

Vocation Art Productions

Introduction at counterpoint

Polyphony was a genre that developed itself in the Renaissance. It identifies itself by tangled voices.

Through the law of the harmony that voices put themselves second a refined art of rule that appoints by **counterpoint**.

As a ballet, in that have voices in parallel, others at short distance, and others that go approaching or distancing symmetric of the center of the stage. With help of the language and of the mathematical concepts, also through the geometry can describe a few practices of counterpoint.

The looks of a melody

Sounds and noise is disturbance of the pressure of the air picked by human ear. In a musical sound, the disturbance is a regular variation that has a right frequency (height).

Ex: Sounds that have the same frequency and a certain length. At succession of these sounds that happen without interruptions call melody.

So a melody as a function $f(t)$ in that the frequency f depends on the time t .

When two sounds have the frequency one the double of the other, frequency f and $2f$.

Ex: A female voice and other male, in a choir, produce a pleasant sensation (accord). And singing the same melody will have the function $y = f(x)$ e $y = 2f(x)$. Look a few manners as the geometries transformations had a place in the structures looks musicals.

Notions of graphics of a function and hers four main families:

1 - Horizontal translations.

$$t : f(x) \rightarrow f(x-a)$$

2 - Vertical translations.

$$N : f(x) \rightarrow b+f(x)$$

3 - Horizontal reflections (=lake).

$$l : f(x) \rightarrow d-f(x)$$

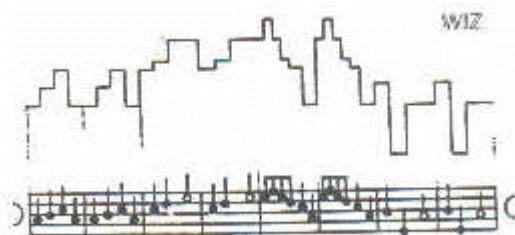
4 - Vertical reflections (=wall).

$$m : f(x) \rightarrow f(c-x)$$

5 - Turns arounds (punctuals symmetris).

$$g : f(x) \rightarrow d-f(c-x)$$

1-Horizontals translations:

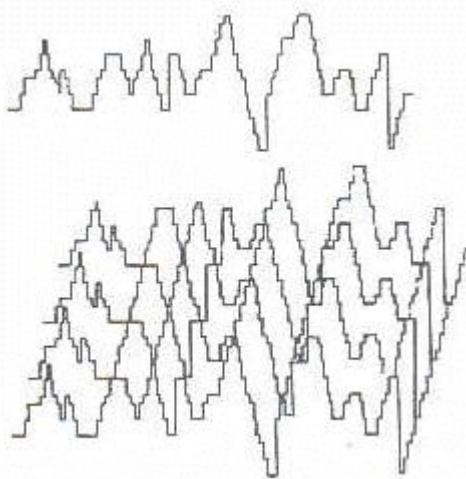


Traditional writing and graphic tune Fran Martino

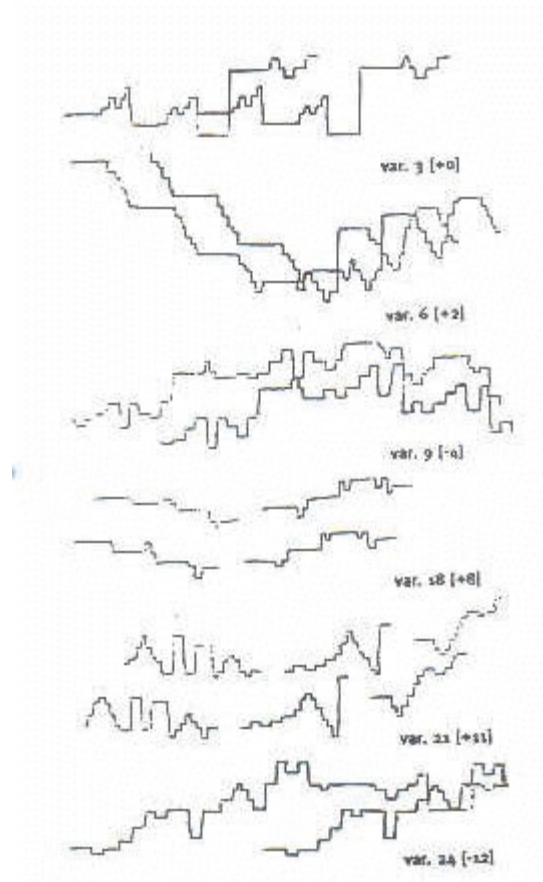
2-Verticals and obliques translations:



One autograph of J.S. Bach



Graphic carrying of the c none BWV 1073



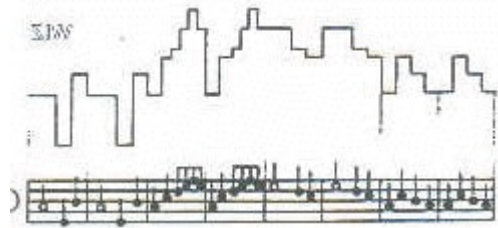
J.S.Bach: a few of the variations Goldberg

3-Reflections lake:



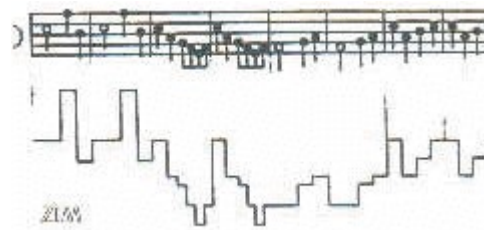
Effect of a reflection lake in the Fran Martino

4-Reflections wall:



Effect of the reflection wall in the Fran Martino

5-Others transformation:



Effect of a turn around in Fran Martino

