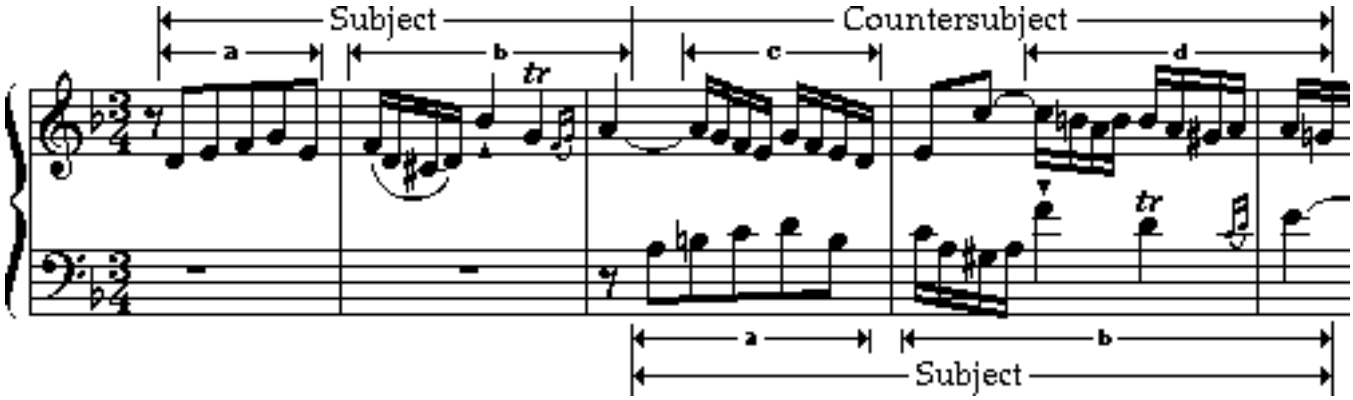
Fugue No. 6

D minor
Well-Tempered Clavier Book I
Johann Sebastian Bach

To read this essay in its hypermedia format, go to the Shockwave movie at http://jan.ucc.nau.edu/~tas3/wtc/i06.html.



Subject: Fugue No. 6, *Well-Tempered Clavier*, Book I

Explosion of idea! That is what this fugue is all about. It is the big bang of motive: one of the greatest examples of motivic saturation in the universe of fugal writing. In this analysis I shall discuss its:

- energy-packed subject
- parallax of inversion
- contrapuntal satellite

In conclusion I shall reflect upon the importance of motivic variation in 18th century music and fugue as the highest expression of that process.

Energy-Packed Subject

Astrophysicists theorize that the cosmos was once infinitely dense and compressed into a space smaller than the head of a pin. The subject of this fugue is like that. It is a fireworks display waiting for somebody to light the match.

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The subject has three ideas, each with a characteristic *rhythm* and *interval.* The rhythms are: five eighths in its head, four sixteenths in its middle, and three quarters in its tail. In terms of duration, it is as if Bach has initiated a countdown: five, four, three [two, one, blastoff]! Notice that, in proportion to the subject's head, the durations of its middle have been halved and the tail doubled.

Each idea in the subject also has a characteristic interval: a falling third. Of the four skips in the subject, three are falling thirds and the other is a rising sixth (the inversion of a falling third). Listen to the falling thirds in the subject's head idea, middle idea and tail idea.

Another way to capture the creative energy of this subject is to hear it as skip/step particles that are retrograde-inversions of each other. It contains two instances of a rising 2nd with falling 3rd [Particle 1 and Particle 2]. Their retrograde-inversion is a falling 3rd with rising 2nd [Particle 3 and Particle 4]. Notice that in each particle the interval of a third descends.

The subject's defining interval and its direction is of such importance that I have given it prominent representation on the timeline: grey with descending pitches superimposed.

Parallax of Inversion

Parallax is an astronomical term denoting how stars appear to be in different positions depending upon the vantage point from which they are viewed. The subject of this fugue undergoes somewhat of a parallax in its melodic inversion (the movement of a melody in the opposite direction). Here for the first time in the *Well-Tempered Clavier* Bach has developed the subject by melodic inversion. In a comparison of mm. 1-2 and mm. 27-28, here are the subject's three ideas in their original and inverted contours:

original: Head, Middle, Tail.
inverted: Head, Middle, Tail.

The middle voice of m. 14 (Bach's number) contains the first instance of an inverted subject in the *WTC.* The inversion has been represented in light grey. Subject inversions are also heard in the stretti of mm. 21-24 and 27-30. In the first two sequential episodes (mm. 9-11 and mm. 30-32), the direction of the defining skip (falling third) has been inverted while in mm. 25-26 Bach has inverted the countersubject's tail (figure d).

Now I have two assignments for you. M. 12 and m. 33 contain *aggregates* of the subject. An aggregate is a complete statement in which the subject's motives are shared by two voices rather than one. Can you identify which figures and by which voices? For the second assignment identify the figural source for the second-to-last measure.

Contrapuntal Satellite

For the remainder of this analysis I shall combine what I have called the subject's middle and tail into one figure b (high voice of m. 2). In this view the subject consists of figure a plus figure b, both of which are labeled in the score.

On the timeline they have been represented in hot colors: the red and orange of mm. 1-2.

Let us think of these hot colors as being like the sun from which all the warmth and vibrancy of this fugue radiates. In mm. 3-4 the hot colors migrate from the high voice to the middle. Meanwhile the high voice, now playing the cool figure c and figure d (in blue and purple), presents the fugue's countersubject.

A countersubject is a secondary melody that accompanies the subject. The timeline reveals that every time a cool color appears it runs counter to a hot color. That is *counterpoint.* Like the earth, held in orbit by the gravitational pull of the sun, the countersubject is a contrapuntal satellite of its subject.

Now I would like for you to see how the countersubject is like the subject in its construction. Do you recall how figure a beginning the subject commenced with a rising tetrachord? Well figure c beginning the countersubject commences with two falling tetrachords. So again we hear the parallax of melodic inversion.

Likewise the countersubject's tail (figure d) is a transformation of the subject's middle. They differ by only one interval. Whereas the subject's middle commences with a falling 3rd, the countersubject begins its figure d with a falling 2nd.

Importance of Motivic Variation

Throughout this analysis I have used the metaphor of astrophysics. Although our knowledge of the universe is finite, there are many things of which we can be quite certain. The atomic structure of elements 100 million light years away is probably like what we have observed on earth. Iron is iron whether it be here or there. This suggests that everything in the universe has a common origin.

The idea of a common origin comes very close to saying that there is a creator (big C or little, as you wish). In the case of a Bach fugue we should have no difficulty drawing such a conclusion. Better than 90 percent of this fugue emanates from its first four measures. That Bach could have expanded this into 44 measures without a literal repeat indicates, in addition to his elegant craftsmanship, a profound sense of design. This is what I meant by an explosion of idea.

Whereas bad ideas tend to implode, good ideas have the capacity to explode into new ones. Bach placed a great emphasis upon the discovery of good ideas. He even had a word for it: *inventio,* the power of invention.

But whose invention was it: the composer's or the motive's? I am certain that Bach would no more have claimed to have invented a good motive than Einstein would have claimed to have invented his famous e=mc2. Both men discovered something bigger than themselves. And in both cases it is the newly discovered idea that has the tendency to beget still newer ones.

To his students Bach continually reinforced the principle that composition was a process of discovering motives that had the potential to create new ones. Having found such a motive the rest was merely a process of *elaboratio* (elaboration).

The *inventio* of this fugue, its kernel structure, is found in the explosion of idea contained in the high voice of mm. 1-4. In measures 3-4 Bach demonstrates that these ideas are contrapuntally viable; they are recombinant with each other.

The next 40 measures are *elaboratio.* The Germans have a word for this. They call it *Fortspinnung,* meaning the "spinning out" of a motive.

Fugue is, in the western tradition, the most highly evolved form involving continuous variation. The fugues of the *Well-Tempered Clavier* are a treasure trove of *Fortspinnung* technique. This fugue represents that technique at its best.