Regarding "Jazz Scales"(And other thoughts):

There are a few misconceptions about "bebop scales", and I will try to clarify things a bit. There isn't just one so-called "bebop scale". One thing unifies all of them though: They all have an extra one passing note which makes them an eight-note scale. A seven-note diatonic scale with one chromatic note.

The idea is that by "inserting" an extra note into an already existing seven note scale or mode(that is derived from the major/scale), we will form an eight note scale.

Here is an example of a(seven notes) "pure" diatonic descending C Major scale:

Example 1:
C B A G F E D C

"inserting" one note in between G and A, and we now have an eight note " bop scale":

Example 2:
C B A Ab G F E D C

This 8-note scale, consists of a major scale with an added lowered 6th(Or enharmonically #5 if we play the same scale in an ascending direction).

Here is a major scale with an added b5 (#11).

Example 3:

C B A G Gb F E D C

..And these were only two scales..

Here is a summery of all the possible bop scales that may be generated by adding one passing tone(chromatic connection) to a C Major Scale while starting from C point into C(within an Octave). It will be even easier to see these notes on a keyboard, as they are the black keys. So we practically have 12 tones within an octave:seven white keys, and five black keys. So each of the following diatonic scale has only one passing tone. That makes each one of them "bop scale":

Example 4:

Here are the five eight note scales that have been created after adding each of the five chromatic tones to an existing C major scale.

a)C B **Bb** A G F E D C
b)C B A **Ab** G F E D C**
c)C B A G **Gb** F E D C
d)C B A G F E **Eb** D C
e)C B A G F E D **Db** C

This operation can be applied with any modes of the C major.

***Example b) is a particularly important bebop scale. This bop scale, AKA "The 6th diminished scale", is a major scale with an added chromatic note between the 5th and 6th scale degrees. This added note creates a unique set of diatonic arpeggios that alternate between the tension of the V7b9, (The diminished 7th chords) and the resolved sound of I6. In this case, we have G7b9 and C6 which is an I and V7 relationship between different inversions of these two chords. This scale places the additional b6(#5) tone on the"and" of beat 2 of the measure, which resolves to the G note on beat 3. This by itself creates a stronger tension release movement inside this scale. We will later find out that by doubling/repeating certain chromatic notes, we can form other lines which place the notes of the C triad on a strong beat. However, the 6th diminished scale overlaps many other scales when one starts applying the approach and other leading tones to the two main functioning chords it is built from(i.e. I6, V7(b9)). For a more in-depth exploration of this scale, I would urge anyone to check out any literature available by the late great Barry Harris, or by his many disciples, who can demonstrate the vast musical concepts and possibilities of this scale alone, each with his/her variations and developments.*

Here is a seven-note descending E mode(Phrygian mode) that is derived from the third degree of the C Major scale:

Example 5:
E D C B A G F E= Seven note diatonic mode.

Now let's start the process by adding an extra one note to each scale in order to complete the **five** eight-note scales:

a)E **Eb** D C B A G F E
b)E D **Db** C B A G F E
c)E D C B **Bb** A G F E
d)E D C B A **Ab** G F E
e)E D C B A G **Gb** F E

Example 6:

Let's take a look at the seven-note descending **G Mixolydian.** By adding each of the five chromatic tones, we now have **five** eight-note bop scales. We can use this application to every mode of the major scale.

a)G **Gb** F E D C B A G
b)G F E **Eb** D C B A G
c)G F E D **Db** C B A G
d)G F E D C B **Bb** A G
e)G F E D C B A **Ab** G

Try to apply the same method to D dorian, E Phrygian(shown above), F lydian etc.

Adding More Chromatic Notes to Six Note Modes:

Let's look at a descending C major diatonic scale. This time, instead of starting from the C note, we start the scale motion down from B(the following note in the order) and we stop and the low C:
B A G F E D **C.**
Just because we did not start, nor ended in the same letter that is an octave away from one another(we started on B), we now have only six notes before the target note(**C**) so we will need to add **two** more more chromatic tones in order to form the eight note scale before resolving to C(The ROOT).

Example 7a:

B **Bb** A **Ab** G F E D C

The next thing to experiment with is changing some of the "white" notes with other available "black"(chromatic) notes.

Here is the same run while alternating the D note with Db.

Example 7b:

B **Bb** A **Ab** G F E **Db** C

We have just formed a quite useful jazz line, after "skipping" the D note before resolving to C by using **three** chromatic notes,
Now let's alternate the E with an Eb.

Example 7c:

B **Bb** A **Ab** G F **Eb Db** C

We now have **four** different chromatic tones, which do not follow a typical bop scale "rule" of employing only one passing tone, and can do so when we start and end on two different **scale degrees.**

Let's look at the following six-note scale:

A G F E D C(5 notes+1 target note)

We now have to add **three more (passing) tones** to the five note diatonic scale in order to complete the eight note run which will resolve to the target note C.

Example 8a:

A **Ab** G F E **Eb** D **Db**——C

Example 8b:

A **Ab** G **Gb** F E D **Db**——C

Example 810
c:

A **Ab Gb** F **Eb** D **Db**——C

So far, we have managed to form eight tone runs starting from the C(root), B(7h), and A(6th). When trying to build an eight-note run starting from the G note, we face a new problem. There is simply not enough room to insert eight tones between G to C, as the interval(5th) between these notes is too small. So instead of C, the next available target note in the C major triad descending order is the scale tone G. The descending triadic order of C Majors is C, G, E; G, E, C; E, C, G etc).

Here is an example of a C Major starting and ending at G:

G F E D C B A G

First, let's go over the available bebop scales (one passing tone):
Again, there are only five of them

These are the five available bop scales in this mode:

1)G **Gb** F E D C B A —G

2)G F E **Eb** D C B A —G

3)G F E D **Db** C B A—G

4)G F E D C B **Bb** A—G

5)G F E D C B A **Ab**—G

Harmonically speaking, things begin to become less restricted when we use more passing tones instead of diatonic notes. However, we need to maintain the eight-note run to a resolution to keep the eight-note to resolution(C train target note) rhythmic formula. We now have to skip an actual scale tone to maintain the 8-to-1 rhythmic ratio.
When skipping an actual scale note, we can start treating these scales as simply a mixture of chromatic and diatonic lines.

Let's look at the next few examples:

1)G Gb F E D C B Ab —G(A is skipped)

2)G F E Eb Db C Bb Ab —G (B and A are skipped)

3)G F Eb D C Bb A Ab—G (Skipping E and B)

4)G E Eb D C B Bb A—G (No F)

5)G E Eb D C Bb A Ab—G (No F, and Bis skipped)

6)G F E Eb D Db C Ab—G(No B)

Examples 4) and 6) show us that you can bypass a note letter and fill the space with other tones to complete and eight-note formula.

You CAN certainly bypass two consecutive letters, but that can cause a leap that will undermine the harmonic nature of the scale. Therefore, it can be treated as an eight-note shape, but not a scale.

Here are few examples of C Major in the mode of G. Please note that I refrain from calling it G Mixolydian and this point, as I prefer to treat it as a C Major scale from Point G to point G

Each example has two **bypassed** letter(tones):

G Gb D Db C B A Ab—G (No F, E)
G Gb F E B Bb A Ab—G(No D,C)
G F D Db B Bb A Ab—G (No E,C)
G E D Db B Bb A Ab—G(No F, C)
G Gb F E Eb D Db Ab—G(No C, B)

Important: The note before the target note has to be no larger than a interval of a second. A larger interval causes a **weak** resolution effect. It sounds like an abrupt, unprepared resolution.

To Summerise….

1)Bebop scales are any scale that has one chromatic note added to an existing diatonic mode(or a seven letters scale) from within a distance of a full octave: In the case of Major and minor scales, we have seven different modes, in which we can execute this operation.

2)Each time you start on a different scale degree than the target note letter(In an octave apparat), you will have to add chromatic notes to "compensate" for it to complete an eight-note scale

3)Any letter you skip (alternate note letter), or bypass(Omitted letter) in the scale, will be replaced with a chromatic non-diatonic tone, and the remaining scare tones(letters).

4)The preceding note to a target note should not be in a greater than an interval of a second or a minor second away.

5) It is recommended to practice these modes in all keys.

6)It is recommended to play these scales in a descending motion mostly, to train your ear to "hear" them.

Let's look at ways to form a jazz scale with a larger than an octave interval between the starting note and the target note:

First, let's observe this descending diatonic mode in C major from high A to a (ninth bellow) G:

A G F E D C B A— **G**

Here are few tweaks we can do
Try to play the next examples over C6 or CMa7 chords:

A **Ab** G F E D C A—G(No B)
A **Ab** G F E D C **Ab**—G(No B)
A **Ab** G F E D B A—G(No C)
A **Ab** G F E D **Bb** A—G(No C)
A **Ab** G F E D **Bb Ab**—G(No C)
A G **Gb** F E D B A—G(No C)
A G **Gb** F E D B **Ab**—G(No C)
A **Ab** G F Eb C B **Ab**—G(No D)

We can keep taking these scales as there are more variations to explore. However, two factors cannot be changed:

1) The starting note-A
2) The preceding note to the target note has to be A or Ab., as we want to avoid any leaps to the target note.

<u>Next target note: E(the third of Cmajor chord)</u>

Lets look at the next ten letters diatonic motion:

G F E D C B A G F E

Since there are more than eight letters before the target note E, we will need to “squeeze” again the nine-note scale back to an eight-note scale by bypassing different letters. Do not change the first note(G), and the preceding note to the target(F)which resolves E nicely, to avoid an unprepared resolution.

Here are the six available scales with a letter bypassing:

1)**G** F E D C B A **F**—E(No G)
2)**G** F E D C A G **F**—E(No B)
3)**G** F E D B A G **F**—E(No C)
4)**G** F E C B A G **F**—E(No D)
5)**G** F D C B A G **F**—E(No E)
6)**G** E D C B A G **F**—E(No F)

While some alterations will not sound as good as others, it is worth checking them out to see if some are effective. However, these experiments should not be seen as part of the eight-note scale scenarios. Let’s add some chromatic tones where applicable:

1)**G Gb** F E C Ab G **F**—E
2)**G** F E D C Ab G **F**—E
3)**G** E Eb D C Ab G **F**—E
4)**G** F E D Bb Ab G **F**—E
5)**G** F E D Bb A G **F**—E
6)**G** F E Bb A Ab G **F**—E

We are now starting to understand how to build a better, cohesive jazz line. so far, there have been a few operations that can be done to further ” tweak” a seven-note diatonic scale, so it can be an eight-note scale:

1)By adding one passing(or a chromatic approach)in between two diatonic notes(letters)unless they already have a half step between them(i.e: F,E; C,B).

2)Altering letters, (instead of E, replacing it with Eb), and by that, allowing the usage of more “black” notes. I call this operation a” skip”.

3)” Bypassing” letters altogether: A six-letter or a five-letter diatonic scale will allow more chromatics to be deployed.

Double notes:

Here is a descending four note diatonic scale:

G F E D—C
Since the distance(interval) between G and C is too small, we cannot insert a sufficient number of chromatic tones to complete an eight-note scale before resolving to the C note:

G Gb F E Eb D Db(only seven tones..)————————-to C

By doubling the first note, G, we now have the required eight-note series we need, so the scale will have a sufficient eight note rhythmic resolution. Do not double the resolution. The preparation note cannot be the same as the resolution note. Therefore, this will create an abrupt resolution without a preparation leading tone!

Correct:G G Gb F E Eb D Db———-C
Incorrect:G Gb F E Eb D Db C—C

Important: Make sure to initially double the notes that are placed on a beat:

G G Gb F E Eb D Db———-C
1 + 2 + 3 + 4 + Target

G Gb **F F** E Eb D Db———-C

G Gb F E Eb Eb D Db———-C

G Gb F E Eb D Db Db———-C

Doubling more than one note:

G G Gb F **E E** D Db———-C

We now have doubled the G and E notes, so we no longer need more than two chromatic tones.

Here is another example:

G F **E E Eb Eb** D Db———-C
1 + 2 + 3 + 4 + Target

I hope these last few pages could give you some starting point to think a bit outside of the modes and diatonic scales as a whole. Obviously there are many more options to explore, but by" inserting" these notes in to any existing seven/six and five note scale, one should have many more options to build an eight note scale. That way, it will maintain the melodic, harmonic and the rhythmic integrity of most jazz lines that one is striving to create and improvise.

Please do not forget to drop me a note!

AR