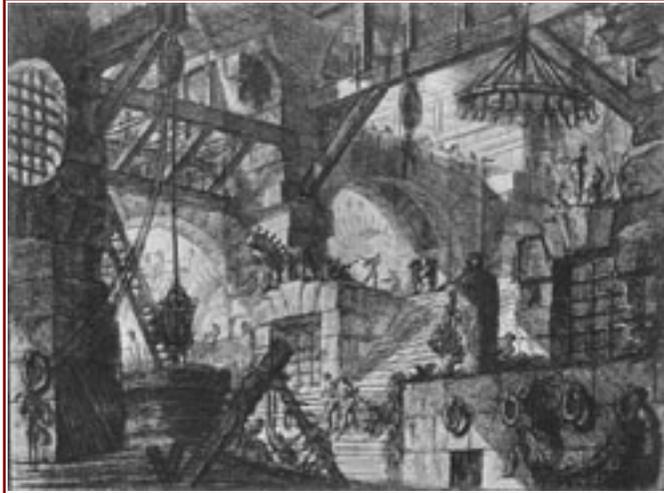




## LUIGI NONO'S

### 'QUANDO STANNO MORENDO. DIARIO POLACCO N. 2':



*Cries, whispers and voices celestial*

## INTRODUCTION

In October 1981 – in the heydays of Solidarnosz – Luigi Nono receives the commission to write a composition for a music festival in Warsaw. On September 13 Jaruzelsky seizes power. The festival is cancelled and Luigi Nono loses contact with the friends who had invited him. Which only stirs his desire to complete the work. He dedicates it to *'the Polish friends and comrades who resist in exile, in hiding, in jail, at work – who continue to hope amidst hopelessness, who continue to hope despite their disbelief'*. One year later, on October 3, Luigi Nono's work is performed – as if it were by default – in Venice. It is christened 'Quando stanno morendo. Diario polacco nr.2', lasts for nearly half an hour, and is written for four female voices, cello, bass flute and 'live electronics'.

## SEVEN POEMS

The title of the work is borrowed from the second half of the last verse of a poem by Velimir Chlebnikov, the second half of which is eloquently omitted:

*Quando stanno morendo, i cavalli respirano  
 Quando stanno morendo, le erbe intristiscono  
 Quando stanno morendo, i soli si spengono  
 Quando stanno morendo, gli uomini cantano...*

*When they are dying, horses breathe,  
 When they are dying, grasses wither,  
 When they are dying, suns fade away,  
 When they are dying, men sing...*

Together with a poem of Boris Pasternak and one of Czeslaw Milosz, it is part of a group of three poems that Luigi Nono has concentrated in the third part of his composition. As the triad of hope, they are opposed to the triad of hopelessness in the first part: three poems of Czeslaw Milosz, Endre Ady and Aleksandr Blok. Both triads are joined in the central second part through a seventh poem of Velimir Chlebnikov: 'Mosca – chi sei?' , the second strophe of which reads as follows:

*Moscou – who are you?  
 I know that your are  
 Orthodox wolves.  
 But how, how on earth don't you hear  
 The rustling of the needle of fate,  
 That wonderful seamstress?*

The context leaves no doubt: here is raised an indictment against the 'citadel of evil' of that time.

### THREE TIMES THREE PARTS

From a musical point of view, however, 'Quando stanno morendo' does not consist of seven, but of nine parts. Since, even when the central poem of Chlebnikov is considerably longer than the other ones and comprises three strophes at that, it is repeated three times: a first time integrally (IIA), a second time in fragments that are recorded and immediately replayed in reverse (IIB) and a third time integrally again (IIC). Thus, the seven poems are distributed over three times three musical parts as follows:

I			II			III		
IA	IB	IC	IIA	IIB	IIC	IIIA	IIIB	IIIC
Milosz	Ady	Blok	3 x Chlebnikov			Pasternak	Milosz	Chlebnikov

The musical expression of the three times three parts runs parallel to the literary content: from despair over indictment to hope. Although merely generally: there is no point-to-point translation of single poems, let alone of verses or words. It would be tempting to relate the sometimes groaning voices to the 'tears' and 'sorrows' in the poem of Endre Ady:

*Here tears are saltier  
And sorrows are different too.  
Our Messiahs are  
Messiahs a thousand times.  
If they die a thousand times,  
The cross does not redeem,  
Since they have been able to do nothing,  
Oh they have been able to do nothing...*

But the voices do not groan on the corresponding words, and they continue to do so on the third poem of Aleksandr Blok in which there is no immediate cause at all:

*And once more the snows  
have erased the footprints...  
and far far far away  
death is revelling in the fields,  
once more it is mirrored by stars  
that never set.*

Conversely, it catches the eye how Luigi Nono, in that very same poem, simply omits the word 'death' (Italian: 'morte'), that for many another composer would have been an occasion to compose a colourful madrigalism.

And, finally, it is not immediately evident that poems are being sung here. We merely hear a sequence of very long notes, sometimes isolated, sometimes joined to groups of two or three. From the words that are sung on these fragments of melodies, nothing more is heard than a nearly differentiated sequence of vowels. It is apparent then: the listener is supposed to have read the poems before listening to the music – and that is why we will render all of them integrally in the course of this text. For the performers, the poems function as a kind of extended indication in the vein of the traditional, more concise expression marks like 'molto espressivo'. That explains why the text is printed not only on the corresponding notes, but equally at the bottom of the corresponding page of the score.

There is one exception to that rule. In the central part II, Chlebnikov's poem 'Moscow who are you?' is not sung, but recited. The first time (IA), the recitation is accompanied by the song of the second soprano and the mezzo-soprano. Only the initial words are clearly understandable. And these are plain enough: 'Mosca chi sei?' In IIB, only fragments of the poems are heard together with their reversal, to the effect that they are nearly understandable. In IIC the text is heard in full, only to be shouted down by a deafening noise: the electronically manipulated and boosted sound of cello and bass flute. The deafening of recitation and song alike is as it were the musical counterpart of the vehemence with which Moscow threatened to suppress the revolt.

The (un)usual way in which Nono uses to treat the text, hence\*: it partly determines the expression and the structure of the composition. But, as an audible phenomenon, it is driven out of the music – literally so in part II. Which does not prevent that – in a paraphrase of Czeslaw Milosz' poem – Luigi

Nono not so much lends his colours to language, but rather his even more wonderful sounds:

*My faithful language  
I have served you.  
Every night I have offered you my colours,  
So that you would have a place  
in my memory.  
You have been my only homeland  
Because I lost the other one,  
Because its cities are empty,  
Because the thistle has covered its earth...*

### **THREE REGISTERS IN THE AUDIBLE WORLD**

#### *Cries, whispers and voices celestial*

Even though we do not understand what, they surely sing – cantano!, the voices in ‘Quando stanno morendo’! With those long sustained tones, they continue to relentlessly weave that very fragile, sometimes somewhat frayed thread on which the whole piece is suspended. A miracle!

But, already in IB, the clear sound of voices singing vowels is increasingly filtered, so that the voices seem to be gradually transformed in electronic instruments. Furthermore, the singers soon seem to lose all inclination to sing: they begin to groan, if not to whistle, when their singing is not altogether withering into a nearly audible breathing. As if they are preparing the drone of the instruments that is going to burst out in part II.

In combination with the recitation of the text, that yields three levels. On a first level, there is the recited text, in which music is only smouldering in the tones of the melody of speech (II). On a second level, the melody of speech is unfolding to the plain singing that supports the whole composition, while language is shrinking into a succession of mere vowels. And on a third level, finally, the voice threatens to become speechless (IB and IC): it enters the pre-verbal realm of audible expression (groaning), if it is not instrumentalising altogether (whistling, breathing).

The instruments can seamlessly be fitted into this continuum from language over music to sound. Whereas voices have always to pronounce words or to sing vowels, instruments are allowed to sing in a pure musical way: wordless. But that is precisely what they refuse to do in ‘Quando stanno morendo’! Only the bass flute is doing an effort in IIIA, merely to bring forth some hesitating aeolian tones. In part II, however, the cello and the bass flute produce a soon deafening sound that begins to pulsate on a soon shattering rhythm. They thus complete the move that has set in by the voices in part I: just as the voices proceed from singing to imitating the normal, non-verbal audible appearance of men, just so do the instruments no longer bring forth pure - wordless - tones, but normal, non-musical sounds.

Let us examine how these three registers are unfolding in time. In terms of orchestration we get the following scheme:



IA	IB	IC	IIA	IIB	IIC	IIIA	IIIB	IIIC
2S,Ms,Ca			S2, Ms,Ca			2S,Ms,Ca	Ca	2S,Ms,Ca.
			C,Bfl	C,Bfl	C,Bfl	/Bfl	C,Bfl	

(*S = soprano, Ms = mezzo-soprano, Ca = contralto, C = cello, Bfl = bass flute*)  
 (the / before Bfl in IIIA indicates that voices and bass flute alternate)

We could interpret this scheme in terms of a ternary form (ABA), were it not for the fact that in the second A section the central part IIIB reminds of the central part II. It rather looks as if Luigi Nono has conceived the third part as a ternary form itself - as if he had telescoped the overall structure in the final part.

But a pure reference to the orchestration will not suffice to properly grasp the structure of 'Quando stanno morendo'. The above scheme does not account for the fact that the contralto does not sing but recite in II, nor for the fact that the voices are 'instrumentalising' in IB en IC, while, conversely, the bass flute is producing aeolian tones in IIIA, and is thus doing a vain effort to 'sing'. Let us therefore refine our scheme as follows:

I			II			III		
IA	IB	IC	IIA	IIB	IIC	IIIA	IIIB	IIIC
song	song v sound	song v sound	song sound	song sound	song sound	song ^ sound	song sound	song
			word	word	word			

What announced itself as a ternary ABA structure, turns out to be a 'bridge form' - a symmetrical structure around a central axis (ABCBA), introduced by Bela Bartok. How much the central part IIB is conceived as the pivotal point is apparent from the fact that, in that section, the words of Chlebnikov's poem are also recited in reverse.

But the symmetry is not perfect. IIIB seems not to fit into this scheme either. And that demonstrates how much Luigi Nono resigns from imposing a preconceived structure upon his musical material. He rather prefers to keep in touch with the pulse of audible musical time. Already the father of the bridge form was confronted with the problem that the backward moving second half of his bridge form would seem to last longer than the forward moving first half, when mirrored exactly. He solved the problem by condensing the backward moving second half (for example in part II and IV of the quartet V which is also a bridge form as a whole). Luigi Nono chooses for another solution. By telescoping the structure of the whole in one of its parts, the rather rigid structure gets a new momentum: the outburst of instrumental violence in the central part II is echoed in the central part IIIB of the last section, to the effect that the final section IIIC is now experienced as a genuine conclusion. That is one of the tangible interventions through which the late Luigi Nono succeeds in creating that very special feeling of an organic flow of musical time that is also so characteristic of

the 'Prometeo'.

### THREE KINDS OF MIMESIS

We should not casually brush off the fact that, in the above, instruments are relegated to the realm of natural sound. For, strictly speaking, the sounds produced by the cello and the bass flute, though instrumental, are not musical – such are merely the sounds of bass flute in IIIA. Without foreknowledge, nobody would even surmise that those infernal sounds are produced by a cello and a bass flute. The instruments are used in a very unconventional way. In the three sections of II, one of the four strings of the cello is tuned respectively to an f, an f-sharp and a c, and the three other strings a quarter tone higher and lower, and a halve tone higher. In addition, the cello is to be played with two bows: one, held in the customary way, plays the middle strings, while the other bow, with the hair turned upwards, plays the outer strings. Which produces a grinding sound full of interference tones which is electronically manipulated at that: lowered, imbued with echo and immoderately amplified.

Such sounds no longer belong to that remarkable island of musical tones that man, through the invention of ever new instruments, knew to isolate from the ocean of the audible. Rather do they remind of the vehement sounds that are to be heard on construction sites or in factories, where the mechanical violence of pneumatic drills, circular saws and sledgehammers is set on equally industrial materials, if not of the drone of bulldozers and tanks crushing everything in their way. And that goes equally for the sound of the cello in IIIB, which results from the immoderate amplification of the sound that is heard when the finger of the hand is applied to the string with great pressure and then removed abruptly ('con dita'). Especially because of the long reverberation, these sounds no longer remind of the cello. Rather do they evoke the sound of the irrevocable falling shut of iron doors in subterranean cellars – like those of Piranesi on the print below the title of this text. That sound only gets its full meaning through the words of the accompanying poem of Czeslaw Milosz, sung by the contralto. Especially the melody on the repeated 'aspettero, aspettero' sounds like the ominous song of a sibyl in the true sense of the word:

*Spedisci la tua seconda anima  
oltre i monti, oltre il tempo:  
dimmi che cosa hai visto,  
aspettero...*

*Send your second soul  
beyond the mountains, beyond time:  
tell me what you have seen,  
I will wait...*

The simple fact that, when hearing these sounds, we are reminded of so many different sources of sound, however essentially related, betrays that Luigi Nono was not out at imitating concrete sounds. Rather did he succeed in evoking an imaginary overwhelming power by self-created sounds – in forging a kind of undetermined audible metaphor for those 'orthodox wolves' howling in Moscow. But that does not prevent such imaginary power to be evoked through the equally imaginary sounds it might produce. To phrase it differently: we are dealing here with ordinary audible mimesis. With the voices and the sounds in a radio play it has in common that, when hearing these voices and sounds, we imagine speaking figures in an audible environment. From those same voices and sounds in a radio play it differs only in that the sounds and the being that produces it do not belong to the real world. Such audible mimesis is something totally different from music, which – as we have stressed elsewhere – does not render the sound of existing or imaginary

beings, but conjures up imaginary beings through making audible the impulses of their movements\*\*

And what goes for instruments, goes equally for the voices: these proceed from singing to groaning and blowing. This is equally ordinary - non-musical - audible mimesis of audible expressions, such as those of an actor on the stage. And this time we are not dealing with imaginary expressions of imaginary beings, as with the cello and the bass flute, but with existing expressions of existing people – *'the Polish friends and comrades who resist in exile, in hiding, in jail, at work, who continue to hope amidst hopelessness, who continue to hope despite their disbelief.* In 'Quando stanno morendo', they are conjured up through singers, as otherwise through actors in the theatre.

Thus, in 'Quando stanno morendo', ordinary audible mimesis is combined with musical audible mimesis. And to complete the triad, it suffices to refer to the reciting voice, whose words conjure up the rebel calling the 'citadel of evil' to account:

*Moscou – who are you?  
Moscou – ancient skull.  
With a razor of stone  
I would shatter these walls  
In which, like autumn prayers,  
Children jump towards death..*

*Moscou – who are you?  
I know that your are  
Orthodox wolves.  
But how, how on earth don't you hear  
The rustling of the needle of fate,  
That wonderful seamstress?*

*Woe betide you,  
Who have turned a false place  
In your hearts against me:  
You will be smashed on the rocks  
And the rocks will laugh at you,  
As you have laughed  
At me...*

As opposed to ordinary audible mimesis and musical mimesis, which conjure up an audible world, we are dealing in this poem with a world that is conjured up through words for the most diverse 'inner senses'. To the three levels of the audible world correspond three kinds of mimesis: ordinary and musical audible mimesis for the ear, and mimesis for the representation, mediated by words\*\*\*

That such ordinary audible mimesis resounds on a fixed pitch cannot save it: many ordinary sounds have a fixed pitch, especially spoken words. It must be granted, however, that in 'Quando stanno morendo' such fixed pitch enables a smooth integration of the ordinary mimesis of the instruments and the musical mimesis of the voice.

Also 'Guai ai gelidi mostri' combines both kinds of audible mimesis. And it speaks volumes that

such combination is not taken over in the Prometeo\*. There, the overwhelming force of repression is evoked through purely musical means: the deafening 'fanfares' that come to tear up the fragile fabric of the voices time and again. Even when one can prefer such homogenous medium, nobody will deny that in 'Quando stanno morendo' Luigi Nono reaches the highest level of expressiveness precisely by combining two heterogeneous mimetic media. The way in which the soprano and the mezzo-soprano, faced with an overwhelming violence, are desperately trying to ascend to the heavens, to be eventually shouted down nevertheless, is simply impressive. Only in this central part do the words of the final verse fully become sound: 'Quand stanno morendo, gli uomini cantano'! And that song, in vain defying the heavens, acquires its full mimetic impact precisely through the contrast with that infernal, non-musical drone of the instruments in the sublunary world. And that holds equally true of the ominous negative prophecy of the sibyllic contralto – aspettero – that in IIIB resounds as if in Piranesi's subterranean cellars.

## FOUR LAYERS IN VERTICAL MUSICAL SPACE

As far as pitch is concerned, the sound of 'Quando stanno morendo' is spread over four different layers in musical space.

To begin with, there is the bipartition between four female voices in the heights and two 'male' instruments in the depth. The realm of the female voices can be divided in three regions: the two sopranos that ascend as high as e6, as opposed to the contralto that descends as low as e-flat3, and, in between, the mezzo-soprano. Conversely, the cello is allowed to produce aeolian tones, overtones that are clearly distinguished from the fundamental, deep in the depths.

Although there are in principle four layers in this musical space, we never hear more than three of them at a time. In I it is only the voices which are singing in the three layers of the higher regions. In part II, they are joined by the instruments, but this time we hear only the contralto in the middle layer and the song of soprano and mezzo-soprano in the highest layer. And in IIIB, the sustained tone of the bass flute and the 'con dita' of the cello are opposed to the ominous song of the contralto in the middle regions of musical space. Thus, musical space is unfolding in time as follows:

			II			III		
IA	IB	IC	IIA	IIB	IIC	IIIA	IIIB	IIIC
2S	2S	2S	2S	2S	2S	S/Bfl	.	2S
Ms	Ms	Ms				Ms		Ms
Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca
			C, Bfl	C, Bfl	C, Bfl		C, Bfl	

It is as if – as in 'Hyperions Schicksalslied' of Hölderlin – the voices would like to ascend to heaven in an endeavour to escape the shattering happenings in the sublunary world that becomes audible in part II and is echoed in IIIB without the redeeming song.

But, again: a pure reference to the orchestration does not suffice. For, even when all the voices are singing in part I, they are not singing in four parts in the four layers of the female vocal space. By

taking the tones out of each other's mouth they produce a kind of monodic song that runs through the entire musical space. That monodic song only sporadically differentiates into furtive two-, three-, or four-part singing, so that musical space is timidly unfolding into a layered space. We are dealing here with a kind of emergent layered space. In part II, on the other hand, a fully unfolded space takes a definite shape. There are three clearly distinguishable layers: that of the two sopranos in the heights, that of the reciting contralto in the middle, and that of the drone of cello and bass flute in the depths. In part III, things are a little more complicated, as usual. In IIIA, the two sopranos and the mezzo-soprano are singing quasi monodically: only sporadically is the melodic line differentiating in a quartertone, half tones or a full fourth. Beneath this emergent segment in vocal space, the contralto is singing a totally independent part in a clearly separate layer. Here, musical space is at the same time layered and emergent. In IIIB, space is fully unfolded and stable, as in part II, even when one layer is failing, as we have seen. In part IIIC, the voices are singing a succession of chords. Chords consisting of four tones are sung by all the voices together. But chords of three tones are sung by ever changing combinations of voices. It is as if one single layered voice – or one polyphonic being – is moving chord by chord through the entire un-layered space – a way of writing which Nono will fully develop in 'Hay que caminar'. Only tentatively can we try to render those subtle changes on the scheme below:

			II			III		
IA	IB	IC	IIA	IIIB	IIIC	IIIA	IIIB	IIIC
emergent			layered			emergent +	layered	layered +
						layered		emergent

### THREE HORIZONTAL LAYERS IN REAL AUDIBLE SPACE

Next to musical space, which is determined by pitch, there is also real space: the hall in which the music is performed. The general relation between both has been extensively dealt with elsewhere\*\*. Here, we can concentrate on a detailed analysis of 'Quando stanno morendo'.

We know that Luigi Nono wanted to get rid of 'perspectivic' space, a space in which the public is focussed on the musicians on the stage\*. In 'Quando stanno morendo', though, the musicians play in front of the public as usual. In the score is indicated precisely how they have to sit: on a row from the left to the right soprano 1, soprano 2, the mezzo-soprano, and the contralto. To the left of the first soprano is posted the cello and to the right of the contralto the bass flute. But not less than 10 speakers, placed around the public at an elevated position at least two meters off the ground, assist the musicians on the stage. A first group of speakers (1-4) is arranged in an outer circle at the four corners of the concert hall. A second group (5-8) has to be placed at the left at the right of the public as on an inner circle. Two more speakers (9-10) must be positioned so as to give 'the impression that the sound from them comes from a great distance': behind the stage, or at the back of the hall or in the middle of the hall hung from the ceiling. The intention is that we get three concentric circles.

	Flb	S1	S2	MS	CA	Vc
	1					2
	5					6
			9		10	
	8					7
	4					3
			9		10	

A first problem arises here. As far as musical space is concerned, it does not matter where precisely the instruments are distributed in real space: as long the arrangement is not too much against the grain, musical space will emerge anyhow\*\*. That is immediately apparent in part II. To be sure, the sounds obediently resound from the speaker where they have been referred to by the central control panel. But at the same time, the voices of the sopranos set off to the utmost heights of musical space, while the deafening drone of the bass flute and the cello irresistibly descends to the deeper regions of that same musical space. Only the voice of the contralto seems to dwell in the middle regions of musical space, which tends to coincide with the real height of the speakers in real space.

Which it would do anyway, even when it was resounding from speakers high above the heads of the public, as one of the variants for the placement of 9 and 10 prescribes. It is precisely the same Luigi Nono that so stubbornly insists on spreading his music over real space, that reminds us of that truth. For, through allowing three totally different positions for speakers 9 and 10, he unwillingly admits that the distribution of the sources of sound in real space is in the last resort irrelevant, arbitrary: wherever they might be produced – far before, far behind or far above the public – the place of the voices in musical space will hardly be influenced.

## THE MULTIPLICATION OF THE MUSICIANS

The fact that the sounds, produced by the musicians in front of the public, are distributed in the hall through speakers, tends to obscure the fact that we are dealing with a mere distribution of the sources of sound in real space, and not with the construction of musical space. Let us therefore undertake a mental experiment.

Suppose that no reverberation and no delay are added to the sounds and that no filters are used. Since it is not allowed to boost the sound of the voices in 'Quando stanno morendo', the role of the electronics would then be confined to the spatial (reverberation) and temporal (delay) multiplication of the singers. It is as if, next to the singers on the stage, a host of other singers would be posted on

diverse places in the concert hall around the public. When also the halaphone is introduced - a device that makes the voices rotate around the public – the singers would equally have to run back and forward around the public, as planets on their orbits around the sun. Still in the supposition that there would be no other electronic intervention but the distribution of sound in space, nothing would prevent us from replacing the imitated singers with real singers, apart from the fact that it would be more expensive and that it would take far more parts on the score. But only then would it become plainly apparent that we do not situate the song of the singers in the countless places where they would be singing in real space, but in the higher regions of musical space. Which does not amount to say that the real disposition of the real singers – or that of the imitated singers in the speakers – would not influence the disposition in musical space: also in the higher regions of musical space, high above our imaginary heads, do the voices circle around, not otherwise than the angels singing above the stable of Bethlehem.

The electronic distribution in space comes down to a replacement of real singers with imitated singers, not otherwise than when a speaker of flesh and blood is replaced with his voice in the radio. It is as if – in a variation on Haydn's 'Farewell' symphony – the musicians would compensate their departure through leaving a speaker on their seats, from which would resound the part they were supposed to play, until finally the director itself would be replaced with an engineer manipulating the handles of the central control panel. The music of such an imitated orchestra would in essence not differ from the music performed by its real counterpart. Musical space would unfold just like before...

### **THREE KINDS OF AUDIBLE SPACE**

The electronics in 'Quando stanno morendo' are doing more than merely replacing real singers with imitated singers. Underway, reverberation and delay are added. The real concert hall is thereby replaced with an imaginary space. As long as the reverberation and the delay are added to the singer's voices, it is musical space that seems to expand. But as soon as the reverberation and the delay are added to the non-musical sounds of the electronically manipulated cello and bass flute, it is real, non-musical space that seems to expand. That is foremost apparent in IIIB, where the sounds seem to resound from under a gigantic dome – if not in subterranean vaults à la Piranesi, or: in the godforsaken universe. And the same goes for the advent of imaginary space in part II: it sounds like a gigantic factory hall where an infernal machine performs its unwholesome works.

And just as the advent of imaginary musical space annihilates the distribution of the sources of sound in real space, just so does the advent of imaginary ordinary space. For, whether the same reverberated or delayed drone resounds from a speaker in the inner or the outer circle, in neither case do we situate the source of sound in the corresponding speaker, but in an appropriate place in imaginary space. And that is far beyond the inner or the outer circle...

It is plainly apparent then: the distribution of speakers in two circles would only make sense when Luigi Nono had been out at creating a 'soundscape' – a real audible space where one could walk around the speakers like around the pillars in visual architecture\*\* But whatever sources of sound might be used for such a soundscape, no reverberation or delay whatsoever should be added: that only becomes the construction of an imaginary space. And in such a space one cannot walk around: one sits down, as in front of the screen in a cinema, where the surround-sound conjures up the most spectacular movements in imaginary (ordinary) space.

Also when ordinary imaginary space is combined with musical imaginary space, the former threatens to swallow the latter and to reduce the music to its vocal and instrumental sources: singing voices and musicians playing. Which does not prevent that, in 'Quando stanno morendo', Luigi Nono has succeeded to perfectly combine ordinary imaginary space, in which resound the moaning of the singers and the drone of the instruments, with musical imaginary space, in which resounds the song celestial of the voices – to the extent that the difference only dawns on us after the analysis above. This is due to the fact that Luigi Nono instinctively has structured the non-musical ordinary space so that it seamlessly fits in the structure of musical space. For the entities in ordinary musical space not only produce deep sounds, they are also situated far below the musical beings that produce high tones and are ascending in musical space, high above the infernal sounds in the depths. Things would be totally different if the drone was supposed to be produced by bombers or other demonic threats in the skies. In that case, speakers two meters off the ground would no longer produce the desired effect: it would sound as if the bombers were still standing on the runway. Only speakers hung up at the ceiling of the hall would do. For, even when it is possible to refer sources of sound backward in ordinary imaginary space, it is plainly impossible to make them move upward or downward, unless you move the speakers in the same direction. \*\*

Or, to bring things to a head: two groups of speakers, one to the right and one to the left of the musicians, would largely produce the same imaginary space as the whole arsenal that Luigi Nono has summoned up around the public. To be sure, things would sound better when the speakers were distributed around the public as well. But one circle would amply suffice then. The effect of concentric circles could be more convincingly and flexibly obtained by using the old technique of differences in loudness (dynamic echo).

## **THE UNFOLDING OF SPACE IN TIME**

That does not prevent the distribution of sound in real space to enrich the evolution of the structure of musical space and to supplement it with an additional evolution of ordinary imaginary space. We already described the evolution of musical space. Let us now concentrate on the evolution of ordinary imaginary space.

In IA, only the distribution in real space is affected by the electronic intervention. There are seven schemes, succeeding each other in an often fast tempo. In all the schemes, the first soprano is singing from speakers 9 and 10 in the outmost circle. With each new combination, the second soprano, the mezzo-soprano and the contralto move from the upper half to the lower half of the inner circle, to the right side of the middle circle, to the lower side of the outer circle, while the first soprano in the outmost circle is joined once by the second soprano and once by the mezzo-soprano. While the first soprano is a kind of beacon in space, the other voices migrate to diverse places in space. In combination with the fact that the singers take over each other's singing, the effect is that the song resounding from diverse places in space converges into the highest voice resounding from speakers 9 and 10. To have the distribution in real space match musical space as much as possible, speakers 9 and 10 should preferably be hung on the ceiling, so that the voices converge in the highest point of musical space high above the audience.

In IB an echo of two seconds is added to the voices, to the effect that musical space is expanding. The first soprano continues to sing from speakers 9 and 10. The other voices now resound from the speakers in lower half of the outer circle. At the same time they describe a circular movement through

the outer circle. Since the fixed sounds are merging with the rotating sounds (also when they are filtered) they seem to move along the circumference of an oval, inscribed between the centre of the circle and the periphery of its lower half – at least for the ideal listener in the centre of the circles, where there is no listener at all, but merely the engineer at the control panel...

IC starts with the soprano in the outmost speakers 9 and 10 and the other voices in the lower half of the inner circle. This time though, the first soprano leaves her position in the outmost speakers to first join the other voices in the lower half of the inner circle and to eventually move to the upper half of that same inner circle. The other voices continue to rotate through the outer circle, but their fixed places are changing: they first sing together with the soprano in the lower half of the outer circle, and then gradually proceed to the upper half. Eventually, all the voices find themselves back in the immediate vicinity of the real singers, from where they began their odyssey in the beginning of the piece. But his movement does not proceed in the four phases of a single movement towards the final position: the five possible combinations are constantly changing in a fast tempo, towards the final position and away from it, as if space hesitated between expansion and involution.

In II on the other hand, all the spatial registers are opened. There is only one scheme for this section. The bass flute and the cello resound in the upper half of the inner and outer circle, the contralto in the lower half of the outer circle, while her recitation in reverse is rendered in the outmost speakers. The song of the second soprano and the mezzo-soprano is rotating in both directions around the public through the outer circle. An echo of 2 seconds is added to the bass flute and one of 8 seconds to the cello. Since their sounds belong to ordinary imaginary space, the effect is the advent of an expanded ordinary imaginary space. A reverberation of 2-3 seconds is added to the song of the voices, to the effect that musical space expands above the expanded ordinary space.

In section III, the expanded space begins to contract. In IIIA the first soprano reassumes her fixed position in the outmost speakers. Around this fixed beacon, space is changing in four phases. First the second soprano and the mezzo are rotating through the outer circle. They then nestle in a fixed position in the lower half of the inner circle. In a third phase the soprano begins to rotate between 1, 2, 6, 3, 4, 5 and the other way round. Until, in a last phase, the second soprano and the mezzo-soprano leave their fixed places and join the trajectory of the first soprano. Then resound the hesitating aeolian tones of the bass flute. Da capo.

As expected, in IIIB the registers are opened again, but not so drastically as in the central section II. The sustained tone of the bass flute resounds in the upper half of the inner circle (upper and lower). The sledgehammer blow of the cello 'con dita' resounds with a reverberation of 7-10 seconds in all the speakers. And the voice of the contralto rotates through the outer and the inner circle.

In the last part, finally, space seems to gradually contract into its initial state around the musicians: the voices of all the singers are rotating from 1, 2, 6, 3, 4, 5 and the other way round, but at the same time from a fixed position in the upper half of the outer circle.

Let us try to render this evolution in our scheme:



	echo 2' S2,MsC	echo 2' S2,MsC	echo 2' Flb en C	echo 2' S2 en Ms	echo 7-10' C	
			reverberation 2-3' S2 en Ms	reverb. 2-3' S1	reverb. 2-3' 2S,Ms,C	
widening musical space		widened ordinary space and widened musical space		widened musical space	widened ordinary space and widened musical space	widened musical space

*In the schema above no account is given of the general echo of 2 seconds prescribed by Nono in case of very dry acoustics.*

### THREE MODES OF TIME

All that jazz around space would have us forget that music is also – if not: above all – a question of time.

It immediately becomes apparent, then, that there seems not to be such a thing as a measure in 'Quando stanno morendo'. Time rather seems to unfold as the continuous emergence of fragments of the audible world out of silence. It is as if a kind of god with each breath would breathe out the audible world, merely to breathe it in again in the void of silence – a process that equally is the pulse of one of those other works belonging to that remarkable archipelago around the Prometeo: 'A Pierre'.

In the audible fragments, time is running, but in a very remarkable way. Sometimes we seem to feel the pulse of time under the tones that seem to glide over the beat of a measure, but that very measure continues to elude us. The reason is that the progression of time is time and again sustained in that the single notes are often immoderately prolonged. Luigi Nono is lavish with fermatas – a musical sign that prolongs the duration of the note above which it is placed. Luigi Nono adds a number to indicate the number of beats the fermata has to last. And those fermatas are not only placed above audible notes, but also above inaudible rests – the silent void between the tones, and even above symbols which do not denote duration at all, such as the vertical lines of the measure on the staff. It is as if thoughts would wander off in far away worlds, while the lonely wanderer would stand still on the spot with one leg left up. By analogy with 'emergent space' we could call such time: 'emergent time' – or better still: 'emergent timelessness'...

And just as emergent space takes a solid shape in part II, just so does time in that same section. The sustained and swelling drone of the electronically manipulated sound makes short of the breathing out of silence. Time has resumed the shape it uses to take in the sublunary world. Unrelentingly and without mercy does it leave no room whatsoever for any evasive stretching of time. In the score, this is visible in the total absence not so much of rests, but rather of fermatas. Also the voices that desperately try to raise above the drone, seem to have got wings: the loose

fragments of part I - emergent melodies – now seem to want to unfold to completed flight. As if only the boosting of the force in their wing beat could prevent them from being sucked up in the whirlpool of time, grinding deep below them.

In the third part it initially seems as if the breathing time has come back. But in IIIB, the song of the contralto resumes the flight of the soprano and the mezzo-soprano in part II. And also the instruments begin to move in flowing time again, albeit with far less enthusiasm than in section II. The bass flute is playing a sustained note and the cello produces on irregular intervals 'con dita' the sound, that we described in the context of audible mimesis as the 'closing of iron cellar doors', but that in the context of the course of time reminds of something different: the unrelenting knock on the door, the blow of the pile-driver on the pile, or the ticking of a clock with a giant pendulum – if not the fall of the blade of the guillotine. Time is running again, even when it is now articulated through the irregular beat of fate. In part IIIC, time resumes breathing again, even when nothing remains of the evasive widening of time but its onset in long sustained notes: only the rests between the notes stand under the sign of the evasive fermata.

Thus, we get the following scheme of the evolution of time:

I			II			III		
IA	IB	IC	IIA	IIB	IIC	IIIA	IIIB	IIIC
emergent			continuous			emergent	articulated	emergent

## THE CIRCLE OF TRITONES AND FIFTHS

Time has come to have a look behind the scenes - in the inaudible that structures the proceedings on the scene. The reader should be warned: we cannot but indulge in some musical cabbalistics. No problem: whoever is not acquainted with music theory – or whoever does not like cabbalistics – can skip this paragraph and resume his lecture by the next.

In our text on the Prometeo\*, we already mentioned Luigi Nono's propensity to have the atonal universe of twelve tones implode. In 'Guai ai gelidi mostri' the implosion is virtually completed: that composition gravitates around one single fundamental and its octaves. But in the other works surrounding the Prometeo, the implosion stops short of the reduction to one single tone. In a first phase, Luigi Nono redoubles the number of allowed notes trough dividing the octave into two tritones. When the two tones of a tritone are sounded together, we seem to hover in a world without a fundamental. When the two tones of the tritone are heard one after another, it seems as if the imploded universe begins to gravitate first around the first component and then around the second. But the movement eliminates itself: when a new tritone is added to the foregoing, we get the same fundamental. Thus, the tritone dictates a never-ending swing of a pendulum.

The freedom of movement can only increase by resolving the tritone – which is in essence an augmented fourth or a diminished fifth – into a fourth or a fifth. When the two tones of a fifth are sounded together, one of the tones begins to function as the fundamental, around which one of the others begins to gravitate as a dominant or a subdominant. When we add these intervals as formerly the tritone to an octave, our universe is enriched with two new intervals: two fourths yield a

minor seventh and two fifths a major ninth. But this time the fourths and the fifths threaten to run away with us. For, in contrast to the sequence of tritons, which falls apart in an endless swing of the pendulum..b/f/b/f...., the addition of fifths has no inbuilt ending. Rather are we swept away in the endless progression of the circle of fifths: f, c, g, d, a, e, b, f-sharp.... in the one direction ad infinitum, and b, e, a, d, g, c, f, b-flat.... in the other direction, equally ad infinitum.

The only way to close the system is to have the added fourths and fifth fulfil the same function as the single fourths and fifths. Just as these single fourths and fifths are the resolutions of the tritone, just so can their 'dissonant' additions be resolved in the octave. The alternation of 'consonance' and 'dissonance' can thus proceed along a more complex trajectory. When after the resolution of the tritone in the fifth, a second step is set on the circle of fifths, we proceed from the initial 'dissonant' (triton) over a 'consonant' (fifth) to a new 'dissonant' (ninth or seventh) which can be resolved in its turn into the octave, which is a double tritone. In this new universe, fourths and fifths may be added just like tritones. In doing so, they are transformed into their opposite: addition of the 'dissonant' tritone yields the 'consonant' octave, and addition of the 'consonant' fourth and fifth yields the 'dissonant' ninth (or second). And what is more: that 'dissonant' addition of the fifth can be resolved in the 'consonant' addition of the tritone. The endless progression of the circle of fifths is curtailed in that an ever-changing segment of it is inserted in the alternation of the circle of tritones from which the progression through the circle of fifths can be resumed at ever changing places.

There is also a shorter way to obtain the alternation of 'consonance' and 'dissonance': through simply adding a new tritone to the note that resolves the initial tritone into a fourth or a fifth. That procedure yields two new intervals in our universe: addition of tritone and fourth yields a major seventh, and addition of tritone and fifth a minor ninth, intervals which, if possible, are still more 'dissonant' than the minor seventh and the major ninth, and therefore ask all the more urgently for their resolution in the octave (or the unison). In 'Quando stanno morendo', the gravitation around the unison or the octave is further narrowed in that quarter tones are introduced that seem to want to break free of the unison, only to all the more relentlessly strive for their resolution in it. These quartertones can easily be integrated in our system by conceiving them as the result of the minute deviation of the octave that results from the addition of tritone and tritone or fourth and fifth in a natural temperature.

A repeated alternation of tritone and fifth is precisely the sequence with which 'Quando stanno morendo' begins: b, f, b-flat, e, a, e-flat, (c), d. Not for nothing does the series begin with the only tritone that can be written in natural notes: b f. We can correct the row in one direction as b, f, b-flat, e, a, e-flat, a-flat, d and complete it in the other direction as f, b, f-sharp, c, g, c-sharp, g-sharp, d. The complete series reads as follows:

d / g-sharp / c-sharp / g / c / f-sharp / b / f / b-flat / e / a / e-flat / a-flat / d
--

Such circle of fifths and tritones cannot be continued ad infinitum. It is closed on the enharmonic **a-flat** and **g-sharp** and the common (d). Wherewith the danger is avoided that the tritone can be inserted in every one of the endless intervals of circle of fifths: a central segment of twelve tones is cut out of the endless progression. The segment can justifiably be called 'central' because it is arranged symmetrically around the central primeval triton f-b and because it extends to the first three flat notes and the first three sharp ones.

We could rearrange the circle of fifths and tritones in a scheme in which ' | ' indicates the tritones, ' / ' the fourths and ' \ ' the fifths:

(d)		c- sharp		c		... b...		b- flat		a		<u>a- flat</u>
	X		X		X		X		X		X	
<u>g-sharp</u>		g		f- sharp		f		e		e- flat		(d)

In the entire 'Quando stanno morendo' *all* and *only* these twelve notes are used! In that sense the tritone-fifth-circle is in the first place a kind of scale in the sense of a set of allowed notes. But it is at the same time a set of allowed intervals. Within the above scheme, whatever trajectory may be followed, on the condition that you walk over the lines and you take only one or two steps. One step over a vertical or diagonal line yields a tritone, a fourth or a fifth; two steps over one vertical and one diagonal line yields a major seventh or a minor ninth; two steps over two diagonal lines yields a minor seventh or a major ninth. Thirds and sixths are excluded, as well as diminished fourths and augmented fifths. In the entire 'Quando stanno morendo' *all* and *only* these intervals are used. Although there may arise some confusion in determining what the term 'interval' means in 'Quando stanno morendo'. When we restrict ourselves to the notes that really succeed each other without interruption, Nono seems to obey the rule strictly. But in 'Quando stanno morendo' also the interval between separated notes is heard as an interval. Here, Nono is far less consequent: even when the overwhelming majority of these 'negative intervals' belong to the set of allowed intervals, there are some scarce thirds and sixths – and also a diminished fourth and an augmented fifth, which in this universe amounts to variants of the third and the sixth. Apart from the increasing difficulty to apply the rule when it comes to 'negative intervals', especially when we are dealing with the succession of chords, as in IIIIC where there are many exceptions to the rule, we could ascribe Nono's 'inconsequence' to the flexibility that is needed when handling audible material. It suffices to listen to the effect of the first 'sin': the already mentioned (c) that comes to replace the a-flat that is to be expected in the initial sequence of 'Quando stanno morendo'.

The prescription to walk through the trajectory while taking only one or two steps, is a kind of algorithm, Nono's dynamic version of Arnold Schönberg's rigid dodecaphonic series. The algorithm makes us smoothly shift from the central tritone to the extremes of the scale, so that all the tones of the chromatic scale are covered – although Nono seems to have had a preference for the right half of the scale. To the double effect that our trajectory never adds to a full scale of seven tones and that we are as it were permanently modulating from the one fundamental (or 'emergent scale') to the next. The solution is ingenious: a perfect combination of tonality and atonality!

The solution is not only ingenious, it also has its hidden – inaudible – charms. The resolution of the tritone in the fifth, the motor that makes our tonal-atonal universe move, contains a secret message. Of old, the tritone is the interval of the devil and the fifth the divine interval. While staying at the spot with the one leg, and taking ever new steps aside with the other, the devil is permanently being transformed in god, and god in the devil. Or: how in 'Quando stanno morendo' god and the devil are dancing a lugubrious pas de deux...

Since the addition of tritone and fifth yields a ninth, the circle of tritones and fifth can also be called the circle of ninths. In view of the three times three parts of 'Quando stanno morendo', it cannot escape our attention that the number nine seems to play an important part in this work. In Italian a 'ninth' is called a 'nona', which cannot fail to remind of the name of the composer. That is why we reverently would like to rename the succession of tritone and fifth as the 'Nono-circle'.

The question remains whether Luigi Nono really has worked with such a Nono-circle. Its existence was suggested to me by the initial sequence of 'Quando stanno morendo' and its end, and also by the three tones on each of the three central parts: the descent from f, over f-sharp to c – a major seventh followed by the triton (which can also be read as a fourth that widens to a triton). But it is also possible that the 'Nono-circle' is only the underlying logic that imposes itself when two obvious rules of thumb are followed: not to use thirds and sixths (1) and to choose the most economic notation of the chromatic scale (2). Whoever does not want to repeat himself, begins as a matter of course to run through the circle of what we then have to call simply 'the circle of ninths'. In that case, our construction is a mere fancy. Or, as the Italians would phrase it: 'Se non è vero, è ben trovato' - If not true, well found!\*\*\*\*

As opposed to the audible structures analysed above, the construction of a circle of ninths is in principle besides the question. It nevertheless is important to understand how that very remarkable and unheard-of universe of Luigi Nono has been derived from his dodecaphonic and serial roots.

And it is also important because Luigi Nono's resort to such systems, cannot but belie his contention that, to him, sound is in the first place a pure phenomenon\*. Already his resort to non-musical sounds in view of non-musical audible mimesis would suffice. But even more telling is that, in 'Quando stanno morendo', the musical tones are not only a symbol for two opponents in a manicheistic universe, but also numbers structuring a mathematical universe. And what is less phenomenal than symbol and number, especially when they go hidden as a secret message or as building blocks behind the appearance of a façade?

No doubt, art is the world of appearance. But such appearance – such apparition – distinguishes itself from the phenomenon only in that the spirit previously has cut the unwholesome umbilical cord that bound us to the existing world.

## THE CITADEL OF EVIL

There is something like false appearance, though.

We already pointed to the fact that the title of 'Quando stanno morendo' consists of the first half of that verse that sounds so good in Italian and of which the second half is withheld. That second half reads: '...**gli uomini cantano**' ('...men sing'). In the context of Luigi Nono, that cannot but remind us of Arnold Schönberg's 'A survivor from Warsaw' (1947), an indictment against the former citadel of evil: Berlin. In that composition, a speaker describes how Jews are brutally rounded up by the Nazi soldiers to be counted and transported to the gas chambers. The sergeant, for whom everything is going too slowly, urges them to hurry, and beats them until they fall. Finally, as the victims are being led away, they suddenly begin to sing '*as if prearranged, the old prayer they had neglected for so many years - the forgotten creed!*'. Meant is the hymn 'Shema Yisroel'. Wherewith is demonstrated again how much, in Luigi Nono's mind, rebellion and revolution are associated with the Jewish

people. Just as the Prometeo can be understood as Luigi Nono's version of Schönberg's 'Moses und Aron', just so can his 'Quando stanno morendo' be considered as his version of 'A survivor from Warsaw'.

Although Luigi Nono does not yield to the triumphalistic pathos - sung on the tones of a dodecaphonic series - of the very Arnold Schönberg that dedicated himself to the Zionist case.

Even less did Luigi Nono yield to false comfort. For the comparison with a composition of a composer of the country that invited Luigi Nono to write his 'Quando stanno morendo' imposes itself: the third symphony of Hendryk Gorecki. Five years before the premiere of 'Quando stanno morendo', in 1977, that symphony was performed together with Arnold Schönberg's 'A survivor from Warsaw' in a Polish church, destroyed during the Second World War. Poland and the former citadel of evil...: that cannot but remind us of that Polish village Oswiecim, the German name of which be remembered for all eternity: *Auschwitz!* To those who happened to disappear there, Gorecki's symphony is dedicated. Just like to Luigi Nono, instruments seem not to have sufficed to Hendryk Gorecki: they both could not but let the voice of a soprano rise above the instruments. But for mentioned suffering, no new musical universe has been created here. Rather did Gorecki draw his inspiration from Gregorian song and folklore – equally, albeit from the opposite camp: '*an old prayer, a forgotten creed!*' And that cannot fail to have its bearings on musical language!

With Luigi Nono – at least in his music – the wounds stay open, as they will continue to do for a long time to come. And for that pain, no notes had yet been found.

Despite Adorno, singing might be more akin to groaning than to weeping....

## GLI UOMINI CANTANO...

We, who happen to live in he shadows of still another citadel of evil – meant is: the real one – may conclude in a lower key with the poem of Boris Pasternak, the last poem of the seven which we are left to render:

*But,  
After a while,  
We will come to the light.  
One day or the next,  
The sun of dusk  
Will call us to the window,  
We will randomly animate  
Unusual sunsets,  
We will tremble  
At the sight of chimneys,  
We will shed light on the day,  
As on the prodigal son...*

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['Luigi Nono's Prometeo: a revolutionary's swansong'](#)  
[Györgi Ligeti: ode to the discrepancy between word and deed](#)  
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## FOOTNOTES

\* See ['Luigi Nono's Prometeo: a revolutionary's swansong'](#)

\*\* See ['Musical space and its inhabitants'](#).

\*\*\* See 'Mimesis and semiosis', soon on this website.

\*\*\*\* That Nono has been experimenting with such procedures is apparent from his sketch for a 'scala enigmatica' for the Prometeo. That scale is built around two added tritones, and Nono indicates also the fourths and the fifths (see Sallis). Jürg Stenzl also points to symmetries in 'Hay que caminar'. These can be frequently found in 'Quando stanno morendo' (see the first eight notes, or the construction with b-flat, a-flat, e-flat and f-sharp, c-sharp, g-sharp in the part of the cello in IIIB). Also the late Liszt used to be crazy about such symmetries.

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