

## INVISIBLE CITIES: AN INTERVIEW WITH CHRISTINA KUBISCH

CHRISTOPH COX

In 2003, Berlin-based sound artist Christina Kubisch began an ongoing project called “Electrical Walks.” This project employs specially built headphones that receive electromagnetic signals from the environment and convert them into sound. Kubisch maps a given territory, noting “hot spots” (ATM machines, security systems, electronic cash registers, subway systems, etc.) where the signals are particularly strong or interesting. She then loans the headphones to the public, allowing participants to undertake an auditory *dérive* through the invisible network of electromagnetic information. To date, Kubisch has undertaken her own personal walks in Germany, England, France, Ireland, Japan, Latvia, Sweden, Switzerland, Slovakia, Spain, Taiwan, and the United States, and has held public walks in Berlin, Cologne, Karlsruhe, Bremen, Oxford, and London. In September 2006, she will stage an “Electrical Walk” in New York as part of an exhibition of Berlin sound art at The Kitchen.

Christoph Cox spoke to Kubisch about her project by telephone in December 2005. To accompany the interview, Kubisch has provided thirty short sound samples gathered by her while walking through various cities. These samples, whose sources are listed at the end of this text, can be heard at [www.cabinetmagazine.org/issues/21/kubisch.php](http://www.cabinetmagazine.org/issues/21/kubisch.php).

### Your background is in painting and music. How did you come to work with electromagnetic induction?

I can't explain exactly why, but I've always been more interested in electrical things than, for example, classical music. I began investigating electrical fields at the end of the 1970s. I had been studying electronic music at the Conservatory in Milan. But the classes there were very conventional; and I wasn't very satisfied with what I was learning. So I decided to enroll in Milan's Technical University—which was very hard for me because my brain is not very scientific. One day I bought a telephone amplifier, a little cube that you could put next to your telephone so that you could hear it without having the receiver in your hand. The cube was switched on, and when I came into the laboratory, it started to make really strange sounds in my handbag. I took it out and asked my professor what was going on. He explained to me that there were coils in this little cube, and that they picked up some of the machines in the room. It was like a flash in my mind. It was exactly at the time when I wanted to get away from performance and start producing installations.

In my early installations, there were people wandering around with these little cubes in their hands, walking along thick electrical cables that had sounds running through them. I didn't think about using the sounds of the outside world. I had no idea about electricity in general or that it could make interesting sounds. I just used the system of electromagnetic induction as a way of amplifying musical sounds.

### When did you develop the electromagnetic headphones?

It was kind of tiring to have these cubes in your hands all the time. So, four or five years later, I found a factory that built wonderful headphones. I went to them and asked whether they could put the components of the cube in the headphones. You know Italians, they like to invent things, especially when a blonde girl comes in and says, “Can you do this?” So I put all my money together—I was giving flute lessons at the time, a *lot* of flute lessons—and finally managed to pay for about twenty sets of headphones. The sound was better and more subtle. And the headphones worked over longer distances as well.

I used this system for several years. Eventually, the headphones got a bit broken. Sometimes people stole them. And I never got much money, because this was not considered a musical thing. It wasn't a concert or something you could sell on the art market. I wanted to go on with other pieces and investigations. So I put the equipment away. About eight or ten years later, I found a sponsor who knew about these works and who gave me the opportunity to construct an even better system. With this new system, in 1999 I did a really large installation at Potsdamer Platz in Berlin. When I put on the headphones again after all these years, I heard so many strange sounds: humming sounds, rhythms, and all kinds of things that, of course, disturbed me, because I didn't want them. Eventually, I realized that I no longer needed to put my sounds in cables because they were already out there. So I built a new generation of headphones that are especially sensitive to electricity and that don't suppress or ignore all these electromagnetic fields but, instead, amplify them.

### How do the headphones actually work?

Every current in an electrical conductor—for example a wire or a cable—generates an electromagnetic field. These currents can be “musical,” like the signals running through loudspeaker cables; or they can come from electrical activity in the infrastructures of buildings or cities. The magnetic component of these fields is picked up by the sensor coils in the headphones. And, after amplification, these signals are made audible by the little speaker systems in the headphones. So if there's an electromagnetic field (say, an underground cable) and another one nearby (say, the headphones), the fields pick up each other. The sound jumps through the air from one to the other.

### How does florescent lighting or a security system show up as sound?

You can transform any electromagnetic field into sound. That's what happens when you send electrical information through a speaker cable.

... or a telephone.

Exactly! Just what we're doing right now! It's just the same thing. When this electromagnetic information runs through a cable to a speaker, the speaker reconverts it into sound.

### **What are some of the devices that generate these sounds?**

There are so many—and more and more each day. They are also different in every city. Some of the best ones are the security or anti-theft systems that are at the entrance of every shop. When you walk through them, you get pulsating sounds that have different rhythms (Tracks 4, 13, 17, 19, 23, 29). Some are so strong that you can't even come near them with the headphones. But they are all quite different. Some are very sophisticated, like the one at the Centre Pompidou in Paris (Track 19). Others are really simple, just a very constant beat. And some of them, interestingly enough, are not even working! I have a secret list for my friends! Lately, there are a lot of WLAN (Track 28), Bluetooth, and GPS systems, which make very nervous, crispy, irregular sounds. You can only hear them in certain areas. And sometimes, if you move 10 cm to one side or the other, they disappear. I think of them as electrical corridors.

### **I'm struck by the similarity between some of these sounds and minimalist techno: PanSonic or Alva Noto, for example.**

Yes. There are some sounds that, when I listen to them for half an hour, sound to me like LaMonte Young. The tram in Bratislava, for example, is almost like a choir: a chord, three sounds together that are changing, but each at a different level (Tracks 7, 24). Subways, buses, and trains are especially musical, maybe because they depend upon a constant flow of electricity. There's a wonderful subway in China that sounds to me like electronic music of the 70s (Track 16; also 3, 21). Airplanes, though, sound really ugly: very high, thin, and noisy.

### **Is your interest in these phenomena primarily aesthetic or is there a critical element, a desire to call attention to the environmental and psychological implications of this electromagnetic web in which we live?**

That's a hard question because I'm somewhere between. I have always been critical toward the way that people deal with technology and have made many pieces about the relationships between nature and technology. But I never point a finger and say, "This is bad" or "This is good." I'm more interested in having people recognize what's around them by doing it themselves. I could tell everyone that I think it's bad. But that wouldn't be an *experience*. It would just be didactic. On the other hand, this stuff is very fascinating as well. I mean, we love computers. We know that it's bad to sit in front of them for hours and hours; but we still love them. So we arrive at the middle of these two worlds—the real world and the continuing substitution of real experience by a technological experience that replaces much of what counted as experience in former times. I'm not nos-

talgic; but, of course, I am worried about how these fields around us are increasing.

This summer I put on my headphones during a very strong thunderstorm. There was no electricity, because all the power had gone out. But, when I recorded, I got the sounds of natural electricity, which was wonderful. The recording is so strange: very low, but very clear (Track 10). At two points, you hear voices. You can't understand the words, but you can tell that they are voices. I knew that electricity could transport voices, but I had never heard it before. It's quite breathtaking when you hear things like that. This is nature, too—*electrical* nature!

### **Does one often hear voices on your "Electrical Walks"?**

There are a lot of induction systems for the hard-of-hearing. In the UK, I think they even have a law that churches or public meeting houses have to have these induction loops. What they don't know is that, with these headphones, you can hear exactly what's going on inside. In Switzerland, I came across a group of people—I think it was a group of Indian people—celebrating a religious service in their own language. Because I didn't understand the language, at first I thought it was some kind of terrorist meeting, with all this shouting and these rhythmic sounds. But then I heard the "hallelujah" and "amen," and I understood what it was (Track 18). In London, I walked by a church where I could hear the cleaning woman talking and, later, the organist playing jazz (Track 20). So you become a sort of spy. Sometimes you hear sounds from offices. I'm sure that people don't know that they have these induction systems in their private offices. They must be there in order to secretly spy on people.

### **Do different cities have unique sonic characteristics?**

In Bremen, there's a tram system that you hear all over the city, even when you're not near it. It's a kind of basic drone that's very present. And in Madrid, a really persistent sound is that of the mobile phones that people carry around. You don't hear people talking, of course. But you hear when they dial—that moment when the information is being transported. It's a sort of short chirp: *dip, da-rip, da-rip, da-rip*, something like that. You hear that every moment, sometimes in duos or trios, because, in Madrid, everyone lives with their phones. In Taiwan, the sounds are very aesthetic. Maybe they have a new technology that's already very sophisticated. In Paris, you have some very heavy sounds, like in the train stations, where there is so much interrupted current. Train stations in general are very full, heavy, and dusty with sound (Track 26). In the short time when I walked in New York, the sound came from everywhere, and a lot of it from underground. It was incredibly dense. Even a short

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opposite: Audiowaves of the sounds emitted from various electromagnetic security gates found at shop entrances in London, Berlin, New York, Oxford, Paris, and Madrid; recorded in 2004 and 2005.



movement of my head made big changes in the sound. There are some places that are always interesting, places where there is money: banks, shops, people working. In residential areas, you mostly find low sounds, not so many rhythms. And then there are surprising places where you don't know what is happening.

**Do you generally choose business or shopping districts when you chart territory for your “Electrical Walks”?**

I start there, but then I go further out. I also ask people to tell me where they can imagine interesting possibilities. You can find interesting sounds anywhere. In the country, there are a lot of high-voltage wires (Track 8). They make very beautiful, very dense sounds. Everytime you stand under them it's different. But, of course, if you want to have a quick walk and a lot of direct information, then a shopping area is always good.

**I know that you are interested in the idea that each participant is a creator who makes his or her own mix.**

That's true. Each person should probably begin with the help of some instructions, so that they know, for example, that you sometimes have to go very close to things. In electronics shops, for instance, you have to bring your ears very close to the screens to hear them. And every screen has a different sound. Or sometimes you have to stop and do nothing. So the maps that I make are really just aids to teach you how to investigate on your own.

**If you were to stand in one place for a while, would a signal likely pass your way?**

Yes. Some places, like train stations—I could just stay there for hours. It's like a movie, an audio movie. Sometimes signals come for just a short time. So the sounds that I find may have disappeared by the time you get there, because the whole electrical world is constantly in flux. It's a mystery.

**Your work connects with the recent renewal of interest in electronic pioneers such as Nikola Tesla, Guglielmo Marconi, Heinrich Hertz, Thomas Edison, Alexander Graham Bell, and others. What do you think accounts for this revival?**

I've been working for so long on these electromagnetic investigations. Sometimes it was completely out of fashion; but now, as you say, it has become rather trendy. When Tesla started his experiments, there were no telephones and few trains. It was a very simple world. Maybe this is the fascination. Now that we are so surrounded by electrical signals,

we look to the pioneers and come back to the first experiments. Back then, it was so *physical*. In those beautiful old photographs, you see these big machines. Today, everything is nearly invisible. Everything digital is so small and becomes smaller and smaller. You can't really touch or see it. So I think that's part of the fascination as well.

One of my favorite things is something I discovered in the diary of Heinrich Hertz, who died very young due to his experiments. For several days, he wrote nothing in his diary but phrases like “electromagnetic fields again” and “nothing but electromagnetic waves”—over and over!

**Do you have plans to develop this work?**

What I would really like to do is to make a map of several cities and continents. In a large city, for example, where are the electromagnetic fields? Where are the security gates? You could just mark them with little dots. They even have the same sound systems all over the world. It's the globalization of sound. This is something that I think would be very interesting: to see a network of little dots showing where things are and where they are spreading. Every time I do an “Electrical Walk,” it adds to this general map of sound that I'm collecting. It's artistic work, but it's a kind of social research, too.

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Thirty audio samples from Kubisch's “Electrical Walks,” online at [www.cabinetmagazine.org/issues/21/kubisch.php](http://www.cabinetmagazine.org/issues/21/kubisch.php):

1. Light advertisement in Sendai, Japan
2. Post office in Bremen, Germany; source unknown
3. Subway in Taiwan, China
4. Between two security gates at the entrance of a shop; location unknown
5. Minicomputer at the Zentrum für Kunst und Medientechnologie (ZKM), Karlsruhe, Germany
6. Bavaria, Germany; source unknown
7. Tram in Bratislava, Slovakia
8. Electrical transformer at a farm in Bavaria, Germany
9. Tram in Karlsruhe, Germany
10. Thunderstorm in Bavaria, Germany
11. Object (magnetic field) in the Science Museum, London, England
12. Sounds in an underground passage, London, England
13. Security system in Oxford, England
14. Heathrow Airport, London, England
15. Light systems in Paris, France
16. Subway in Taipei, China
17. Security gate in Bremen, Germany
18. Religious service heard through an induction system in a small church in Lucerne, Switzerland
19. Security gate, Centre Pompidou, Paris, France
20. Induction system in a church in London, England
21. Signals at a subway station in Taipei, China
22. Sounds in the exhibition room at the ZKM, Karlsruhe, Germany
23. Security gate; location unknown
24. Tram in Bratislava, Slovakia
25. Electrical flame (decorative object); location unknown
26. Gare de l'Est, Paris, France
27. Paris, France; source unknown
28. WLAN, London, England
29. Security gate in the Musée de la science, Paris, France
30. Tower, Heathrow Airport, London, England