

The Sound of It: Chords and “Sonority”

The difference between Western keys and Highland tastes.

by Barnaby Brown

ON MAY 31, THE FOLLOWING question was posted on Bob Dunsire’s bagpipeweb forum:

“Is it possible for someone to say, for example, the key of K has the notes W, M, P, O, L and S, or whatever?”

The first step to clear up existing confusion over Highland bagpipe “keys” is to establish the lingo. What do the words “major,” “minor,” “scale,” “mode,” and “Mixolydian” actually mean? Should we be using these terms the way other musicians do, or can we stretch their meaning to fit our music without causing confusion? How many pipers can explain the difference between “B minor” as used in Highland piping since the 1970s, and “B minor” as used in the Western world since the 1700s?

The next step is to account for the drones when we describe bagpipe music. It is easy to forget them when working on paper, or on the practice chanter—and theorists and composers regularly do. Anyone studying bagpipe “keys” should form their conclusions by *listening* to the music, not by reading it on paper. Drones are a fundamental source of expression. Our repertoire is unmusical without them.

The final step is to consider how relevant Western music theory is to Highland music. In which society did the system of keys arise? When did Highland pipers start imitating these new-fangled keys? Would any additional words be helpful in explaining bagpipe melodies that aren’t in any Western key?

With these points in mind, I will endeavor to describe the lingo I would use, clarifying how each term relates to Highland piping. The topics of pitch

and tuning are not touched upon and will be covered in a future article. Nor do I explain some of the rudimentary terms of music theory. If there are words you don’t understand, you can research them in just about any music dictionary, book, or just type “music theory basics” into Google and follow the links. My main concern here is to clear up the problems created when we borrow terms from Western music and then apply them to bagpipe music.

The following terms and their definitions enable us to explain to other musicians why the drones are not a limitation, but an asset: the prime factor in making one tune different from the next, or, our means of *modulation*. I also hope they help anyone composing or listening to bagpipe music gain a deeper satisfaction.

CHORDS

The pipe chanter can sketch out a limited number of chords (see Example 1). As opposed to the chords on other Western instruments such as the piano, the notes of each chord on the bagpipe chanter sound in succession, not simultaneously. Depending on the number of passing or decorative notes, the identity of a chord can be obvious or slightly ambiguous. The bolder the contrast between two chords and the faster they alternate, the more “martial” the piobaireachd, or exciting the dance.

KEYS

The fashion for keys spread across Europe in the 16th and early 17th centuries. Only two Western keys are found in Highland bagpipe music: A major and D major. Examples

2 and 3 show that these were in use in the North Highlands by 1774.

Melodies belong to the *tonal* system of keys whenever *chord I* (the *tonic*) moves to *chord IV* (the *subdominant*) and to *chord V₇* (pronounced “five seven”—the *dominant seventh*). If chord *V₇* doesn’t resolve to chord *I*, then a melody is not in a key, but in a Highland “taste.”

Bagpipe tunes currently said to be “in B minor” do not use chord *V₇*, and often don’t use the *diatonic scale*. It is more accurate to say that these tunes begin (and sometimes end) with the chord of “B minor over A,” with the chord of A major (and sometimes D major) providing contrast and structure. A major and D major “sonorities” offer relief from the tension of the principle sonority “B minor over A.” Example 4 ends on this dissonance, but it is more common for such tunes to finish with an A major sonority.

TONAL OR MODAL?

When the chords sketched out by a melody are a 4th or 5th apart, the melody is *tonal* and can be said to be in a *key*. If, however, chords are a 2nd apart (or there are no clearly discernable chords), then the melody is *modal* and not in any major or minor key.

Nearly everything we hear on the radio—or anything that could be described as “catchy”—is *tonal*. Everything else is *modal*. This term *modal* loosely includes all non-Western traditions, local European traditions, pan-European traditions before 1600, as well as Western music composed after 1600 that imitates any of the former.





Example 1. These are the Western chords that are implied in Highland pipe music. The white notes are harmonics of the drone, and the black notes are sounded in succession by the melody. They are named using guitarists' shorthand: Bm7/A is pronounced "B minor 7 over A"; F#m is "F sharp minor"; and Gmaj7/A is "G major 7 over A".



Example 2. This is the key of D major, because the chords implied by the melody move between D, and G/A or A7. Tunes like Amazing Grace might be harmonized in D major, but as the melody omits the notes C and G, it is more accurately described as D-pentatonic. (Patrick McDonald, *The Patrick McDonald Collection, North Highland Reels or Country Dances, 1774, No.11.*)



Example 3. This is the closest that the Highland bagpipe gets to the Western key of A major. G natural is almost completely omitted, and the chords implied by the melody move between A and either D or E7. This chord movement, jumping by a 4th (A to D), or a 5th (A to E7), creates a sense of "home" or tonic on the chord of A major. (*ibid.*, P. McDonald, 1774, No.5)



Example 4. Two ingredients—a pentatonic scale (omitting G and D), and alternating chords of Bm7 and A—create a B minor taste. This is not in the Western key of B minor, because the alternating chords are a 2nd apart, not a 4th or 5th. (Donald MacDonald, *A collection of quicksteps, strathspeys, reels & jigs, 1828, page.34*)

SCALES

The 12 Western modes and the 24 major and minor keys share a 7-note scale. This is known as the *diatonic scale* and (like the white keys of the piano) is made up of 5 whole tones and 2 *semitones*. Highland music, however, often avoids semitones, preferring steps of minor thirds and whole tones (like the black keys of the piano). Examples 4 and 5 are *pentatonic*—with no semitones—and Examples 7 and

8 are *hexatonic*—with one semitone.

In both Highland music and Western music, notes are left in reserve in order to allow the composer to change taste, or key. In musical function, the full set of 7 notes in Highland music corresponds to the *chromatic scale*, or the full set of 12 notes in Western music.

Melodies that use the same scale (or *pitch collection*) can be in different 'modes' or 'tastes.' Naming the notes

of the scale is therefore only part of the story. We must also state which notes carry the weight of the melody, the ones that are there for decoration, and the ones that don't belong there at all but might appear for fun. The relative importance of each note in a scale is called the *pitch hierarchy*.

THE 12 WESTERN MODES

In the eighth century, a system of 8 "church" modes emerged to classify Gregorian chant. In 1547, these were expanded to 12 in order to classify polyphony. These modes do not describe bagpipe music, and none of their names are useful without substantial modification.

Example 7 is not really "A Mixolydian" because it doesn't finish on A; and to describe Example 4 as "B Aeolian," or Example 6 as G Lydian, is even more tenuous. The drones make B and low G so dissonant, there is no sense of repose.

Tunes ending on E have been described as "E Dorian." But this, too, is misleading because the melodies are often hexatonic (excluding C), and so not really in any 7-note mode, and many tunes with a similar taste to those ending on E, don't end on E—like in Example 8. The final note of a melody is fundamental to the definition of a Western mode but often irrelevant to the Highland taste. For these reasons, using Western modes to describe bagpipe music is, at best, problematic.

SONORITY

I've introduced two terms—*sonority* and *taste*—in order to reduce the confusion created when we describe Highland music using terms established for other traditions. Without them, we either misrepresent our music, or undermine the clarity of existing terms when we communicate with the non-piping world.

Sonorities are the Highland equivalent of Western chords. They are the building blocks of modal bagpipe melodies, just as chords are

the building blocks of tonal melodies. On any instrument with a drone, a linear sonority is formed by a chunk of melody—specifically, by the selection of notes, their hierarchy, and by their instantaneous sonority with the drone.

TASTE

Just as chords make up a key, sonorities make up a taste. Joseph MacDonald introduced this word in about 1760 as a synonym for “key” in the context of piobaireachd, possibly translating the Gaelic word *blas*. Unlike keys or modes, which are fixed in number (in theory), taste varies continuously.

The tastes of Highland bagpipe music could be categorized any number of ways, like colors or tastes of wine, but I’m not going to suggest a system here, only make an observation which applies equally to ceol mor and light music. In the architecture of bagpipe music, it is the contrast between “top hand” and “bottom hand” sonorities that provides form and meaning. The taste of laments is not, as Joseph MacDonald states, created by excluding the pitch C, but by lingering on the top hand, avoiding the lower notes.

CONCLUSION

The system of major and minor keys, established in Europe in the seventeenth century, only colonized planet earth in the twentieth century. Non-Western musical systems are no less valid, but are much less studied, with the result being that people apply the terms of Western tonal music to musical traditions that don’t really fit. This has left a legacy of confusion, and I believe we should now take care to highlight the differences between Highland “tastes” and Western keys. In these times of globalization and cultural dilution, surely the *blas Gàidhlig*, or “Gaelic taste,” is what we should be proudest of, and able to explain clearly to other musicians.

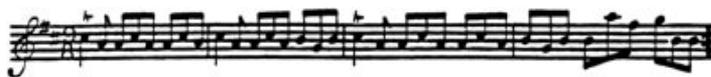
After all that preamble, can we now say the key of “K” has the notes W, M, P, O, L and S, or whatever? Yes.



Example 5. This tune uses the same pentatonic scale as Example 4. However, the taste is very different as the weight of the melody falls not on B, but on A and C. (Donald MacDonald, *A Collection of the Ancient Martial Music of Caledonia, 1818, section 1, page 8*)



Example 6. As the C is sharp, this is not in the key of G major, but in the dissonant Highland taste of G/A. Only an occasional A and C offer relief from the primary sonority, a G-major chord that clashes against the A drone. (*ibid.* D. MacDonald, 1828, page 25)



Example 7. This tune is neither in A major, nor in A Mixolydian, but in a typical Highland taste where the weight of the melody falls on A and C. Contrast and form are provided by the notes B and G. In this case, the scale is hexatonic and omits D. (*ibid.* P. MacDonald, 1774, no.3)



Example 8. Another hexatonic tune, this time excluding C, with the weight of the melody on high G and D. (William McKay ed. Angus McKay, *The Tutor for the Highland Bagpipe, 1843, page 29*)

The key of A omits low G and has the chords A, D, and E7. The key of D uses all 7 notes and has the chords D, G, and A7. But most bagpipe music is not in any Western key or mode, and there are no obvious Highland equivalents. Compositions with a Gaelic flavor ebb and flow between two (occasionally three) sonorities to form a taste. One of the sonorities is more consonant with the drones, the other(s) more dissonant. Highland composers were constantly searching for novel tastes, and have left

such a variety that that there are no clear-cut categories.

If there is anything in this article you do not understand, you can use the bagpipeweb.com “Music” forum to generate a discussion, and perhaps gain more insight. If something is still not clear, you email your topic link to barnaby@pibroch.net.

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