

Fugue No. 2

C minor

Well-Tempered Clavier Book I

Johann Sebastian Bach

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To read this essay in its hypermedia format, go to the Shockwave movie at <http://bach.nau.edu/clavier/nature/fugues/Fugue02.html>.



Subject: Fugue No. 2, *Well-Tempered Clavier*, Book I

This fugue is to a fugue lover what double-chocolate fudge is to a chocoholic. That's why it is the one of the most recognized in the *WTC*. It is famous because of its:

- memorable subject
- two countersubjects
- triple counterpoint
- delicious canons & sequences

Memorable Subject

What can you do with a skip and a step? Well, with two steps you can step away and back. That is called a "neighbor" figure and it happens three times in this subject. Because it is first we'll call it the "head motive."

A "two-step" can also move twice in the same direction: either up or down. We will call this the subject's tail.

But what can you do with a *skip* and a step? Hmm, you can skip-step or you can reverse the order to a step-skip. Reversing the order is what we call a retrograde. So if Figure 1 is the original than Figure 2 is generated from it by retrograde motion.

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Did you hear how the skip of Figure 1 goes down while the step goes up? A literal retrograde would have reversed these directions: the step would have gone down and the skip up. Does Figure 2 do that? No it does not.

So Figure 2 is not a literal retrograde. Bach has applied something else to restore the original directions. That "something else" is melodic inversion.

You might object, "I thought that melodic inversion reverses the direction of intervals in a melody." In this you would be correct. But so does the retrograde. To restore them after they have been inverted by retrogradation Bach had to reinvert to produce Figure 2. This contour is the retrograde-inversion of Figure 1.

So inverting the retrograde cancels the inversion produced by the retrograde. If this is confusing to you, it is to me too. I sometimes joke that the retrograde is really the retrograde-inversion and the retrograde-inversion is really the retrograde!

There's one more trick a skip can do that a step can't. Skips can be little or big. The skip of Figure 1 is smaller than that of Figure 2. As if to make sure that we get it, Bach has expanded the skip once more to produce Figure 3.

So the skips of Figures 1, 2, and 3, expand. The expansion is applied first to the top of the interval then to the bottom. Listen to each skip--original, larger, largest--then see if you can hear the interval expansions in the subject.

Another reason why this subject is so memorable is that it accentuates the last pitch of each figure. These pitches make a nice melody--le-sol-fa--in their own right. Listen for this melody in the accented pitches of Figure 1, Figure 2, and Figure 3. Can you hear how they are revisited in the subject's tail?

Now let's add the similarly accented pitches (me-re-do) of the answer. Amazingly they resume the descending scale from where the subject had left off. When heard together, the subject and its answer suggest a six-note scale: le-sol-fa-me-re-do.

If the subject were a dance, it would be a "two-step 'n skip." It has been artfully crafted out of tiny musical ideas. So it is memorable because it is economical and it is organic. The parts relate to the whole and the whole to its parts.

Two Countersubjects

A countersubject is a motive that sounds in counterpoint with the subject. Countersubjects are normally heard in the most recent voice to have stated the subject.

While all fugues provide counterpoint to the subject, not every bit of counterpoint qualifies as a countersubject. To qualify, the same melody must appear more than once. If each bit of counterpoint to the subject is different, then it is called "free counterpoint." But if it is repeated, then it is a countersubject.

Most fugues don't have a countersubject. This fugue is extraordinary because it has two. The 1st countersubject (turquoise) is first heard in the middle voice of mm. 3-4. Notice that this voice has just completed its statement of the subject.

Listen to the 1st countersubject several times so that you can recognize it elsewhere. It has a descending scale in sixteenth notes followed by a

descending tetrachord in eighths. (A tetrachord is a four-note scale). Now click on each turquoise-colored measure of the timeline and practice picking out the 1st countersubject.

The 2nd countersubject (pink) is more difficult to track. It is first heard in the middle voice of m. 7. Mostly it parallels the 1st countersubject in thirds. But it does have two distinguishing traits. The first is a two-step descent, sort of like the tip of the subject's tail but half as fast. This happens once, then again, and is followed by a little twist in its own tail.

Triple Counterpoint

Invertible counterpoint is the art of writing melodies that can exchange registers with each other. It is said to be "double" if two voices are involved and "triple" if three are involved.

Double counterpoint is like a two-layered cake--chocolate and vanilla. There are only two ways to layer it; the chocolate can go on top or on the bottom. A subject can be above its countersubject, or below.

But with a subject and two countersubjects we have *triple counterpoint*. That is like a Neapolitan ice-cream sandwich. There are six ways to arrange the layers; each flavor gets two turns to be on the top, middle, and bottom.

The triple counterpoint of this fugue has been animated to show each voice migrating to its new register. Of the six ways to layer his subject and two countersubjects, Bach has used all but one. Can you figure out which one he did not use?

Invertible counterpoint is important because it allows Bach to create a continuous variation of textures without departing from his subjects. Conversely it enables motivic development without tedious repetition of textures.

Delicious Canons & Sequences

If Bach were a chef, the canonic sequences in this fugue would be his *Crêpes Suzettes Flambé*. Before sinking your teeth into this delight you might enjoy an appetizer--a quick review of canon and sequence.

A canon is a melody that is copied by another voice. The copy may start on the same pitch or upon a different pitch. As long as the copy retains the interval contour of its source, it is canonic.

This fugue has canonic episodes in mm. 9-10 and 22-24. Both canons are at the fifth; the follower sounds a perfect fifth below the leader.

A sequence is a pattern that repeats on another pitch. Unlike a canon, which necessarily involves two voices (one copying the other), a sequence can involve a melodic pattern in one voice, or a harmonic pattern uniting a complex of voices, none of which are in canon.

Sequences are like the stair steps in the timeline to the right. Sometimes they go up, other times they go down. The number of steps indicates how many times the pattern repeats. The stairs can be short or long. Bach often uses these stairways to move from one key to the next.

The two canonic episodes [#1 & #2] are *also* sequential. This is to say that in addition to employing canon they follow a pattern: hence "canonic sequences."

But what is the pattern that the canons repeat? It is nothing less than the head motive that has been detached from the subject. This technique is called "fragmentation." The connective stuff between statements of the subject is often made of such motivic particles, or fragments.

Bach lights the match to his *Flambé* in mm. 13-14. Here the high voice of the sequence is generated by melodic inversion of the low voice in the prior sequence--mm. 9-10. Earlier we observed that melodic inversion happens when the intervals of a melody are moved in the opposite direction.

The melodically inverted segments are like a poetic stanza with an *abba* rhyme. There are four measures involved: 9-10 & 13-14. The outside pair [9 & 14] contain one inversion. The low voice of m. 9 descends a fifth from C to a low F. But the high voice of m.14 ascends a fifth from F to a high C. Just the opposite!

In a similar manner, the inside pair [10 & 13] contains another inversion. The low voice of m. 10 descends a fifth from Bb to a low Eb. But the high voice of m.13 ascends a fifth from Eb to a high Bb. Again, the opposite!

The pattern whereby Bach has paired these inversions creates a palindrome. Two intervals of the fifth are exposed as follows: falling C-F (m.9), falling Bb-Eb (m. 10), rising Eb-Bb (m. 13), rising F-C (m. 14).

So the boundary intervals of each measure are the same, backward or forward! Don't forget that when you read it backward the interval's directions also invert. The palindrome is therefore one of intervals and directions.

I sometimes refer to this type of antithesis as *Back 'n Forth*. The opposing elements could involve melodic inversion, palindrome, invertible counterpoint, retrograde, or some combination of these.

Back 'n Forth is not a technical term, but I like it anyway. It implies that the antithesis is psychologically satisfying, like returning home after a visit with the neighbors or the gentle swaying of a hammock on an Indian summer afternoon.

In Conclusion

Do you remember that we started the study of this fugue by noting that it has a memorable subject? It is inherently memorable. But by the time this fugue is over it is truly unforgettable. In some ways the subject receives its most memorable development in those delicious sequences whose steps are themselves made of the subject's two-step 'n skip.