

***Bonjour les Trois* – composition with isolated parameters**

The piece “*Bonjour les Trois*” was written as a result of two related basic ideas:

- (to compose) music where *transformation* (*transition*, *development*) in itself is the perceivable content of every section and thereby of the whole piece.
- (to compose) music based on three layers, where each layer consists only of either *contour*, *colour* or *density of events* (and with no interference of the other two parameters)

First I would like to define these terms:

<i>Transformation</i>	Group name	Referring to a conscious change of any kind and in any direction for a larger period or section.
<i>Transition</i>	Goal-related	Transformation from one state to another by a number of steps or by a continuous process. (For example from signal to noise or from aperiodic to periodic.)
<i>Development</i>	Event-related	Transformation in steps where every step is determined by the previous step. (For example by reducing elements.)
<i>Contour</i>		Upper and lower line of a musical object or series of musical objects. This is, in relation to <i>Shape</i> , free from information about content. The material between the upper and lower line may change without any transformation in <i>contour</i> . This is, in relation to <i>Melody</i> , not dependent of “cantability”; rhythm structures, breathing or organisation of intervals.
<i>Colour</i>		Assembling of fundamentals and partials on a vertical plane. This is, in relation to <i>Harmony</i> , without any dependency of or information about harmonic progressions.
<i>Density of events</i>		Relation in time between all different events. This is, in relation to <i>Rhythm</i> , not referable to patterns or known sequels of events. The only point of reference is pulse and relation to pulse.

Here it is important to explain that dynamics is only a parameter of audibility, where f_{pos} is as loud as possible and p_{pos} is as silent as possible. If we go even softer, we attain non-audibility, or *niente*, silence i.e. absence of sound.

This is comparable with the way light and darkness works; if we compare sound with reproduction of colour, we can say that “black” is absence of colour, or “black” is a result of no reflection in colour.

If we look at a tree with leaves in autumn colours, and we watch the tree through sundown, we will see that the brown leaves soon will turn black, then followed by the red leaves, the green and finally the yellow leaves.

When we transfer this to the harmonic spectrum of any (pitch defined) instrument, we will see that when a note is played softer, the relation between the partials in the harmonic spectrum remains the same; the only difference is that the angle with which the partials subside (in amplitude) only gets smaller.

For example; an instrument plays a note going softer and softer, when it reaches **pp** we only hear the fundamental and the first partial (the octave). When it reaches **p_{pos}** we only hear the fundamental (with a few exceptions). And when it finally reaches *niente*, even the fundamental is non-audible, but the spectrum of that instrument is still the same!

Development of the two basic ideas

The second of the two basic ideas is, in its pure sense, impossible to succeed with; all sonic objects are dependent of all three parameters to sound at all. An object or a series of objects must have a shape, a (tone-) colour and a density of events. But it is possible to have a series of objects where the change or the transformation only occurs in one of the three parameters.

For example; consider two Trombones begin on the same note and where the first Trombone starts playing a *glissando* while the second Trombone is continuing that same note. We achieve a transformation only in the contour of the sound object, whereas the *colour* and the *density of events* remain the same.

And if we have a continuous note played by Violins, which is gradually being replaced by the same note in Clarinets, then by French Horns, and finally by Flutes, we achieve a transformation only in the *colour* of the sound object and where the *contour* and the *density of events* remain the same.

Finally consider a tone cluster played staccato by the whole orchestra intervened by a cumulative silence; we achieve a transformation only in the *density of events* and where the *contour* and the *colour* remain the same.

If we then go back to the first example; the two Trombones constitute the *contour* layer. But this time, consider their lines intervened by rapid and vast changes in *rhythm* and *colour* in a random manner. Though still with a clear and logic transformation in the *contour* layer.

Since we attend to look for patterns, and preferably do so where we find the most informative material, our attention is drawn to the previous two parameters. Even though we don't find any valuable pattern, we still focus on the details, because of the high intensity they possess.

By then we are close to the first idea:

By focusing on the details (where we in this example find the *rhythm* layer and *colour* layer), still without discovering any specific patterns – these are only random changes, the *contour* layer can meanwhile go through radical transformations "behind the back" of the listener.

This is comparable with the magician; he/she draws our attention to the magician stick, where nothing of importance actually will happen; that part is just “hocus pocus”.

But at the same time he/she brings out that particular playing card or that rabbit with the other hand, where we at the moment didn't pay attention.

So when the atmosphere radically changes, which marks the end of the section, we can summarize it as a major transformation in only one of the parameters, the one we didn't pay attention to.

We can call this *Masked transformation*, and it gives the music a high level of intensity, due to the high intensity of the details.

We can also do the opposite; *Open transformation*, whereas the only thing that happens takes place only in the one intended parameter, for example by going from random accents on a Snare Drum to steady pulse (*density of events*). Or the string section goes from a spread out cluster to a single note (*contour*), or the brass section gradually replaces the woodwinds (*colour*).

This gives the music a low level of intensity, since the level of details is low.

How is this applied in the piece?

30"	30"	2'	1'	30"	1'	2'	30"	30"	3'
SOURCE		M1			M2			M3	C3
			C1			C2			
	R1			R2			R3		

The piece starts with a 30 seconds long transcription of the opening of the electro-acoustic piece “Fina slipade längtan” by Magnus Bunnskog. This transcription is named “source” in the score.

A basic parameter-analysis of the sound gives us:

Contour: a glissando of a minor third from e⁴ to g⁴.

Colour: A transition from metallic sound with a formant in the high register to a darker register and sound.

Density of events: A ritardando, more and more time passes between the events. The global form throughout the piece is more or less in relation to this given information of the analysis.

The *contour level*, represented by woodwinds, goes from a wide register in three lines to a narrow register in one single line. The intervals spring from the minor third, which is stretched out. This layer occurs 3 times in the piece and is named M1, M2 and M3 in the score.

The *colour level*, represented initially by brass, goes from a metallic sound, bright in character, to a darker sound, played mostly by woodwinds and strings. This layer occurs 3 times in the piece, named C1, C2 and C3.

The *density of events* level, represented by percussion and strings, moves from a short time interval between the events to a long time interval, in where the rhythmic cells appear, in the duration of the cells (longer and longer), and in the peak of the each cell (from > through <> to <). This layer occurs 3 times in the piece and is named R1, R2 and R3.

The second time the *contour* layer appears (M2), it continues into the *colour* layer and the two layers blend gradually.

The third time the *density of events* layer appears (R3), it continues into the *colour* layer and all the three layers are blended.

This result in a *morendo*, because of the more and more narrow register in the contour layer, the darker and darker timbre in the colour layer and the slower and slower tempo in the *density of events* layer.

Bonjour les Trois *for orchestra* was first performed by Helsingborg Symphony Orchestra in June -06

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