

## HELICOPTER STRING QUARTET

(transcribed and translated by Ian Stuart)

[counting of click-track which musicians hear while playing]

[musicians counting, as part of score]

*Stockhausen*: I have no philosophy as such, but for the whole of my life, I have dreamt that I could fly, and how it feels to fly. In many dreams I am able to leave the Earth entirely.

There is an oft-recurring dream in which I find myself in a large cellar, surrounded by lots of people dressed in tail coats, all with a glass of something in their hand. I know I have the ability to make them all fall silent, so – as they have not been paying attention to me – I rise onto the tips of my toes and take off. In an instant, I am flying high with my back to the ceiling and in the next, I swoop down till my chest brushes the floor and then soar up again, everyone gasping in astonishment as I then bank in front of a wall with the most elegant curve. In the dream everyone is speechless, because I can fly even though I am a human being. I also dream that I take off from high mountains. Now this is common enough, but it has been in my music from the very outset until today. When I am in the studio, I close my eyes, the controls in my hands, a sound conception already in my head, and I move the sounds around the speakers, just as a bird might fly. All this is no philosophy but a lifelong dream that music can fly because I can fly.

[musicians counting, as part of score]

My dear Jan<sup>1</sup>. You managed to get here, and that with having so much work to do. Thank you very, very much...

Sign (Dutch) in the studio that the camera dwells on briefly:

“ANGEL MUSIC”

*Technician*<sup>2</sup>: Good morning.

*Stockhausen*: It is pleasantly cool here.

Since my first four-channel works – SONG OF THE YOUTHS and GRUPPEN *for three orchestras*, I have composed the musical space around the audience so that sounds come from all directions and rotate around the listeners. In GRUPPEN *for three orchestras*, there is one orchestra situated at the front, one orchestra to the left and one to the right. In CARRÉ *for four orchestras and four choirs*, the four conductors stand with their backs to each of the walls, and the audience sits in circular rows facing into the centre so that by turning in their seats, they have the choirs and orchestras in a 270 degree arc, and hear music from all around. KONTAKTE is electronic music with piano and percussion. The piano and percussion are on the stage whilst the electronic music KONTAKTE is projected from a circle of loudspeakers surrounding the audience, and this practice has continued to develop. Just before the HELICOPTER STRING QUARTET, I composed works – for example INVASION – in which music actually comes from outside the auditorium. Meanwhile, inside the hall, octophonic music is projected. In octophonic projection there is a cube of speakers enclosing the audience: one square of speakers 14 metres above them and another square at the same level as they are seated. The sounds move simultaneously at different speeds in every diagonal direction, and rotate in spirals or in tilted circles. In addition, there are musicians who move through the audience – loudspeakers attached to their bodies – from left to right, then right to left and finally from the back to the front.

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1 Jan van Vlijmen, director of the *Holland Festival*, who made the world première possible.

2 Paul Jeukendrup, one of the sound technicians.

This work – *INVASION* – which lasts 70 minutes, is the first one to use space outside the auditorium as musical space.

And now, there is this piece that literally flies in the air. Increasingly, I would like to use not only the space of a particular place, town or country, but of the whole planet, using visual and acoustic relay, as well as the space we can access in flying machines. This leads to the understanding that music can come from any place that musicians can be and that through technology, that space can be brought into our own space.

[English passages]

*Is this the first string quartet you have ever composed?*

*Stockhausen:* Yes, and probably the last! It is just that I have never written anything for a classical formation. It is, actually, an eighteenth century prototype, along with solo concertos and symphonies which, in their composition, performance practice and particularly in their form, characterise a definite epoch. Although I am a pianist, I have never written a piano concerto and declined all requests for violin concertos, piano concertos, symphonies in any case, and string quartets. But this string quartet is the result of a dream. I was sent the commission, and said, “Never!” but then I dreamed it and everything changed, because it was conceived with the notion that all four musicians were flying in the air in a quite different performance space. The people in the auditorium can but imagine that the four of them are **actually** up in flying machines. In the future, it might be in machines that can travel much further away.

[English passages]

This must be technically as rehearsed as though it were a flight to the moon. Do not fool yourselves into thinking that, on the 25th, all twelve radio mikes will work if we have not rehearsed with them. That would be extremely dangerous and result in total disgrace, just as if a space rocket had not taken off. We must be able to get to Deelen<sup>1</sup>, or wherever else we have to go, and test the equipment in a helicopter. If there is not the money to test in all four at once, then we must use one and swap the equipment around. They even tell me that the helicopters at Deelen are a different model than those which are to be used in the performance. I said, “Take care! If the turbines are too loud, all we are going to hear is a *Bzzzzz* and not the rotor blades.”

In the dream, I saw the musicians playing, and – in my mind, as though with multiple vision – I could keep them all in view at the same time, even though they were in different helicopters. Similarly, on the four monitor screens in the hall, or rather columns of screens, as well as in the public square, where there are also stacks of screens, you can see the image of each performer multiplied, as is sometimes done in big shop windows. At the 1970 World Fair, I remember seeing large numbers of screens stacked on top of each other. Because all the images are identical, you get a quite different effect and can actually see more clearly what is happening. It leaves a very clear impression. I never told anyone about my dream. It seemed so bizarre to me that I kept it to myself, not mentioning it in case people would consider me mad – not even to those I live with, which normally I always do.

[English passages]

The musicians wear headphones and clearly hear, “10, 9, 8, 7, 6, 5, 4, 3, 2, 1, GO” and then the click-track starts and they play for 18 minutes – actually to be precise – 18 minutes and 36 seconds. They play synchronously as they all hear a click-track, and then comes the descent which lasts two or three minutes. This is composed in a similar way to the descent of the helicopters. Here you can see the top line, the second, third and fourth. You see that each of the musicians is shown in a different colour and that is for a special reason. The whole score is drawn in four colours – I will show you this page, for example. There you see the first violin, second violin, the first in red, the second in blue. The viola is in green and the ‘cello in orange.

1 Home base of the *Grashoppers* helicopter stunt team (of the Netherlands Royal Air Force) which participated in the world première of the HELICOPTER STRING QUARTET.

The coloured lines cross from one staff to another and that is what they play and how I composed it. Here you see the “flight paths” of the notes, so to speak, as they slide in glissando through the “airspace” of different octaves. Down here you see the disentangled lines where each musician stays on his own staff, but if you analyse this up here you will find the same as down here.

[English passages]

I want to link space with the orchestral musician in such a way that his role is no longer the traditional one, where there is a violinist on a chair in front of a music stand; instead, there is a violin player, but the acoustic in which he plays is in a completely different space and has nothing whatever to do with the concert hall. No one knows at present how to achieve this. Ideally, of course, the roof of the concert hall would open and, looking up into the starry night sky, you would suddenly see four helicopters circling overhead, and you would be informed by the president in this theatre piece that there is a string quartet up there.

And then, one day the following happened. I was working daily at the *WDR Studio for Electronic Music* in Cologne. In the studio there is a window that is 10 metres wide, facing east. Outside, about 150 yards away, the Rhine flows by, and on its banks are some buildings connected with the port. Suddenly, Kathinka Pasveer, who was with me in the studio along with Suzanne Stephens and two technicians, said, “Look over there!” Flying into view from the left appeared a green helicopter, closely followed by a second, third and fourth in close sequence. They flew right past the window out over the Rhine and out of view to the right. I said, “That is a sign from heaven. No one is going to explain that away to me.” The two of them were exclaiming, “Just look at that! Incredible! Exactly four of them!” That was an extra-ordinary, or how shall I put it: not an irrational, but a supra-rational confirmation that something was afoot. But we still cannot explain something like that.

I lay awake half of last night pondering what other possibilities might exist for this displacement of musicians in space and the craziest ideas presented themselves to me. For example, ever since I was a child I have loved bees, and my uncle had many hives. I find the sound of lots of bees buzzing together quite magical. Above all, it never stays the same. I imagined a musician sitting in a large wire basket full of bees, but then I thought, he cannot sit amongst the bees because they will sting his hands and he will not be able to play. But then: last night in my dream, there was a technician with a special spray and he sprayed the musician’s hands so that he would not be stung, and could carry on playing. I have had many “retrospective” dreams like this on account of the HELICOPTER STRING QUARTET that we are going to rehearse today.

Increasingly often I dream of ways of incorporating into my music sound events that you will not find in instrumental, vocal nor electronic music.

1... 2... 4... 5... 9... 12... good! 12, 15, 12, 9 are the totals of the digits in the helicopter numbers: 390, 465, 453, 324. If you add up the digits of those numbers you get 12, 15, 12, 9. That’s wonderful: 4 to 5 to 4 to 3.

Good morning, Bart<sup>1</sup>.

*Bart Mesman*: Good morning, Stockhausen.

*Stockhausen*: How are you?

*Bart Mesman*: Fine.

*Stockhausen*: That’s good. It all looks marvellous.

[speaks in English to the helicopter pilots]

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1 Bart Mesman, one of the sound technicians.

2 Stephan Müller, photographer.

Good morning, Stefan<sup>1</sup>. I must explain to you what is going on. Come over here. The idea is as follows. There is not much more time left before they take off. In each helicopter there is a video camera. Over there sits the musician with his music stand. These are all very important pieces of equipment. Every musician wears tight-fitting closed headphones which you can see over there. Through these he can hear a transmitted click-track that keeps all four musicians in time. He will also hear what feeds through this small mixing desk, which is the next important piece of equipment. He hears his own voice as well as the sound of his instrument picked up by the small microphone mounted on his instrument. A technician, who is sitting behind the pilot and facing the musician, controls the balance using the controls on the desk. He/she adjusts the mix when the musician says he needs to hear more of his instrument or more of his voice. What the musician hears on his headphones I also pick up on my mixing desk in the concert hall. So, that is important... that is also important. His headphones are important, as is the contact mike mounted on his instrument which you cannot see yet, of course. Next thing: this is the microphone which was chosen – after many experiments – to pick up the sound of the rotor blades. It was tested there, then here, then there and finally fixed here. That is the best position we found.

For forty-five years, I have been trying more and more to incorporate everything audible in life into my music. It is a dream of mine – to turn the whole world into music. Anyway, it has got to work.

Good morning Oliver (Last). They let you in all right? You were on the list. You look pale – have you had a touch of something? A cold? Look! The sun is up there!

[English passages]

Up here you see four staves and underneath four more staves. Written in black notes in the upper ones, you see what I call the formulas or the beginning part of the formulas, a so-called “limb.” I will sing what is written here from 0”–23.8” (metronome mark 50.5), but faster than it should be and transposed down for my voice... [sings]. That is the top melody. The second goes... [sings] and the third one... [sings]. That is how the melodies begin. I then decided to do the following. Starting from the first note in the top melody, I drew a line in red to a small “limb” in the third melody and then back to the first one, then to a note in the second, back to the first, then down to the second melody again, and so on. The second colour is blue. I started with the first note in the second melody, then the line travels to a note in the first one, then to two notes in the third melody, and then to the top one, to the second, back to the top, to the second, to the top, to the second, to the top, then to the second melody again. The third part is marked in green and travels from the first note of the third melody to the second note of the top melody, comes back to its own melody, goes up to the top again etc. That is the green line. The fourth part is marked in orange and travels to the notes that I have left open. It has no formula of its own, but traces notes in the other three melodies. That then is the orange line.

[English passages]

It is a bit like a modern toy you have been given for Christmas and you have no idea whether it works – it crackles and hisses. Poor Graham is still playing!

[English passages]

They had to learn – and this was the main thing – how the three melodies or formulas should be prepared and listened to: each musician had to first understand how his part fit into the whole polyphonic weave. That took quite a while. Now they have reached the point that they know exactly who is taking over their line and they make the relevant crescendos and accelerandos in the tremolos. The tremolos are now very differentiated from each other where initially they all sounded the same... and now they go... the latter with accelerando and ritardando in each note!

I have to get used to the fact that the timbres and rhythms of the rotor blades are constantly mixing with those of the instruments, and today I learnt something that I had not foreseen. From time to time, improvising, I can raise the signal level of the four sets of rotor blades without swamping the instruments at all. It is

wonderful when you hear the waves of sound of the rotor blade rhythms through the speaker columns, rising and then sinking into the background again, making them sound quite independent. You can literally hear the sounds of flying.

*How does the result compare with your original idea or vision?*

*Stockhausen:* That is a difficult question. Everything has suddenly become very terrestrial again. You notice all the monitor screens. I am completely absorbed with operating the mixing desk and that detracts from the whole point of all this. I cannot be as free as when I floated in my dream when I myself had no body and could even look right through the helicopter. It is very strange that in dreams things do not always appear solid but rather transparent. At the same time, I could look down at the Earth and see and hear lots of tiny people standing in crowds. All that, of course, is gone and now I am in a hall with black curtains and many columns of T.V. screens and, as I said, lots of technical equipment which is necessary to make this project possible. You must not try to really pin me down as to what I think – it has to do with fantasy and its technical realisation. The technical realisation becomes the most important thing.

[English passages]

The musicians should go into the helicopters and call...

It is symbolic of my musical work since 45 years that it is the unheard and the unplayed that is the most fascinating in my life. With every new work, I wait until I sense something in my inner vision, discover something that I have never heard or indeed something that could not be played: new instruments, new sounds, completely new combinations of forms, new spaces, new languages. I have just finished working on a new composition for choir that took me four months – WORLD PARLIAMENT – in which the choir sings in a completely invented language and in many invented dialects. The singers had never had to articulate these syllables before. It is an absolutely new language that I developed for this piece. It will always be thus in my life. To begin something new, I await – in myself and from the tools at my disposal – something that I have never heard before, and which has neither been played nor imagined.

Through music, my spirit continues to develop through the invention and discovery of new forms and a continuing expansion of my acoustic space and of my ability to hear.

I can hear ever more connections, layers, relationships and can really perceive more through my ears – and the eyes often help the ears. This is a goal which has no end. I would really like to have a body capable of far more than my own and my hope is that one day, I will have a spiritual body that is much more perceptive than this one with its human senses.