

Creating Imaginary Worlds from Scientific Data: An Interview with Amanda Stuart

By Scott Deal

British composer and media artist Amanda Stuart uses narratives of form and shape, juxtaposing contrasting translucent colors with dense sonic textures, woven together in an audiovisual tapestry. From the tiniest of gestures to dramatic powerful climaxes, she immerses the listener in fantasy landscapes creating beautiful and dramatic sound worlds. Her piece *Song of the Trees* won the IAWM Pauline Oliveros Prize for Electroacoustic Media 2015 and *Not Missing You* received an Honorary Mention for the same prize in 2014, with one reviewer writing, "...It's as beautiful to look at as it is to hear" (Boston Classical Review). Her work has been presented throughout the world in venues that include Earth Day Art Model Festival, New York Electroacoustic Music Festival, Boston New Music Initiative, International Computer Music Conference, and Understanding Visual Music in Buenos Aires, to name a few. She has held residencies for the City of Peterborough, the Cambridge Festival, Suf-

folk County Council and the Firebird Trust. Her commissions include compositions for the London Festival Orchestra and The City of Peterborough Symphony Orchestra. The following is a transcript of an interview that was conducted in October, 2023.

Scott Deal: Amanda, in looking at your work, it seems that you cover a wide range of earth-related phenomena. For example, *Bubbleflux* explores the notion of bubbles forming in the ocean, as well as the functions they carry out in animal bodies. *Magnetosphere* draws from scientific data of electronic activity in the atmosphere. These two works seem to capture what you are doing broadly, and I'm wondering how would you frame them in the context of your creative process and artistic intents?

Amanda Stuart: When I first composed *Bubbleflux*, I was certainly attracted to the pure joy of bubbles, but I was also incredulous at how vital they are to life. For instance, in medicine they are used to transport drugs to specific parts of the body. And it seemed to me that you could celebrate these aspects of our world, and not to be too grand, but

through compositions, one could take people into a different world and allow them to focus on it. It's not just another scroll of "...bubbles in this", or "...the magnetosphere is doing that", but rather that you are immersed in it and that gives you time to really think about what you're listening to, and to think about earth. Most importantly, it's about treasuring the earth, now more than ever. With *Bubbleflux*, I was attracted to the idea of creating a video graphic score that could be understood by non-musicians, so we could have audience members on stage performing spontaneously. During the piece, the audience joins in making popping sounds with their mouths and there is great fun and laughter. But they've also been reading the program notes and getting a bit more information. Hopefully, this makes them think a bit differently about things than they perhaps would otherwise. And with *Magnetosphere*, I think of how incredible it was to work with the real sounds from the atmosphere, and to create a work that transforms the notion from those sounds into a whole creative world, which is quite a different experience from understanding a scientific report, for in-

stance.

SD: Where did the recordings for *Magnetosphere* come from?

AS: There was a call for works from *CARISMA*, a project funded by the Canadian Space Agency, using recorded sounds they had captured from the magnetosphere of the earth. In the call they made clear they were interested in music to accompany the sounds. But I was interested in using just the sounds themselves, so while I knew my work most likely would not be selected, I thought wow, these sounds are so amazing, what a fantastic opportunity! I didn't really write to their brief, but I used the material for what I wanted, which was to take these tiny sounds and make an incredibly imaginative world by transforming them, giving the agency publicity as it is cited every time the work is presented.

SD: I'm reading on your website about the various sounds they supplied....*Sferics, tweeks, whistlers, dawn choruses and hisses*. Seems like a big variety of sounds. Perhaps you can talk about your process. How did you take these various sounds and term them into a media piece?

AS: If I remember correctly there were four types of sounds recorded in the magnetosphere that you could use. The sounds were interesting but limited in number – but I like that. I wanted the piece to literally feel like you were in space and that things were coming at you. This is also why I chose to make it in surround sound, so that you had that real sense of being up in the atmosphere. After choosing sounds, I go through every sort of transformation I can think of, using any weird bit of software that I have that might do something. This takes *a long time*, because I'm following my sense of what's right for the piece and what's not. If it's too electronic, it doesn't work because I want it to feel like it is in the sound world. In essence, the first step is just to go through all different creative processes that I can to get a sort of library for the piece. And then while I'm doing that, I'm starting to imagine a structure. It doesn't have to be an obvious structure, but it does have a sense of journey. I think, oh, well, I want it to start really quiet. and I'm always going to have soft bits and dramatic bits because that's what my pieces are. They'll take you on journeys, but

there'll be these wild bits in the middle, or it might start with a wild bit or whatever it might be, but it's going to be big and powerful and then completely tranquil and silent in other bits. The sounds must have a reason for them being there, so there is a sense that they belong in that place because they're part of that storytelling, which is very important to me. Structure will create emotional movement in the piece in the sense that I want the listener to respond and to be immersed in it. Life itself is small and joyful and big and powerful....all these things. And somehow, I want these in all of my pieces.

SONG OF THE TREES

SD: *Moving to Song of the Trees*, can you discuss your inspiration and process for its creation?

AS: I went to see David Hockney's big exhibition at the Royal College of Art London. Walking into the exhibit, there were some massive tree paintings from his *Woldgate* series. For some reason I just looked at them and strongly sensed the structure of a musical piece. The view was a huge tunnel of trees to walk through which struck me as both

imposing and peaceful. I just knew then I wanted it to be like that, to be peaceful and to be very dramatic in the middle and then be peaceful again. I also wanted the instruments to be somehow connected with the trees. As I was imagining these trees, I wondered, what would they sound like? I settled on clarinet and flute and wrote the instrumental score first as a duet. I wanted it to have a sense of wind, so that the two melodic lines would float above the wind. The wind would come and go, giving the listener a sense of space and being surrounded by the sounds. I created wind sounds by recording an associate blowing air into a bassoon and did the same for the clarinet, and then processed those sounds.

I had the wind in the trees and the two melodic lines from the clarinet and flute, which I decided to transform in live performance. The piece begins quite simply and the transformations are quite simple, but in the middle section there is this whole whirly section where the two instruments are processed live, and it's just wild. An audience member described it as like somebody bulldozing down the forest in the middle of the piece, just an explosion

of sounds, all created live. At the end you come back into a transformed version of the original melody, a return to an altered beginning. Then when I did the film, I drew from hundreds of photos I'd taken in the village over the last few years. I selected pictures and started to experiment with them and realized I could create a sensation flying over the trees. It looks like you're in a drone, but actually all the trees aren't moving. It's uncanny that the photos are all taken from the ground, but in the film it looks like you're flying over the trees, and through them. I layered the images and moved them in the software, but it was all really tough because I didn't realize that I could do that sort of thing. It was all very experimental, and I was creating this all the while I was learning how to use the software (laughter). But it's like, gosh, that's the joy of creating, isn't it? You don't know...it's like, wow, what if I could do that! (more laughter).

SD: *Oceania* is derived from a two-minute sample of Ross Seal and Orca Whale calls. Could you discuss a bit about your process in creating the audio for the work, and if you want to get a little technical, which

software, what processes you liked, or that you felt worked well?

AS: I was delighted to be chosen to take part in the Polar Sounds project, which was a collaboration between Cities and Memory, the Helmholtz Institute for Functional Marine Biodiversity, and the Alfred Wegener Institute at the Helmholtz Centre for Polar and Marine Research. The aim of the project was to highlight the soundscapes of the Antarctica and the importance of sound communication between the animals and how it is affected by climate change. From what was offered, I chose the sample of the recording of Ross Seals and Killer Whales because although they're very repetitive, two different sounds in all, I thought I could create the whole piece from just this one sample. Then I literally went through every single processing software app I have; Everything in Ableton, Max for Live, Native Instruments, UAD and IRCAM GRM Plug-ins. I put the single sample through everything, which produced around 83 sounds that I liked and then I cut that down to 61 sounds which were then used in the piece.

The crazy thing is that I had all these sounds and you know, I'm starting

to get overwhelmed very quickly. Then I divided them up into categories, like, oh, that sounds like a washing machine. Okay, I'm gonna have washing machine sounds, and these are low sounds, swooping sounds, etc. I knew I didn't want anything to sound electronic, because I was creating an imaginary world underwater. I wanted the sound to be organic and natural, of course they weren't, but I wanted them to feel as if you really would hear those sounds underneath the water. You hear the original recording twice in the piece - most clearly at one minute 15 seconds from the start of the piece. It was very important to me that you hear what the whole piece was made from. The idea is that you would start in the depths of water. It's an imaginary underwater world, and you don't really know where you are. It feels familiar but completely unfamiliar and again, sounds are all moving so you get sense of the whale, and it's moving further away or coming near, and it's swimming up to you but you're not certain as to what it is. And there's a big storm after which, you just like gently float away. So that's how the audio of the piece came together.

SD: And how did you integrate the audio part with the video?

AS: Having created the piece, I thought it would be great to put some pictures to it. I began researching media of the Antarctic, which is fascinating look at, seeing waterfalls in the ocean and all these things, and to see where these animals lived. But I couldn't create visuals that worked in the context of Ross Seals and Killer Whales. I returned to the idea I began with the audio component, of just creating my own world... the imagined world under water. And then I started experimenting with some of my digital paintings and tried transforming them and suddenly I realized it was going to work! I used about 13 of my paintings of various media, digital and acrylic. They all had been experimental paintings, but then when I layered, transformed and animated the images, they came together into this imaginary world in my mind, and that's how the visuals came together and were synced with the sounds.

SD: Amanda, it's exciting to hear you talk about your process, and I appreciate how intuitively it is that you work. Thank you for taking time to

talk with us today.

AS: My pleasure!

Music

Amanda Stuart: *Oceana*
World Premiere: Earth Day Art Model Festival IUPUI Indianapolis - April 22, 2023
<http://mediathek.slub-dresden.de/vid90003603.html>

Amanda Stuart: *Song of Trees*
Clarinet: Gareth Stuart
Electroacoustic World Premiere: Light and Sharpness Concert 2013, Mumford Theatre, ARU, Cambridge;
Film Premiere: Earth Day Art Model Festival 2022, Indiana University Purdue University Indianapolis (IUPUI).
<http://mediathek.slub-dresden.de/vid90003604.html>

Amanda Stuart: *MAGNETOSPHERE - Sounds of the Earth*
Electroacoustic World Premiere: New York City Electroacoustic Music Festival - 2017; Film World Premiere: Earth Day Art Model Festival 2021, IUPUI.
<http://mediathek.slub-dresden.de/vid90003605.html>