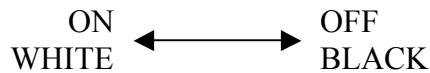


Quantity and quality reduction of isolated parameters

This text is referring to definitions and basic ideas of composition presented in the article “*Bonjour les Trois – composition with isolated parameters*”.

Consider music, or a sound, or a slice of any audible environment placed on a two-pole scale. At the left pole, we have something – information of any kind. At the right pole we have nothing – no information.

We can call these poles “on/off” or “white/black”.



If this unity of sound has no reference to any other sound, it defines its own quantity and quality and is to be placed on the left pole – “on”, or “white” – since it is “something”, and “something” in opposite to “nothing” is “everything”. This far we have a totally polarized scale, with no intermediates, only “on” and “off”.

If we make a replica of our sound object, with no other difference but a decreased level of audibility in amplitude (in dB), we can place this new object somewhere on the scale in between the two poles.

We are now able to make as many intermediates we like to fill the whole scale from left to right, from “on” to “off”.

This gives us a *transition* of the sound object in amount of audibility. From left to right, we have a *quantity reduction* in the parameter audibility.

Now let us do the example all over again, but this time we keep the sound object at the same amplitude the whole time, surrounded by louder and louder background noise until the sound object finally drowns in the surrounding noise.

This also gives us a *transition* of the sound object, but not in amount of audibility – the sound object is still there, although we cannot sort it out.

Instead we have a *quality reduction* in the parameter audibility – the character of the sound object is reduced.

Quantity reduction for the isolated parameters

Now let us transfer this to each of the parameters *contour*, *colour* and *density of events*, and define “white” and “black” and the *transformation* in between in terms of *quantity*.

To begin with we have to define “on/off”, or “white/black” of these parameters.

We have already defined “on” as “everything” which in terms of sound in general is referable to *white noise*, i.e. all frequencies are represented at the same level all the time.

We have defined “off” as “nothing”, and in terms of sound, this means *silence*, i.e. no frequency is represented at any time.

Since *contour* is a parameter dealing with the register of the vertical information, “on” in this case would have to be “as vast register as possible”. In theory, this means infinite, practically this means the whole register of the instrument/instruments; or it means the whole register defined by superior interests, such as specific sound sources or global form.

“Off” for this parameter will have to be infinitely narrow.

A similar situation is valid for the *colour* parameter, since it also is a parameter dealing with vertical information. The difference is that this parameter is dealing with the content *between* (or outside) the *contour* lines. In this case, “on” would have to be defined as “as many frequencies as possible”. In theory this means “infinite, or limited by the contour layer”, while the practical meaning is shared with the *contour* parameter.

And for this parameter, “off” will be as few frequencies as possible, or as silent as possible. Here we easily fall into a trap – the similarity to *dynamics*, or level of audibility is striking. Though keep in mind that a *transition* from white (or any other composition of colour) to black means to reduce the reflection of colour. By subsidising the amplitude of the partials, and finally of the fundamental, we reach non-audibility – silence.

So, if we consider the whole sound being assembled only by partials, the *quantity reduction* in the *colour* parameter can also be equivalent to a normal *diminuendo*.

But for the *density of events* parameter, which deals with horizontal information – events in the time domain, the definition of “everything” is to be “all the time”. In theory this means “as often and as close as possible”. Practically, this means “as rapid and as varied as possible”, since there is a risk that the series of sound objects become a continuous sound, a static block of sound.

The definition of “off” for this parameter will have to be “as seldom and as distant as possible”.

Let us summarize this:

The *quantity reduction* for the parameters *contour*, *colour* and *density of events* looks as follows:

In *contour*, this results in a *transition* from as wide register as possible to as narrow register as possible.

In *colour*, this results in as many colours (frequencies) as possible to as few as possible.

And finally in *density of events*, this results in a *development* from as often and as close as possible to as seldom and as distant as possible.



In these examples, the result is silence. “Black” in terms of *quantity reduction* equals absence of sound.

Quality reduction for the isolated parameters

In terms of *quality*, the transformation from “white” to “black” will have to be more flexible for the three parameters, since *reduction of quality* involve reducing more and more of the character of the parameter. This is resulting in a *transition* from one parameter to another!

So, a general definition of “black” in terms of *quality reduction* will be dissolved character.

For example; we can *reduce the quality* of the *contour* parameter by surrounding the *contour* lines with more and more notes, and on the same dynamic level, similar to noise.

Or we can make the *contour* lines move very fast in a gradually vaster register in a random pattern.

As a listener, we then lose perception of the definite pitch/pitches of the contour lines and we start listening to the sound from a *colour* perspective instead.

Or, we can start stuttering on the *contour* lines, subsidising in interval, to finally develop patterns (rhythmic) on a static pitch. By then the *contour* lines have transformed into *density of events* instead.

Or we can do many other operations. The ways of *quality reduction* are numerous.

Other applications

Of course there is a whole spectrum of possibilities in these methods, depending on how we define “white” and “black”. If we instead of “white” say “element A” and instead of “black” say “element B”, then “element A” can be silence and “element B” can be noise, which inverts the whole situation. Or “element A” can be one defined sound object and “element B” can be a different defined sound object, then the transformation will look completely different.

We can also have “element A” consisting of material in more than one of the parameters, for example both *colour* and *contour*, then the reduction can be simultaneous or run in different tempi.

And we can let the *reduction* be affected by other actions in the musical environment, for example by adding objects or parametric values from neighbouring transformations.

Finally

By organizing our ideas with these methods, we are able to formulate a specific theme or subject for a section or for the whole piece, but with a rich variety in output.

We can develop our material infinitely, and with extreme freedom, but at the same time be very determined and devoted to a global process.