

Orchestrating Nature

This intervention is an occasion for me to think, or re-think, about my own music and at the same time to share some thoughts about music, or musical composition, in general. I will also give a brief overview of what is happening in France and particularly at IRCAM.

As I have two careers – I am a composer and a musicologist at the same time – I try to have a musicologist’s insight on my own music. I have discovered that I have a large tendency to use sounds that are taken from nature, especially in instrumental pieces. I will try to illustrate this through three of my recent compositions.

Soirs

Let us consider the “Performance Notes” of my piece for five instruments *Soirs* (2004). Among the different ways by which the flute produces sound (Fig. 1), here we have “blowing in ordinary position” which results in a “wind” coloured with some traces of pitch. The “R” sound, next, is something close to a cat’s purring. The third one – a transition from just blowing to a sound and back – is quite interesting, as it has an equivalent in the strings part. Finally, there is the “pizzicato”, which is actually a percussive sound. Similar sounds can be found in the clarinet part.

Figure 1. Flute’s Performance Notes in *Soirs*

Performance notes

Flute



Blowing in ordinary position.



With the embouchure “in” the mouth, blow and pronounce an “R” (preferably with the tongue).



Gradually from blow to sound and backwards.



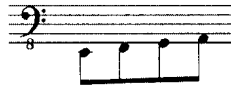
“Pizzicato”. Without blowing, pronounce a very “explosive” “T”. This technique is often used to emphasize key-strokes.

As for the piano (Fig. 2), I ask the performer to block with some rubber four of the lowest notes of the instrument. The pianist is thus freed from the need to stop the strings inside the piano with his fingers and can perform something else, like the “guiro” sound for example. While, on the black keys, using just the fingertip is enough for this sound to be clearly audible, on the white keys it takes a nail, a pick or a plastic card to amplify it.

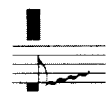
Figure 2. Piano's Performance Notes in *Soirs*

Piano

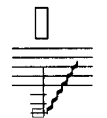
Please block the following low notes:



The resulting sound should approach as much as possible the sound you obtained by pressing firmly the string with the thumb: using rubbers with something heavy on them, or a piano tuner's "comb" could be a good solution.



Black keys "guiro". Play a glissando on the black keys without lowering them.

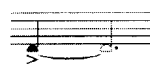


White keys "guiro". Play a glissando with a nail (or a guitar pick, or a plastic card) on the white keys, without lowering them.

For the strings, I tried to find the same "breathy" sounds that I used for the wind instruments (Fig. 3). Violin and cello can play *on* the bridge and on the tail piece. In this last case they produce a blowing sound, then they move to an actual sound and back. The result is analogous to what is played by the wind instruments.

Figure 3. Strings' Performance Notes in *Soirs*

Violin and Cello



Blowing produced by drawing the bow on the bridge.



On the tail piece. By increasing the bow pressure, the tail piece produces a "singing" sound.

I do not consider these techniques to be "effects", and I am strongly opposed to this label. They have the same ontological consistency as the ordinary sounds of the instruments; in other words, they are all *sounds*. Considering them "effects" presupposes that you have conceived your music as made by "real" sounds... to which you just give a fresh (often an old) coat of paint to be more (or less) *à la mode*. For me, these sounds are "structural", as they contribute to creating the structure of the piece. If I had to replace them with something else, I should transcribe the whole piece.

The second page of the score (Fig. 4) exemplifies particularly well the use of non-ordinary sounds as structural elements.

Figure 4. *Soirs*, p. 2

Upon further investigation of my own music, I discovered that apart from these iconic, simplified onomatopoeias on a small formal scale, I am clearly influenced by a physiological/biological/organic way of thinking on a bigger formal scale. Two pages at the centre of the piece will show this. In the first of the two pages (Fig. 5) there is a sort of tension, which to me seems different from a simple musical tension as you could find, for example, in Brahms, just to consider a very melodramatic case. There is nothing apollonian in my way of developing such a feeling of anxiety; it is rather more like a prelude to a beast's attack, or to an outburst of violence.

Figure 5. *Soirs*, p. 14

Figure 6. Soirs, p. 15

The musical score for Figure 6, page 15 of *Soirs*, is written for a chamber orchestra. It includes parts for Flute (Fl.), Clarinet (Cl.), Piano (Pno.), Violin (Vno.), and Viola (Vc.). The score is in 4/4 time and features a variety of dynamic markings, including *pp*, *f*, *mf*, *mp*, and *ppp*. The piano part is particularly complex, with many triplets and sixteenth-note patterns. The violin and viola parts have markings for *molto vibr.* and *non vibr.*. The score is numbered 51 at the beginning and - 15 - at the bottom.

Even the relief achieved (Fig. 6) is, once again, not stable. These “waves” sound more like a panting than like a real rest. The classical consonance of the G \flat major chord does not add any balance to my ear. On the contrary, as nothing else is consonant in the piece, the context makes this chord sound even more disquieting.

Trigarole

The next piece I would like to consider is *Trigarole* (2005) for chamber orchestra. The apparently cryptic title gives more than a hint about the direction of this piece. It is a word taken from my dialect, Venetian, which I spoke with my grandmother when I lived in Italy. There is no word to translate *Trigarole* in Italian or, to my knowledge, in any other language. It concerns the weather, like many other words in languages which are close to agriculture.

The *trigarole* is a complex event that happens when a storm is coming. First some heavy drops coming down, but they stop after a minute. Then, for five to ten minutes everything is still. As a child, I thought that the storm had passed, but every time my grandmother would tell me that it was just a prelude... the rain would pour down a few minutes later, but one never knew exactly when. I transposed this to my piece: events occur, but a bit too late or too early. If I succeeded, then you should not know exactly when they are to arrive, and you are left in a state of perpetual tension.

In a smaller scale, I developed even more onomatopoeias in this piece. There are all kinds of percussive sounds in all of the instruments – sort of stylised drops, and there are also some real drops! For this last sound, I asked four instrumentalists to throw little stones into buckets full of water. This is always mixed with the sounds of the instruments, so as to become part of the texture of the piece.

These drops – be they real or stylised – seem to be looking for a structure, for a form.

In a real storm, there is no form. It just happens, in real life. But a piece is something else, it is a representation. Therefore, I take these sounds from nature to build something that is, in a certain way, entirely unnatural. While looking for a form, these drops are actually present, yet at the same time they echo that which we cannot remember, and they are a prelude to that which we have yet to discover.

The drops are finally able to find a form by setting up causal relationships to one another. What they are looking for is a tight-knit and – once again – very organic texture. This texture might appear to be a mere superposition of strata, but the causal relationships among them tie the events in a much deeper way. As it may seem just theoretical, I wanted to show this in the piece. So, when we are already deep inside this process of searching for a form for several minutes, I inserted (Fig. 7) something that has nothing to do with all the rest. In this temporal window, I use exactly the same percussive and rattling sounds as before but, suddenly, everything becomes mechanic, with the precision of a clock, showing – by contrast – how organic the texture

was. This appears to be coming out of the piece and putting it all into perspective. It is as if you could see what you are doing from outside yourself.

Figure 7. *Trigarole*, p. 11

Trigarole 11

E *Un po' più lento, come da lontano*

The musical score for *Trigarole*, page 11, is a complex orchestral arrangement. It begins with a circled number '49' in the top left corner. The score is for a full orchestra and includes parts for Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bass Clarinet (Cl. B.), Bassoon (Fg.), Cor Anglais (Cr.), Trumpet (Tr.), Trombone (Tbn.), Percussion (Perc.), Piano (Pf.), Violin 1 (V.no 1), Violin 2 (V.no 2), Viola (V.la), Violoncello (Vc.), and Contrabass (Cb.). The score is in 3/4 time and features a variety of dynamics and articulations. Key markings include 'mf', 'f', 'ff', 'pp', 'p', 'mp', 'pizz.', 'arco', 'arco molto al T.', 'arco verticale (III corde)', 'arco molto vibrato', 'Wood-block (bucchetta moricida)', 'simile', 'pizz. oltre il Pt.', 'pizz. (I.C.)', 'pizz. (IV.C.)', and 'arco'. A circled number '49' is in the top left corner.

Concerto

When I wrote *Concerto*, for basset horn or saxophone and electronics, at Ircam in 2006, I was faced with yet another problem. I had electronics, so I could record actual natural sounds, if I wanted to. But it seemed to me the least interesting thing to do, as I did not want real life, but a representation of it. So, instead of using real natural sounds, I created them, more or less in the same way as I had done in the instrumental pieces. For example, I cut out some seconds from the recording of *Trigarole* (a bass drum *ff* followed by a “resonance” of slaps) and I combined it with one of the sounds that is the farthest from being natural: the sound of a car engine.

By multiplying the two signals in the Max/MSP software, I obtained a *convolution*, resulting in a cross-synthesis of the two sounds. Paradoxically, I thus obtained what seems to be the mumbling of thunder by mixing what is very artificial, namely my orchestral representation of rain and the mechanical sound of an engine. This technique is used quite extensively in the piece, and many other sounds are produced in this way.

The main problem of mixed pieces is the interaction between the performer(s) and the electronics. The two extreme situations are: on one side the *tape*, on which the electronic part is pre-recorded, and on the other side the *live electronics*, in which every electronic sound is produced during the performance. Both solutions present some major drawbacks. The tape constrains the instrumentalist to know the electronic part by heart and to follow it strictly, thereby killing all liveliness in the performance. Live electronics, on the other hand, while they assure more interpretative freedom, severely limit the possibility of electronics. It is not by chance that reverbs and delay lines are so ubiquitous in live electronics!

In order to minimise the disadvantages and to take advantage of the benefits, every kind of intermediate solution has been tested. One of the more effective and reliable ones consists of the use of a MIDI pedal by the instrumentalist. If you look at the score (Fig. 8) you can see two staves. The most important feature of the upper staff, which is used to represent electronics, is numbers in squares. When the instrumentalist reaches these points on the score (and he reaches them with a certain freedom – he can play *rubato*, for example), he presses the pedal and triggers an electronic *event*.

Throughout *Concerto*, *events* generally play sound files that I have prepared in advance, but in a very special moment in the piece I do use some real-time electronics. As you can see in Fig. 8, *event 32* consists of a sort of rain (there is the rain again!) produced live by the computer. I obtained this complex sound by pre-recording just three slaps (short percussive sounds) of the instrument, and by changing their pitch and rhythm in an aleatoric way. It is actually a very controlled randomisation, as the rain is slow and low-pitched in the beginning and becomes fast and high-pitched at the end.

The spatialisation of this rain is another example of representation vs. reality. I had nine loudspeakers, four at medium height, four on the ground below the seats and one on the ceiling.

Then this strange rain started in a paradoxical way. It came from under your seat, and this was even more surprising because I had not used these loudspeakers before. Rain started below you, and then moved up the walls to finally stick to the ceiling. This happens two times. The third time, the rain just appears on the ceiling. And this is also something that at the same time looks weird (because it is the end of this process of “climbing” rain) and normal (the rain on the roof is something we are very used to).

Figure 8. *Concerto*, p. 15

The image shows a musical score for page 15 of 'Concerto'. It consists of two staves. The upper staff is labeled 'Concerto' and contains three square boxes with the numbers '32', '33', and '34' inside, representing electronic event triggers. Above these boxes are small raindrop icons. The lower staff is labeled 'III.' and contains musical notation for the instrumentalist. Dynamics markings include 'p' (piano), 'mp' (mezzo-piano), and 'ff' (fortissimo). A vertical dashed line connects the '32' box to the beginning of the instrumentalist's music. The page number '15' is in the top left, and '124' appears on both staves.

Three Considerations about Poetics

After this excursus on my own music, I can outline my poetics with three considerations.

1) The beginning of Federico Fellini's movie *Roma* (1971) depicts the "Grande Raccordo Anulare", the highway that encircles the Italian capital. In the first scene, we see a film troupe going there to film it, so there have to be at least two troupes: one filmed and another one actually filming. But what I find even odder and more interesting is that this highway is not the real one. Fellini got his producer to recreate several kilometres of this deserted highway in Cinecittà's studios. For practical purposes, Fellini could have filmed in the actual location, which was quite new at the time and not so busy. When he was asked why he did not choose to do so, he answered that reality is cold, and has nothing to do with a movie. For me, this is an extreme example of *art as a representation*.

2) In *The City of Lost Children* [*La cité des enfants perdus*] (1994), French director Marc Caro depicts a fantasy world, inhabited, among others, by "Cyclopes". Cyclopes are blind people, but they can see with the help of a vintage electro-mechanical monocle. In one scene, a Cyclops goes crazy and kills other one by choking him. Before doing so, and this is what seems very interesting to me, the crazy Cyclops rewires his and his victim's monocles, swapping the connections. As a result, the victim sees himself dying, and I cannot imagine any stronger example of a *change of perspective*!

3) The most important question about my poetics, however, is: why do I do this? Why do I use "natural" sounds and paradigms, as well as all sorts of "impure", not properly musical, sounds in my own music? I think the answer can be found in the change of a work of art's status during the last century. What I retain from Theodor W. Adorno and Walter Benjamin – two of the main philosophers who wrote about aesthetics in the 20th century – is that there is a loss of authenticity, or of "aura" to use Benjamin's terms, in works of art. Even if this had an extremely negative connotation for Adorno, and a very positive one for Benjamin, it seems to me that their conceptions agree on one point: the ability to reproduce things has changed the status of a work of art. If today an iPod allows you to listen to whatever you want, whenever you want, then what remains of the uniqueness of a concert? Does it still make sense to buy a ticket and see someone play? And does this still represent a particular moment in life? These are far from rhetorical questions... What seems undeniable to me is the "invasion" of art in everyday life. Poetry and prose are not divided any more. Instead, nowadays they mix and meld. Marcel Duchamp sensed all of this at the beginning of the 20th century, when he placed objects taken from everyday life in museums, such as a bicycle wheel or a urinal.

What I try to do in my music is, in a certain way, quite close to what Duchamp was doing. It is a given that there is a loss of aura in the works of art, but I am not angry about it like Adorno was. I was born with this reality and take it as a given. Instead of complaining about the situation, I change the perspective. I do not try to give a fake aura to things, which I think is a lost battle, but instead I try instead to *put the sounds of prose in the poetry of a work of art*, in the hope that when we live in real life and we listen to rain or thunder, a bit of the poetry of art – a memory – will enlighten our day.

NOTE: Full scores and recordings of the pieces can be found at the address:
<http://www.elviocipollone.net>

Santrauka

Orkestruojant gamtą

„Auros išnykimas“ (jei vartosime W. Benjamino posakį) arba „autentiškumo praradimas“ (Th. W. Adorno žodžiais tariant) stipriai įsigalėjo šiuolaikinėje meninėje kūryboje. Ar pasaulyje, kuriame meninė poezija taip neapdairiai painiojama su kasdiene proza, dar yra prasmės kurti konkretų meno kūrinį? Atsakydamas į šį klausimą, aš, kaip kompozitorius, bandyčiau pažvelgti į problemą iš kitos pusės, užuot skundžis dėl to, kas prarasta. Į savo kūrinius įpindamas kasdienius garsus tikiuosi, kad mes galėsime išgirsti juos kitaip, nei jie skamba „realiame“ gyvenime. Gamtos garsų (vėjas, vandens lašai, lietus, griaustinis ir t.t.), tinkamų šiam mano tikslui pasiekti, išteklių yra iš tiesų dideli. Aptardamas savo kamerinę pjesę *Soirs*, kūrinį kameriniam orkestrui *Trigarole* ir koncertą saksofonui ir elektronikai, mėginau pademonstruoti, kaip šie garsai orkestruojami ir kaip nuo vieno kūrinio pereinant prie kito ši orkestruotė tobulinama.