

Dave Soldier

Fractals on the Names of Bach & Haydn

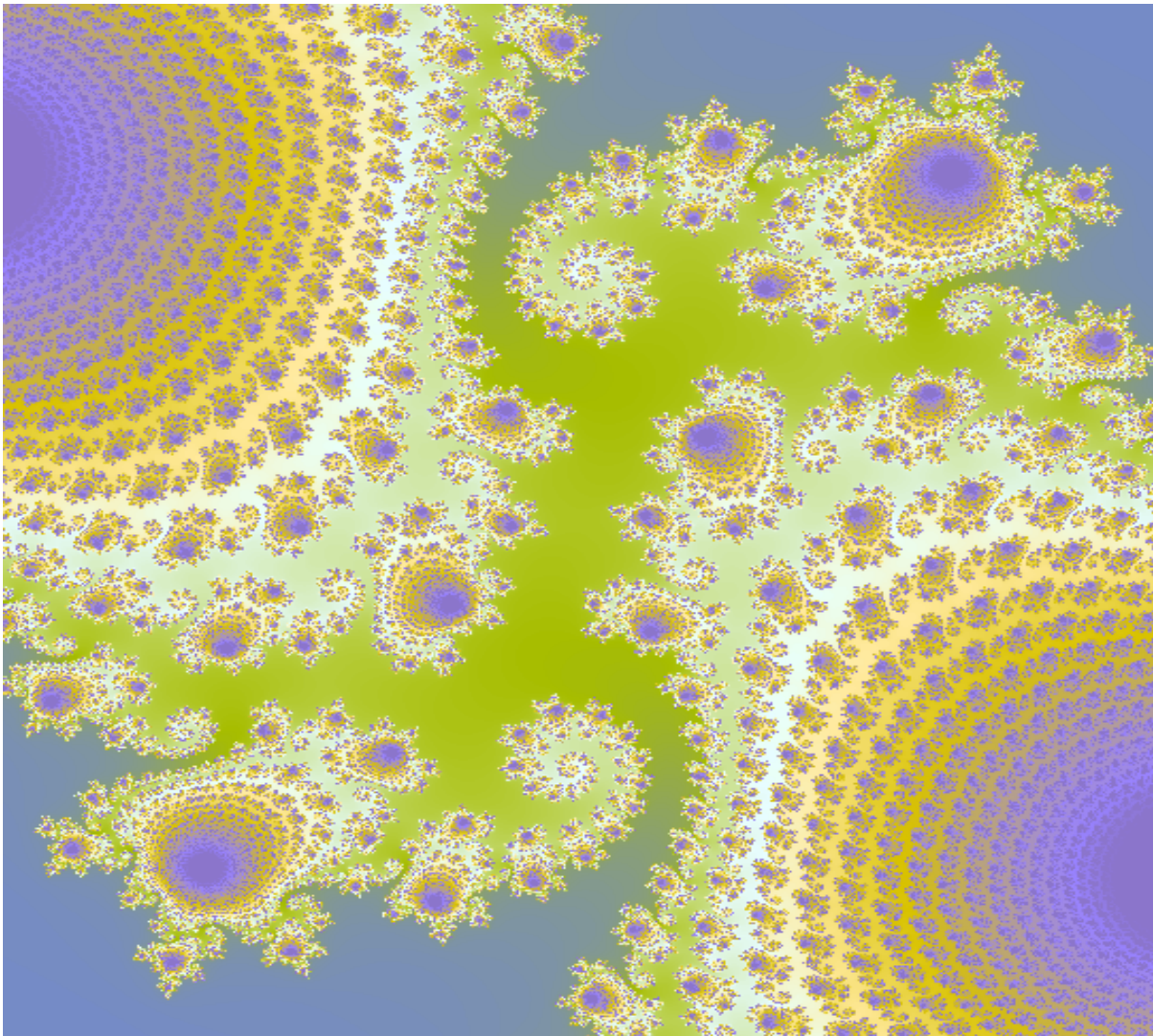
for solo piano

opus 24

version from December 27, 2011

4 minutes in length

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These use short motifs that occur at different time scales.

For example, to make a fractal pattern from Bach's name, use the pitches

Bb A C B

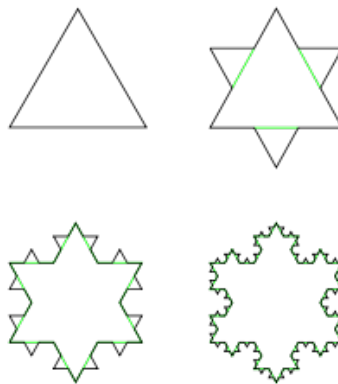
Superimpose this pattern on top of each note:

Bb A C B A Ab B Bb C B D Db B Bb Db C

So here are identical patterns at three different time scales...

Quarter notes:	BbACB	AAAbBBb	CBDDb	BBbDbC	AAAbBBb	AbGBbA...
Half notes:	Bb	A	C	B	A	Ab ...
Whole notes:	Bb					A ...

This type of patterning is equivalent to constructing fractal shapes in two dimensions, such as the Koch snowflake.



In theory, you could keep adding smaller and larger time scales of a musical phrase, and adding and subtracting as you like. If you continued with enough scales, the music has a partial dimension!

Thanks to Steve Beck for very helpful comments on this music.

piano
December 27, 2011

Fractal on the Name of Bach

Dave Soldier

à Steve Beck

Piano

$\text{♩} = 72$

B A C H

mf

p *mf* *f* *mp* *f*

p *mf* *f* *mp*

mp *mp*

mf *p* *mp* *f*

pp *mp*

6 6 6

Fractal on the Name of Bach

This musical score is for a piece titled "Fractal on the Name of Bach". It is written for two staves, likely piano and bass. The score is divided into systems, with measure numbers 33, 41, 48, 55, 63, and 68 marking the beginning of new sections. The key signature is B-flat major (two flats). The time signature is 5/4. The piece features a variety of dynamics, including *p* (piano), *mp* (mezzo-piano), *mf* (mezzo-forte), *f* (forte), and *ff* (fortissimo). There are also accents and hairpins. The score includes several ornaments, such as mordents and grace notes. A prominent feature is a sixteenth-note triplet in the bass staff at measure 68, which is marked with a *ff* dynamic. The piece concludes with a final chord in the bass staff, marked with a *ff* dynamic and a triplet of eighth notes.

piano
version
December 27, 2011

Fractal on the Name of Haydn

Dave Soldier

as spelled by Ravel

à Steve Beck

$\text{♩} = 100$ *dolce* *p* *H* *A* *Y* *D* *N*

6 6 11 11 16 16

Fractal on the Name of Haydn

21

Musical notation for measures 21-25. The top staff (treble clef) contains a melodic line with a long slur over measures 21-25. The bottom staff (bass clef) contains a bass line with a slur over measures 21-25. The key signature has two flats (B-flat and E-flat).

26

Musical notation for measures 26-30. The top staff (treble clef) contains a melodic line with a slur over measures 26-30. The bottom staff (bass clef) contains a bass line with a slur over measures 26-30. The key signature has two flats (B-flat and E-flat).

5

Musical notation for measures 31-35. The top staff (treble clef) contains a melodic line with a slur over measures 31-35. The bottom staff (bass clef) contains a bass line with a slur over measures 31-35. The key signature has two sharps (F-sharp and C-sharp).

10

Musical notation for measures 36-40. The top staff (treble clef) contains a melodic line with a slur over measures 36-40. The bottom staff (bass clef) contains a bass line with a slur over measures 36-40. The key signature has two sharps (F-sharp and C-sharp).