Throughout his long career, Bill Fontana has been exploring the possibility of using sound as a means of transforming our perception of visual and architectural spaces. In this interview, we will ask him to introduce his recent sound installation *Silent Echoes Notre Dame*¹, to shed light on the key concepts that drive his practice and theoretical reflection, and finally to discuss together the possibility of extending some of his concepts from sound art to sound design.

SL Good morning Bill, thank you for taking the time to meet with me today. Over a period of more than 50 years, you developed an impressive number of sound installations in public spaces and museums around the world, and formulated sound concepts that continue to inform the practice and thinking of many sound artists today. Looking back to the beginning of your career, what were the key encounters in your artistic formation and how did they influence your idea of music and sound?

BF In the late 1960s I was living in Cleveland. I was enrolled part time in the Cleveland Institute of Music as a composition student and at the same time I was going to a liberal arts College as a philosophy major. I grew up within walking distance of the Cleveland Museum of Art, including the Orchestra, and so these institutions were very important to me as a kid. As a composition student, I had the ability to sit at the piano and just spontaneously make up music: it was so easy for me to do that! And when I was writing, as a formal composition student, I was going into a sort of state of “hyper focus”. When I went into that state, I felt very distracted by all the sounds around me. I started listening to those

sounds and my brain found patterns and relationships in those sounds that were more interesting than any music I could write. I started to feel kind of frustrated. I remember that one of the composition teachers I had at that conservatory, whose style of composition was of the post-serial type, approached me and asked: “What is your philosophy of music composition?” I said that, for me, the act of listening was a way of making music. He looked at me as if I was some kind of madman. And then I started to feel like I had to get out of there.

I was very interested in John Cage and a lot of the things that were going on in New York. At the New School, Cage was teaching a seminar called Experimental composition, so I transferred to that College in 1968 and took the Cage course. One of the first things he asked me was: “What is your philosophy of music?” And I said to him: “The act of listening is a way of making music”. He had a big smile on his face and we developed a very close kind of mentor – student relationship. And he took me seriously. At the time I was 21 years old and to be taken seriously at that age by this guy really meant a lot to me: it enabled me and at that point began my career, I think, as an artist.

The other thing is an important experience in 1968. There was a famous exhibition at the Museum of Modern Art, called The machine show in which, for the first time in my life, I saw Marcel Duchamp’s ready-mades and some of his famous works, especially a work called The Bride Stripped Bare by Her Bachelors, Even. Cage pointed out to me this box of notes that Duchamp wrote about that piece. There was a passage, in that box, in which he said: “Musical sculpture sounds lasting and leaving, forming and sounding a sculpture that lasts”. So, when I read that, I decided that from then on they would forward my works and I would call them Sound Sculptures.

And then I started really thinking about the meaning of the word “sculpture”. The word, among other things, meant some kind of physical embodiment of an aspect of the human condition. I want these works to embody the act of listening as a way of making music. And that’s really where I began and I’ve been on that journey in different ways.

SL What was your first Sound Sculpture?
BF I did the first Sound Sculpture exhibition in the early 1970s in New York. We’re for a piece called Sound Sculpture with Resonators and it was installed at a place on West Broadway called the Experimental Intermediate Foundation. It was a very low budget operation. I went to Canal Street, collected some interesting objects, took them on the roof of the building, put little microphones on them and hardwared them to live speakers in a gallery space below: these objects were resonance ears, and in a way we were listening to New York through them.

That idea is really no different than what I’ve done almost sixty years later with Notre Dame bells in Silent Echoes, the most recent Sound Sculpture. I treated the bells as big middle ears listening to Paris, with accelerometers. It’s the same principle.

And that idea has been with me that whole time, as well as the real environments that we live in and the structures that are in them have a kind of really interesting musical interaction.

SL What is the relationship between space and sound? How does sound change our perception of the space in which we hear it?
Acoustic phenomenology - The hidden architecture of the sounds of Venice Workshop by Bill Fontana 13, 14 September 2018. Recording session no.1, Ca’ Rezzonico bridge.

Fig. 1

Fig. 2, 3
Recording session no.2, Ragusei bridge.
Fig. 4

Fig. 5
Recording session no.4, Ca’ Foscari.
BF  Well, I’ve always been very interested in the physical interaction of a sound sculpture with the architecture and the design of a space. For example, in 1984 in Berlin, I buried eight loudspeakers in the empty field that used to be the station hall of the Anhalter Bahnhof, and the sounds were coming from the main station of Cologne, Germany. It was like the living voice of the Cologne station in the space that had once been one of the great train stations in pre-war Berlin. But the way the large speakers were installed wasn’t a stereo mix of the clone station: it was an eight channel sound piece with microphones spread out in the Cologne station, mapping the acoustics of that space, to transfer and recreate it in the ruins of a famous station in Berlin. I don’t have the complete archive of that, but one of the partners in that project did some radio pieces about that project where they actually interviewed people walking through the Anhalter Bahnhof: old people who have a memory of it, as a real living train station.

SL  So the old station became a listening space: and how did you shape the listening space in the “Silent Echoes Notre Dame” installation in Paris?

BF  In the project with Notre Dame that was exhibited in Paris last year, at the Centre Pompidou, the listening space was created in a beautiful large balcony that faces south, where you can see the ancient cathedral, actually. The IRCAM team installed thirty loudspeakers surrounding the perimeter of this large closet, which the museum had turned into just a big open space. With a sound designer at IRCAM, using a program called Max, we created an automatic mixing system that would take the live ten channels of sound. Lots of bells come out and create a really interesting spatial composition of these sounds moving through the thirty speakers that surround this space.

SL  I think that in our cacophonous city, we citizens need listening spaces where we can practice the act of listening. Do you think it is possible to extend your concept of listening space to the scale of the urban project and imagine the city, in its streets, in its squares, as a vast listening space?

BF  Well, it’s interesting, because I have the possibility to explore this, doing a project like this in London. Around a metro station called Tottenham Court Road, there’s a building, called Outernet: it’s a big public media gallery, with all sorts of immersive videos. What I proposed doing for them is analyzing the urban environment around the Tottenham Court, and installing sensors and microphones in different structures and bringing the hidden music of that urban landscape into this big public — kind of — exhibition space right there.

Like the piece I did in Venice in 1999. Acoustical Visions of Venice was a live audio mix of sounds, collected from twelve different Venetian urban sites, selected for their acoustic distinctiveness and cultural relevance, using hidden microphones located in strategic points. The acoustic signatures of these sites were transmitted to the Punta della Dogana in real time, creating a never ending sonic texture. Punta della Dogana became a listening space, where visitors could get in touch with the acoustic soul of the city of Venice. Did you see this work?
SL Yes, I was already living in Venice and that installation was my first contact with your art.
How do you create a new listening space? How do you move when you discover a space and want to reveal its hidden musicality? What is your working process?
BF Let’s think of the kind of sound design in the urban space in London that we were talking about. I think my approach would be to go to a space like that, listen for a while and just analyze it in my imagination, focusing for example on the interesting kind of side points. Then, to put sensors or small microphones at some of those points and to bring them into that space, like seasoning on a recipe, just to emphasize those points, with hidden loudspeakers. So, you’re not overwhelming the space: you’re just creating a kind of subtle musical dimension, highlighting what’s really there. This musical dimension must not seem to be background music, or something artificial. It’s a subtle interaction that enhances the experience of listening to what’s really already there. That would be my report.

SL Do you think it is possible to extend this approach to urban regeneration processes? To consider sound as a means of restoring degraded urban spaces?
BF Well, I think there’s a huge amount of work that can be done in this area. I feel like the kind of soundscape ideas developed by Schaeffer have been important. However, I don’t really like them, because they create a positive/negative distinction. And I start from the premise that every environment has interesting possibilities. Suppose we are next to a noisy two-way freeway. There’s a lot of sounds of automobiles and trucks: what’s positive about that? For me, it is positive, because I could put sensors on the structure of the freeway and create a sound piece. In a subtle way, there are these rhythmic, slightly harmonic echoes of the real activity that’s taking place: there are so many possibilities for developing that kind of idea.

SL Much of your work uses sound as an activator of memory. I think your installations can be an inspiration to designers who use sound as a means of evoking the history of a place, the identity of a community. But how do you compose the sound of the present with that of the past in the visitor’s listening experience?
BF Well, for example, let’s take the case of the Pigeon soundings. During my first contact with the local authorities, I was informed that they wanted to commission an architect to design an amazing building for a collection of this museum. The site of the new building was a ruin of a church that had been destroyed in the bombings of Cologne during the Second World War. After the war, they discovered that the bombing revealed an archaeological site of Roman streets, and so they constructed a temporary wooden structure to protect it, which became inhabited by a large population of pigeons. So before they were to begin construction of the new museum and take down this temporary structure, they asked me to go there and document the sounds of the pigeons living in it. I made extensive recordings of the pigeons, but in doing that, I was also recording the background sounds of the city of Cologne, the bells and other ambient sounds. Those sounds became part of the mix that I was playing then in the museum space. So there was a mixture of a moment of acoustic history with pigeons, as well as contemporary sounds. The city was part of that mix and you couldn’t tell what was real anymore, which was really interesting to me.

SL In many of your installations, you use the accelerometer to amplify vibrations and reveal the hidden music of buildings and
urban infrastructure. In the practice of product sound design for cars, sound engineers do exactly the opposite: they use accelerometers to pick up chassis vibrations and cancel them out in an active intervention to control noise.

By looking at sound as a resource rather than a problem, do you think it might be possible to extend your approach to car sound design and use the natural vibrations of the vehicle as a qualifying component of the cabin soundscape? Do you think this line of work could produce interesting results? What might be the difficulties, what might be the potential?

BF Well, I think there is a problem with this issue right now. You walk down the street and see so many people with headphones on listening to music. They are tuning out their perception of the sounds around them. I think in a surprising way, we live in a culture with a kind of acoustic illiteracy, in the sense that we’re a culture in which people learn not to listen to the sounds around them. They use the word “noise” as a way of pointing to something in their experience, in the place, that needs to be eliminated.

Historically, this goes back to the first treatise on acoustics ever written: *Sensations of Tone*, by Helmholtz. Here, the author specifically mentions that the sounds he wants to talk about are the kind of sounds that have musical properties (tone and pitch) and he describes other sounds, such as a horse-drawn carriage going down the street, as a “noise” that is not interesting to talk about. I think I’ve taken a very opposite kind of attitude towards this. And I think there are certainly implications for sound design, although I haven’t really worked in that field because I’ve mostly been interested in doing these big installations and art projects.

SL To conclude this interview, I would like to suggest an additional definition of your work. From a designer’s point of view, your work could perhaps be defined as designing the act of listening. Do you think this is an effective description?

BF Something I’m really interested in now is that the act of listening is really related to our perception of time. We are always thinking about what we’re doing at a certain moment in time, about where we’re going. And, in order to really listen, we need the ability to deconstruct our perception of time. So, by creating the right immersive listening experience, I encourage a psychological state in which someone can be fully present at a certain moment of time, lose their sense of linear time and really become present in a space. That’s what I really try to do in the psychological experience I want to create.

I want to bring this back to an experience I had a long time ago, in the mid-1980s, when I lived in Japan. I remember going to a temple in Kyoto called Nanzen-ji. I was really interested in Zen Buddhism, and particularly in the meditation exercises related to sound. This is a Buddhist temple bell: it is designed to have a very slow decay. The idea in the meditation is that, if you listen to it in a way that makes your brain dissolve, as if there were no separation between your brain and your thoughts in the act of listening, in a way that you could be fully present with the sound, you would experience the illusion that the bell never stops ringing. And that as long as you didn’t stop ringing.

I think that sort of sense of listening is something I strive to create in my work, to enter another dimension of a person’s perception: time.

Bill Fontana

Born in 1947, Bill Fontana is an American composer and media artist, internationally renowned for his pioneering experiments in sound. Since the 1970s he has developed an impressive number of sound installations in public spaces around the world, and formulated sound concepts that still influence many sound artists’ practice and thinking.