GRESHAM COLLEGE

11 FEBRUARY 2019

MUSIC MADE OF LISTENING:
COMMUNITIES OF LISTENERS FROM STRING QUARTETS TO JAZZ GROUPS TO ORCHESTRAS

PROFESSOR TOM SERVICE

It is the contention of this series that our listening is the dark matter of musical cultures, underpinning the way composers and creators write, the way performers play, and the way we the audience attend to the music we're experiencing. But what happens if we shine a light into that darkness, if we listen in to that dark material? In this talk, Music Made of Listening, I want us to listen in to a special part of our listening culture: silence.

Or rather - non-silence: there isn't such a thing as true silence, because there is no place in the known universe where there is no energy being radiated in some dimension - as Seth Horowitz's work reminded us in the first of these lectures. So if not quite silence, then collective quiet, at least. This may seem contradictory for those of you who may have heard the second of these talks, which was a plea for a noisier listening culture of the music we call classical, and an explication and demonstration of the idea that our concert halls - especially modern concert halls - aren't fit for purpose because of the deliberate deprivation of our agency as listeners that they inspire in any of us who sit in them, and because the music of the last 4 centuries and more was written as a dance with us listeners, not for our passive contemplation and perniciously pretentious reverence. All that said: I am going to be talking about regions of quiet or relative silence today, by exploring the revelation of the American composer John Cage's 4'33", a piece made famous - and infamous - as his so-called 'silent piece', but which, as the title of Kyle Gann's book about 4'33" reminds us, is in fact only another proof of the truism that there's *No Such Thing as Silence*: a study to which much of what I'll say about Cage today is indebted.

And as proof of how listening - as idea, as practice, not only musical, but mindful and spiritual too - is a vital part of today's compositional cultures, the composer and pianist Rolf Hind is with us to share his ideas and his music, its exploration of regions of listening and being that are made manifest through his orchestral, chamber, and theatrical pieces - including the world's first mindfulness opera, *Lost In Thought*. And we'll all be turning our listening into creative practice, all of us here in the Museum of London, and watching on-line, as Rolf leads us in a Deep Listening session, thanks to the work of the American composer, improviser, and thinker, Pauline Oliveros.

But composed silences aren't only the preserve of classical or avant-garde traditions. Here's the French pop musician Stella's song *Le Silence*…

[Stella - *40" - two rounds of silence*]

A gift of silence, a few seconds of respite from a noisy world of clamouring pop culture, a miraculously sardonic, funny, and very avant-garde conception of a song, a chorus, and an idea!

Mind you, another French creative artist had got there already, in making silence an essential creative material…

[Allais]

That's a surreal, black-bordered humoresque of a piece from 1897 by Alphonse Allais: *Funeral March for the Obsequies of a Great Deaf Man*: a piece, as you can see, that consists of no notes at all: three empty systems of music - Lento Rigolando - a stultified, petrified slow tempo, and a piece that doesn't need a double-bar, since its end is implicit in its subject matter. Allais had clearly never got the note that there can be no such thing as silence, since the surrealist gag of the piece is built on the idea that the deaf don't perceive vibration - not true - and that true silence might be a possibility - it is, but only in imagination, only in the 2 static dimensions of this page.

Allais's silent music gag isn't a lone phenomenon: in 1932 in the US in *Etude* magazine, here's Willie Wimble's *Song of the Sphinx*::

… notated in a decidedly unorthodox 2/4 - those rests don't add up, not that that matters to make the joke! - and his ruse here is to compose a piece that would get him out of practicing the piano because it consists of no musical sound at all. Which rather refutes the idea of potential silence as a vessel for concentrated listening, which is the definitive musical skill across all genres. "Listen" was the most important word that the condutor Claudio Abbado used to tell his orchestral musicians in rehearsal; listening sensitivity is the root of jazz players' tuition, and of any improvising tradition, and it's the basis of all musical proficiency whether you're a record producer or a pianist: to listen, to really listen to the sounds you make in relation to what your fellow musicians are doing, to listen to your instrument, to understand your part as one fraction of the total musical universe: these are vital gifts that Willie Wimble willingly gives up in order to get out of practising! Mind you, I know the feeling…

And do you see at the bottom of the cartoon, who actually came up with all this in *Etude*? Hy Cage. No relation - at least not as far as we know! - of John Cage.

20 years later, on Friday the 29th of August in 1952, a concert of music was presented by the Woodstock Artists Association at the Maverick Concert Hall in New York State played by the pianist David Tudor. Here's the Maverick hall's indoor and outdoor auditorium...

Tudor presented a mixed programme of avant-garde works by composers from Pierre Boulez to Morton Feldman, from Christian Wolff to Earle Brown. And by the 39 year-old John Cage: Tudor sat at the piano to play a piece by Cage that's confusingly titled "4 pieces" on the original programme of the concert - it's a list of durations - 4'33" then 30" 2'23" 1'40" - but in fact this is one piece, in three movements, which were signalled in the performance by David Tudor closing the piano lid at the start of each one and opening it in between the movements, timing the duration of the work with a stopwatch, and looking at the notation of the piece so as to keep his place.

And here is David Tudor performing this work decades later - in a filmed performance preceded by John Cage taking questions from the audience…

[clip…*circa 2'30" - to beginning of second movement*]

I think we needed to keep the volume up to hear what happens during Tudor's performance in the film - the opening movement of it and start of the second anyway - to experience that glitch at the end of the first movement in the copy of the film, as well as to attend to the ambient sounds where we are in the Museum of London: as Cage says, composition is the combination of sound and silence, and we should attend to every sound, to listen to everything as music - a cough, a stopwatch, this air-conditioning.

And here's David Tudor's own recreated version of the manuscript of 4'33" that he played in 1952, albeit with slightly different durations of the movements, so the first one lasts 33 seconds on this score, and as as you can see from the marking on the top left, this is an example of so-called proportional notation, in which space on the page maps precisely on to a period, or a space of time: in this case, 2.5 centimetres equals one crotchet, and as the tempo is

marked at crotchet=60, that means one second passes every 2 and half centimetres; as we're in 4/4, 4 beats to the bar, each bar is 10 centimetres long: a piece of pure duration.

So our series of questions about 4'33" starts here: how and why did Cage come up with these 4 minutes and 33 seconds of silence that *aren't* silent? Why are there three movements? Why these particular durations? And what happened to precipitate the composition of a piece that isn't a surrealist joke or a cartoon-like gag, but rather a stick of musical kryptonite directed at the whole edifice of the canons of classical music and its reception whose seismic shocks the musical world is still reverberating with?

I'll introduce some precedents of 4'33" as musical and creative idea in a moment, but just to explain more about what you've just seen and heard: as you saw, the Maverick Concert Hall in New York State is open to the elements, and Cage tells us what happened at that premiere performance in 1952 - conveniently, Cage's reminiscence mirrors the 3 movements of the piece:

"What they thought was silence because they didn't know how to listen, was full of accidental sounds. You could hear the wind stirring outside during the first movement. During the second, raindrops began pattering the roof, and during the third the people themselves made all kinds of interesting sounds as they talked or walked out".

This was a symphony or at least a soundscape of natural sounds not normally considered part of the musical experience or even thought of as musical material, but which, when attended to by that audience, were alchemised into aesthetic objects as never before in a concert hall - at least for everyone who didn't walk out.

But it's not only in a bucolic, Henry Thoreau-like idyll that 4'33" has its place and finds its meaning. As you noticed in Tudor's filmed performance in that studio, there were sounds we heard there - real sounds! - in that film: the ticking of Tudor's mechanical stopwatch, the turning of his pages of the score, the opening and closing of the piano lid - all accompanied by your own rustles, coughs, and movements here in the Museum of London. 4'33" is performed, in that sense, like any other conventional work of classical music: in fact, 4'33" is a shadow of the rituals of the concert hall, turned inside out and into the substance of the work: so that we hear a universe of environmental sound, such that a cough and stopwatch might be considered 'music' through the simple application of our listening.

Just some of the thoughts and provocations that 4'33" still inspires. But remember what Cage said about that coughing, and its interest as pure sonic object: that's a Cagean clue that the roots of 4'33" aren't in silence at all but in a new conception of listening: by admitting all environmental and accidental sounds into the aestheticised gallery of objects of sonic contemplation, Cage isn't asking us to hold our breaths to create a true idealised "silence", but rather to accept music as an art of noise, of coughs and sweet wrappers, in a concert hall; or in a performance of 4'33" that you might create on a sidewalk in New York, Mumbai or Tokyo, of traffic noise, speech, electronic chirrups, and everything else that passes your attention in that time.

In that sense, 4'33" can be a symphony of noise - of urban noise. Which is what another composer had already conceived. Luigi Russolo, one of the Italian futurists from the start of the 20th century created a set of instruments called Intonarumori - noise-makers - in order to create hymns to the symphony of modernity he heard around him on the streets, in the sounds of industry and factories, even war, conflict, and mechanical terror. He created music like this: this is Russolo's *Awakening of the City*, from 1913…

[Russolo - *20"?? Check clip*]

There he is with his orchestra of instruments, these are the sounds of his Intonarumori: this piece is a visionary accommodation of noise into the aesthetic space formerly called "music" - and vice versa. It's a piece and project that prefigures the modernist sonic visions of Edgard Varese, who included alarms and whistles and industrial sound and fury in his orchestral music: and it's a premonition, too, of the musique concrete of Pierre Schaeffer in the 1940s,

who turned recordings of the real world into musical material, the first electro-acoustic music we have - trains, cities, factories. Russolo's work even looks forward to the technologies of sampling and electronic manipulation of the digital era: his early 20th century art of noises is the ancestor of all of them.

And Russolo's work is a precursor too of Cage's not-at-all silent piece, 4'33": because if listening is the dark matter of musical culture, then so too is noise, the supposedly unwanted sounds that are part of all musical performances by acoustic instruments: the audible breaths of woodwind or brass players before their instruments sound, the clack and percussion of the keys and finger-holes, the grain and ghost of string player's fingers on wood and string, and the white noise of vibrations that lies under every note they play - or the noise of the piano lid, and the turning of pages in David Tudor's performance. Cage's piece is about turning noise into art, about accepting these sounds as aesthetic objects, just as much as is Russolo's.

Everyday objects of the modern world turned into mandalas of artistic meditation; framing the outside world with the transforming spectacles of the concert hall or the gallery. There's a precedent for all this in the visual arts too, and from just a few years later than Russolo's art of noise:

[Duchamp]

Marcel Duchamp's *Fountain* - submitted but rejected from the Society of Independent Artists exhibition in New York in 1917: Duchamp wasn't only an influence on Cage, but a friend in New York - and even if recent research shows that R Mutt is likely to have been the pseudonym of Baroness Elsa von Freytag-Loringhoven, rather than Duchamp himself - in which case the appropriation of the everyday is only taken a stage further than the exhibition of a urinal in an artistic context, through the pilfering of somebody's else's artistic readymade! - the idea of placing *Fountain* in a gallery, and turning this everyday object into an artwork through the magic of context and a way of seeing, is analogous to the shock of the noise, the non-silence, of 4'33" in a concert hall.

But Cage had been preparing for the shock of 4'33" in his own music as well. Here he in the 1940s, interfering with a piano…

[Cage preparing]

In fact, he's not interfering with it at all, but conjuring a new soundworld from an otherwise conventional instrument: this is the prepared piano, which came into existence in the early 1940s thanks to creative necessity: lacking sufficient space in a theatre for a percussion ensemble for a dance piece, Cage turned a single piano into an assemblage of noise-making possibilities of wild and unexpected variety, by inserting screws and erasers and other objects between the keys of the instrument. The result was this system of preparation for a set of Sonatas and Interludes for Prepared Piano…

... and you can see the care with which Cage created the gorgeous, gamelan-like sounds of this music, composed in 1948: this chart has to be obeyed with as much precision as possible to get close to the sounds Cage needs for this piece, and the result is a strange disjunction between the notation and the sounds you hear: so that notes might sound higher, lower, buzzier or less resonant, more metallic or more muffled than they otherwise would resonate on a regular piano, so that this music on the page, which looks uncomplicated as a piece of piano music - in fact sounds like this…

[Sonata III - *45"*]

But there's something else going on in this piece, if we go back to the notation: the structure of the piece is highly static, and highly formal, with a repeated sequence of bars, of measures, so that the notes themselves are suspended like mobiles within a pre-existing temporal framework - it's a series of 8 bars that repeats a total of four times, with another sequence of 8 bars of different lengths afterwards. Cage's focus here isn't on directional harmony or melody: it's a different way of thinking from the way that so much music - like that of his teacher in Los Angeles, Arnold

Schoenberg, works, building up patterns of tension that require release through the necessities of musical and emotional expression. Cage's time - CageTime... - has a feeling instead that the notes, the sounds, are placed like objects in a landscape - a landscape of time, a rhythmic and temporal grid that exists as a vessel simultaneously connected to yet separate from the notes themselves. That's a process that's taken a stage further in Cage's String Quartet in Four Parts from 1950, whose sounds are fixed across the registers of the instruments, so that they recur as reiterated sonic points throughout the tessitura of the string quartet, and you have even more strongly the feeling of time suspended - or rather, of time turned into a space in which the sounds of music exist.

[SQ - *30"*]

There were further epiphanies before the composition of 4'33": there was his encounter of the Chinese I Ching or *Book of Changes* and its chance operations - thanks to the teenage prodigy and polymath Christian Wolff: through the I Ching, Cage could remove his own subjectivity even further from the compositional process. By using the hexagrams of the *Book of Changes* as a compositional took, Cage turned the choice of which rhythm, pitch, attack, and dynamic would come next in the notes of a piece, as well as a work's overall duration, into objectively determined parameters. The I Ching did the work instead: that means that the usual function of a composer - deciding precisely which sounds should succeed each other! - was handed over to a randomising computation. (It's not quite that simple however, since Cage sets the boundaries of each of his parameters in assigning the values of the hexagram: there is still intentionality - still ego - in the system.) The use of the I Ching required the tossing of coins - hundreds of thousands of coin tosses, on the streets and on bus stops as well as at his home throughout 1951, to create the huge scale of his piece *Music of Changes* for solo piano, also composed for David Tudor. Here's the hexagram - the chart based on the I Ching - that he used…

and here's a page of the score - again, time works on this score like a grid, it's another example of proportional notation so that each bar-length is mapped on to a precise number of seconds. And here's Tudor playing it:

[Changes I - *score is start of II - loaded in another chance operation… - 30"*]

So in building up to the composition of 4'33": by the early 1950s we've got an openness to noise and the everyday, thanks to Russolo and Duchamp; Cage has stripped music down to a fundamental of duration as the primary field in which sonic events happen; and he's discovered chance procedures to determine and generate the articulation of musical parameters in ways that previous composers would never have tolerated. All of these ideas emphasise the transcendence of ego and the avoidance of the expression of subjectivity, notions that also resonated with what Cage learnt from the Zen thought of Daisetz Teitaro Suzuki's classes, which he attended at Columbia University.

But there's more: framing silence, framing time. Cage needed another friend, another visionary, and another bold artistic gesture before 4'33" was possible: the painter Robert Rauschenberg and his *White Paintings* - exhibited in New York in 1951…

The *White Paintings* exhibit another kind of fulsome emptiness that's actually about confronting the viewer's perceptions and preconceptions, so that what we're looking at here is the idea of looking at art. That was the perceptual paradox that Rauschenberg created with the exhibition of these paintings: a direct influence from the visual arts for Cage's bravery in filling his equivalent of the art gallery, the concert hall, with an emptiness that is anything but empty in 4'33": his version of looking at looking - of listening to listening. Rauschenberg and Cage's friendship was one of the crucial catalysts of mid-century creativity. Yet there was one final piece of the jigsaw: a personal epiphany that Cage experienced at Harvard University - here, to be precise, but on his own, without these two straight-out-of-central-casting 1950s scientists…

[anechoic chamber]

The anechoic chamber at Harvard: it's a place … which does what it says on the tin: it's an-echoic, a place without echo, in which sounds cannot reverberate and is as quiet a place as it's possible for human beings to make on earth. It works thanks to those specially shaped foam cones you can see sticking out from every part of the walls - there's a floor beneath them which is covered in the same way, so that you walk into this world without echo over a gantry, suspended over acoustic foam sculptures. Every sound you make is muffled, deadened, instantly. The acoustic baffling of deep snow is one natural world almost-but-not-quite equivalent; and if you haven't been inside an anechoic chamber, it's the weirdest sensation; you're in a world in which you lose your sense of acoustic self: you feel lost, because you're no longer able to use the subtle echo-location that we're always employing when we hear our voices in a space; you feel you can only communicate with yourself; like being inside your own head. Never a comfortable place to be.

For Cage, being immersed in the anechoic chamber in 1951 was an experience that gave him another vital insight towards 4'33": there's no such thing as silence - even here.

In fact, the latest thinking on Cage's "two sounds" is that his description can't conform to scientific fact: those high and low sounds aren't really the operation of the nervous system or blood flow, which we simply can't hear, but rather are internal acoustic illusions that relate either to mild tinnitus or to a blood pressure condition that might have been one of the conditions that led to his death from a stroke in 1992: but whatever the precise cause, Cage's direct experience of non-silence even in an anechoic chamber at last gave him the creative fuel he needed to make 4'33".

And make it, compose it, he did: here it is in the most abstract proportional notation he devised for the piece, the second score that he created in 1953 (when this one was published, the piece had no title at all!): time flows, again proportionally, from left to right here, the vertical lines marking the divisions between the movements, and it's a score that bears a striking relationship, laid out like this, to the three panels of Rauschenberg's *White Paintings*.

And here we encounter another of the paradoxes of this piece: why 3 movements? And why 4'33" as the total duration? Even Cage seems not fully to know. He says he composed the piece using the same method of working as he did for the *Music of Changes*, preparing the I Ching charts - although in a later telling of the story, he tells us he was actually using Tarot cards - here's what he says:

> *"I built up each movement by means of short silences put together it seems idiotic but that's what I did I didn't have to bother with the pitch tables or the amplitude tables all I had to do was work with the durations … I didn't know I was writing 4'33" I built it up very gradually and it came out to be 4'33" I just might have made a mistake in addition'.*

Cage got lucky - that's one interpretation: in fact, he had already dreamt of a piece of silence in 1948 that would be around 4 and a half minutes long to compete and confound the Muzak corporation - the length of a single side of a 78rpm record - which would have been called *Silent Prayer* - and luckily enough, that's exactly what happened when he asked the I Ching for the durations of what turned out to be 4'33"! As Kyle Gann writes in his book *No Such Thing as Silence*:

> *"What a happy coincidence! … Someone suspicious in nature might conclude that the "mistake in addition" served to bring the piece as close as possible to that predetermined four and a half minutes. Who knows?"* [Gann: 177]

The point about all of this is that 4'33" is *composed* as a fully-fledged piece of music. The precision - however Cage manipulated the process - of its composition tells us as much, but there are other factors as well. Those three movements: how conventional, like a classical piano sonata! It has a 30" upbeat to a longer second movement, 2'23", and a concluding 1'40", which borrows elements from both previous movements, you might say. That shape - and especially the way that David Tudor dramatised the boundaries between each of the movements in his performances - frames the piece within the conventions of the classical just as surely as Rauschberg's paintings are framed by being in a gallery. We are not looking at nothing, we're not listening to nothing; we're doing so in a concert hall, so that our

listening has a precise beginning and end, in which our experiences and memories of the piece will be shaped by the performers separating one movement from the other, one span of non-silence from another. 4'33", in this interpretation, is as indebted to the functioning of the classical conventions of listening as is a Mozart piano sonata.

The intentionality, the copyrightable compositional work of 4'33" was proved in 2002 when the composer Mike Batt made a minute of silence for one of his albums and attributed it to Cage. Cage's publisher threatened legal action, and Batt settled out of court, donating an undisclosed 6-figure sum to the John Cage Trust, and demonstrating that 4'33" is as firmly a musical work as a symphony by Beethoven or an ensemble work by Brian Ferneyhough.

But Cage took 4'33" even further in his final, 1961 notation of the piece.

… the music, the piece is communicated entirely by numbers and a single word - a strange word, too, since "tacet" is most familiar to ensemble players who have long rests in a larger piece: brass and percussion parts in symphonies or operas, instruments that stay silent for whole arias or movements; those are everyday pieces of measured silence: someone, somewhere, right now is counting out silences and rests, before they come in with that fortissimo in Verdi, Wagner, or Mahler. Cage wrote an accompanying explanation for the 1961 version, including this:

> *"the title of this work is the total length in minutes and seconds of its performance … However, the work may be performed by any instrumentalists and last any length of time".*

That's a pretty gigantic existential change from the way David Tudor performed it in 1952. Cage suggests that 4'33" can be a second long, or last until the heat-death of the universe. And that's what allowed Cage to say that he used to perform 4'33" every day, simply through the act of listening to sounds on their own terms. Which leads to the striking thought that 4'33" is being performed whenever any of us choose to listen intently to our sonic environments. Which means listening itself has been copyrighted by John Cage, and we might all owe Peters Edition an awful lot of royalties… That suggests that 4'33" remains problematic, since its tendrils of non-silent contemplation risk aestheticising the whole world, turning nature-scape and city-scape alike into objects of musical amusement; as if the world existed for the purposes of our art- and music-making: Cage's 4'33" turns the world into an art-work - into *his* artwork - which is a pretty violent appropriation of the world's sounds for someone who professed a total lack of ego. Cage copyrighted the world!

So: 4'33" - meditation, icon, and tattoo - literally, here is the right arm of the composer Jim Altieri…
... and above all, a piece of composed musical experience that won't stop being controversial: it's still a work whose performance can be reported as everything from a joke to a deadly serious attempt to inspire new kinds of listening everywhere from *The Sun* to *The Fast Show*. No other avant-garde work of music has achieved so much in popular culture!

And to prove how much listening is encompassed by 4'33", here are two realisations of the piece that demonstrate the range of sonic environments it allows: the guitarist Vitor Rua's feedback from his amp…
…[clip - *15"*]

And the Amadinda percussion group's Thoreau-like nature walk…

…. [clip - *20" - sea, birds, bells - change to insects for 2nd movement*]

We've been listening to listening in Cage's 4'33". Our question now is how listening as compositional material and as musical and meditative experience might develop in contemporary musical culture in the wake of 4'33": which is why it's time to welcome the composer and pianist Rolf Hind to join me on stage: Rolf Hind!