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STOCKHAUSEN´S HELICOPTER STRING QUARTET AND THE CHALLENGE OF CONCEPTUAL MUSIC

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1. Introduction

The *Helicopter String Quartet* (1993) by German composer Karlheinz Stockhausen (1928–2007) is one of the most notorious works of classical music of the past decades. It is exceptionally megalomaniac and laborious to perform, and from an everyday common-sense point of view it makes absolutely no sense whatsoever. Accordingly, it is guaranteed extensive media coverage and popularity wherever it is performed, or even if a performance is merely planned.[1]

The work is scored, if one can use that term, for a traditional string quartet, four helicopters each with a pilot and a sound technician, audio and video communications equipment, a sound engineer (or 'sound projectionist') and a moderator (optional). Lasting half an hour, the work features the four musicians playing the music each in their own helicopter. In the air. In each helicopter there are three microphones, a video camera and a sound technician managing the balance between the sound of the instrument, the noise of the helicopter and the speaking voice of the musician. The audio and video from each helicopter are transmitted to a central location ('ground central'), where the audience is gathered among towers of speakers and video screens and where the moderator talks them through the piece as the sound engineer controls the balance. Before the musicians take off, the moderator presents them to the audience and describes the technical execution of the piece. After they land, the moderator presents the pilots and leads a question-and-answer session with the audience not unlike the public debriefings of NASA astronauts.

The work was premiered at the Holland Festival for the performing arts in Amsterdam on 26 June 1995. The performers were the Arditti Quartet and the Grasshoppers aerobatic team of the Royal Dutch Air Force. Stockhausen himself was the sound engineer and the moderator.[2]

Dutch film director Frank Scheffer made a documentary of the premiere and its preparations, also titled *Helicopter String Quartet* (Netherlands & Germany 1995). It shows the

members of the quartet trooping towards their helicopters, each wearing a different coloured shirt according to the symbolism in the score. In the meantime, the composer explains the content of the piece, including the significance of the colours of the shirts. Then the helicopters take off and fly out over Amsterdam harbour.

Strapped into their seats, the musicians saw away manically at their instruments. The texture, consisting of shifting tremolo lines, blends with the noise of the helicopter rotors, and the basic sound of the music consists of a loud carpet of noise made up of buzzing lines sliding up and down.[3] The string players do not hear each other; all they hear is a click track in their headphones. At times, one or another of them screams a number into the microphone attached to his/her head, with elongation and vibration in imitation of the helicopter's sound; these indicate cues in the music (but are only heard by the sound engineer and the audience).[4]

2. Confusion and disbelief

It is a bizarre spectacle. A string quartet playing in flying helicopters? Really? The soundtrack comes across as a boring and monotonously unpleasant noise, which further fuels disbelief: all this effort for a musical texture like that?

At the same time, there is something utterly fascinating about the documentary, probably because the concept of the work is so surreal as to be funny. And ultimately it is the *idea* behind the piece that attracts interest rather than what it sounds like. This reveals that the work has a strong conceptual music dimension.

It is impossible to pigeon-hole the work neatly into existing conceptual classes or affective categories. It does not embody the thing-ness that is conventionally expected of performances of classical music. On the contrary, it seems to require the listener to make a considerable effort to understand it. The importance of sensory perception seems to diminish in reception of the work – or at least to differ considerably from the types of perception generally associated with music – while the demand for cogitation and intellectual analysis grows exponentially.[5] What is this all about? Is this music? Is this work worth performing in the first place? Does a composition like this make any sense at all, and if so, where might that sense be found? What *is* music, anyway?

We approach these questions as being crucial for the content of Stockhausen's *Helicopter String Quartet*. In other words, we discuss the work from the 'conceptual music' perspective.[6] Our approach is based above all on a musicological translation of the theory of conceptual art developed in visual arts scholarship, i.e. the application of that theory to art consisting of sound. Our analysis is based on the score of the work including its written instructions, the composer's other commentaries on the work, the recording made by the Arditti Quartet and the documentary

directed by Scheffer.[7] We also made use of various media materials from performances of the work: descriptions, reviews, still photos and audiovisual recordings of performances.

The following is a discussion of the ways in which the *Helicopter String Quartet* challenges our thinking about music and the world. We first discuss the concept of conceptual music and then a feature characteristic of conceptual music in general and this work of Stockhausen's in particular that we call a *manifestation of a concept*. This means presenting ideas using concrete symbols. In the work at hand, the key concepts being manifested are the concepts of air, sound direction, the world, the cosmos and light. Also, the transgressive approach of the work to the string quartet tradition prompts reflection on the relationship of the work to (chamber) music and to music as a metaphor for the miraculous and the ineffable. Finally, we discuss the *Helicopter String Quartet* as music that presents as a metaphor of itself and explore conceptuality as a feature of this music.

3. Conceptual music, part 1

There is not such a great discourse or tradition in conceptual music as there is in conceptual art in the sphere of visual arts. Conceptual music is not a term generally used in musicological scholarship, and there is no genre or canon of conceptual music works.[8] Nevertheless, the term has been used in a variety of musical contexts.[9] As early as in the beginning of the 20th century, the notion of 'thought and concept music' (German: *Gedanken- und Begriffsmusik*) was assigned in the distinction between absolute and programmatic music to compositions such as tone poems that had a predetermined programmatic conceptual content.[10] On the other hand, absolute music has also been deemed conceptual: in any music where a distinction may be made between the music written on the page and the performance, it is always possible to claim that any performance is only a more or less imperfect manifestation of the idea inscribed in the score or existing in the composer's mind.[11]

Most commonly, however, the term 'conceptual music' has been used to describe compositions that are akin to an installation or performance art and are based on a simple, unusual idea, as with *Poème symphonique* (1962) by György Ligeti (1923–2006), where 100 metronomes set at different speeds are put in motion and gradually come to a stop at their own pace.[12] The key feature here is that the music is experimental and unusual in a way that challenges conventional ideas about music and composition. Many of the works created by John Cage, La Monte Young, Nam June Paik, Yoko Ono and other *happening* artists and experimental musicians in New York in the 1960s – and, in retrospect, the musical ideas of Marcel Duchamp – may be considered early examples of conceptual music in that sense. Indeed, a parallel may be drawn between them and the early type of conceptual art that emerged in the USA in the 1960s, where

the central aim was to liberate art from its materialist chains and to focus instead on ideas, thoughts and concepts and the role of the recipient in comprehending those ideas, thoughts and concepts. At the same time, conceptual art questioned the very concept of art and shook up the relationship of artistic functions to society and culture.

Yet the role of music in the conceptual art movement remained a minor one. Even the experimental and avant-garde forms of music dissociating themselves from conventional score-based music, such as Pierre Schaeffer's acousmatic music or John Cage's emancipation of noise, tended to focus on the separate and independent nature of sound, sidestepping the key question in conceptual art: the question about the relationship between art and reality, the world of sign systems and representation.[13] It is indicative that when Fluxus artist Henry Flynt first defined conceptual art in *Essay: Concept Art* (1961), he used music as an analogy or a counter-example instead of emphasising its conceptual art potential.[14] Early conceptual art emphasised the importance of language (text) as a key element in conceptual art, and obviously Flynt, by noting for instance that concepts are material for conceptual art just like sound is material for music, felt that the sign system of music was too far removed from language to be capable of conceptual communication.

Musicologically speaking the approach of this article draws from cultural musicological study of recent decades according to which music is never devoid of meaning or content. Accordingly, the idea of music as abstract or absolute art by its essence has become untenable, and the term "extra-musical" (as opposed to inherently "musical") is no longer valid. All music has content, meaning, and cultural significance, and the idea of music as something abstract, absolute or "pure" is merely one possible form of its socio-cultural signification. Music communicates just like all other cultural constructs, and as an art form in its own right it has its own discursive practices and therefore its own conceptual art potential.

It is precisely music's non-linguistic meaningfulness that proves to be crucial for the conceptual musical argument of this article. Besides and in connection to cultural musicological studies, another important starting point for this article is the fact that, in recent years, the term 'conceptual music' has come to be used in a new way, more loosely defined than the above, referring to a shift in the aesthetics of content in classical music and sound art in the 2000s.[15] This 'neo-conceptuality' departs from the constructivist and modernist traditions of composition aesthetics and concert practices that focus on the structures of music and are score-based; instead, it aims to respond to the challenges of post-modern, technology-driven and media-infused society, culture and art. What is essential are the ideas that music or sound art are used to convey and the artistry of performance that freely combines various forms of art and media. As a result, the boundaries between music and sound art, between music and other arts, and between music and other culture have become more porous.

4. Conceptual music, part 2

In the present article, developing further both of the above definitions of the term of 'conceptual music' – music as a part of traditional conceptual art, and the 'neo-conceptual' shift in the aesthetics of content of music – we discuss conceptual music not so much as a genre of music, a form of composition or an aesthetic approach but instead as the emphatically *philosophical* dimension of a work of music or sound. In this sense, conceptual music highlights in a particular way what philosopher Andrew Bowie said about the philosophical potential of music: music is able to present examples of conceptually confusing phenomena and situations that force us to re-examine critically assumptions that we have regarded as established truths.[16]

With a piece of music with a strong conceptual dimension, the focus is not on the fine-tuned observation and emotional perception of the composition itself and its features but instead on concepts and intellectual insights. The most important material in a conceptual music piece is not sound but an unusual and surprising idea, thought, concept or question. Indeed, the planning or creation of the work – or even just the idea of the work – is more important than actually executing a performance of the work, which is a secondary consideration and, in some cases, would be impossible. Or insane. The composer's principal intention may be simply to spark debate in the media. We should also note that although a distinction between conceptual art and conceptual music does not always need to be made, conceptual music always somehow involves problematising the concept of music, the concept of art in sound. Therefore, a musical work with a focus on intellectual insights isn't an example of conceptual music per se unless the focus is coexistent in the work with a focus on challenging the commonplace beliefs about the very nature of music. In fact, the belief in the "abstractness" of music as an art form and the belief in something distinctly "extra-musical" (as opposed to "musical") are among the very convictions a conceptual musical composition might aim to challenge.

Conceptual music works are not so much about the finished musical object or a performance thereof as they are about the process of creation. They focus the recipient's attention on the concept of music and the chain of events that leads to the emergence of music. Conceptual music poses the question: what and when is music, and on what terms? In drawing our attention to music as art and the terms and conditions under which it is created and received, conceptual music prompts us to meditate on how we perceive the world and its reality in the first place. In other words, conceptual music, in questioning the essence of music, philosophically explores our notions of music, composing, art and reality.

A conceptual music work can consist of any concrete materials, information related to the work and documentation of the creative process. It is usually experimental by nature and often cast in a mixed-media guise: installations, soundscape composing, instrumental theatre,

performance art, and so on.[17] The work often makes use of 'ready-made' materials, such as rubbish. Or helicopters. The work may involve audience participation, or its execution may be outsourced to craftsmen, a commercial enterprise or the military.

A conceptual music work often includes documentation of the underlying idea of the work and its creative process: audio, video, still images and written materials. The *Helicopter String Quartet* is a case in point. The fact that a performance of the work has a voiceover explaining what is going on distances the work from the notion of music as a self-contained entity or object and brings its focus closer to the process of music, where reception plays a major role.[18] Stockhausen prepared a large volume of other information on the work, such as various writings. His own company engaged Scheffer, known for his documentaries, to produce a 77-minute film detailing the preparations and rehearsals for the premiere and also the performance itself.[19] Stockhausen himself talks a lot in the film about the work, its planning and other thoughts. The musicians performing in the premiere also describe their relationship to the work. The printed score of the work contains a wealth of information, including an explanation and performance instructions that run to twenty pages.

5. Manifestations of concepts

In our view, Stockhausen's *Helicopter String Quartet* represents a kind of conceptual music where 'manifestations of concepts' and symbolic presentation (allegory) are significant features.[20] What this means is expressing a surprising idea, thought, concept or question in an unusual, concrete and material way. Ideas become literal – and at the same time metaphorical – performances that confuse the mind and force it to think actively. Conceptual music, like philosophy, is a mode of exploring reality. But here concepts are replaced by concrete sounds, images, gestures and functions moving in space.[21]

Above all, the *Helicopter String Quartet* evokes, both literally and metaphorically, the issue of music being a material transmitted through the air and a spatial art form whose principal parameter is the direction of the sound. We could go so far as to say that in all his works Stockhausen explored the essence of music (sound), i.e. the question of what music (sound) is from a physical perspective and what it could mean from a philosophical or spiritual perspective. In all of Stockhausen's works, acoustics and sound analysis (science, technology) encounter a contemplation of the deeper dimensions of music (art, mysticism).[22] Indeed, Stockhausen's compositions are (whatever else they may be) always a contemplation of music as music. Yet in contrast to mainstream post-Second-World-War modernism – characterised by a formalist approach – Stockhausen's works are never mere composition-technique comments on earlier composition-technique solutions. Rather, they are conceptual studies and metaphors of music, and in order to

function as such they require the listener to step at least temporarily outside the conventional bounds of music in order to be able to take an abstract or comparative perspective on music.[23]

6. Air, direction, the universe and everything

Stockhausen's *Helicopter String Quartet* may be seen as a conceptual manifestation of the transmitting of music by air, i.e. a literal representation of the physical definition of music. The flying musicians concretely demonstrate the material nature of music. Music consists of vibrations in the air: in physical terms, sound is made by vibrations in the instrument, transmitted through the air (the medium).[24] The helicopters carrying the musicians – which are themselves sources of sound, i.e. instruments – may be seen as a manifestation of what is perhaps the most influential definition of music given in music aesthetics: 'tonally moving forms' (German: *Tönend bewegte Formen*).[25]

At the same time, the work expresses – on quite a megalomaniac scale – the spatial notion of music, i.e. that music operates in three dimensions and has direction. Music is sound transmitted through the air; it has a direction and a spatial shape. The musicians being moved around in the air according to the score demonstrate the notion of the *direction of sound* as a fundamental parameter of music.

Stockhausen's way of working with music as space and direction was largely derived from the aesthetics of electroacoustic (taped) music. This may be seen in the fact that the musical texture in the *Helicopter String Quartet* is based on noisy tremolos and glissandos on the string instruments and the similar sounds generated by the rotor blades. The way in which the string instruments mimic the rising and falling pitch of the rotor noise is at its most apparent when the helicopters take off and land. There is no boundary between noise and musical sound: the helicopters and string instruments reflect and reinforce one another. Watching Scheffer's film generates a fascinating synchronisation of image and sound, creating the impression that it is the string instruments that are the actual motors of the helicopters, raising them aloft with their frantic buzzing.

In the *Helicopter String Quartet*, the composer directs the music (the sounds made by the string players and the helicopters) into the directions he wants. The space taken up by the work is considerably larger than in any of the composer's earlier works. Because sound propagates everywhere in a space, the fact that the helicopters in the *Helicopter String Quartet* are flying in the open air means that their sound will in theory propagate to everywhere, all around the world. The space taken up by the work is determined by the distance at which the helicopters are audible; but although sound waves are attenuated, they may be considered notionally to continue their spreading beyond the threshold of audibility, rendering the entire atmosphere of

the Earth, and the universe beyond, a part of Stockhausen's composition – as indeed the composer himself indicates in Scheffer's documentary. The music of the work embraces the world.

Looking at the work in this way reflects a cosmological understanding of music that connects music to the fundamental order of the universe, the harmony of the spheres. The notion of music having an underlying cosmic origin comes to us from the cosmic harmony theory of Antiquity, to which the Judeo-Christian tradition added the concept of a hidden divinity behind the audible number relations of the universe. However, the Pythagoreans insisted that we cannot hear this all-pervasive cosmic music because we are so used to it that we do not notice it at all – just like we never notice the air that we breathe.[26]

The music of the *Helicopter String Quartet* sounding in the sky and conveyed down to earth may be regarded as a representation of the harmony of the spheres, a sort of cosmic white noise where all frequencies are present simultaneously.[27] In this sense, the work is in effect an Aeolian harp resonating to the respiration of the world – of existence itself.[28] This prompts an association to acoustic ecology and the principal thesis of experimental music: that music can be anything at all.[29]

7. Inaudible music

Stockhausen also manifests the imperceptible – inaudible – cosmic music in his score. The printed score carries two parallel systems for describing the music: in both, the musical line played by each instrument can be followed through colour-coded symbolism (red for the 1st violin, blue for the 2nd violin, green for the viola and orange for the cello).[30]

The lower system of the score comprises an ordinary musical score with a staff for each instrument. Above it is another system that shows how the musical lines intersect in pitch as the work progresses. This system, graphically representing the pitch trajectories of the instrument parts, illustrates how the texture of intersecting lines generates (ghost) melodies, which the composer stressed as an important element. These are melodies that are not played by any individual musician; they are formed by pitches in the intersecting musical lines, as the composer indicated. Sometimes such a 'melody' consists of a single pitch. For instance, after the opening section *Aufstieg* (Takeoff), the section *Flug* (Flight) opens with a ghost melody consisting of 23 repetitions of the pitch A4 where none of the musicians plays any of the two repetitions consecutively, each note being played on one of the four instruments in turn.

The upper system of the score illustrates the ghost melodies that do not exist as independent entities yet are very real and audible.[31] This upper system may in fact be a better representation of the listener's perception of the work than the conventionally notated lower system.[32]

We may thus describe the upper system as manifesting the 'miracle' of music, the end result in sound that would be difficult if not impossible to perceive in a conventionally notated score.

Moreover, the dual-system score also serves the purpose of questioning what actually is a score and what its relationship is to the work. Is the score a performance instruction or a representation of the auditory result of its performance? Which of the systems in the score of the *Helicopter String Quartet* is 'more' music?

8. World and cosmos: environmental music

Stockhausen's work creates a world – a world view – not only aurally but also visually. It is essential for the video projections used in performance that the listeners/viewers perceive how the string players see the world above, below and in front of them through the windows of the helicopter. These images of the world as seen by the performers is both literally and metaphorically a 'world view'. The players render the world in sound, and this serves as a conduit to the totality of existence, in keeping with the theory of the harmony of the spheres. Also, if we apply the philosophy of Martin Heidegger, we may observe that this view demonstrates how in the modern era the world has become an image determined by a technological subject (here, the helicopter and the musician) and instead of its recipients human beings are now its representants.[33]

The *Helicopter String Quartet* expands the notion of the spatial qualities of music to the maximum, as it seeks to fill the entire world. This may be seen as the logical conclusion of the conception manifested by Stockhausen in his output since the 1950s, that music is an all-encompassing global structure that connects everything that exists like a network of rhizomes and is thus a metaphor for life itself.[34] Stockhausen used to talk of his music as not only music in space but music *of* space, cosmic music.

According to the instructions in the score, ground central should be located indoors in an auditorium, but in some performances, particularly those given since the composer's death, audiences have been given the option of being either indoors or outdoors. In fact, in Scheffer's documentary the composer himself implies that it would be in keeping with the spirit of the work if the roof of ground central were to be opened and the audience were to see the helicopters in the sky above them, preferably a starry sky. To paraphrase anthropologist Tim Ingold, whose thinking was influenced by Heidegger: if witnessed under the open sky, the work underlines the concept of the world as a concave spherical object in the centre of which the human being is and which is in diametrical contrast to the concept of the world as a convex spherical object that can only be understood from an outside point of view.[35]

Notwithstanding the above, a cosmic connection can ultimately only be sensed through a specific location and a relationship to that location. Accordingly, the *Helicopter String Quartet*

may be regarded as environmental music and a landscape composition that leverages a specific physical outdoor environment as its own material, at once the performance space, the object of depiction and the source of experientiality.[36] Music, being an art based on vibrations of the air and of the human body and comprehensively addressing space, time, body and emotions, has special potential for enhancing environmental awareness among listeners and prompting a sense of ecological affinity with the environment.[37]

Performing the work in different cities, i.e. different environments (for instance in Paris 2013, Rome 2009 and Venice 2013), emphasises the environmental and landscape elements of the work and how it connects to local culture. In Paris, it was particularly important to have the helicopters fly a long way along the Seine River.[38] In Salzburg (2003) and Valais (2015), the Alpine scenery was of course in a prominent role. Locating ground central in an outdoor location, as at the Place du Pont-Neuf in Paris for the performance by the Elysian Quartet in 2013, emphasises the cosmic and environmental aspects of the work but also its communal and cultural-history significance, since this explicitly links the performance to a specific location with its own layers of socio-cultural and historical meaning.

For the audience to be outdoors rather than in an auditorium emphasises the connection between the audience and the environment, because it links the listener to the environment both concretely and metaphorically.[39] Instead of an abstract notion of being one with the cosmos, the listener is able to blend into and identify with a location or landscape that is familiar or otherwise has significance and to which the listener has historical, social and personal ties, prompting a contemplation of those ties and his or her relationship to the environment in a new way.[40]

Because the *Helicopter String Quartet* is noisy, loud, repetitive and spatial, it is very much haptic by nature: it is music that is as much felt as heard.[41] This too emphasises the link between listener and environment. The noise and the profuse use of technology point to the constructed nature of our world view and relationship to the environment, and more generally of the ways in which we observe and inhabit the world, as noted above. While these elements may help the listener explore the modern world view, they may also have the effect of alienating the listener from the environment.[42]

9. Helicopters into the light

Rendering the air-transmitted nature of music tangible by having helicopters make music in the sky may further be identified with the notion of music as a manifestation of the miraculous and the ineffable, or transcendence.[43] The music literally flies away, as the composer says in Scheffer's documentary. Art historian Simon Shaw-Miller wrote that in the *Helicopter String Quartet* the music is concretely elevated to transcendence and then brought back down to

earth.[44] Flying may here be seen as a concrete representation of the transcendence of art – reaching for the sky or for alternate realities – or as a metaphor for spiritual striving.

Art scholar Ryan Bishop notes that the technology employed in the work has the purpose of liberating music from all things terrestrial. One might even suggest that technology used in this way beyond the realm of technology and science facilitates the revealing of the truth in Heideggerian terms: it shows the technological mindset as comprehension of existence.[45]

Although Stockhausen wrote the *Helicopter String Quartet* as an independent work (he was commissioned to write a string quartet for the Salzburg Festival in 1994), he also cast it as a scene in his opera heptalogy *Sieben Tagen aus Licht* (usually referred to as *Licht*). This gigantic 29-hour cycle, intended to be performed over seven evenings, was Stockhausen's principal occupation from the 1970s up to the 2000s. It is no exaggeration to say that from 1977 until the end of his life Stockhausen was working on only two compositions, each of huge proportions: *Licht* and *Klang* (Sound).[46] The *Helicopter String Quartet* is Act III of the Wednesday instalment of the opera cycle, *Mittwoch aus Licht* (1998).[47]

Licht is about the eternal struggle between different ways of understanding reality in a cyclical structure that ideally has no beginning or end: the days of the week follow each other in unending succession (and, by extension, in an ideal performance the opera cycle should continue ad infinitum). Stockhausen's description of the principal characters is that Eve symbolises the rebirth of humanity in music, while Lucifer and Michael represent opposing conceptions of the world and life.[48] In all of the world's mythologies, religions, philosophies and art, light is traditionally a metaphor for life and for a human being's spiritual journey, the search for a higher dimension of being.

10. Communication and the un-string-quartet

Stockhausen's *Helicopter String Quartet* can easily be described as an anti-opera(tic part of an opera), since it involves no singers. But more importantly, it is an anti-string-quartet, demolishing conventional notions of what a string quartet is and more generally what chamber music is. The string quartet, a genre scored for a specific group of solo string instruments (two violins, viola and cello), is regarded as the highest form of chamber music in Western music and the very essence of chamber music.[49] A close-knit string quartet can achieve a uniquely sensitive and concentrated state of interaction and communication. The music is exceptionally carefully and intelligently constructed, using subtle means and effects. The audience, if there is any, is relatively small, and the performers have an intimate connection with them. It is all about the social and aesthetic pleasure of making music together.[50]

All this is negated in the *Helicopter String Quartet*,[51] which blows up the intimate, subtle, small-scale genre to huge proportions in the sky. The performers are isolated from one

another so that they cannot communicate or experience the pleasure of making music together. Enclosed in a helicopter cabin, they would not even hear the sound of their own instrument if they did not have headphones to which the sound picked up by a mike near the instrument's bridge is transmitted. The only other thing piped into the headphones is a click track; none of the performers can hear what the others are playing. Only the sound engineer and audience at ground central can hear everything – the music played by all the musicians and the sound of all the helicopters. The four instrumentalists only become an ensemble through a complex techno-logical mediation process – an ensemble from which they themselves are excluded.

Communication between the musicians and the listeners is also made as difficult as possible. The performers and audience are far apart, and the music is transmitted to the audience not directly but through a technological system. To be sure, the technology serves as a concrete manifestation of the nature of music as an airborne art form and raises questions about communications and transmission. The emphatically technological character of the transmitting of the message in a performance of this work is a metaphor for how music travels between human beings and is able to bring together people who may otherwise culturally be very far apart. And because music is ultimately based on touch – sound waves touch the eardrum, which amplifies them and conveys them to the inner ear – the music literally touches all its listeners.[52] Thus, the music that is separated from direct contact with the individuals receiving it is a metaphor of something that can connect all the people and living beings of the world.

The musical texture of the *Helicopter String Quartet* is also as un-string-quartet-like as possible, consisting mainly of the noise of the helicopter rotors and the buzzes and hums of the string instruments imitating the sound of an air stream. It does beg the question of whether the actual resultant sound is at all interesting except as far as its anti-string-quartet nature is concerned. Instead of catering to sensory perception, the music seems to prompt metaphorical associations.

The composer mentioned that he wished to emulate the sound of bees – moving, magical sound sources – but the rushing of air may also be understood as representing the cosmic breath of the world that we referred to above.[53] We hear the helicopter rotor blades 'slicing' the air, distorting the sound as the very medium that carries the sound is cut to pieces.[54] On the other hand, the mind-numbing sound texture invites the listener to pay closer attention to the multitude of frequencies and sounds present in the noise. Stockhausen once recalled being entranced as an airline passenger by the noise of an aircraft in flight; he pressed his ear to the fuselage and learned to discern frequencies and sonorities in the noise so that his perception of the spectrum of sounds was constantly shifting.[55] The *Helicopter String Quartet* asks us: what is listening to music? what is the relationship between music and listening?

11. Music as a metaphor for itself

Stockhausen constantly explored the question of what music is and what its essence is. Aspiring to the 'suprarational', he saw contemplating music as confronting the miraculous, the ineffable and the inexplicable.

Music has served as a metaphor for many things not subject to rational explanation or sensory perception, ever since Ancient Greece. It has even been regarded as a practical philosophy or an extension of philosophy that can help us resolve ultimate questions of existence.[56] As Bowie has said, music is even today a vehicle for creating an affective relationship to things which we know affect us but which are completely beyond our control,[57] such as death, loss, longing, transitoriness, love, happiness and joy, but even such fundamental modern phenomena as the environmental problems that threaten our very existence. From this perspective too, the *Helicopter String Quartet* addresses our relationship to the universe, to the cosmos.

Conceptual music works, then, are not so much completed musical objects or performances as they are processes. They direct the recipient's attention to the concept of music and the development through which something becomes music. We also argue that conceptual music in general and the *Helicopter String Quartet* in particular do this by transferring ideas and thoughts into concrete, material manifestations; or, to put it another way, in the *Helicopter String Quartet* the music becomes a metaphor for itself.

In exploring the nature of music through material manifestations, Stockhausen created a metaphor of a metaphor, where a phenomenon typically understood as a symbol for the ineffable (music) itself becomes the referent of a symbol (Stockhausen's conceptual music). In the *Helicopter String Quartet*, as indeed generally in conceptual music – an art form that queries the concept of music – music serves as a metaphor for itself, taking the time-honoured function of music as a metaphor for the ineffable to the next level, so to speak.

In the end, Stockhausen's *Helicopter String Quartet* consists not only of the sounds made by the quartet and the helicopters in mid-air and the sounds transmitted to ground central and mixed by the sound engineer for the audience to perceive in an auditorium or urban landscape. To at least as great an extent the work also consists of the bemused comments it elicits, the process of creating the performance, the running commentary for the audience during the performance, and all the related documentation and discussion. This, of course, also includes the present article and whatever thoughts you, the reader of this article, may have about it. All the talk and confusion and criticism that the work generates is ultimately part of the realisation of the work. When, at the premiere, the composer himself sitting at the sound console explained to the audience what was going on, this did not make the work any easier to understand; if anything, it confused the audience even more. What the *Helicopter String Quartet* questions –

because it is so strange – is the conventional relationship to the miraculous, the ineffable, the inexplicable or (in pre-conceptual terms) the affective that has been established in the history of music.[58] It is precisely because the work is a metaphorical contemplation of music itself that it manages to boggle the mind of the listener in a 'WTF moment'.

12. Conceptuality as a dimension of music

Conceptual music focuses our attention on the concept of music. It may be regarded as an experimental form of music philosophy, posing the questions of what music is and when music is. Instead of philosophical argumentation, it operates with sounds, objects, gestures and actions moving in time and space. This often has the effect of provoking confusion, irritation and boredom among listeners. Stockhausen's Quartet is one such work that compels the listener to take a philosophical position.

So why do we need conceptual music? Conceptual music – especially in a neo-conceptual sense discussed above – questions our ideas about music, highlights the boundaries and parameters of music and also expands the very concept of music. Conceptual music sensitises us to the world by upsetting our conventional notions of music, composing, concerts, works and the relationship between art and reality.[59]

The discussion above defines conceptual music as a subgenre under experimental music. However, a more feasible approach might be to consider conceptual music not as a genre or tradition of music but as a potential dimension of a musical work or performance which, if emphasised, may provide a relevant perspective from which to contemplate the work. As art theoretician Roger Seamon proposes, conceptuality may be understood as one of the fundamental dimensions of an artwork along with mimesis, expression and form. Different works – and different critiques – emphasise different dimensions. With the conceptual dimension, we cannot intuitively understand the work; we must engage in deduction and embrace a state of uncertainty in order to explore interpretations of what the concrete and unique symbolic representations in the work might signify and what the meaning of the work might be. The (neo-)conceptual dimension highlights meaning, theory and interpretation instead of value, technique and artefacts, and thus it may be regarded as the philosophical side of art.[60]

It follows from the above that the arts as a whole have undergone a shift towards conceptual art since the 1960s. Today, instead of a specific genre of conceptual art we find the conceptual dimension extending itself to various branches of the arts. The performance art trends of the 2000s and new forms of experimental art such as artistic research have been seminal in this development. In performance art, having art turn to contemplate itself creates a philosophical

structure with which one may present questions about art and reality, challenge conventional ways of representing the world and create new ones.[61]

Conceptual music need not be understood as a genre of music. Any work of classical or popular music may incorporate a conceptual music dimension, whether more or less apparent. It is typically found, however, in experimental music and performance art, in which music may serve as a philosophical vehicle for contemplating reality where concepts are replaced by concrete, material sounds, images, gestures and functions moving in space. In this context, the distinction between "musical" and "extra-musical" is no longer relevant. Any culturally meaningful music where the idea of music is the main focus and that is significantly experiential from a conceptual perspective can be defined as conceptual music.

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[1] An earlier, a slightly different version of this article is published in Finnish in the journal *Niin & näin* (3/2015).

[2] The performers at the premiere were: Irvine Arditti, 1st violin; Graeme Jennings, 2nd violin; Garth Knox, viola; Rohan de Saram, cello; Pilot Marco Oliver; Pilot Lieutenant Denis Jans; Pilot Lieutenant Robert de Lange; Pilot Captain Erik Boekelman; and the composer as the sound engineer and moderator. There were also technical assistants both on the ground and in the air.

[3] The microphones recording the helicopter sounds must be placed so as to maximise the sound of the rotor blades and to minimise the sound of the engine (Stockhausen 2001).

[4] This 'Stockhausenian counting' occurs throughout the *Licht* opera cycle, imposing a sense of formalist control, constructivism and symmetry, much like the visually appearing numbers in the film *Drowning by Numbers* (1988) directed by Peter Greenaway.

[5] Cf. Roger Seamon, "The Conceptual Dimension in Art and the Modern Theory of Artistic Value," *The Journal of Aesthetics and Art Criticism* 59, no. 2 (2001): 139; Marja Sakari, *Käsitetaiteen etiikkaa. Suomalaisen käsitetaiteen postmodernia ja fenomenologista tulkintaa*. (Helsinki: Valtion taidemuseo, 2000), 42, 68.

[6] For previous discussions of the *Helicopter String Quartet*, see e.g. Ekaterina Sedova, "Netzstrukturen in Karlheinz Stockhausens Helikopter-Streichquartett," in *Musik Netz Werke: Konturen der neuen Musikkultur. Dokumentation des 16. Internationalen Studentischen Symposiums für Musikwissenschaft in Berlin 2001*, ed. L. Grün and F. Wiegand (Bielefeld: transcript, 2002); Minoru Shumuzu, "Potentiale multimedialer Aufführung und ´szenische Musik´ – einige Bemerkungen zum Helikopter-Streichquartett," in *Internationales Stockhausen-Symposion 2000: LICHT,* ed. I. Misch and C. von Blumröder (Münster: Signale aus Köln); Robin Maconie, *Other Planets. The Music of Karlheinz Stockhausen* (Lanham: Scarecrow, 2005); Steven Connor, "Strings in the Earth and Air," A lecture given at the *Music and Postmodern Cultural Theory Conference*, Melbourne, December 5, 2006, http://stevenconnor.com/strings/strings.pdf; Ryan Bishop, "The Force of Noise, or Touching Music. The Tele-Haptics of Stockhausen's ´Helicopter String Quartet´," *SubStance. Review of Theory and Literary Criticism* 40, no. 3 (2011); Florian Leiffheidt, *"Tradition vs. Moderne? Karlheinz Stockhausens Helikopter-Steirchquartett im Spiegel der Gattungsgeschichte"* (Studienarbeit, Grin, Norderstedt, 2011). As far as we know, the work has not yet been discussed from a conceptual music perspective.

[7] See Karlheinz Stockhausen, *Helikopter-Streichquartett vom Mittwoch aus Licht* (Kürten: Stockhausen-Verlag & German Music Publishers Society, 2001); Karlheinz Stockhausen, **"**Introduction – Performance practice – Recordings," [CD liner notes] translated by Suzee Stephens, *Helikopter-Quartett / Arditti String Quartet*. [CD] Arditti Quartet Edition 35. Westdeutscher Rundfunk WDR Köln & Montaigne Audivis, MO 782097 AD 049, Paris 1996; Karlheinz Stockhausen,

"Helikopter-Streichquartett," *Grand Street* 14, no. 4 (1996); Karheinz Stockhausen, "Introduction. Helicopter-String Quartet (1992/1993)," Website of the Stockhausen Music Foundation (*Stockhausen-Stiftung für Musik*) (1999), http://www.stockhausen.org/helicopter_intro.html; Karlheinz Stockhausen, *Helikopter-Quartett / Arditti String Quartet*. [CD] Arditti Quartet Edition 35. Westdeutscher Rundfunk WDR Köln & Montaigne Audivis, MO 782097 AD 049, Paris (1996).

[8] See e.g. Harry Lehmann, "Konzeptmusik. Katalysator der gehaltsästhetischen Wende in der Neuen Music" *Neue Zeitschrift für Musik* 1 (2014): 23.

[9] See e.g. Voya Toncitch, "Music Conceptuelle," *Musicalia: Rivista internazionale di musica* 2, no. 4 (1971); Seth Kim-Cohen, *In the Blink of an Ear. Toward a Non-Cochlear Sonic Art*. (New York: Continuum, 2009), Sophie Stévance, "John Cage Tunes into the Redefinition of the Musical Field by Marcel Duchamp and the Emergence of a Conceptual Music," *Tacet: Experimental Music Review* 1 (2011); Johannes Kreidler, "Mit Leitbild?! Zur Rezeption konzeptueller Musik," *Positionen: Texte zur aktuellen Music* 95 (2013); Johannes Kreidler, "Das Neue am Neuen Konzeptualismus," *Neue Zeitschrift für Musik* 1 (2014); Tobias Eduard Schick, "Ästhetischer Gehalt zwischen autonomer Musik und einem neuen Konzeptualismus," *Musik & Ästhetik* 66 (2013); Lehmann, "Kozeptmusik".

[10] See Frederick Niecks, *Programme Music in the Last Four Centuries. A Contribution to the History of Musical Expression* (London: Novello,1906), 448.

[11] Lehmann, "Konzeptmusik," 23.

[12] Lehmann, "Konzeptmusik," 23.

[13] Cf. Kim-Cohen, *In the Blink*, xv–xvii.

[14] Henry Flynt, "Essay. Concept Art (1963)," in *Theories and Documents of Contemporary Art. A Sourcebook of Artists' Writings,* ed. Kristine Stiles and Peter Selz. (Berkeley: University of California Press, 1996); see also Sakari, *Käsitetaiteen etiikkaa*, 33.

[15] E.g. Kim-Cohen, *In the Blink*; Kreidler, "Mit Leidbild?!"; Kreidler, "Das Neue"; Lehmann, "Konzeptmusik".

[16] Andrew Bowie, *Music, Philosophy, and Modernity* (Cambridge: Cambridge University Press, 2007), 11.

[17] The term 'experimental music' is here used broadly to refer to any music or sound art that consciously pushes against the boundaries and definitions of its genre or of a particular musical tradition. Its principal features are a radical departure from norms and an embracing of that which was previously excluded, thus for instance unusual materials, sound sources, sound production techniques, composition methods or aesthetic goals. Experimental music questions and expands conventional notions of 'music' and 'musical work' and is characterised by an open and exploratory approach to sound as such. See e.g. Tanja Tiekso, *Todellista musiikkia. Kokeellisuuden idea musiikin avantgardemanifesteissa* (Helsinki: Poesia, 2013).

[18] Simon Shaw-Miller, "Thinking through Construction. Notation–Composition–Event. The Architecture of Music, "*AA Files* (Architectural Association School of Architecture) 53 (2006): 46.

[19] The documentary does not include the actual 30-minute premiere in its entirety, only its beginning and end.

[20] Cf. Seamon, "The Conceptual Dimension"; Sakari, *Käsitetaiteen etiikkaa*, 31.

[21] Cf. Sakari, *Käsitetaiteen etiikkaa*, 14, 17, 34, 38, 42, 75–76; Välimäki 2015, 249.

[22] We borrowed the concept of deeper dimensions from the philosopher Eino Kaila [Eino Kaila, *Syvähenkinen elämä. Keskusteluja viimeisistä kysymyksistä* (Helsinki: Otava, 1985)]. Stockhausen, though a Catholic by upbringing, was a religious mystic who was in favour of all the world's religions.

[23] Cf. Tere Vadén and Juha Torvinen, "Musical Meaning in Between. Ineffability, Atmosphere and Asubjectivity in Musical Experience," *Journal of Aesthetics and Phenomenology* 1, no. 2 (2014): 218–219.

[24] Cf. Bishop, "The Force," 30.

[25] Eduard Hanslick, *Musiikille ominaisesta kauneudesta. Tutkielma säveltaiteen estetiikan uudistamiseksi* (Vom Musikalisch-Schönen, 1854)*,* trans. Ilkka Oramo (Tampere: niin & näin, 2014), 43.

[26] E.g. Joscelyn Godwin, *Harmonies of Heaven and Earth. The Spiritual Dimensions of Music from Antiquity to the Avant-Garde* (London: Thames & Hudson, 1987); Thomas J. Mathiesen, Greek Music Theory, in *The Cambridge History*

of Western Music Theory, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002).

[27] Cf. Max Peter Baumann, "Listening to Nature, Noise and Music," in *The World of Music* 41, no. 1 (1999): 99. Representing the harmony of the spheres as noise deviates from the convention in Western music of representing it as a field of tones forming octaves, fifths and fourths, as broad in range as possible and rich in overtones (e.g. the opening of Beethoven's Ninth Symphony or Mahler's First Symphony).

[28] Cf. Connor, "Strings," 1.

[29] E.g. Tiekso, *Todellista musiikkia*.

[30] Stockhausen also drafted a graphic score representing the aural impact of the piece, including the sounds of the helicopters.

[31] The Sixth Symphony (*Pathétique*) of Pyotr Tchaikovsky (1840–1893) has a similar construct in the opening of its final movement: a ghost melody made up of alternating tones in different instrumental parts.

[32] When listening to the work, it is possible and feasible to follow one or the other of the systems in the score, but it is impossible to keep track of both at once.

[33] Martin Heidegger, *Kirje humanismista & Maailmankuvan aika,* trans. Markku Lehtinen. (Helsinki: Tutkijaliitto, 2000), 24–27; see also Tim Ingold, "Sfäärien soitosta pallojen pinnalle. Ympäristöajattelun topologiasta," in *Luonnon politiikka,* ed. Yrjö Haila and Ville Lähde. (Tampere: Vastapaino, 2003), 152–169.

[34] E.g. Karlheinz Stockhausen, "Zur Situation des Metiers (Klangkomposition)," in *Stockhausen*, *Texte zur Musik 1*, ed. Dieter Schnebel (Köln: DuMont Schauberg, 1963), 46.

[35] Ingold, "Sfäärien".

[36] Cf. Irene Kletschke, "Landschaftskompositionen," *Archiv für Musikwissenschaft* 69, no. 3 (2012): 196–206.

[37] E.g. R. Murray Schafer, *The Soundscape. Our Sonic Environment and the Tuning of the World* (Rochester: Destiny, 1994); Hildegard Westerkamp, "Speaking from Inside the Soundscape," in *The Book of Music and Nature. An Anthology of Sounds, Words, Thoughts*, ed. David Rothenberg and Marta Ulvaeus (Middletowen: Wesleyan University Press, 2001), 143–152; David Ingram, *The Jukebox in the Garden. Ecocriticism and American Popular Music Since 1960* (New York: Rodopi, 2010), 11, 59–70; Tiekso, *Todellista musiikkia*, 179–185, 241–261; Susanna Välimäki and Juha Torvinen, "Ympäristö, ihminen ja eko-apokalypsi. Miten nykytaide kuuntelee luontoa?" *Lähikuva* 1 (2014): 8–27; Tere Vadén and Juha Torvinen, "Musical Meaning"; Susanna Välimäki, *Muutoksen musiikki. Pervoja ja ekologisia utopioita audiovisuaalisessa kulttuurissa* (Tampere: Tampere University Press, 2015).

[38] In this performance, the helicopters did not take off beside ground central as suggested in the score but at the Auteil Hippodrome 8 km away.

[39] Cf. Schafer, *The Soundscape*, 86–89.

[40] Cf. Ingram, *The Jukebox*, 64.

[41] See Bishop, "The Force".

[42] Interestingly, the Salzburg Festival that originally commissioned the quartet for the 1994 festival in the end did not premiere it. One reason for this may have been the public protest made by the Austrian Green Party, declaring that it would be "absolutely impossible for Austrian air to be polluted by performing this Stockhausen", but the prohibitive expense was also a factor. (Stockhausen, **"**Helikopter-Streichquartett".) On the other hand, when the work was finally premiered at the Holland Festival in Amsterdam in the following year (1995), it was praised specifically for its environmental-art aspect. The work was eventually performed at the Salzburg Festival too, almost a decade later (2003).

[43] Stockhausen himself said that he was interested in the suprarational: that which cannot be explained but which is not senseless (see Stockhausen: *Helicopter String Quartet*, [a documentary], directed and written by Frank Scheffer. Stockhausen Verlag and Allegri Film. 77 min. DVD release, Medici Arts, 2008.) The work is dedicated to "all astronauts" who concretely work at the extremities of our knowledge, and in extreme circumstances too.

[44] Shaw-Miller, "Thinking," 46.

[45] Bishop. "The Force", 32; cf. Martin Heidegger, *Taideoksen alkuperä* (Der Ursprung der Kunstwerkes, 1936), trans. Hannu Sivenius. (Helsinki: Taide, 1995).

[46] *Klang* is a 24-part series of chamber music works, one for each hour of the day.

[47] *Mittwoch* has four acts: I *Welt-Parlament*; II *Orchester-Finalisten*; III *Helikopter-Streichquartett*; and IV *Michaelion*. There is also an opening greeting (*Gruss*) and a closing farewell (*Abschied*). It poses formidable technical demands and has only been produced once, in Birmingham in 2012.

[48] See Ivanka Stoianova, "And Dasein Becomes Music. Some Glimpses of Light," *Perspectives of New Music* 37, no. 1 (1999): 179–212; on *Mittwoch* see e.g. Robin Maconie, "Divine Comedy. Stockhausen's *Mittwoch* in Birmingham," *Tempo* 67, no. 263 (2013): 2–18.

[49] E.g. Paul Griffiths, *The String Quartet* (London: Thames & Hudson, 1985).

[50] E.g. John H. Baron, *Intimate Music. A History of the Idea of Chamber Music.* (Hillsdale: Pendagron, 2003).

[51] Cf. Bishop, "The Force", 31.

[52] Cf. Bishop, "The Force".

[53] See Stockhausen: *Helicopter String Quartet*.

[54] Cf. Connor, "Strings", 8. As Bishop ("The Force," 30) explains, the periodic sound of the rotor blades is created by the blades beating, slicing and compressing the air, much as sound waves beat the ear and vibrate the inner ear. Bishop notes that the Quartet highlights the idea of the production of sound by physical touch.

[55] See Stockhausen: *Helicopter String Quartet*.

[56] Juha Torvinen, "Musiikin filosofisuus ympäristöongelmien aikakaudella,"*Agon* 4 (2014). http://agon.fi/article/musiikin-filosofisuus-ymparistoongelmien-aikakaudella.

[57] Bowie, *Music, Philosophy*, 32–40.

[58] About music as a metaphor for the inexplicable, cf. Torvinen, "Musiikin filosofisuus"; Juha Varto, *Kauneuden taito* (Tampere: Tampere University Press, 2001).

[59] Tanja Tiekso writes in her thesis *Todellista musiikkia* (2013) of the ethos of experimental music in opening up to the world.

[60] Seamon, "The Conceptual Dimension", 140, 144–147.

[61] Cf. Välimäki, *Muutoksen musiikki*, 249.

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