'Audio & Image' RCA Dissertation [Commendation] 1995

Audio & Image: On auditory perception and the image in dissociated sound. Janek Schaefer 1995.

Included in the text are a few instructions for you the reader. So before you begin to read, it is advised that you find a quiet room, with closed windows and doors. It is also preferable that this space is in a city.

LISTEN.....
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.....
.....HARDER.
.....
.....
..... there is no such thing as silence.

Close your eyes and open your ears. Everything in the world has at some point made sound, or been the cause of sound. The following is an exploration into the nature of sound, the way we listen to and hear the world around us. There are two aspects to the nature of our contemporary auditory environment as expressed in the definition of the term AUDIO: "Sound or the reproduction of sound."(1) The essence of the essay lies here. Sound originates from two types of source, both exist in actual space but are intrinsically different in their nature. Vibrations emitted by physical objects constitutes real sound in its initial state in real space which gives us the soundscape of our surrounds. The reproduction of this effect through the umbilical cord of the speaker gives us a mental IMAGE of that soundscape, it forms a mind space via auditive means.
I have chosen to concentrate on the nature of our soundscape (city), firstly because it is a characteristic of our times that many people live and work in fairly dense environments with close proximity to machines of all kinds, including myself, and it is this environment which best characterises the soundscape at the end of the our century. Secondly is not feasible to fully comprehend the soundscapes from ages past, as neither you nor I have had any first hand experience. It is the nature of sound that only in this century has it been possible to make a record of it. Prior to recording technology we can only rely on earwitness accounts characterising the nature of those environments.
Although I will touch on the physics and mechanics of the process of sound generation and reception, I do not intend for it to be the focus, (as this is more expertly documented and dealt with elsewhere) but instead I wish to look at the way in which we experience, Perceive and understand the actuality of our own soundscapes (each is different, continually). "Noise is a food like oxygen, or a piece of information like the mail, or an emotional gamut such as crying or fucking."(2)

LISTENING

"Although sounds and even more general noise emissions are not visible, not tangible, they are nevertheless physical realities in as much as they exist as pressure differences in the air, mechanical vibrations in the middle ear, liquid vibrations in the inner ear, and finally as electrical impulses in the nerves leading to the brain."(3)

In Italo Calvino's short story on the nature of the earth before it formed its atmosphere there existed a character named Ayl who occupied the realm of total visual and auditory neutrality: "Ayl was a happy inhabitant of the silence that reigns where all vibration is excluded."(4) Sound requires a medium through which it can travel, be it a fluid medium (air) or solid matter. Without the medium there is no message. The nature of the medium determines the characteristic of the vibration. If the vibration travels through the air then climactic conditions such as pressure, humidity and temperature all influence the ability of that vibration to extend its ACOUSTIC SPACE.(5) This term refers to the profile of a sound over its landscape. It is the area of space over which the sound may be heard before it drops below the ambient sound level. An example of this would be anything that you cannot hear from where you are now. As any sound that you cannot hear has fully occupied its acoustic space. Inversely in this scenario then, you are in the sound field of all the sounds that you can hear at this precise moment. The nature of vibration travelling through and reflected from mass also sculpts the nature of that specific environment. This is probably the most important factor in the formation of the city's physical acoustic flavour, with its multiplicity of inter-related hard, reflective surfaces that refract the continuous flow of vibrations which in turn acoustically signal the sense and type of enclosure.

The perception of sound does not just involve the act of hearing, but is in fact the process of listening. The listening system includes two ears together with the muscles for orienting them to a source of sound. Anatomically speaking the ear is only half of the bilateral listening system. A single ear can interpret a sound but it is unable to locate it. The function of the auditory system is not merely to permit hearing, but also to allow orientation and identification of the event.

When we close off our visual field we can learn the advantage that hearing has over sight. We cannot see anything with our eyes closed as we can only see objects directly. We can hear around corners but not see around them. This is because of the reflective nature of sound. Sitting at my desk I can tell that there are cars driving up and down the street outside but I cannot tell you what colour they are.

The sense of hearing cannot be closed off at will. There are no earlids. We are continually absorbing and filtering the soundscape. When we go to sleep, our perception of sound is the last door to close and it is the first to open when we wake up. The ear's only protection is an elaborate psychological mechanism for filtering out undesirable sound in order to concentrate on the desirable. The eye points outward, and the ear draws inward. It soaks up information.

Brian Eno pointed out in one of his interviews when discussing a tape-loop composition by Steve Reich (during which two identical recordings of a person saying 'It's Gonna Rain' are played together, but at very slightly different speeds due to the

nature of tape machines) that our hearing operates in a similar manner to that employed by the frog's eye mechanism: "Frog's eyes don't work like ours. Ours are always moving: we blink. We scan. We move our heads. But a frog fixes its eyes on a scene and leaves them there. It stops seeing all the static parts of the environment, which become invisible, but as soon as one element moves, which could be what it wants to eat - the fly - it is seen in very high contrast to the rest of the visual field. It's the only thing the frog sees and the tongue comes out and takes it . Well, I realised that what happens in Reich's piece is that our ears behave like the frogs' eyes. Since the material is common to both tapes, what you begin to notice are not the repeating parts, but the sort of ephemeral interference pattern between them. Your ear telescopes into more and more detail until you're hearing what sounds like the atoms of sound."(6)

The Ability of the ear to distinguish one sound from a multiple group of noises is what sets it apart from the rest of the senses. The eye for example cannot fully differentiate between three overlaid images projected onto a wall, or break down the constituent parts of the colour green. What our brain tells us is that 'that is the colour green and that is an image which looks like that.' What it perceives is the whole, the image, not what its components are. This is due to the nature of seeing; we only need to see objects as objects and images as images. Whereas because the ear absorbs sound in a passive manner it is forced to adopt a process of filtering and focus. This ability as explained by Eno gives us the ability to listen to two conversations at the same time, and also to hear our name floating across a crowded room.

When analysing a soundscape one must first discover the significant features of that soundscape, those sounds which are important either because of their domination, their numerousness, or their individuality. The main distinguishing features are categorised into keynote sounds, signals, and soundmarks.

Keynote is a musical term; it is the note that identifies the key or tonality of a particular composition. It is the anchor or fundamental tone and although the material may modulate around it , often obscuring its importance, it is with reference to this point that everything else takes on its special meaning. Keynote sounds do not have to be listened to consciously, they are overheard but cannot be overlooked, as keynote sounds tend to become listening habits.

It is useful to borrow from the field of visual perception when the psychologist deals with the idea of 'figure' and 'ground'. The figure is that which is looked at while the ground exists only to give the figure its outline and mass. But the figure cannot exist without its ground, subtract it and the figure becomes shapeless, non-existent. Even though keynote sounds may not always be heard consciously, the fact that they are ubiquitously there suggests the possibility of a deep and pervasive influence on our behaviour and moods. That is to say that the keynote sounds of a given place are important because they help to outline the character of the environment. The classic keynote of the city is the ever-present sound of the car, something I will return to later.

Signals are the foreground sounds and they are listened to consciously. In terms of the psychologist, they are the figure rather than the ground. Any sound can be listened to consciously, and so any sound can become a figure or signal. Some signals which we as a society have learnt that we must listen to as signals, as they constitute warning devices, are whistles, horns, sirens and bells.

The term soundmark is derived from landmark, and refers to a community sound which is unique or posses' qualities which make it especially regarded or noticed by the people in that community. Once a soundmark has been established, it may well deserve protection, as soundmarks make the acoustic life of the community unique. (It has been suggested by R.Murray. Schafer that a record should be kept of all these unique aspects of each soundscape as this has not been the tradition in our history to date. There does not exist, as far as I know, a single museum which is dedicated to the soundscape and its constituent parts.)

In order to further classify and analyse the nature of a sound, Pierre Schaeffer, (a mechanical engineer by training who undertook a life long study of the nature of sound) formed a research group as part of the French radio in Paris in 1946. This research was aided by the abundance of post WW II tape recorders in broadcasting studios at the time. He invented the term 'Sound Object' which he defined as an acoustical "object for human perception and not as a mathematical or electroacoustical object for synthesis."(7) It is, in its essence, the smallest self contained particle of a soundscape. As it possesses a beginning a middle and an end, it is analysable in terms of its envelope. The component parts of the envelope are, attack, body and decay.

The attack refers to the onset portion of the sound object. When the ear system is suddenly excited, an enrichment of the sound spectrum results, giving a rough edge to the sound. Thus every attack of sound is accompanied by noise (the 'roughness'). The more suddenly it appears the more noise there is. When a sound develops more slowly, less spectral excitement is present and a more even tone quality emerges. Even though the attack section of a sound object may only be a few milliseconds long, its importance in terms of characterising the sound is vital. Schaeffer demonstrated that when the attack portions of certain sounds are amputated, they may well become unintelligible or mistaken for others. In musical terms the piano may then sound like the flute.

The body is the mid-life stage of the sound object. It used to be known as the steady-state as it may seem to the ear that the sound is unproggresive or stationary. The air conditioner when not being switched on or off remains in a continual steady-state cycle. This is a man-made possibility.
The bell has no body in its sound envelope as it consists of purely attack and decay. The energy of the sound begins to drop, fading away to nothing. This can be both fast or slow, and is associated with the reverberation properties of the source.

Although this is how the nature of a sound object is composed, Schaeffer states that it must be considered integrally: "A composed structure (such as we perceive it) cannot be deduced from separate perceptions of its component objects."(8) Even though we have the ability to focus on specific sound objects, these should always be related to the wider field (soundscape). Sound objects when removed from the laboratory become sound 'events' in the environment, as 'event' by definition attaches a context to the situation. .....The context is real space, real time ..... now go to a window, locate its opening mechanism and close your eyes, listen, open the window (or close and then open it), listen again, and note the change in your conception of the space and soundscape.

"He lay stiffly sprawled across the back seat of the car. The motorway embankments were hidden from him, but a steady drumming, as threatening and yet in some way as reassuring as the soundtrack of a familiar nightmare, reminded him where he was."(9).

Space affects sound by modifying its perceived structure through reflection, absorption, refraction and diffraction. The outdoor sounds very different from the indoor; the large space different from the small. The nature of indoor space is that it envelops us, it retains the sounds that we produce; much more than the outside. It is a much more intimate environment than the roofless exterior. When we move around the internalised nature of the closed rooms that we inhabit throughout the whole built environment, we reference ourselves to the objects around us determining our situation, in part, by our auditive proximity to these surfaces . The carpet, ceiling tiles and wood chip wallpaper of the room I'm in now, for example, creates a very neutral acoustic space. It is with reference to this sound quality (in combination with the thermal and visual system it employs for telling me that it's a bedroom) that I feel comfortable and have a sense of privacy. I am the acoustic signal (when the stereo is off), and the distant sound of the traffic acts as the keynote.

"The principle feature of the city soundscape is random motion.....It is the continuous low-frequency roar one hears from an adjacent hill or through an open window."(10)

Over the past year particularly, I have observed the total acoustic transition of this space when I simply open the window, even slightly. I feel the sense that 'the world enters in' when the window rises. The drum and hum of the road and city floods the internal space, and the nature of it changes. This very small physical change to my environment imparts an inversely large effect on the perception of the place. The soundscape has been altered to include another realm of my acoustic space. I choose to have this as my acoustic space whenever the temperature allows it as it gives me a greater sense of my situation.

In another of Calvino's short stories he tells of a king who is confined to the Kings Chamber for fear of losing his throne if he should leave the room. His only reference with the kingdom that he rules is by his auditive perception. He knows the daily routine of the palace, and tells the time by reference to its diurnal soundscape. If at any time that audio pattern changes he fears the end of his reign. An extract from this gives an accurate account as to the generic soundscape of the city: "The city is a distant rumble at the bottom of the ear, a hum of voices, a buzz of wheels. When in the palace all is still, the city moves, the wheels run through the streets, the streets run like the spokes of wheels, disks spin on gramophones, the music comes and goes, in gusts, it oscillates, down in the rumbling streets, or it rises high with the wind that spins the vanes of the chimneys. The city is a wheel whose hub is the place where you remain immobile, listening."(11) This last sentence highlights the nature of the human acoustic space, as each and every one of us is the hub of our acoustic space.

An opposite type of space to my bedroom is the industrial environment, full to the brim with clattering machinery. This a common soundscape space with its low fidelity keynote. This lo-fi soundscape was introduced by the Industrial Revolution and then extended by the Electric Revolution which followed it. The lo-fi soundscape originates with the sound congestion of machines which defines the acoustic nature of a generic shop floor today. These large spaces are acoustically not to far removed from other large enclosures, such as churches. In terms of their high ceilings, wide floor areas, and hard reflective surfaces they act in the same manner. Sound travels with ease throughout the volume. Each environment is characterised by the sharp contrast of total silence at night (except for 24hr factories) and a very loud sound output at times, during use, in the day. The type of auditive experience generated couldn't be further apart though. Man's love of machinery is supposed to be in its total efficiency. It is the fundamental problem of the machine that it so inefficient acoustically. The loss of energy which creates the lo-fi noisy nature of the factory soundscape illustrates and undermines the inefficiency of the machine. In the church however the human machine is highly efficient and the significant sounds that we produce such as singing or speaking are the object of our energy output, not a side effect.

Between the house and the factories lies the street and road. The moving car gives a very clear conception of our space via the Doppler Effect. This effect is associated with the movement of the sound source through your acoustic field. It results when a sound is in motion at sufficient velocity to cause a bunching up of the sound waves as the sound approaches the observer (resulting in a rise in pitch) and an elongation of the sound waves as the sound recedes (resulting in the lowering of pitch). So, as we can perceive the passing of the car with our binaural listening system which comes at first hand from a single source, we can understand the nature of our three dimensional space. It carves out a space around us, delineates it, and gives us personal orientation. If you close your eyes and listen (focus) to a single car passing your perception system relates your position to that of the cars; It says 'I am hear and the car is passing me there.' The continual flow of traffic, the passing of one car and then another gives a good analogy of the way we listen to the space around us as described by John Cage: "The nature of listening is the experience of hearing something and then realising that your no longer hearing it and that your hearing something else instead. This is part and parcel of hearing."(12)

Beside the foot path lies the Urban Park. Our perception of the space in urban parks is both related to the sound of the vegetation, the acoustic nature of that vegetation and most importantly, being urban, the proximity of the car. Brian Eno once said: "If you sit in Hyde Park just far enough away from the traffic so that you don't perceive any of its specific details, you just hear the average of the whole thing. And its such a beautiful sound."(13) Yet again the car is raised as the keynote. The sound of the city is fused with the rustle of the leaves the whoosh of the wind and the ripple of the water. Sound transmission in the park has a reasonably clear path depending on the vegetation, in opposition to the reflective nature of the street. The very absorbent nature of the vegetation makes it one of the most calm external environments in the city. We are not affected so much by the reflection of our own voice. If you shout in a public street or square the auditive effect is much greater than the same action in the open park. When vegetation is heavily present it further reduces the transmission of that shout.

I visited the Berlin Wall just after its demise in 1990. It was not so much the visual experience that defines my memory of that event, but instead the sound signal of that soundscape. Walking between the two delineating planes with a friend, what was most apparent was the sound of the hammer and chisel tapping away at the wall claiming small fragments of the structure. My most vivid memory of the event is then attached to the specific nature of the auditive event at first hand.

"Space has always reduced me to silence." Jules Valles(14) .....Try and find a silent space.

SOUND & ABSENCE

"There is nothing like silence to suggest a sense of unlimited space. Sounds lend colour to space, and confers a sort of sound body upon it. But absence of sound leaves it quite pure and, in the silence, we are seized with the sensation of something vast and deep and boundless."(15)
The most unusual sound in the city (silence) in actual fact doesn't exist. There is no such thing as SILENCE.

The famous story which illustrates this is that of John Cage entering an anechoic chamber. A room of total sound absorption which is totally sound proofed. When you speak in a room of this nature the sounds seem to drop from your lips and disappear. The ears strain to pick up evidence that there is still life in the world. On entering the room, Cage thought that there was something wrong with it, he could hear two sounds, one high and one low: "When I described this to the engineer in charge, he informed me that the high one was my central nervous system in operation, the low one my blood in circulation."(16) He concluded that something is always happening that makes a sound. This is true on a global scale but as I have described, the acoustic space of a sound is finite. It does not exist acoustically speaking beyond its perimeter. Silence is a quality that we relate to on a personal level. Animate objects all make sounds of some nature, but an inanimate object like a book is silent until it is touched in some way. The CD in this package is a silent static object, and not even it makes a noise (unless it is touched) as information is extracted from it which is translated into sound by the electronic system. It is merely a representation of sound. The anechoic chamber can be viewed as the ultimate acoustic representation of infinite space, as the absence of reflected sound gives it the unlimited sense of space described in the opening quote. Silence then is only a notional idea, one which we associate with relative quietness and the absence of sound. As the ears don't ever stop listening to noise it is an unusual experience to be conscious of its true absence.

Just as our bodies require time for sleep to recharge our physical batteries, so to do we require time to regain mental and spiritual recomposure. Even when we sleep our ears are absorbing sound, all be it in an unconscious manner. Before the acoustic congestion of today's city, stillness was a precious article in an unwritten code of human rights. The tradition of the 'quiet Sunday' still applies to a certain extent, but this is even now being eroded by the Sunday openings of many high street shops. The working week for many people is never ending. The time for relaxation less and less. One of the favourite places for contemplation in silence is the cemetery, which represents the ultimate human silence, death. "We like to make sounds to remind ourselves that we are not alone. From this point of view total silence is the rejection of the human personality. Man fears the absence of sound as he fears the absence of life."(17)

In Western society, silence is a negative, a vacuum. As Wittgenstein wrote; "Whereof one cannot speak, thereof one must remain silent."(18) Silence for us is equated with lack of communication, pause between sentences. Not having anything to say is frightening to many of us, especially in our soundbite city culture. "The essence of sound is felt in both motion and silence, it passes from existent to non-existent. When there is no sound, it is said that there is no hearing, but that does not mean that hearing has lost its preparedness. Indeed, when there is no sound, hearing is most alert."(19) In other words silence delineates and punctuates the soundscape.

Before continuing: Play the sample 'RECORDED DELIVERY' and carry on.....

Brian Eno..... while bed-bound "A friend of mine came to visit me, and as she left I said 'can you put a record on for me?' She put it on, but it was much to quiet - plus, one side of my hi-fi had broken down. At fist I was listening and thinking, 'Oh, shit, I can't hear the music.' But then I realized I wasn't just listening to the music: I was listening to the rain, and to these occasional pieces of sound drifting above the level of the rain. I thought, 'Now this is interesting, the idea that music shouldn't exclude but include, that the music you make can be a background against which other sounds can perform."(20

image & SOUND ¬ DISSOCIATED

" The human ear offers not just another hole in the body, but a hole in the head."(21)

It is this hole in the head which enables us to deal with the manifestation of the image in dissociated sound found lurking in the reproduction and transmission technology of the twentieth century.

The focus of the previous chapters has been on sound (or its absence) at first hand derived from an original point source; that which travels directly to your ear (often around corners). I now wish to turn to the nature of our perception associated with sound that travels directly to us from the speaker. This is still a specific point source in itself but the nature of the sound is very different, as it is either reproduced or transmitted from another location.
I choose the term dissociated as it is able to refer to both the reproduced and the transmitted. It is defined in the dictionary as, "Disconnect or become disconnected: separate." The reproduced becomes disconnected, and the transmitted, separated. R. Murray Schafer used the term Schizophonia to describe the same. Its components are schizo, to split, and phone, Greek for voice. The problem I find here is the narrowing of the term to voice, as what we are trying to describe is sound in general, of which voice is just one facet.

Originally all sounds were originals. They occurred at one time in one place only. They were inseparable from the mechanisms that made them. Every sound was uncounterfeitable, unique. With the invention of the Phonograph in 1877 this all came to an end. Sound could be a representation of the thing itself. The voice for example was no longer tied to emerging from the mouth. It was free to issue from anywhere in the landscape in many different places at the same time. With the phonograph and the tape recorder sound was released from its original point in time. The telephone and the radio acted to release sound from its point in space. The amazing removal of these restrictions has given us a totally new perception of space. This was only made possible by the advent of Electric Revolution.

The telephone is simply an extension of the distance between two people having a conversation. We can stay in the same place and talk directly to people in America and Poland within the space of five minutes. This is an incredible shrinking of space. I've just got off the phone to my mother, who called me from a phone box. Before I asked her where she was, I had absolutely no idea, (other than she was standing near a road,) yet I could still speak to her and we knew who we were talking to.

When we arrive home and play our answerphone messages the soundscape which surrounds the caller leaks onto the tape and gives some information as to their surrounds. People can have whole verbal conversations via this medium and yet never actually speak to each other. People just become sound impressions in the broadest analogy, with which we must attach mental images to, partially based on the auditory information. In getting my CD produced, I have had a purely telephonic relationship with the 'guy on the other end.' I could tell you that he works alone in a quiet room and he has a wooden door. These clues culled from listening to the background noises of the calls get mixed together into a palette of associated images, which relate to my acoustic and mental notions of what his room might be like.
The tape recorder has been the most commonly available and revolutionary audio (recorded sound) medium for the past fifty years simply by its ability to record sound and replay it directly. Its beauty lies in its immediate flexibility. Once you had pressed record, and subsequently, stop, the captured sound is instantly dissociated. Tape recording and working with sound this way highlights its inseparability from time. An audio diary of a journey for example can only be re-revealed in real time. That is to say that it cannot be quickly and intelligibly scanned and understood faster than the speed of the sounds themselves were recorded. A snap shot (1/60th sec.) of an acoustic event does not have the same informational content as the snapshot photo image. Soundscapes are revealed through time.

"A character in one of Jorge Luis Borges's stories dreads mirrors because they multiply men. The same might be said of radios."(22) Radio, a cold medium which gives only one type of sensory information, unites the telephone, the record, the tape and links live events. By 1970 there was an average of one radio per citizen in America. The radio formed its own community of listeners which were spread by the ability of the signal to create an interrupted acoustic space. Never before had sound disappeared across space to reappear again at a distance. "The community, which had previously been defined by its bell or temple gong, was now defined by its local transmitter."(23)

Today we are very accustomed to the nature of the radio. When heard unconsciously it is just an object that 'talks' to us. Yet it truly is an umbilical cord to a physical yet virtual event in space. 'Live' is still a common promotional tool on the radio. It means something special, as the events you hear are actually taking place at that very moment. This is true also of the voice of the DJ, but the live event is unfamiliar, a signal rather than a keynote. We are transported directly to the event acoustically. We have a sense of being there, being part of the action.

The 'Loudspeaker' is the sound source for these types of technologies and thus represents the acoustic virtual image. In tandem it is capable of producing a binaural 'stereo' portrait of an acoustic event. It can transform the perceived nature of a room. Again I return to my own. When I listen to a CD (a digital representation format) I enter the space of the speakers. The sound that I hear from them forms a stereo environment which is separate from the room. But it is also a part of the environment of the room, thus blurring the distinction. I put on sound to create that environment within my room. Sound has the ability not only to create an image, but also affect the atmosphere of the environment. If you put on a recording of a journey you are placed within the acoustic environment of that journey. If you put on music it also establishes an atmosphere in your environment, and gives you an abstract sense of place, as identified by Eno: " One thing it [music] can do is give an instant sense of location. When I was travelling a lot, I used to carry four or five cassettes that I knew could reliably produce a certain condition for me. I'd put one particular cassette on, and that piece of music would make the letter-writing space for me.....I realized that while I was living this nomadic life, the one thing that was really keeping me in place, or giving me a sense of place, was music."(24)

The next level of interaction with the speaker is enacted by in the wearing of headphones. This is the ultimate private dissociated acoustic space, as Schafer notes: "messages received through headphones are private property."(25) This is less true today with the familiar experience of listening to people listening to headphones. But the exclusion of the true acoustic horizon for one which is invented in the mind through the stereo is the essence of dissociated audio. In the head-space of earphone listening, the sounds not only circulate 'around' the listener, they seem to literally derive from a space 'within' the head.

"When played on the radio, a given sound is juxtaposed instantaneously with thousands of different ambient sound contexts."(26) The work of Bill Fontana, the American sound artist (sculptor) explores the themes in dissociated sound and relative context. Influenced by Duchamp's strategy of the found object, 'Ready-made', he uses the acoustic ambience of a place/space and relocates it (via phone and radio), in order to find new aesthetic aspects in the sculptural qualities of sound: "I conceived such relocations in sculptural terms because ambient sounds are sculptural in the way they belong to a particular place.....the act of placing this sound would have considerable aesthetic importance."(27)

Metropolis Koln was an acoustic portrait of the city of Koln made in Sept. 1985 by Fontana. Unlike his previous projects which primarily dealt with a duality relationship (which focused on the nature of the perceived scale of the sound source in its new location), Metropolis Koln was characterised by its multiplicity of events. In order to express the nature of the city, rather than a place, it was necessary to combine many ambient scenario's. He did this by simultaneously relocating may different types of sounds to the Roncalliplatz, a large square plaza adjacent the city cathedral (the dominant architectural element of the plaza.) Eighteen loudspeakers were hidden, at differing heights, on the four sides of the plaza. Each one relating to eighteen microphones placed at various acoustic landmarks around the city. These locations included bell towers, bridges spanning the Rhine, a pedestrian street, the zoo, just above the surface of the river, and finally a hydrophone placed in the river. The signals were transmitted via broadcast quality telephone links. The result of all this connectivity was a live diurnal soundscape diary/portrait of the city. The acoustic image of the space had been transformed into an acoustic image of the city.

"During the day and early evening, the square was alive with many sounds and activities, with the river sounds providing a constant texture among the other sounds. In the evening as the city became quieter, the sound of the river would take over, apparently becoming the sound of the cathedral. In the early morning and at twilight, the live microphones broadcasting from the zoo became very active, as if the sealions, birds and apes were suddenly calling from the balcony of the cathedral. On the hour, the Romanesque bell towers told the time from positions all around the square; the time they told was not entirely correct since they were all off slightly from each other. Ships passing under bridges, trams and trains making the bridges resonate could be heard from the cathedral and the roof of the museum. A microphone placed under a manhole cover on a pedestrian street would broadcast the resonant and percussive sounds of foot steps and the sounds of muted voices. Microphones in the Hauptbahnhof would broadcast train announcements, the whistles of the Wagenmeister and the loud signals at the end of the platform."

Fontana does not draw any conclusions from his work, as the actuality of the event is what he is concerned with. I have included this verbal trans-script in order to illustrate the essential nature of dissociation. I suggest that, just as you have formed a mental image of the events above (and throughout this document) based on text only, so does the listener form an impression of a dissociated sound based on its acoustic representation. The difference lies in the quality of its representation. The sounds in the square are 'stencilled off the real' (to borrow the words of Susan Sontag on photography). The text then, is 'second generation', as it has been transcribed (represented) from this stencil. The listener in the square obviously has a much greater affinity with the sounds heard there, as they are live, and auditive; yet they too are not real, they were reproduced by speakers. You cannot even hear anything (I hear you cry) associated with the event (based on a textual representation). Yet you have produced a mental image (most notably its sound content) through reading the description. (I am aware) The image in text is a very different field, but I do feel that it does have resonance's here. Sounds in the square are in actual fact just as much removed, notionally, from their respective context, as the text here is removed from the context of the square.

Fontana's work is not to far away from that of Hans Peter Kuhn, who at the time of writing has just finished showing his collaborative installation HG in the Clink Street vaults, London. His work is in opposition to Fontana's in that it is mostly internalised by architecture. He under takes much the same procedure as Fontana, but his 'Decontextualised' sounds are not necessarily live or transmitted. They consist of a palette of the everyday noises, especially ones which evoke memory and emotion: "I use sounds everybody knows and first isolate them and put them together in not normal relationships. And by that of course I trigger the memories of the people. They have all their stories, but because there are sounds coming together that don't belong together, two stories come together that don't belong together. What happens is a third story appears and that's the story of the single person who comes to listen to it."(29)

What Kuhn is doing here, is working directly with the acoustic mental image. He is not trying to recreate or transmit. He is catalysing the personal mental image. He calls himself a 'Sound Architect' which implies the will to create the mental acoustic spaces in which these images live.
The field of the 'Sound Effects Technician' involves the falsifying of these dissociated soundscapes. Predominantly it is enacted out in the medium of the radio. It is not to far removed from musical composition, in so far as it is involved with the creation of imaginary landscapes. The difference being the sounds it employs to do this.

In recreating, or creating an imaginary landscape from scratch the technician uses what is known as 'The three stage plan' which subdivides the sound-scene into categories of acoustic dominance. Not dissimilar to the figure, ground and field system. The 'Immediate' describes what is to be listened to, such as a conversation. The 'Support' and 'Background' are effects merely to be heard. The 'Support' effect refers to sounds taking place in the immediate vicinity which have a direct bearing on the subject in hand, leaving the 'Background' to do its normal job of setting the scene.
Take for example, the recording of a commentary at a fun-fair. The 'Immediate' effect would be the commentator's voice. Directly behind this would come the 'Support' Effects of which ever item of fairground amusement he happened to be referring to, backed, to a slightly lesser degree, by the 'Background' effect of music and crowd noises.

These soundscapes are truly in the imagination of the listener. Not only are they received through the technology of dissociated sound, but only exist in this medium. When I listen to the Archers on Sunday morning, I know that the events in this acoustic space are only enacted in my mind, and this image is completely different to any one else's, as no one really exists in this virtual space.

I'd like to end by discussing the dissociated soundscape in which you have been travelling; the RECORDED DELIVERY 28>03>95. This acts as the acoustic image for the document, and serves to illustrate the themes I have been dealing with in this section.
RECORDED DELIVERY 28>03>95 as the title suggests, (and as you will have by now deciphered) is the secret life of the journey of a parcel initiated by myself in March of this year. The idea was brought about by my involvement in a group show called Self Storage which was produced by Art Angel, Brian Eno and Laurie Anderson. The brief given me was wide open, but it was the nature of the project as a whole that helped me to arrive at the final idea. The space allocated to us was the generic idea of a room in a Self Storage centre, only. Not a particular space. The fact that I did not have access to a physical and specific place was the fundamental aspect of the creation of the work. If a touchable place had been given me then I would have most likely dealt with IT (being an architect by training) rather than the idea (Virtual) of it.

The question I asked myself, was how can I create something specific to a space/place without having ever been there. I realised that the whole aspect of Delivery was very pertinent, as it is essentially to do with the movement of objects. Delivery involves the movement of an object from one specific place to another specific place. Which deals with the problem of site specificity with relationship to the brief. The self storage centre is a temporary resting place for these objects, and the place I was dealing with. But what does the journey of the parcel sound like. This is where the Audio technology enters the scene. How do you record the secret journey of the parcel. In the last ten years 'Sound Activated' recording technology has become widely available. This gives the ability to leave the tape recorder on all the time and it only activates itself when it senses loud sounds. So by sending such a device through the post it can undertake a 12hr journey and only record one hours worth of audio. It only records the 'interesting' parts of the journey. The best example of this on the CD, is having sent the 'recording parcel' overnight through the Post Office system, it lies in wait for the postmen to arrive for work, and captures them swearing at each other. But what exactly does interesting refer to here. It is all the sounds, as this is an unheard soundscape before now. We have all heard the rustle of paper, the movement of machinery and the chitter chattering of people before, but never through the ears of a moving object of this nature.

By equipping the parcel with 'ears' you give the inanimate technology a spirit. By deciding when, and when not to listen, it takes on a life of its own. When listening to what it has 'heard' its previously unknowable journey is revealed. Every journey is different. No-one involved in its auditory space has any special relation to the package. It is (as far as they are concerned) just another brown paper box. [but it has been given ears].

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