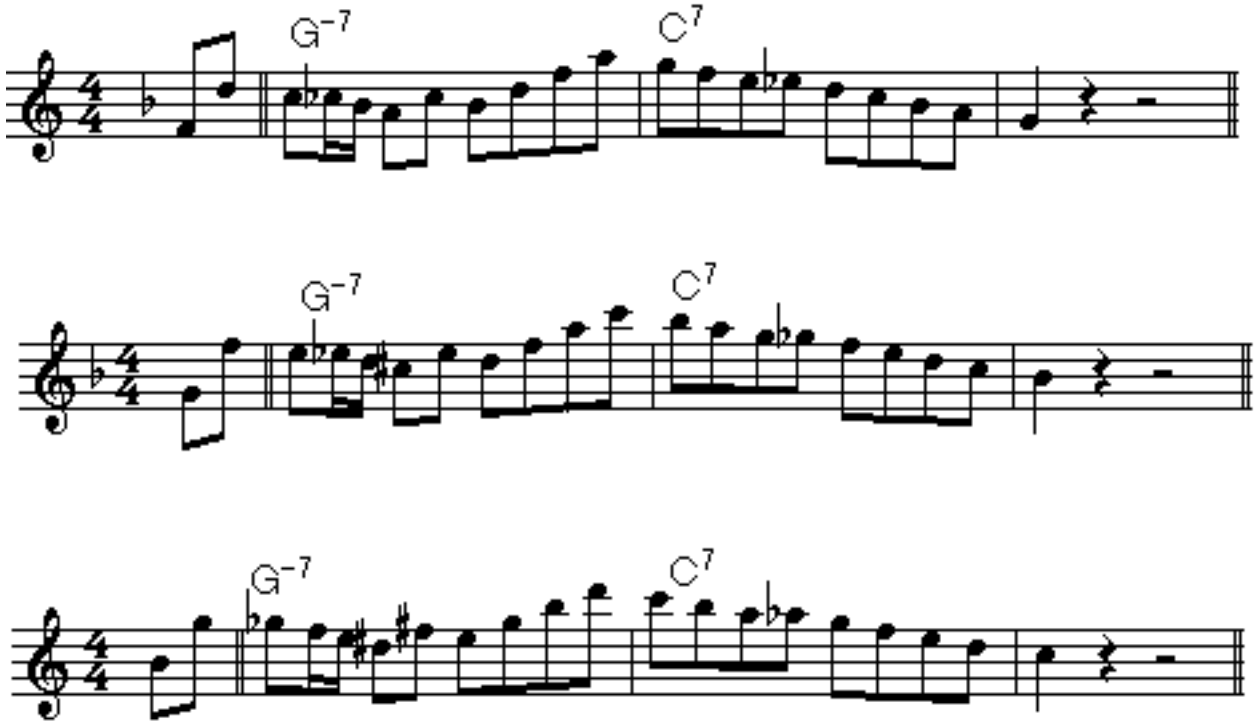
If you change the chord and the melody doesn't fit you can change any melody note to make it fit.

"Four Of Everything"

The information can be exponentially expanded by applying the technique of "Four Of Everything." The concept is based upon the fact that all musical ideas are built around either basic or superimposed chord tones. That being the case, there are always at least three other versions of a copied idea based around the other three chord tones of a chord or set of chord changes. This can be best demonstrated by taking the first example above.



Note that the first note of the example is the 5th. of the G-7. Move the whole idea upward to start each new version of idea on the 7th., Root, and 3rd. Of the chord.



In the example above I changed some intervals to make the line fit the chord. The line works well for E-7b5 - A7 alt. as well. You can mix and match any of the melodic components from any version with any melodic component of any other version.

This process can be extended in the extreme by trying "Seven Of Everything" where you move the line up diatonically in scale steps for versions that start on every note of the scale. They may not fit the original set of changes but they will fit some others.

"Closing Comments"

I'm sure you've noticed that when practicing an exercise, there is a tendency for the ideas you're working on to take on a life of their own. They branch off into directions that were not originally intended. Do not resist this tendency. Let it lead you wherever it goes. This exploratory work will take you into surprising areas of self discovery. At a later time you can always come back to the

original idea you were working on. Practicing then becomes more of a creative than mechanical process.

In themselves, the techniques of Idea Expansion can be intellectually fascinating. They can open up limitless, new melodic possibilites for the student. However, the focus of this process is not the mere collection of new melodic ideas themselves but the global effect continued implementation and experimentation with the process can have upon the mind! The musical ideas not only serve a higher function than their mere memorization, they are the tools you use to achieve general state of musicality. It's what one gets from doing this kind of work, "The Big Picture" if you will, that eventually becomes one of the most basic tools an improvisor takes to the band stand.