

As a part of my research into the relationships between composed and improvised music, I conducted an interview with a composer, saxophonist, producer and educator Nick Roth. I asked him about his composition *Flocking III*, inspired by murmuration of birds and was commissioned by European Saxophone Ensemble.

An interview was taken on 4th November 2020 via zoom call with Roth in which he demonstrated a number of ideas and played some recordings.

Viktória Šinkorová: Can you please explain how did you got the idea of using the murmuration of birds for musical composition?

Nick Roth: I am interested in how music can function as a form of translative epistemology – ‘an investigation or *coming to know*’. In other words, ‘how can we know something through music in the same way that we know things through languages, or through images, or through data? Music itself is a form of knowledge. Music is an epistemology. You can know something through music in a different way to how you know it through words. This teaches us something of knowledge, but also music itself.

My journey into this idea about music begins with water [Roth plays an excerpt from his Water Project, which is like rhythmic dropping sounds]. That recording was made in 2009. I was living in an old Victorian house in Dun Laoghaire [Dublin] with a bunch of musicians. What you are hearing in this recording is the sound that our toilet cistern was making. The recording is not processed in any way; it is just us putting a microphone to the cistern. It used to make that same noise every time, every flush cycle. Obviously, with the house full of musicians we would listen to that and we would hear it as music. You hear rhythm, you hear pitches, and a kind of the understanding came through was that music is in the world. When we have an idea of what music is, we tend to think about it as something which is man-made. We create music and we might be inspired by ‘nature’ or what some people call nature, but post-Cage, in 20th- and 21st-century music, there has been some kind of porousness to environmental sound or to listening. The idea that music was in the world was a fundamental shift in the way I was thinking about it because what it meant was that actually, what we call music is really just *the way we listen to the world*.

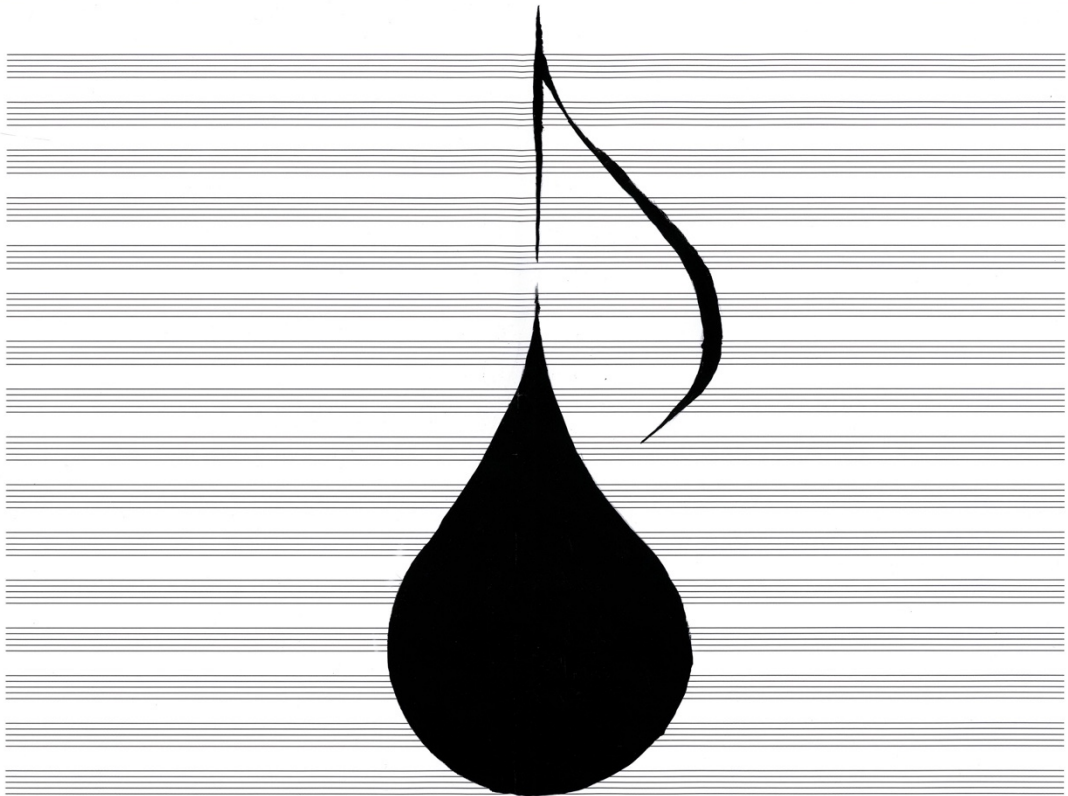
What I was really fascinated by in that [cistern] melody, was that while there were certain aspects to it that you might write or compose as a human musician, there was something about it that was unpredictable; there was a chaos to it, and I was interested in that chaos. So, the water, listening to water, realizing that music was in the world and that water was an expression of that world’s music, was a radical introduction to the world of chaos and chaos theory. I started to actively study water. In the book, *Sensitive Chaos*, Theodor Schwenk explores different patterns, and specifically vortex patterns, that happen in water whenever you have flowing forms of water. That vortex pattern does not just occur in water; it occurs at multiple scales in the universe from the foetus in the womb, to plant forms in growth, to the shape of the galaxy. The vortex pattern is an archetypal form, and it is an invisible aspect of the universe, which water renders visible. In exploring this and reading further about chaos theory and the mathematics of chaos, I started to deal with science, it was the music that had led me there.

The way that I was actively doing this research was as a member of group called 'The Water Project', which has two other founder-members Olesya Zdorovetska and Keith Lindsay. We collaborated with lots of different artists and musicians and scientists, and people from different disciplines. We did a lot of projects over the last 10 years all of which use water as a mechanism of producing sound. Then, we also interacted with lights in all sorts of different ways; and photography, video and images became a great part of that research. We also did lots of field recordings and active listening to environmental sounds.

It was at that point in 2011—and this is really relevant to the flocking work—that I started imagining how you might write music for water; how you notate it. Up to this point, I had only written traditionally notated scores. So, this idea of how to write for water was very problematic because the one thing which I was really interested in with water—and it's the same in flocking—was that the patterns are always but never the same; *always but never the same*. There is always something about the pattern where you can recognise that that's a vortex or that's a murmuration of starlings, that's a flocking. It has something that suggests what it is in itself; but when you look at it in detail it is always different, slightly. It is like looking at a flame. You can tell it is a flame but every time you look at it it's different. So, there is this dissonance between the word: if it is always different, how do we know if it is still a flame? At this point you start to come across limitations of language. Wittgenstein said, "The limits of your language are the limits of your world". No, it's the limits of your language. There are ways which you can talk about the differences between the single and the multiple but using language is not the most precise tool. Actually, using numbers is much more accurate; but it is also kind of boring, and it requires a very specialist training in order to read it, and to read the patterns in it. I think that music is actually a more efficient mechanism for exploring the tensions between the one and the many. What is the oneness of something? How is it always the same if it's never the same?

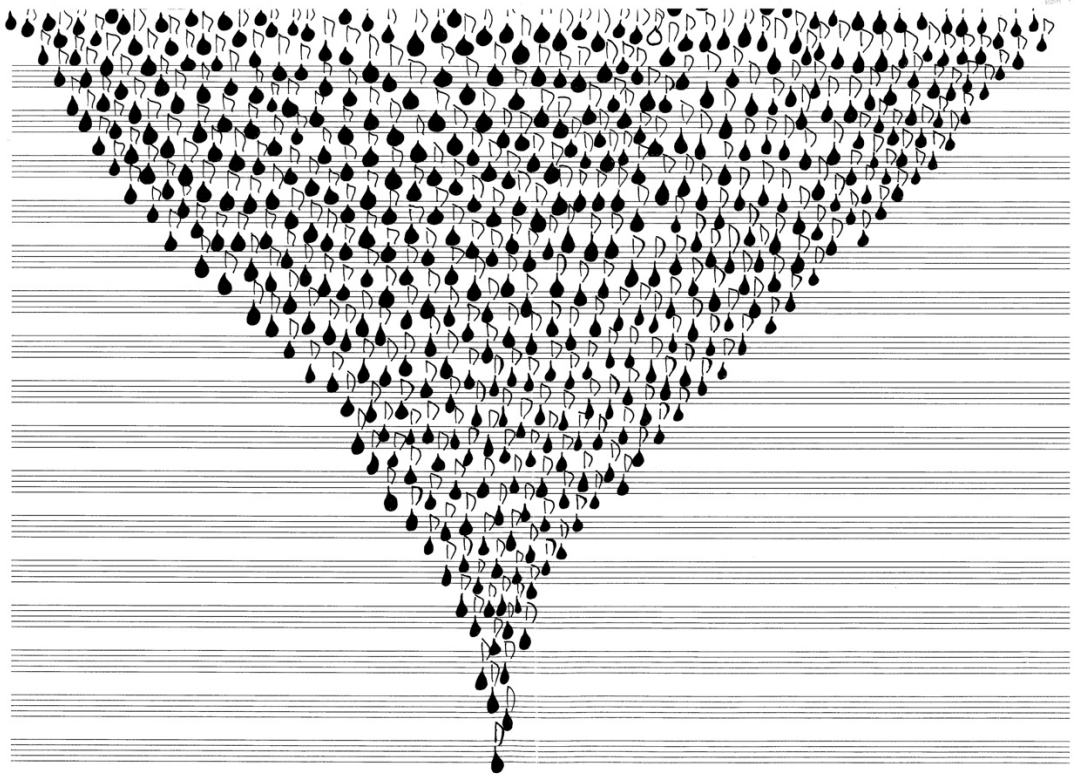
Around that time, I read Andrei Tarkovsky's *Sculpting in Time*. I was in Kiev; it was New Year's Eve 2010. I was alone in the apartment and I watched *Sacrifice*, which is his last film. (It was the last of 11 that I had not seen, so it was at that point that I had seen all of his work). It was also around this time that I was reading *Sculpting in Time*. When I finished watching that film, I suddenly realized how to write the score for the Water Project. So, I sat down and started to write the score of what would be the *Water Project I & II*; and I just kept writing until 5am; and these are the scores [he shows the scores for *Water Project I & II*].

Essentially it is a graphic score in two parts where in the first part you play a single gesture that builds continuously in sound until it can no longer hold; and then it transitions to part two where you play many sounds gradually reducing to a single sound and silence. It contains the instruction: 'It must last at least 30 minutes, and it must include....water'.



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So, this was my first graphic score. And what I like about it is that it is this two-part thing: a single and a multiple, and it has a beginning and an end; and it is a piece! I played this many times but every time it is different; so the graphic score was a more efficient mechanism for exploring the always and never-the-sameness of water.

VŠ: I find with many of your scores this need or this idea to capture something on paper that is changing all the time. In another words, you use improvisation or use chaos (as you call it) or randomness; but you still have to have some sort of instructions on how to achieve the music or how to have structure within it. That whole thing fascinates me because complete chaos could be beautiful, in a way, but I do not think it would be manageable. Are you essentially attempting to make chaos manageable?

NR: Well, I think chaos is acting in the world. Chaos is an organizational force but it is not the only player in the game; not the only horse in the race. There is also geometrical perfection of number and essentially those two things are antithetical to each other. What I am trying to do is to be as transparent as possible, and make music that is an accurate and honest depiction of what I think is in play with the universe at this time. That is what I am trying to do. The musician at the end of that video, Mamoru Fujieda, was very important for me in thinking about this; and I worked with him around the same time I was making these discoveries (2010). He studied with Morton Feldman in America, and since the 1960s his entire work has been based on electrostatic data on plants—it's called 'Patterns of Plants'. He worked with a botanist called Yuji Dogane, and they transcoded the electric impulses between the cells of the plants, because plants are constantly sending electrical impulses around the whole between the cells, as are all living organisms. So, they mapped this and converted the patterns into sound. I was really interested in that kind of direct conversion because, again, these composers are very transparent. They are trying to give a voice to this thing which exists. I really like the idea that, in real time, the plant data is being translated into sound, and we can then hear that.

This was a major influence on the *Flocking Project*. The next phase in this chapter is around 2012. There were many videos going on around of starling murmurations.

[shows starling murmuration on the Shannon]

I just loved those; and I just thought this is really similar to water vortexes because the pattern is always but never the same. It is a single flock of birds made up of hundreds and thousands or possibly even millions of individual birds. So, what I really wanted to do was to translate that movement of the flock into music, into a score. I was really influenced by Fujieda's idea of getting data from the plants, and so I was thinking, 'how can I get the data directly from the birds in real time?'

I have a friend who is doing a PhD in mathematical biology and I asked him if he could get me data of starling murmurations moving in space and time? He said, 'no I can't, but my supervisor might be able to get it for you.' So, he gave me his email and I wrote to him. I told him that I am a composer, I have this idea, I want to write this piece for saxophone orchestra (12 saxophones) and could you get me this data? The next morning, I got an email with all the data and it was only afterwards that I found out who he was. His name was Iain Couzin, and at that time he ran a post-doctorate laboratory at Princeton University of 250 post-doctoral researchers who were all working there. He now works at the Max Planck Institute. He is one of the world's leading experts on flocking behaviour. That in itself was a big lesson

for me because I realized that if you want to know something, you ask the person who is the world's leading expert on that thing. Firstly, they will most likely respond to you straight away, and secondly, they will give you a clear and simple answer that you can actually understand. That was really important for me and in all of my subsequent projects, which involved forest ecology and astrophysics and genetics...many different kinds of disciplines, I always went to the person who was the most renowned in that field and asked them directly, and they always replied. So, that in itself was a lesson.

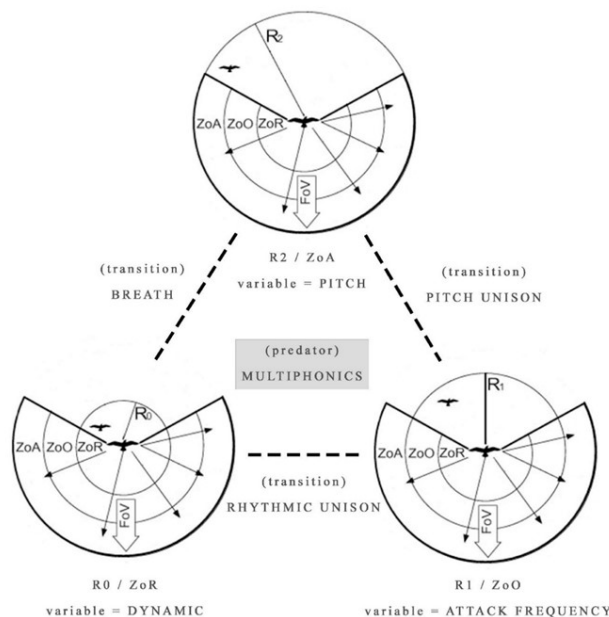
What Iain sent me was the data for two models of flocks. So, they do not have actual real-time data for flocks of the birds, like a GPS positioning system on the birds in real time. I mean they do this, but I needed the data for a flock of 12 birds, so what they used was a thing called the Boids algorithm, and they use this algorithm to basically generate flock-type behaviour. So, he gave me a few different examples of flocks [Nick is showing me the data.] The one on the bottom left is flock I and the top right is flock III. Essentially, the difference is that in flock 3, the birds are swarming around a fixed point of orientation, and in flock 1 that point is moving horizontally in space. He gave me this data and he quantized it for me for twelve different birds. And I asked him for the x, y, z positioning of each bird in time to fit it to a quantization that I could map to pitch, rhythm and dynamic. Wherever the bird was in space and time, that gave me a value, or a note, a duration of that note, and the dynamic that that note was being played at. So, I used that data and I wrote two scores for saxophone orchestra, which have never been played; the score which you have maybe seen is *Flocking III*. But before that I did *Flocking I* and *Flocking II*. I have never actually presented them to a saxophone orchestra; they were really just kind of études. Because, as soon as I finished the score, I realized that this piece was just one example of how the flock moved at one time, at one single time. It was one instance; it was not always never and the same. And that was, again, the limitation I was having with water, because once you put a note on a page it is fixed; it gives you one single instance of how the flock would move but it does not give you the type, it does not give you the big picture. Those scores [*Flocking I* and *Flocking II*] for me were basically just the studies in thinking about this.

A really big and important thing I realized around that time was that we interface with music across three aspects – as listener, as performer and as composer. If you are a saxophone player and you were just reading the top line of this music and playing it, you would hopefully be a listener because you are listening to the piece that is happening around you. You are obviously the performer, but crucially you are *not* the composer. The composer is not there, I am the composer. I have written that music and really, it is only in the act of composition that you actually understand the totality of how the whole thing works. What I realized was that it was only if these three ways of interfacing with music are combined that you get embodied knowledge.

With that in mind, in 2013, I got a commission from the European Saxophone Ensemble and so I thought that this would be a good chance to try a new piece *Flocking III*, which would embody and unite those three ways of interfacing with music. What this meant was that the saxophone players had to be the performers and listeners but they also needed to be the composers. I needed to hand the reins over to the performers as improvisers because obviously improvisation is spontaneous composition, as you know. So, essentially, *Flocking III* is a way of thinking; the same way of thinking as in *Flocking I* and *Flocking II* in that the flock is represented by these 3 variables, but it hands over the decision-making process to the performers.

Keep in mind that at this point, the starlings are traveling at 45km/h and they have a response time of 0.0046 seconds, so they are making incredibly fast decision movements. The fact that is happening through the nervous system and not through the conscious mind makes it quicker. They have short circuited the thinking part of the response system—it's just pure impulse. And as an improviser, that's where you want to be, right? Where you want to be, right?

So, the piece is in 3 zones and this relates to the way that the Boids algorithm is designed, in that there are three primary rules.



Flocking III (2013)
European Saxophone Ensemble (ESE)

Source Image: [1] Pavlos Antoniou, Andreas Pitsillides, Tim Blackwell, Andries Engelbrecht, and Loizos Michael, "Congestion control in wireless sensor networks based on bird flocking behavior," Elsevier Computer Networks Journal, vol. 57, no. 5, pp. 1167-1191, April 2013. [\[pdf\]](#)

- 1) If you start with the outside one (Nick is describing his score, *Flocking III*). The outside zone is a zone of *attraction* – the rule here is that, if a bird crosses that outer zone, it has an impulse to move towards it, which is what keeps the flock together.
- 2) Then there is a middle zone, which is called the zone of *orientation* – the rule here is, if a bird crosses that zone, you have an impulse to move with them, which is what makes a flow happen.
- 3) And then there's the most inner zone or the zone of *repulsion* – if a bird crosses that zone the rule there is to move away.

So, in all, we have the zones of *repulsion*, *alignment [orientation]* and *attraction*. So, all this piece is, is a mapping of those three zones to the three musical variables—so, three rules with three transitions. In the pitch zone, the rule is that you move towards whatever note you hear around you. With the saxophone orchestra, you can space them out so you are going to hear slightly different things depending where are they positioned and who they are closest to. You have this constantly shifting movement of pitches, which creates a harmonic space.

One more nuanced rule is that in each section you try and focus on that variable so there should be a very light attack that is very smooth, there is no rhythmic event and the dynamic is constant, so you are just isolating pitch as the moving variable. The saxophonists are constantly moving around up and down towards the note they hear around them, you get this harmonic space.

The rule then is that at some point—and this is an emergent rule, which in flock ‘types’ are technically known as emergent systems. Individual local decisions control the global singularity; this is called an emergent system. The saxophonists listen, and they make these decisions; and at some point, one individual (and it can be anyone) makes a choice to stay on one pitch. Once the others hear that that choice has been made, they all stay on one pitch; so, you get this static chord: that moment is the transition into the second section, which is the zone of orientation, and the variable here is rhythm. In the second section, you only play very rhythmic, unpitched sounds, which are in their own meter, so your sound is intentionally metered but you are not related directly to the others. Gradually over time, you move towards and lock in until everybody is playing in the same meter or polymeter, which is a natural thing that generally happens with improvisation anyway.

Actually, in a more general sense this piece is very much about what happens when you do free improvisation, constantly negotiating these kinds of decision-making processes. This is how you orally learn improvised music. When that groove, essentially, is locked in, that triggers a move to the 3rd section – the zone of *repulsion*. Here the variable is dynamic. Everybody plays at a quiet dynamic and then every so often anybody can trigger a suddenly loud sound, which causes a kind of chaotic ripple. At the end of that section, somebody, anybody, can play a breath sound which is the trigger to go back into the pitch section. That is the only rule in the piece, it is not specified how many times each section can be repeated or how long you should stay on each section. It is completely open, and actually it is most interesting when it’s really flexible because it means that every performer can at any point change the formal structure of the piece by making a decision and performing; and so essentially by composing in real time, by making a performative gesture and it works because everyone is listening.

You have this triple aspect taking place. In that piece I also introduce this idea of a *predator* – which is that one of the saxophones will move around the space using multiphonics and that causes them to just use multiphonics if they hear it. So, it is kind of an extra chaos element because otherwise the piece can have a tendency to get into just doing these things and moving through pieces and moving through pieces. So, introducing this kind of extra element of chaos really helped to keep things fluid.

Subsequently, I played this piece with lots of different ensembles and learned a few things about why it works and why it doesn’t. It works very well in instrumental families like a saxophone orchestra because saxophone players instinctively know what notes the other players are playing, whereas, if they are listening to a violin or a piano, they kind of have to translate what note it is on the saxophone. I am a saxophone player so I noticed it is much easier for me to know what note another saxophone player is playing than it is to know what the pianist is playing. I can hear it, obviously, and find it on the instrument, but it takes a little bit longer, whereas, without thinking, I have a nervous system response that allows me to just play the same note as another saxophone player. I am sure you have the same thing with the guitar.

VŠ: Yeah, it is just easier.

NR: It is when you are improvising with another guitarist you have a shared language, a common vocabulary and similar gestural thinking; you just know what they are doing more than with a pianist. That is a strength.

But there is another really interesting element. The last time I played *Flocking III* was in September 2020 with Kirkos Ensemble. We used two different instrumental groups. We had a string group and a wind group; and we essentially played two versions of the piece at the same time. One performance was in the forest at dusk, another one was on a beach at dawn. There was this interesting thing because sometimes the two phases would line up, sometimes they would be different; it just introduced more complexity because obviously what one performer of this piece is, essentially, what one bird is, what one bird does. So, to really get across a true flocking effect, for a flock of a hundred birds you would need a hundred groups playing the piece. What *Flocking III* is, really, is a kind of microscope that zooms in on a detail of a flock mechanism; it is only an aspect of it, it is not the entirety. I think that rather than listening to a recording of this piece (because I do have several different recordings), it would be better if you would just imagine it and play it yourself. It is not really a kind of sonic signature; it is more of a philosophical signature. If you listen to a recording of it, you will get a fixed idea of what it should sound like. Any recording is just one instance of that piece. That was the flocking research.

VŠ: Why do you as a composer feel this need of not really being in control; why are you happy to let performers participate within your compositional process using improvisation. And what is your philosophical approach towards free improvisation? Why are you as a composer sharing this experience with performers and do not preserve the hierarchy of you being the composer who owns the idea and performers being just medium between the audience and the composer?

NR: The simplest answer to that question is that in these pieces I am not really concerned at all with the music or the performer or the listener. What I am really concerned about is the thing itself. *Flocking III* is a study of flocking. *The Water Project* it is a study of water. *Forest Ecology* it is a study of forests. That is the only thing I am really interested in. The piece is the detritus, what is left over after that investigation. Those moments of realisation and transcendence, of being, that's just what life is. That is just what life is! That is life! That is...it! Everything is made of that. We have an option, as part of the living everything, to be aware of that all the time. That is all that is really happening. All of these things like music and the self, the composer, the performer, these are local limitations on the whole. They are single instances, they are perceptive fields; and that is also what language does. It delineates, it divides; that is also what numbers do. But there is something about what we call music that is able to convey the unity of everything in the individual in the single gesture. You can play a note and listen to all of the other notes at the same time in a way that you cannot do when you are speaking. I am speaking now; you cannot speak at the same time or neither of us will understand each other, but we could both play music at the same time, hear ourselves and hear each other. That is a fundamental difference. I see music, or what we are calling music, as just these windows, these openings onto aspects of the world that I think are cool, like trees or birds or philosophy or language itself. I have a lot of love for everything that is. I think it is great being alive...wow!

VŠ: What you are talking about, referring to music as windows onto something else, sounds extremely free. But we are still trying to capture that with notation. I personally find it extremely limiting.

NR: I think it is the opposite. I think we are trying to set it free.

VŠ: Yes, these days...we are really talking about philosophical ideas; but how can you put those on paper, because this could be a limitation?

NR: But all of these pieces do put it on a page. One thing that we have learned from 20th century and from the Fluxus movement, and this idea of text scores, and the entire history of graphic notation, including the music of the Arab world...before them Babylonians had graphic notation. There is a long history of notation being the means to set free the music and compositions. It is really, you know how it is, the glass half full or half empty. You could argue that Bach was releasing the preludes and the fugues from the ether by setting them into notation. I also write a lot of completely notated music. I do not think there's one way of doing anything. It is just what is the best tool for the job. What are you talking about? What are you trying to describe? What is the idea? And what is the best way of realizing that? If you are talking about a specific setting of a text or the kind of mathematical patterns that Bach was thinking about, sometimes the best way is to set them into completely notated work, which is kind of like a crystal or crystallization of an idea in form, and from there it has its own life. That is one way. Another way is if you are not thinking about specific instances but about types, is to use more open-ended forms. *Flocking III* is one example of the latter, and the Fluxus text scores are, as well. What this really, ultimately comes down to is gesture. Gesture, ultimately is being in time, it's being in time and that is what not just what music is but anything is.

As humans, we are constantly performing actions. We have to be careful not to put on a pedestal these kinds of transcendental experiences where everybody is really happy and tuned into each other and we are having this thing and blah, blah, blah. That is one way of being together. But equally valid is you and your teacher in a room doing totally unconnected things and not having any musical connection. That is equally valid because it is part of a process. The moments where you suddenly get it, you know you do this thing and it works and then you react and response and that is only possible because of the other experiences. It is a process in time. You have gone through different types of gesture and notated music, and improvised music is a different form of these ways of thinking in music.

There is no right or wrong. Ultimately what it comes down to is creating sound in time and in space. What I was saying at the very beginning is that when we hear music. that act itself is the creative act. You can listen to a tap or you can listen to Shostakovich 10th. It's the way that you listen to it that creates music.

That creative act is an attitude to the gesture, it's a meaning. You imbue the gesture itself with a meaning, and what makes it a transcendental experience is that gesture is meant. But that gesture could be anything. You can have a similarly transcendental experience playing the Bach solo violin *Chaconne*. You could have a similarly transcendental experience while playing a fully composed piece if you mean the gesture and if you are fully there. But because you are not composing it, you don't learn what the composer learned from writing it. That is the only difference. Whereas in the improvised element you have a possibility; it does not necessarily mean that you will learn something because it is also to play improvised music and not really compose because we can just repeat things that we have done before

as sounds at different times, not really creating anything new. Composition is when you are trying to work something out. You have an idea and you are trying to express that in some way. That usually means that you come up with something you have never done before. Those moments do happen in improvisation and in fact there are ways of hearing even things you have done before in new ways, in which case that composition happens. So, really, it is about your perception of the moment, about how you perceive what is happening in real time.

VŠ: Don't get me wrong but it seems to me that you have an attitude to music like a baby, and that you're trying to go about it in a totally different way to everyone else. What I mean is that music has become very institutionalized and what institutions do is shape performers' minds in accordance with a canon. Often, highly trained musicians lose an open-mindedness they may have had early on in their development. Did you ever get a response from musicians that they will not play some of your pieces because they are 'empty' in a way that there is nothing written down, and you are asking them to improvise?

NR: It is very common that people are afraid of improvising. It usually relates to their self-confidence, and is a learned pattern of behaviour that they have most likely repeated since they were a child. This explores what learning is, what education is, and what the child has that we beat out of them. This also relates to chaos. Children are naturally chaotic. They are also about 90% water when they're born. Over the course of your life you lose water. By the time you die you are almost 70% water. Water has left the cells and you have accumulated heavy metals, essentially you have dried out. This is not a coincidence. When children are left to their own devices, they will naturally understand the universe in terms of Relativity, like Einstein. Since the birth of classical physics, with the introduction of the subject-object divide, between self and the other, we have entered into a polarized way of thinking, which also relates to our ways of thinking about time. We have a present and a past, a present and a future. But the baby does not understand any of that. Babies do not see any distinction between itself and the world that it's in. It does not understand the past or the future either; it just reacts and responds in a highly chaotic way, which we find really annoying. So, we teach children these regimented patterns and ways of being; that it is this and not that, do this, that is wrong, etc. And the same way of thinking is applied to all of the different forms of education including music education. Any real understanding about the world requires a kind of a remembering of the original chaos. So I take it as a great compliment that you describe my thinking about music as being like a baby because I've worked very hard to get to that.

VŠ: Do you think that improvisation can be taught?

NR: Yeah, absolutely! I was quite lucky because both of my brothers are improvisers. It was just something that we did at home for fun. I have played with hundreds, maybe even thousands of different improvisers all my life really. It is just something you do. You can definitely get better at it but it requires all of the same things as being just generally good at music. Being in control of your instrument, for instance; being able to play anything accurately, artistically, in tune, in time, all of those skills, that is what you need to improvise. You need to be able to know the instrument super well. That requires practice and discipline, all of that. To teach improvisation you need to inspire curiosity.

Which is what Ben [Professor Benjamin Dwyer] has obviously done to you at some point—inspired your curiosity. He has shown that ‘there are more things in heaven and earth, Horatio, than are dreamt of in your philosophy’...as in Hamlet. He has shown that there is something and now you are curious, now you are interested, now you are like, ‘what is the story with that improvising thing?’ That is the first step of being good at it; it is that you are interested in it, you are curious about it. Curiosity is a curvature in the gravitational field of the unknowable. And then there are different practices and different schools of improvisation; there are different ways of approaching that. When I teach it, I just get people to learn as much as they can about all of the different schools, which includes the Berlin noise scene or the Japanese noise scene or John Coltrane or Charlie Parker or the Mbuti Pygmies or African drumming or playing a cadenza in a Beethoven concerto— these are all different ways and modalities of improvising, and the more you know of those different schools, the more fluent and fluid you are in them, the more easy it is to move between the different ones and be a good improviser. Most musicians that I consider amazing improvisers are usually also very polylingual – they can play in a lot of different styles.

VŠ: Do you think that in order to improvise you need to be a technically highly skilled musician? Because going back to Cardew and his scratch orchestra, and the idea that everyone can improvise. Do you think that the technical expertise, a deep knowledge of your instrument is necessary in order to improvise?

NR: I think what you need is a very strong sense of curiosity to different types of sound. Musicians who have that when they approach their instrument inevitably develop high technical command because they are constantly trying new things and they are constantly pushing the horizons of what they can do. The ways in which you play an instrument effectively are just ways of how to make different types of sound. With the saxophone, for instance, if you gave that to somebody who had never played the saxophone before there are a few things that they could do with it to make noise. They could hit it, they could maybe try to blowing in it; but in order to make a full range of possibilities, they have to learn how to blow into it, they have to learn the embouchure and how to control their breath and their fingers. The instrument itself is designed for that; it has a certain way that it’s played. Once you get into that you will find that there are different ways of playing the sax. You can play it without the mouthpiece; you can play it with this thing put into it; you can play with different multiphonics, with electronics, and so on. There’s a way of expanding the instrument if you are curious; ‘I wonder how would that sound like?’ or ‘what happens if I do this?’ Then eventually you will keep increasing the amount of sounds you can make. And yes, I think the more you do that, the better an improviser you can become. But it doesn’t matter what level you are at. What matters is the rate you’re increasing your level. So, anybody can be a great improviser straight away if they are really curious about the way the different sounds sound; in the same way that children can be naturally curious about these things. It is to do with imagination really. With a powerful and strong imagination, they will naturally develop the technical ways of following and realizing the ideas that they have.