

Presentation: Aurality of Objects

An investigation into the production of objects in relation to the 'aural waste' expended during the fabrication process.

This event took place at Central School of Speech and Drama on 3 November, 2010.

Panel:

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Louise Owen: As the abstract says, *Aurality of Objects* is an ongoing investigation into the production of objects in relation to the aural waste expended during the fabrication process. The work explores how this previously wasted by-product might relate to the identity of objects and how we understand and interact with them. It questions whether objects might carry within them some trace of their creation noise, perhaps as a memory, and whether this could have some bearing on the final state of an object's existence. Could the energy expended during their conception have any

relation to how we perceive them? What if we were able to become aware of this energy and hear it? What would each object's birth noise sound like and would it offer us a more holistic understanding of the object? Would being sensitised to these echoes of fabrication foster a responsibility for the object's manufacture on a more visceral level? The work explores the dynamism between these visual and aural outcomes.

Dot Young: Okay, great. Well, *Aurality of Objects* first occurred really because of the 2009 Theatre Noise conference, when Jessica Bowles [Principle Lecturer, Creative Collaborations] was our Head of Course and was enthusiastically encouraging people to contribute. At the time I was really keen to take part in that conference but I didn't know what to contribute, I hadn't particularly thought about it until that point. So I started considering theatre, noise, production, running the prop-making strand, but having studied sculpture installation at college years ago I was really thinking about the world that the prop-maker lives in. That's very much the world I've always lived in. I have a fine art, sculpture background, and growing up I spent an enormous amount of time in workshops, so I think that drew me into the whole prop-making industry.

When you're prop-making, when you're producing sculpture, when you're making any object, the noise is almost deafening. It's an incredibly noisy profession. Often you're wearing ear-defenders, you're warning people that you're going to make a noise. Actually, as a prop-maker, you're living in a world that is just dominated by grinding and sanding and sawing and screaming and screeching and puffing and huffing and extraction. But what struck me is that although the process is incredibly noisy and deafening, the objects that you're producing are more often than not completely silent. So I was really interested in that relationship: the tension between this sort of traumatic, disturbing 'birth noise' and the objects' seemingly silent, poised existence. That became the focus for our research.

Sound is not my area. I'm not particularly well versed in who's doing what in sound, that's definitely Greg's sphere – he's much more informed on that

front. So I suppose that's why, when I was looking at sound, I was really interested in Luigi Russolo, a turn-of-the-century inventor of new sound technologies. Everything was happening at that point. Industry was building; there were noises being produced that people had never heard before. Suddenly the world became a very much louder place. Now, Russolo was particularly fascinated by this new industrial noise, and I just want to read a little quote from his 1930 *Art of Noise* manifesto: 'Let us walk together through a great modern capital, with the ear more attentive than the eye, and we will vary the pleasures of our sensibilities by distinguishing among the gurglings of water, air, and gas inside metallic pipes, the rumblings and rattlings of engines breathing with obvious animal spirits, the rising and falling of pistons, the stridency of mechanical saws, the loud jumping of trolleys on their rails, the snapping of whips, the whipping of flags. We will have fun imagining our orchestration of department stores' sliding doors, the hubbub of the crowds, the different roars of railroad stations, iron foundries, textile mills, printing houses, power plants and subways.'

So Russolo was incredibly excited about about these new noises, and as such he went on to try to recreate these industrial noises with musical instruments. He went on to compose orchestral pieces which he performed and which went down particularly badly at the time. He wasn't popular, he was very involved in the early part of the futurist movement and actually he produced some paintings alongside this work which were very sort of left-wing [laughs]. The futurists went off on a tangent that I don't particularly want to go into, but it was their questioning of the world that was particularly exciting. We're going to hear a clip of Russolo's music.

[music plays]

He went on, as I said, to construct fuller pieces which he played to the public, and his project had a life for a certain amount of time. But the affinity I've always felt with him is that he was obviously working through creating industrial noise. And what I wanted to do was actually collect the waste material from the production of objects: not collect existing objects' noises, but

actually look at the manufacture of objects and, as they're being manufactured, collect their sounds. Then with a composer I'd create the birth symphony for that object, so a slightly different tactic to his. Having visited that area, I contacted Justin Bennet who has a fantastic website which you might want to look at. He is an experimental sound artist in the Hague in Holland and this is a slide showing work that he's doing at the moment.

[Shows slide]

It's shotgun architecture where he's firing guns and measuring the space visually with drawing. So I asked Justin if he would compose the birth symphony for an object to see what the results might be. Obviously, he was in Holland and I was over here, so we only met a couple of times. But it was a case of, 'What object can we make, what can we produce to discover its sound?' At this stage I was keen to produce the object myself so that I could collect those sounds, as a sound project, from a sculptural perspective. So it was a case of having to start somewhere to produce something to collect the noises, so I kind of focused on hearing devices, experimenting with elements of the inner ear, musical instruments etc, very much playing around with the notion of what this object could be. And it sort of evolved into an abstract, slightly surreal musical instrument that could be used as a prop in a production. I was just looking at hair cells in the ear which obviously I'd done a little bit of research into but didn't fully understand. But I was quite taken by their form under a microscope: they became these little fluffy-toothed bags that act as a receptor to sound and enabled you to hear, which I just thought was fascinating. I was really drawn, as a sculptor, to their slightly haggis-shaped form. Eventually I settled on this sketch, very much a sketch, which I felt incorporated a lot of the elements that I was looking for.

[Shows sketch]

I drew it up into a make and then decided to record visually the whole production, the thought process, with a view to archiving. So this is a stop-motion film of producing the object and as this was being filmed I was

collecting the fluttering of the pages, I was collecting the scratching of the pencil on the paper and the hack-sawing and sanding; the mixing of the paint with the brush, the slopping of the water - very much like Russolo.

[Silence – watching the slide]

Again, what I was doing was collecting the sounds of this object as though the object were to be used in a production. At one point the object was going to make a noise, but then I decided that it was much better if it just stayed as a silent prop object. And really I was thinking that it could take part in a performance silently with this secret – this secret aural history that only its fabricator would know about. And it was quite loud to produce. There was a lot of sawing and hammering and battering.

[Silence – watching film]

So once the object had been formed and all the noises had been collected, I sent them digitally to Justin Bennet in the Hague. I sent an image of the object as well, and then he was very much left to interpret that as he wished. So there was a certain amount of room for interpretation. Obviously everyone would have interpreted those noises in a different way but he interpreted them in a very specific way. I didn't have a hand in how he dealt with those sounds, and he worked independently over in Holland and composed a piece. And then I asked him to send it back to me in London, which he did, and so I ended up with this soundtrack and this object. I think something I realised at the Theatre Noise conference was that when you have sound and visuals, the visuals are so dominant that you have to be really careful because people tend to stop listening when there's something to look at. Also, we're talking about this object in terms of its creation sound, not its visual outcome. So it was important in the installation to think about presenting the work sensitively. It was first shown at Shunt, then again at the Theatre Noise conference. At Theatre Noise, so that the visuals didn't dominate the work, it was decided to put the object inside a large, black, furry hood suspended high in a very, very dark space that you couldn't actually know because you didn't know where

the room ended. So you could experience the object to a certain extent but you weren't really allowed full access to it. You were put in a position where you would be searching for clues about its identity more in the sound than the visual. It was done here at college and to access the image, the sound, involved going on a dark journey. You had to travel in isolation down this dark corridor and then sort of come across the object.

Now, the sound that Justin had produced I was quite shocked by when I first heard it. I thought: Gosh I wasn't expecting that. Because the noises are quite brutal and rough. I've just got a very short clip of it.

[Clip plays]

You could hear this through a curtain but you didn't know how long the corridor was. It was quite horrible really. Then you sort of came out onto this space dominated by the object, which was really large, a very large projection on the floor.

So it was quite a full-on experience, actually going into the space. People tended to go in one at a time. When you were in the space it was so dark you didn't know if you were in there with someone else or if you were in there on your own. It was quite disorientating. It was quite loud, the speakers were hung directionally so that the sound was phasing all around you. You were immersed in this experience, really.

The respondent at the conference was a professor from California. He wrote about the piece when he came across it and described how you come in at the furthest point from the door that you entered and what you see projected on the floor is a circle of light that's coming from above and the shadow of a very interesting creation. And then he says, 'I thought about lying down.' And it was really interesting that he said that because when the exhibit was shown at Shunt people did sort of gather in the light; they were drawn into it and it became an altar in some ways. And some people started performing, so it was quite an alluring space. He said, 'I thought about just sitting where I was

and letting the sound fill me and then moving into the light. The point is, it was moving out of the darkness into the light. I did feel there was something teleological about it, but found myself moving, wanting to move, and allowing myself to do this around the edges of the light, as I listened to the sound. So it was a liminal space where that fuzzy penumbra is. That I found it very, comforting is not the right word. It was stimulating, inspiring, provocative to walk that line.'

So he really enjoyed it, which I hadn't particularly intended. But he really enjoyed walking around the edge of it, and he was talking there about liminal spaces, and I think a lot of the work does relate to those liminal spaces between the real existence of the object and its aural history.

That was in Theatre Noise. It then went onto Deptford X where I was working with two black artists who invited me to join them literally because the work was so dark, and they were exploring black identity and darkness and shadow and blackness and how that's interpreted generally. So I worked with the two artists and we converted the basement of an old library into a series of installation works and we all had our separate elements. It was called 'Corridor' and the other artists were Amanda Jones and Paul Jones, both of Caribbean background. Amanda's very digital and Paul works a lot with film, so it was an opportunity just to have another interpretation of the hooded object in the space, only this time it became a lot darker, it got really dark – so dark that you had to travel down this very dark corridor with sodium lighting in a spiral movement and the noise again was quite loud. A lot of people didn't make it to the object, they just couldn't handle the noise and the darkness. They just sort of got lost in this labyrinth and came out again.

[Clip from film plays]

So the visuals were fading away at this point and it was just becoming more and more about the sound that Justin had composed. There was this long corridor and dull lighting. And then you sort of glimpse the object, but it wasn't the object really, it was a mirrored vision of the object which was actually

somewhere else. So the object wasn't actually there and sometimes people would reach and try to touch it. But they'd hit this piece of glass and it would move and they'd panic.

By that point I'd finished with the object and the sound that Justin composed, and it was time to reflect on what had occurred. It seemed more and more that the sound created by the fabrication of objects did have some bearing on the final product. I was starting to think about that relationship. I just want to read out something I wrote in a notebook at one point when I was thinking about this project:

'I recently had the experience of sitting in a large reception area in a London hotel, with just the hushed voices of a few residents offering a low background murmur to a quite sedate environment. Placed around the lounge were a series of large-based, broad-shaded table lamps. They sat solidly and silently. They neither overstated nor understated their presence, acting as required, as representatives of the bland acceptability of corporate style by their host. Their consistent regularity and flawless symmetry suggested a route in the process of mass-production. I wanted to personally become, and have their environment become, sensitised to their genesis as organic material and manufactured objects.

'With all the history and even the political and social context implied by their existence and materials at the time and in that particular place. I wanted their birth symphonies, or perhaps some more encompassing and metaphorical sonic construct, to cry out through the lobby. After exploring the research questions and considering the outcomes of residual matter at work there, I longed for a more holistic understanding of what it was to share their environment and to share their being.'

In other words, I wanted to sit in that lobby with these terribly grand, mass-produced lamps, and be able to hear their production manufacturing noises; to actually hear them scream. Because they would literally be screaming across the lobby and it would be unbearable to sit in that space.

Greg Fisher: Hi, I'm a lecturer here in theatre sound design. My background is in music composition and theatre sound design. I participated in Theatre Noise, the conference where Dot first worked on *Aurality of Objects*. I loved the idea that hearing an object's birth would offer us a more holistic understanding of the object. Would being sensitised to these echoes of fabrication foster a responsibility for the object's manufacture? That really caught me, I really liked that idea and I don't particularly know why except I think I've gone through various stages in my life and climbed real and imagined hierarchies of consciousness and spirituality and subconsciousness. And I have come to believe that the connectedness of everything must be able to be felt in some way.

So I saw what Dot had done, and at that point I was doing a project that was kind of fun as well. We'd had a number of posts situated around the school that were collecting sound. The sounds from those listening posts were brought back to a central location, manipulated in real time and then factored back into the spaces of the conference so that, for want of a better phrase, the sound of the conference became the sound of the conference. And that was a conceit that reflects my interest in collecting noises and working with found sounds, and then in constructing them into something that has a dramaturgical impulse. And I guess that's why I work in performance and theatre because that is key to my understanding of how sound works at an emotional and a visceral level.

I got wind that Dot was going to pursue this to a second stage. I ran to her office and said, 'Can I work with you?' Now I've worked with dancers, I've worked with musicians, I'd never worked with a sculptor before and even though the research item at work here is *Aurality of Objects* and all this stuff that we've talked about, I was really interested as well in some technical things that we'll talk about later. I thought: how is this going to work? What am I going to take away from this? How are we going to talk? We deal in different languages. Will we find some symmetry, will we find a synergy as well? So that was part of my research question, actually. What can she take from me?

What can I take from her? What does the taking and the giving create in the final product? And we're not even there with a final product yet. The idea of using collected sounds in composition certainly goes back a very long way, it's nothing new. But my particular interest as a musician and as a composer is using those materials in a musical way, sometimes transforming them into musical idioms or transforming them into something that is not quite found art, found sound, art, sound art, but maybe more... traditional might be a way to put it actually, in terms of harmonic structures and motifs and rhythms – all the things that we associate with defining music. I actually don't define music that way, but a lot of people do and for this project I wanted to approach it that way. I wanted to approach it musically as opposed to as just a collection of found sounds that had been manipulated in some way.

DY: So, taking that into account and thinking about where it was going, I'd spoken to Greg about sourcing an object and tracking its aural history. It was quite hard to decide what object to choose. You know, there's millions of objects, why choose anything? It's very difficult to settle on something, and it had to be an object that was traceable as well. So we decided in the end to track a chair. Why a chair? A chair for me certainly was a very basic item. I worked in southern Africa many years ago. People carved their tree log into a chair; you always carried your chair with you; you sat in it; you laid your head in it when you were resting; you could fill it with things.

So I had that personal history with the chairs I'd encountered in Southern Africa of which I have a few. And just generally it's a basic iconic structure. From a sculptural point of view it's functional, and it was possibly traceable as well. We decided to try and track a wooden chair, an oak chair. The reason to try and track specifically a wooden chair was to narrow the field down in terms of the materials that we were going to be tracing back to their origin. We spent quite a long time looking at chairs, phoning chair manufacturers up. Where was it manufactured? Who made it? We had restrictions in terms of the budget that we had, but we were lucky to have had a research development grant. So we did have *some* money, but we weren't going to be able to track a chair to China, we simply wouldn't have been able to afford to do that. So we

were suddenly in a position where we had to track a chair hopefully that was manufactured in Britain with the mission to track it to the manufacturers, to the saw mill, to the forest, the tree stump, the ground that it came from. We soon realised that the chair manufacturing industry in Britain is virtually non-existent.

But, in saying that, we did manage to find a chair that we liked, that ticked the boxes. We wanted a chair that was almost the sort of chair that a child might draw. If you said to anybody anywhere 'What does a chair look like?' they would probably draw that type of shape. We kept falling, we kept being lured into all these beautiful chairs that we loved, but we had to keep pushing it back a bit and saying no we need a really sort of iconic object. That chair is made of European oak and it was manufactured in High Wycombe. It soon transpired that the reason it was manufactured in High Wycombe is that High Wycombe used to be the home of the British chair-making industry. So there was a very good reason why the only place we could find that was still manufacturing oak chairs in Britain was in High Wycombe. It was a company called Stuart Linford and they were really receptive to the idea. We went to them and we said, 'We want to find a chair, we've seen one of your chairs that we love the look of, we'd like to be able to track it aurally f that's okay.' And we worked with a guy called Tom Craven, who is the workshop manager, he controls everything. Tom's the man that you have to know, and he's a very practical man. He wasn't particularly interested in the project. He didn't particularly want to sit down and discuss conceptually where it was going. He wanted to know what access we needed, who we were going to record and what we were going to use it for.

GF: I have to say, I think their first reaction was, 'Why don't you just go to IKEA?'

DY: Yeah, they weren't really that interested.

GF: But that, that's actually another project, a really interesting one.

DY: That would be a very different sound. So this is Stuart Linford's in High Wycombe. It's a working chair manufacturer. I must just make a nod to the people that work there. They work incredibly hard, they work from dawn till dusk, they get very little time for their lunch hour and it's very very full-on hard work. So we floated in there and we were able to access all the machinery. This is Brian on the right here. He's actually cutting the wood that we eventually sourced for our chair

GF: And I'm going to jump in and say that I have literally about six hours solid of recording various aspects relating to this project. And so I've put together a collage of Stuart Linford and that will be playing in the background.

[music begins]

DY: It was quite a noisy workshop. We sort of entered this whole world which was very familiar to me but perhaps less familiar to Gregg. You know, there was sawdust, there was dust, there was dirt. There were smells, the smells were just fantastic depending on what wood they had in and were working with. I was fascinated by their jigs and their clamps, I loved it. There was this whole language that they were using, that they shared this common language. They were using these jigs over and over again. They were hand-made. They hadn't bought them, they had designed them, and had been using them for a very long time to manufacture their chairs. We entered this whole world which was fascinating, and at this point we were really charmed by the process, we were thinking this was a wonderful project. It's taken us to this fantastic manufacturer. We love them, they love our project, it's environmentally friendly, it's recyclable. You know, it was ticking all the boxes which was really fantastic.

Of course, from the manufacturers we then had to track it further back to the sawmill. We ended up meeting Peter Barnes at Vastern Timber in Wiltshire, and it took a bit of a turn, the project, because it was a really wet, rainy day and of course there were just mountains and mountains of oak piled everywhere. And there were huge warehouses and piles and piles of felled

trees. Gregg and I had lunch that day and I had to confess that I felt the project had taken a turn and actually I wasn't particularly enjoying it anymore. It was really resonating with me as a kind of abattoir. These trees were being chucked about by huge diggers and they were picking them up and throwing them down and the mud was splattering. And there were all these men hacking them up and the machinery was pounding and they were very unceremoniously treated – there was very little care.

We found out that the trees are felled and sit there for a year. Finally they're taken off and sawn into planks, then they sit for another year per inch. So if you cut a 4-inch plank it sits there for four years, they then steam it for two and a half months in a kiln. So there's this really long, long process and it was just... We were so far from our chair, and we were in this horrible, noisy, stinky place. And the wood really reminded us of carcasses. The logs were tagged and it reminded me of when they clip the ears of pigs and when they tag cattle. There was a brutality to it that was really disturbing. It didn't feel very environmental at all, just slightly abusive.

GF: From a sound point of view it was certainly rich in its nastiness. If you were up close and recording, you might say the wood was screaming. I mean, it makes a noise that was really visceral and very disturbing. And that's why I've never been around a saw mill in my entire life. But it was incredibly informative about the direction that we were going to wind up going in.

DY: There was a very brutal process when they kiln the wood. It has to have a certain amount of moisture left in it, and this lovely, kindly man Brian gets this prod and he'd stab the wood really viciously. It was almost like he was injecting the wood and then he would assess how much moisture was left in it. If it had too much life in it then they'd have to leave it another year. So it was this interminable process of, effectively, waiting for the wood to die which I found very disturbing.

GF: Again, we were working on the brief of the project which was: What did we learn by doing this? How do we feel about the object and its manufacture? And you would be amazed at the emotional gravitas that all of this had.

DY: And they were fantastic, fantastic noises to collect. There was this fantastic saw too, this huge butcher's shop where they would get this wood, and that was where they would get the wood, and that was where they really went for it. They had these massive saw belts and it was a very male environment as well. It was very interesting. The room was full of these huge metal saw belts that you couldn't lift. I mean, it took four men to lift them – and they were all men, there was only one woman on that site. But what struck me as very funny was they had these machines, these huge belts, and there was this really sweet man who ran the saw room, but it was really hard to talk to him because he had wallpapered the entire back of his saw room with pornography – really full-on pornography. So there was this whole other thing. These huge metal belts and this incredibly sweet man, but also this really hardcore porn going on while you're trying to have a conversation. And it was all coming from our chair really. You know, we wouldn't have been there had it not been for the chair, so again we were sort of feeling its roots.

GF: I don't remember that bit.

DY: No, you probably wouldn't. It felt really uncomfortable. So anyway, we'd got to the saw mill and Mr Barnes who runs it, he's incredibly well spoken and incredibly wealthy and he lives in this beautiful cottage and the reason for mentioning it is that it's right next to the forest where the wood had come from. So after having endured this terrible saw mill, Peter Barnes said that he'd be able to take us to the forest where the oak had come from. So we had to trek through this forest to get to one of three potential stumps where the chair had come from. So after this terrible endurance test, we finally got to the forest; we got to where the chair had originated and it was a lovely moment to have tracked it through those terrible processes to get back to its home, its origin. It wasn't the most beautiful forest. We were there when the bluebells were out, it was fairly spacious, predominantly beech with a few oaks. We

were expecting a huge oak, a big old fairytale folk – a very idealistic forest. Of course it wasn't like that at all. It was bit scrubby, lots of beech with the odd oak here and there. But we did feel that we'd come to the root of the chair itself.

GF: The sound file that's playing now was recorded as I was sitting on the stump of the tree that was felled that was used for the wood of the chair. We poked around that for a long time, didn't we? Looking at the bark and the roots and all kinds of fun things.

DY: It was really difficult then at that point to decide what value there was and how that might manifest itself; also, what it meant and had it answered any of the research questions. What were we going to do next? What meaning lay there? Gregg and I travelled together but at that point we sort of separated. I said to Gregg, 'I'm going to go off to my workshop and just sort of think about what's occurred visually' and Gregg went off to his space and worked out what he was going to do with the sound. During that whole process, because Gregg had been collecting the sounds, I'd been rigorously collecting all the debris so I had these sacks of endless amounts of bits of wood – bark, sawdust, bits of splinter and bits of oil from the machines. I'd been archiving all this debris and I really thought that that was what I was going to work with. So of course I got to my space and I just couldn't connect to it at all, it just seemed like a pile of old waste and I was really stuck for a while. I just didn't know conceptually where to go with it.

But I think eventually, in terms of the visuals – and Gregg will talk about the sound in a minute – I really just started thinking about the growth of the tree and the plant in the space where we'd finally ended up, so I got quite into the plant and the root systems and I started collecting little bits of plant and chopping the plant from the root and embedding the plant and the roots in resin blocks and swapping them round – just thinking about growth and the birth of the tree and the birth of the object and that cycle. I had this notion that it would be lovely to create a chair on a root bowl that hovered in a space that you could interact with perhaps, then sort of collecting and pressing roots and

embedding them in resins and creating a little archive of root plants and then looking at the structure of the roots as well.

For me the root became that liminal space where something is occurring. When we found the stump it was interesting that although the tree had gone it had started growing again, it had started regenerating and there was this eternal force that was going to exist beyond mankind and the brutality of the saw mill, which was a really positive thing. So it became clear that the physical debris wasn't going to answer any of the questions for me and I moved into the new sphere of that space, that space of birthing of plants and life, etcetera. So at the moment I'm in a world of subterranean root turmoil. And that's all I have to say so far because I haven't got any further.

GF: Okay, well, picking up there, because the final manifestation of this project is undetermined now and we've had lots of conversations about what it might be and where it might be and how it might be arranged. I've been operating on the idea that this would be an installation some place that the audience would be managed in some way, and I've taken the root ball, the hovering root ball idea as a departure for me, a way of thinking about how this might move forward.

My conceit was that the installation would be interactive, with the audience approaching, getting near it, moving away from the root ball, possibly getting in it in some way but using proximity sensors to trigger various sounds that had been derived from the regional source material so that there would be a constant soundscape in the room. It would be constantly shifting, depending on who was where. I thought: if I'm going to be thinking about this musically, what do I need to do with these samples? So one of my research questions was what can I do with something called 'granular synthesis'. I'm sure there are people here who know what that is. It's an idea which goes back to the quantum physics proposition that there might be a particle theory of sound rather than a wave theory of sound, and that these particles are minute and that they can be in a way reconstructed in software by slicing and dicing samples down to very, very small units called grains. That's granular

synthesis, and then they can be rebuilt in various ways depending on what algorithms you choose.

Granular synthesis has been around actually for quite a long time and I thought it might be interesting to play with it in this regard and with the idea that I would be taking the original samples and making them musical in some way – musical in kind of a broad sense. So just as an example of that... This is a recording of the grinder that sharpens the teeth of the big band saw that you saw earlier.

[Plays recording]

You can hear the files move back and forth over those huge teeth as the band goes around. Okay so this is that same source file with a kind of granular synthesis applied.

[Plays recording]

So clearly we were able to extract rhythm, pitch and timbre information in a way that can then be played. I could put that in to what's called a sampler, I could then play that on a keyboard up and down pitches, I could do anything that would be pitch-based with it in addition to all the other sound design applications that we now have at our disposal.

I thought I would need around 16 tracks of interdependently controllable or triggered sound files, depending on proximity to the sensors. Somebody walks in, something else fades out.

LO: Well, thank you, that was extraordinary – a very fascinating project to learn about. Do we want to go ahead and ask questions?

GF: Can I just say one thing? In terms of the research question about the connection between us and the object and whether my being is informed about what we just went through, there is no doubt I love that chair!

DY: It's at my house, but I'm not sitting on it! For me it's no longer a chair. It's a concept, a journey. The relationship we have with the chair is fairly intense. At the moment the chair is under some stairs, wrapped in bubble wrap. It doesn't feel like a piece of stored furniture, it feels like a piece of the research project. I wouldn't sit on it, I don't touch it, I don't know what to do with it. It exists and it's there! I think in any literal outcomes that we have with the project, whether the chair will be present or not I don't know, because we're really interested in the process of manufacturing the chair and the journey that you go on when you explore the aural history of that chair. And with the visual being so strong, I'm imagining that the work when presented probably won't include the chair – or it may: we're really not there yet. But it's become iconic to us anyway as an item.

AM1: It sounds like the story of Bluebeard, 'the chair in your attic'. I wonder if you've wondered if the chair's happy?

DY: I think the chair's in limbo at the moment.

GF: I have to confess something to you. You're probably not going to want to hear this.

DY: I don't mind.

GF: We were at the end of the process, at Stuart's – which by the way if you ever want a piece of bespoke furniture made is an amazing place to go, though you've got to be really rich. Anyway, I was musing to myself that this wood has water content and it just struck me that water is life and there is still water in this wood. So I turned to one of the guys there and I said, 'Is wood alive?' and he looked at me as if I had just lost my mind. And he was right actually because he said, 'Well, no. Cells aren't actually growing, there's nothing dividing.' He got very technical about it and tried to lead me by the hand like a third-grader...

DY: Are there any other questions?

AM2: I'm really interested by this project. I've got quite a few thoughts going on and one of them was, your research into the chair's origins was so much more than just sound research. You get the smell, you get the sense of place. I guess it's a little bit like... you mentioned an abattoir. It would be a bit like going to a slaughterhouse when you're thinking about whether you're going to eat sausages for breakfast.

GF: You also get the politics, you get the sociology, the culture, the history.

AM2: Exactly. You meet the people who are making it. And I felt that your composition was just so totally informed by your experience. I was quite curious to think that your visual interpretation was in fact a root bowl, whereas from my perspective to actually have had the chair itself present with this sound material would tell so much more of the experience than a root bowl. The other thing and the reason why I particularly wanted to come today was a line in your brief where you said 'it's about the actual sound of the material essentially', and this was my question: whether you were considering trying to access the sound of the wood?

DY: Yeah, we did have conversations about trying to do that. It would be great to access the molecular movement of the wood as it's draining of moisture, for example.

GF: It would be really fascinating, but the problem is that with the technology that we've got or that anybody's got for that matter, it's very hard to get down to that level and figure out what's going on.

DY: The project is still in progress at the moment. We haven't decided any outcomes, they change all the time. Sometimes it's just the chair with the sounds. Sometimes it's a root bowl in a room. Sometimes it's something you travel through. We haven't really come to a final resting point with it yet.

AM3: I don't know if this is a question, there's so much to take in. But there's a connection for me between what Dot started to talk about, when you were talking about the early work and the hairs within the ear, and I was looking at the root system and thinking how violent it is to extract the soil from the root and about root hairs and this sense of the underground – the fact that you're actually exposing the underground, taking soil away from the root and making visible what shouldn't be visible.

DY: I think we've only just entered the subterranean world, the feeder root, and there's a lot to consider and investigate now with that.

ENDS