

AA How do you combine sound with your visual work?

MM The first half of *Citadels: Lightscape* is a sort of soundscape prelude, with the harmonics coupled to colour. The modulation of the sound then parallels the frequencies of the flickering of the light. Sound plays a supporting role. It brings focus and contributes to a meditative atmosphere. For the audience, it heightens the sense of being immersed in the work.

AA Could you also work without sound?

MM You'd think so, but strange things happen because of the sound. Listening to white noise at the same time increases the intensity of contrasts and complementary colours. There's a link between sonic and visual experience. Certain sounds intensify certain kinds of images or the effects of specific colours. And the effect is intensified if you hear the same modulation in the sound as you see in the light.

AA Why do you sometimes present *Citadels: Lightscape* as an installation and sometimes as a performance?

MM The two versions lend themselves to different experiences of the work. An installation is calmer and you can take your time exploring the space. When I perform I'm taking the spectator into another world and there's a direct link between the patterns I see and create and what the spectator sees. There's always something magical about doing it live. I'm at the controls and I see the same patterns as the audience - it's going directly into the brains of the people watching. If I move a single button it changes what they get to see. There's a set composition, but there's space for improvisation.

AA How did your interest in flicker come about?

MM Well it was actually through William S. Burroughs. There's a nice Burroughs quote that goes, 'Anything that can be done chemically can be done by other means'. He saw the *Dreamachine* as a revolutionary object: bringing enlightenment to humanity through machines. It's an interesting utopian idea, I think. It would be great if we could get the right technology and use it - or abuse it - to conjure up new sensorial worlds, instead of enveloping ourselves in a digital bubble that closes us off from the world. I think that the simplistic app culture is holding back the potential for intense technological experiences. Perhaps there's a role here for media art.

AA And in your live performance you do create a personal presence - and you throw the audience back on their own resources.

MM That's what I like about Bruce McClure's performances. They completely throw you back on your own resources. There's nothing you can do but submit to it. You go in and there's no way out. One doesn't usually do that sort of thing.

AA After seeing McClure's performance at Kontraste the Australian musician Robin Fox enthused that, 'At one point it violently put me asleep!'

MM Yes, that's beautiful. It's a really strange reaction, but that's exactly what happens. It's really overwhelming. It's loud and it flickers and you sink into a kind of dream state. That's the way I want to go with my performance too: it has to have an even greater physical impact. It needs to become dangerous, as it were, because then the sublime can manifest itself - something you can't control... something bigger than yourself.

TO SWAY IN SOUND

Interview with Yolanda Uriz Elizalde
Arie Altena

The work of Yolanda Uriz Elizalde, who studied music and ArtScience in The Hague, ranges from experimental music to installations. Her immersive installation *~Kulunka~* (2012) evokes visual, auditive and tactile ways of perceiving vibrations. This interview took place in November 2012 after the Kontraste Festival, and was edited after the Sonic Acts festival.

Arie Altena *~Kulunka~* was shown at both the Sonic Acts exhibition and at the Kontraste Festival. What are you aiming at with this work? What do you hope people will experience?

Yolanda Uriz The fundamental idea of the installation comes from perceiving sound through other senses. The title *~Kulunka~* literally means 'to sway' in Basque. The initial idea was to create an immersive experience based on my explorations of sound as a phenomenon. I was researching how sound behaves in liquids, how it behaves in solids, and how it behaves in the air. How can we perceive sound differently, or perceive it in various ways? The underlying question is, how can you perceive reality from other angles? The installation is a darkened room with platforms on which the audience lies down. Infrasonic frequencies are played through speaker membranes that are placed in a container with water, making it vibrate. This creates ripples in the fluid, which are projected on an undulated screen hanging from the ceiling. The platforms also vibrate sonically. I use pure sine waves, without any harmonics, for the speakers in the water and as the sound that is fed into the solid materials. The frequencies that are played through the speakers in the water are also the building blocks of the audible composition that is spatialised by using four speakers in the room. The composition uses the harmonic series of the infrasonic frequencies, so that the relation between what you see [the ripple patterns created by the

infrasonic frequencies in the water] and what you hear [the audible composition] is one-on-one. It's analogous, both compositions develop in parallel.

AA And how do you make the platforms vibrate?

YU There are two transducers in the platforms. Sound behaves very differently in solids than it does in the air or in a liquid. All the paths of the soundwaves are felt by the body, which is in contact with the solid material through which the soundwaves travel. The transducers also interact with each other, and that creates patterns. I didn't need four transducers per platform [comparable to the four speakers in the water and four in the room]. The reason is that two sine waves already interact in the material. You feel the nodes from the intersecting waves in a different way. What you feel in your ankle has another rhythm than what you feel in your shoulder. If a platform has more than two transducers the interplay is too complex, and the relation with the other elements in the installation is lost. Two sound sources in the solids were more than enough.

AA What frequencies do you use for the speakers in the water?

YU Those frequencies go from 4 to 18 Hz, though there is one point when the pitch rises to 50 Hz, which is already in the human audible range. But that's only for a very short moment. I started including it since the Kontraste Festival; before that all I used was infrasound.

AA Do you try to find a fusion between the ears, eyes and the tactile senses, or do you primarily want to make listeners more conscious of how we 'hear' with different senses?

YU The fusion of the senses happens within the person experiencing the

installation. The senses are already put together in our bodies. I studied classical flute at the conservatory, and sonology in The Hague. I have always been more of a performer than a composer. I came to experimental music as a performer, through playing improvised music. When I'm performing I am always completely immersed in the sound. This experience of playing music is something I wanted people to feel in *~Kulunka~*. I wanted to transfer the experience of playing music, creating sounds, and being completely into it, to an audience. As a performer I was never sure if the audience was feeling all the things I did. The experience of hearing music is different for the performer and the audience. I always hoped to put the audience in the position of the performer. When you play music - certainly when you play the flute - the whole body vibrates with the sound.

AA What music did you play?

YU I used to play acoustic improvised music. For a while I also had an electronic 'instrument', which I used to process the sound of the flute. I really needed a break from my purely classical music education. A lot of work went into the improvising, lots of rehearsals. But the music was always improvised, because I wanted to have the experience of really being in the moment, of being completely aware of where I am when I play. When you are really in the moment, and are completely aware of that moment, that's immersion. I think it is something that society looks for and longs for; its something that people need. That's why we have meditation practices - to help us to silence our inner voice. We still aren't fully aware of this in our society. We also miss out on the tactile sense, with all our digital information. In *~Kulunka~* I try to give people an experience of being immersed and totally aware of the moment.

AA How did you get from studying flute to experimental music?

YU I was always more interested in contemporary music. As a flute player I liked to work directly with composers. I enjoyed the sonic realms of the people who studied at sonology much more than the world of classical music. I learned about the endless possibilities of processing sound. It brought me closer to my own time.

AA You are exploring the physical and tactile aspects of sound, and you were a flute player. The flute does not strike me as a very physical instrument...

YU On the one hand you're right, but you're also wrong. If you take a double bass, the instrument will vibrate, and when you hold it that is what you feel. The flute is the only wind instrument without a horn. That means it has to resonate in your body. The sound comes from the player. For me learning flute technique was a bit like yoga. It's about finding the resonance of the instrument in your body. Playing the flute is really physical. That experience spurred my interest in the tactile aspects of sound.

AA How is the audible composition of *~Kulunka~* structured?

YU It's a fixed linear composition. It develops in parallel with the infrasonics that are used for the speakers in the water. Whenever I use 4 Hertz in the water for instance, it comes out multiplied in the audible frequency range - so 4 Hertz become 8, then 16, 32, 64 and so forth. What you hear is a synthesis of several harmonics. The pitch slowly rises through the infrasonic range, reaches a climax and then descends. You also hear that through the synthesis in the audible range. For me the most important aspect of the installation is the experience of the visitors. They have to immediately 'grasp' what

is going on. For *~Kulunka~* to be clear and effective, the composition had to be fairly simple. The audible composition starts with low beats, but not the lowest, and slowly introduces more elements. It builds up in a more or less random way - in any case not in a totally linear way - and then it descends in a linear way, synchronous with the infrasonics. Of course it's a very conventional way of structuring. It slowly ascends, reaches a climax and then descends. But it works. The first version of *~Kulunka~* was built for one person only and it had a clear beginning and end. Now the installation is for multiple people and sometimes people enter halfway through the piece. Some people come in at the climatic moment. They also stay in for longer than one cycle. I like that random aspect. The first version of *~Kulunka~* was only seven minutes long and then people were supposed to leave. The composition is now twelve minutes long.

AA My experience is that when you stay for a longer time in the installation, you begin to hear 'more'. Like a drone that initially sounds quite boring, but which reveals its richness over time...

YU You need a little bit of time to get used to what is happening in *~Kulunka~*. The physical experience is important. It takes time for your muscles to relax. Once your body and mind have relaxed enough, you begin to hear more richness in the sound. There is also the stroboscopic light in the installation, which affects your alpha waves. It doesn't induce you to see patterns - as is the case in works by Matthijs Munnik or Tina Franke - but it certainly affects your way of seeing things and that in turn influences your hearing. I guess the longer you are in the installation the closer you get to a certain state.

AA Could you elaborate on the research you did into how sound behaves in different media? What did you find out?



YU: One thing I always assumed is that men are able to handle the tactile aspect of sound better than women, because they are generally built stronger. It turns out to be exactly the other way around. The physical experience of sound is something that women would like to be stronger, but men wouldn't. I always fantasise: if our body is 70% water, then you should be able to feel the patterns you see in the installation and which are generated by the soundwaves travelling through water. Theoretically those patterns could be happening in our bodily fluids too. It's a bit of a crazy idea of course, as if we could feel these cymatic patterns. But it is a nice fantasy.

AA: Does the material the platforms are made of make a difference? Does the thickness of the material affect how soundwaves travel through the wood?

YU: Yes, it matters. For the waves to travel as I want, the wood should be plywood. And also it makes a difference if there's a mattress or not. Sound travels much faster through metal than through wood. Metal resonates much quicker. The same is true for how the soundwaves travel through liquids. Soundwaves behave differently in denser fluids; floating a layer of oil on top makes a difference. Now I use water. You feel the soundwaves in the wood you lie on; you feel the frequencies rising and falling. The wood itself doesn't sound in *~Kulunka~*, you only perceive the sound when you touch it. The same for the water: you don't hear those soundwaves, you can only see them. That's a conscious decision. You hear but cannot touch or see the external sound; you can see the visualised sound but cannot touch or hear it; and you cannot see nor hear the tactile sound, you can only feel it.

AA: What is the artistic context or tradition that you feel close to?

YU: Of course my work relates to cymatics, and all the artists that use cymatics, from Chladni to Hans Jenny to TeZ. The link between image and sound and the visual music scene are very important for me. A lot of people work with tactile sound. The phenomena of oto-acoustic emissions and Maryanne Amacher's work is another strand. None of this is really a tradition. Generally my work relates to art that is focused on experience that is focused on effects that your body produces itself, like flicker, which makes your retina produce patterns that you see. The idea that your body is part of the performance and not outside it, is of central importance. If you divided music into programmatic music and pure sound, then I fall into the category of pure sound. Pure, abstract sound that refer to nothing but sound. Pure sound is somehow more direct, and in that sense comes closer to the real meaning of sound, and its experience. If you play improvised music, you feel this directly.

BLACK AND WHITE

Simon Ings

Simon Ings spins together a few strands from the rich history of Soviet science, relates how an Arab scientist found out how the eye works, and criticises the belief that *techne* will free us of the constraints of Time, Space, and the Body.