The Art of Transmission: Supplemental Readings
compiled by R. Lee Montgomery

The Radio as an Apparatus of Communication
Bertolt Brecht

In our society one can invent and perfect discoveries that still have to conquer their market and justify their existence; in other words discoveries that have not been called for. Thus there was a moment when technology was advanced enough to produce the radio and society was not yet advanced enough to accept it. The radio was then in its first phase of being a substitute: a substitute for theatre, opera, concerts, lectures, cafe music, local newspapers and so forth. This was the patient's period of halcyon youth. I am not sure if it is finished yet, but if so then this stripling who needed no certificate of competence to be born will have to start looking retrospectively for an object in life. Just as a man will begin asking at a certain age, when his first innocence has been lost, what he is supposed to be doing in the world.

As for the radio's object, I don't think it can consist simply in prettifying public life. Nor is radio in my view an adequate means of bringing back cosiness to the home and making family life bearable again. But quite apart from the dubiousness of its functions, radio is one-sided when it should be ttwo It is purely an apparatus for distribution, for mere sharing out. So here is a positive suggestion: change this apparatus over from distribution to communication. The radio would be the finest possible communication apparatus in public life, a vast network of pipes. That is to say, it would be if it knew how to receive as well as to transmit, how to let the listener speak as well as hear, how to bring him into a relationship instead of isolating him. On this principle the radio should step out of the supply business and organize its listeners as suppliers. Any attempt by the radio to give a truly public character to public occasions is a step in the right direction.

Whatever the radio sets out to do it must strive to combat that lack of consequences which makes such asses of almost all our public institutions. We have a literature without consequences, which not only itself sets out to lead nowhere, but does all it can to neutralize its readers by depicting each object and situation stripped of the consequences to which they lead. We have educational establishments without consequences, working frantically to hand on an education that leads nowhere and has come from nothing.

The slightest advance in this direction is bound to succeed far more spectacularly than any performance of a culinary kind. As for the technique that needs to be developed for all such operations, it must follow the prime objective of turning the audience not only into pupils but into teachers. It is the radio's formal task to give these educational operations an interesting turn, i.e. to ensure that these interests interest people. Such an attempt by the radio to put its instruction into an artistic form would link up with the efforts of modern artists to give art an instructive character. As an example or model of the exercises possible along these lines let me repeat the explanation of Der Flug der Lindberghs that I gave at the Baden-Baden music festival of 1929.

[Brecht repeats here the second, third and fifth paragraphs of "An Example of Pedagogics"]

'In obedience to the principle that the State shall be rich and man shall be poor, that the State shall be obliged to have many possibilities and man shall be allowed to have few possibilities, where music is concerned the State shall furnish whatever needs special apparatus and special abilities; the individual, however, shall furnish an exercise. Free-roaming feelings aroused by music, special thoughts such as may be entertained when listening to music, physical exhaustion such as easily arises just from listening to music, are all distractions from music. To avoid these distractions the individual shares in the music, thus obeying the principle that doing is better than feeling, by following the music with his eyes as printed, and contributing the parts and places reserved for him by singing them for himself or in conjunction with others (school class).'

Der Flug der Lindberghs is not intended to be of use to the present-day radio but to alter it. The increasing concentration of mechanical means and the increasingly specialized training--tendencies that should be accelerated--call for a kind of resistance by the listener, and for his mobilization and redrafting as a producer.

This exercise is an aid to discipline, which is the basis of freedom. The individual will reach spontaneously for a means to pleasure, but not for an object of instruction that offers him neither profit nor social advantages. Such exercises only serve the individual in so far as they serve the State,a nd they only serve a State that wishes to serve all men equally. Thus Der Flug der Lindberghs has no aesthetic and no revolutionary value independently of its application, and only the State can organize this. Its proper application, however, makes it so 'revolutionary' that the present-day State has no interest in sponsoring such exercises.

This is an innovation, a suggestion that seems utopian and that I myself admit to be utopian. When I say that the radio or the theatre "could" do so-and-so I am aware that these vast institutions cannot do all they 'could', and not even all they want.

But it is not at all our job to renovate ideological institutions on the basis of the existing social order by means of innovations. Instead our innovations must force them to surrender that basis. So: For innovations, against renovation!

["Der Rundfunk als Kommunikationsapparat" in Bjitter des Hessischen Landestheaters Darmstadt, No. 16, July 1932]

The Flight Over the Ocean (Der Lindberghflug)

Bertolt Brecht

Translated by William Gruber

Radio play for boys and girls

1 Invitation to Everyman

Radio

The state asks you: repeat

The first flight over the ocean

By singing the notes

And reading the text

Together.

Here is the machine

Step in

Over in Europe they wait for you

Glory beckons you.

The Fliers

I climb aboard the machine.

2 The American Newspapers Marvel Over the Madness of the Fliers

America (Radio)

Is it true, as they say, that you had with you

Only your straw hat and therefore

Climbed aboard like a fool? On an

Old tin can you will

Fly over the Atlantic?

Without a mate for navigation

Without compass and without water?

3 The Address of the Fliers and their Departure in New York for their Flight to Europe.

The Fliers

My name does not matter

I am twenty five years old

My grandfather was Swedish

I am an American.

My machine I have selected myself.

It flies two hundred ten kilometers an hour

Its name is "Spirit of St. Louis"

The Ryan Airplane Factory in San Diego

Built it in sixty days. I was there

Sixty days, and for sixty days I have

Plotted my flight

On maps of the land and the sea.

I will fly alone.

Instead of a man I will take along more gasoline.

I will fly in a machine without a radio.

I will fly with the best compass.

For three days I have waited for the best weather

But the reports of the weather stations

Are not good and grow worse.

Fog over the coast and storm over the sea

But now I will wait no longer.

Now I climb aboard.

I will risk it.

With me I have

Two electric lamps

One roll of rope

One roll of twine

One hunting knife

Four red flares sealed in rubber jackets

One watertight box with matches

One large needle

One large cask of water and a canteen of water

Five iron rations, American Army canned food, each sufficient for one day. Longer in an emergency

One axe

One saw

One rubber boat

Now I will fly.

For two decades the man Bleriot

Was celebrated because he

Flew over

A paltry thirty kilometers of water.

I will fly over

Three thousand.

4 The City of New York Questions the Ships

The City of New York (Radio)

Here speaks the city of New York:

This morning at eight o'clock

A man flew out from here

Over the water

towards your continent.

For seven hours he has been under way.

We have no sign of him

And we ask

The ships to tell us

If they have seen him.

The Fliers

If I do not arrive

No one will see me again.

The Ship (Radio)

Here speaks the ship, "Empress of Scotland"

Forty nine degrees twenty four minutes north latitude and thirty four degrees 78 minutes west longitude.

Earlier we heard in the air

Over us the sound

Of a motor

At considerable height.

On account of the fog

We saw nothing certain.

It is possible, however, that

This was your man

With his machine

The "Spirit of St. Louis."

The Fliers

Nowhere a ship and

Now comes the fog.

5 For Practically Their Whole Flight The Fliers Must Battle Fog

The Fog (Radio)

I am the fog, and with me must you reckon

You who fly out over the water.

For a thousand years one never saw a man

Who flew around in the air!

Who are you actually?

But we will make sure

That no one flies around any more.

I am the fog!

Turn back!

The Fliers

What you say there

Will be taken into account

It you get worse,

Perhaps I will turn back.

If there's no hope

I won't fight on.

I'll keep out of it.

But for now

I won't turn back.

The Fog (Radio)

Now you are still a big man, because

You are not yet acquainted with me

Now you still see the water under you

And you know

Where right and where left is. But

Wait for a night and a day

Where you see no water and no sky

Nor your steering wheel

Nor your compass.

Grow older, then you will

Know, who I am

I am the fog!

The Fliers

Seven men have built my machine in San Diego

Often working twenty four hours without pause

Out of a few meters of steel tubing.

What they have made must suffice for me.

They have worked, I

Work further, I am not alone, we are

Eight who fly here.

The Fog (Radio)

Now you are twenty five years old and

Fear little, but when you

Are twenty five years and a night and a day old

You will fear more.

The day after tomorrow and for a thousand years more the water

Will be here

Air and fog

But you will not

Be here.

The Fliers

Up till now it was day, but now

Comes the night.

The Fog (Radio)

For ten hours I have fought against a man, who

Flies around in the air, something that

For a thousand years no one has seen. I cannot

Bring him down.

Overtake him, Snowstorm!

The Fliers

Now you come, Snowstorm!

6 In the Night Came a Snowstorm.

The Snowstorm (Radio)

For an hour a man has been in me

With a machine!

Sometimes high above me

Sometimes beneath, near to the Water!

For an hour I have thrown him

Against the water and against the heavens

He can set down nowhere, but

He does not go down.

He falls upwards

And he climbs back down

He is weaker than a tree on the coast

Powerless like a leaf without a branch, but

He doesn't go down.

For hours this man has seen neither the moon

Nor his own hand

But he doesn't go down.

On his machine I have spread ice

So that it grows heavy and pulls him down

But the ice falls off

And he doesn't go down.

The Fliers

It can't go on much longer

I'll soon fall into the water

Who would have thought that

Here there would be ice!

I have been three thousand meters high and

Three meters down above the water

But everywhere is storm, ice, and fog.

Why did I climb aboard like a fool?

Now I'm afraid to die

Now I'm going down.

Four days before me two men

Flew over the water like me

And the water destroyed them, and

It destroys me too.

7. Sleep.

Sleep (Radio)
Sleep, Charlie

The bad night

Is past. The storm

Is over. Now sleep, Charlie,

The wind still carries you.

The Fliers
The wind does nothing for me

Water and air are enemies to me, and

I am their enemy.

Sleep (Radio)
Just for a minute, bend yourself

Over the wheel, just close your eyes for a little

Your hand keeps watch.

The Fliers

Many times for twenty four hours without pause

My comrades in San Diego

Worked on this machine. May I

Be no worse than they. I

Must not sleep.

Sleep (Radio)

It is still far. Calm yourself

With thoughts on the fields of Missouri

The river and the house

Where you are home.

The Fliers

I am not tired.

8 Ideology

The Fliers

1

Many say, the time is old

But I have always known this is a new age.

I say to you, not by themselves

Have houses grown like mountains of metal for twenty years

Each year many are drawn to the cities, as if they expected something

And on the happy continents

The word goes round the great, fearsome sea

Seems a small bit of water,

I fly now as the first over the Atlantic

But I have the conviction that by morning

You will laugh over my flight.

2

But it is a battle against primitivism

And a struggle for improvement of the planet

The same with the dialectical economics

Which will change the world from the ground up.

That is to say, now

Let us stand up against nature

Until we have become natural ourselves.

We and our technology are not yet natural

We and our technology

Are primitive.

In comparison, steamships travel like the sailing ships

Which left the rowboats behind.

In comparison with steamships

I fly

In a battle against primitivism.

My airplane, weak and shaky

My machine full of deficiencies

Is better than anything before it, but

While I fly

I battle against my airplane and

Against primitivism.

3

Also I struggle against nature and

Against myself.

Whatever I am and whatever stupidities I believe

When I fly I am

A true atheist.

For ten thousand years

Where the waters grew dark by heaven

Between light and twilight, there arose almighty

God. Even so,

Over the mountains, from where the Ice came

The ignorant sighted

Unknowable God, and even so,

In the desert He came in a sandstorm, and

In the cities He was born out of the disorder

Of social classes, because when men are different

There is exploitation and ignorance, but

The revolution eliminated Him. But

Build streets through the mountains, then He disappears

Rivers drive Him out of the desert. The light

Reveals emptiness and

Banishes Him at once.

Join in therefore

In the fight against primitivism

In the liquidation of the life to come and

The banishing of every god,

Wherever he appears.

Under the keen microscopes

He falls.

The ever-improved machines

Drive Him out of the air.

The cleansing of the cities

The elimination of misery

Make Him disappear and

Throw Him back to the first millennium.

4

Thus still there reigns

In our ever-improving cities the disorder

Which comes from ignorance and God both.

But the machines and the workers

Will fight against them, and also you

Join in

The battle against primitivism!

9 Water.

The Fliers

Now

The water again comes nearer.

Noise of Water (Radio)

The Fliers

I must get higher! This wind

Bears down.

Noise of Water (Radio)

The Fliers

Now it goes better.

But what is that? The wheel

Will no longer turn right. Something

Doesn't make sense. Is that not

A noise in the motor? Now

It's going down again.

Stop!

Noise of Water (Radio)

The Fliers

My God! That

Nearly got us!

10 During the Whole Flight All American Newspapers Tell Unceasingly of the Fliers' Luck.

America (Radio)

All America believes that the ocean flight

Of Captain Derundder will be lucky.

In spite of reports of bad weather and

The defective condition of his light airplane

Everyone in the States believes that

He will arrive.

Never, writes one paper, is a man

From our country

So taken to be Fortune's darling.

When the fortunate one flies over the sea

The storms hold back.

If the Storms did not hold back

The motor would stand the test.

If the motor didn't stand the test,

The man would prove true.

And if the man didn't prove true,

Good luck would prevail.

And for these reasons we believe

That the fortunate one will arrive.

11 The Prayers of the Fortunate One.

The Fliers

Two continents, two continents

Wait for me! I

Must arrive!

For whom do they wait?

Even one for whom no one waits

Must arrive.

Courage is nothing, but

Arrival is everything.

Whoever flies out

Over the sea and is drowned,

He is a damn fool

In that case a man is drowned at sea

Therefore I must arrive.

The wind bears down and

The fog makes steering impossible, but

I must arrive.

Of course, my machine

Is weak, and weak, too,

Is my head, but down below they wait for me and say

He will arrive and for that reason

I must arrive.

12 So They Fly, Write the French Newspapers, Over Them the Storm, Around Them the Sea, and Under Them Shadows of Nungesser.

Europe (Radio)

Toward our continent

For more than twenty-four hours

There flies a man.

When he arrives

A point will appear in the sky

And grow bigger

And become an airplane and

Come down and

In the meadow a man will come out and

We will recognize him

From the picture that came over before him

In the newspaper.

But we fear, he

Will not come. The storm

Will throw him into the sea

His motor will not hold out

He himself will not find the way to us.

So for these reasons we believe

We will not see him.

13 The Conversation of the Fliers with their Motor

The Motor Runs (Radio)

The Fliers

Now it's not much farther. How

We must work together

We two.

Have you enough oil?

Do you think you have enough gas?

Are you cool enough?

Is everything all right?

The Motor Runs (Radio)

The Fliers

The ice that weighed you down

Has gone away.

The fog, that's my concern.

You work your work

You must only run.

The Motor Runs (Radio)

The Fliers

Remember: in St. Louis we two

Stayed longer in the air

It's not much farther. Here comes

Ireland, then comes Paris.

Will we make it?

We two?

The Motor Runs (Radio)

14 Finally Near Scotland The Fliers Sight Fishermen

The Fliers

There

Are fishing boats.

They know

Where the island is.

Hello, where

Is England?

The Fishermen

Someone is calling. Listen!

Who could be calling?

Listen, the clattering!

In the air

Something is clattering!

What could be clattering?

The Fliers

Hello, where

Is England?

The Fishermen (Radio)

Look, there

Something is flying.

That is an airplane!

How can that be an airplane?

A thing made of ropes

Linen and iron

Can never be over the water!

Not even once

Would a fool set himself in it

It would simply fall

Into the water

Even the wind

Would smash it, and what men

Could hold for so long onto the wheel?

The Fliers

Hello, where Is England?

The Fishermen (Radio)

Take a look, at least!

Why look, where

No one can be?

Now it's gone.

I don't know

How it can be.

But it was.

15 At the Airport Le Bourget Near Paris On the Night of 21 May 1927, At 10 O'clock in the Evening, a Giant Crowd Waits For the American Fliers.

Europe (Radio)

Now he' s come!

In the sky there appears

A point.

It grows bigger. It is

An airplane.

Now it's coming down.

Onto the field

Comes a man

And now

We recognize him: that is

The flier.

The storm did not swallow him

Neither the water.

His motor stood the test, and he

Has found the way to us.

He has arrived.

16 The Arrival of the Flier at the Airport Le Bourget Near Paris

Noise of a Great Crowd (Radio)

The Fliers

I am Derundder. Please carry me

Into a dark hangar so that

No one may see my

Uncontrollable weakness.

But report to my comrades at the Ryan Factory in San Diego

That their work was good.

Our motor has held out

Their work was flawless.

17 Report On the Not-Yet-Attained

Radio and the Fliers

From the time when mankind

Began to know itself

We have made wagons

Of wood, iron, and glass

And have flown through the air

And to be sure with speed that

Doubled that of a hurricane.

And to be sure our motor was

Stronger than a hundred horses, but

Smaller than a single one.

For a thousand years, everything above fell below

Excepting a bird.

Even on the oldest stones

We found no sign

Of any man who

Flew through the air

But we have triumphed.

To the end of the third millennium of our time

Our steel-like integrity

Will be exalted

An exhibition of possibility, yet

Without our forgetting:

The not-yet-attained.

To this is this report dedicated.

Section III
The Great Battles

The Voice of the Revolution

I admit it: I fell in love with Santiago's voice. I got into this whole mess because of it. From the first day they broadcast, on 10 January 1981, the day of the general offensive, I was bewitched by the conviction in that voice:

Fifty years of dictatorship are falling!
Join the ranks of the Farabundo Martí Front!

I don't know why, but I felt like he was talking to me, inviting me to join up. I wanted to take the first plane, grab a bus, even slog it on foot, and head right back to El Salvador. You see, I'm Salvadoran, but I was living in Nicaragua at the time.

I used to work in San Salvador at the newspaper *La Crónica*. My beat was stolen cars, stabbings, bottles thrown in fits of passion, that sort of thing. News, you could call it. One day just for fun, I wrote a political joke and showed it to the editor Jaime Suárez, who was a good friend of mine.

"Marvin, don't do any more news stories. If you bring me five jokes a day like this one, I'll double your salary."

With that stroke of luck I started writing a little column called "The Politics of Humour". Every day I came up with my five jokes making fun of politicians and members of the military junta. They hated it of course, but what really bothered the generals and colonels was the paper's critical stance. Not only our paper, but *El Independiente*, the YSAX radio station, the National University, the Human Rights Commission... It wasn't long before they assassinated Jaime, my editor. Then we started getting anonymous calls in the newsroom, that we're going to kill you all, that we'll teach you a lesson... Since I'm no hero, when they sprayed the building with bullets I made a decision: "I'm leaving. I don't want the death squads cutting off my tongue or sticking a screwdriver in my eyes."

I packed my bags and didn't stop until I got to Nicaragua. That was in 1980. I was still there in mid-'81 when I tuned in to Venceremos and heard that electrifying voice:

Transmitting its signal of freedom from El Salvador, territory in combat against oppression and imperialism!

Then the female announcer would come on, who wasn't bad, but she didn't make such an impression on me. I'd go nuts waiting for her to finish so the other one, someone called Santiago, would come on again. That guy's voice seduced me, I can't deny it.

All this time, without my knowing it, my younger brother was working for COMIN, the station's international publicity team in Nicaragua.

"Look Marvin, we need you," he tells me one day. "You know how to write. Come and give us a hand."

Can you imagine? They wanted me and I wanted to go. Who do I have to talk to? Talk to Carlos Argueta, the head of COMIN. Okay, let's talk. The next day I was sitting at my little desk in the COMIN office where the news team worked. My main job was to write cables based on what I heard on Venceremos, and distribute them to the news agencies. In other words, for my work I had to listen to the station from Morazán every day. I was happy. I remember as if it were yesterday the first story they asked me to write for Venceremos. My story on the radio! All excited, I tuned in way ahead of time, waiting for Santiago's voice to read what I had written. Such vanity! But that day a different announcer read it, someone called Marvel. Too bad.

In January '82 Carlos Argueta left Managua to work with Venceremos on the inside. Two weeks later I heard from him, a message in code: "Do you want to come to El Salvador?"

My feelings got all mixed up. I wanted to, but I had a three-year-old girl. I wanted to, but I was afraid. I wanted to but...

"Do you want to, or don't you?"

"I do."

So they set up the trip and in March '82 I was back in my own country. The *compas* sent me straight off to Morazán, to La Guacamaya, since the command post and the station were still at that camp then. I arrived at seven in the evening, just as they were finishing the broadcast. Marcela was at the mixer, Apolonio at the transmitter, Butterfly and Santiago announcing. Greetings all round.

"How's Managua?" Santiago asked. "And how's my girlfriend Lucía, have you seen her? What do you mean you don't know her? She's such a...! And Nidia Rosa, the captain? Don't tell me she married somebody else? And what about Claudia, the photographer, didn't she tell you to say hello?"

"Tell me about the last operation..." I asked him.

"And Ernesto Cardenal, is he still minister of culture?" He continued interrogating me, "What films have you seen there? Tell me, are the buses still bursting at the seams?"

"Tell me about the station..." I asked him.

No way. Who can withstand Santiago when he wants to talk? He peppered me with questions until exhaustion did me in and I went off to sleep.

The next day, without even saying "Here it comes", they put me in front of the microphone. Santiago introduced the news segment with a sound effect of gunfire.

And next, Radio Venceremos presents its programme... News Bullets!

That day the bullets flew fast, because I read at the pace of a machine gun. The truth is I'd never done radio before. Never in my whole damn life had I sat in front of a microphone. Written news I'd done, but that's a different hundred-peso bill, as the Nicas say.

I hadn't even recovered from my terror when the criticism rained down in the afternoon evaluation session:

"Inaudible."

"Unintelligible."

"Incomprehensible."

In sum, they thought my announcing was garbage, and they "suggested" that I write more and speak less. That didn't shake me up as much as what was going on in the camp. Imagine, the first day I arrived, just as they were showing me the radio's equipment, I saw them race by with about twenty people on stretchers, heading for the hospital. They'd just whipped us badly near Jocoaitique, nearly annihilated one of our squadrons. Sixteen of our people got killed, they told me. Then the next day the same thing. Our forces attacked Gotera and returned in bad shape, defeat written all over their faces.

What happened? During those days, on 28 March to be exact, elections were held. It was all a farce, a big fraud. The decision to remove Duarte and put in Alvaro Magaña as president was made by the army, not at the ballot box. The US ambassador helped divvy up congressional seats among the parties in the Constituent Assembly. General García, the one responsible for the massacres of recent years, was named to rule from the Ministry of Defence. It was the same old story; to disguise the repression and weaken the popular movement they tried to put a democratic facade on the military dictatorship.

The FMLN decided to boycott the farce, and called on people to rise up in an insurrection, but the people didn't respond as we expected. There was a lot of fear and not much political organising. We had a lot to learn about relating to the masses and waging war. Militarily they'd beaten us, and badly. The commanders were evaluating the experience and drawing up a new strategy, but many of us got terribly depressed, really demoralised. We couldn't hide it; the depression among the combatants was obvious. That's when Santiago arrived: "This is war, boys! Anybody can get whipped in a war!"

Then he grabbed the microphone with the same passion as every other day:

Victory is approaching, compañeros*! We're going to win!*

Listening to Venceremos at night lifted all the tension that had built up during the day. The same was true for very many people.

I believe a lot of people joined up because of Santiago's voice, and many others didn't desert when they were depressed because of the spirit he was able to convey. If things were going well or if they were going to shit, Santiago always sounded the same. Always tremblingly alive. Was it exaggerated optimism? I'd say it was more like the shot of enthusiasm you need to carry on through years and years of war, because in those dark days, when you haven't eaten, when you're covered with mud in a swamp, when you see your buddies get killed, you need something to restore your spirit.

That was his virtue. It's easy to sing when you're on top, but to keep on singing when you're the one getting kicked... That's why people love him so. His voice is a symbol, it's everyone's voice, the voice of the revolution. Even though several of us are announcers on Venceremos, Santiago is the one who always reads the official communiqué from the commanders, the one who curses the government, the one who orders highways to be opened and closed. Until he says it, it hasn't been said. That skinny guy speaks with such authority! He has so much faith in victory that it's contagious! You should see him when we start a new offensive, Santiago wakes up energised.

"We're going to win, today we're going to win!"

"Today, Santiago?" I ask, sceptically.

"Okay, maybe tomorrow."

A Battle in Episodes

Jonás called a meeting in El Mozote of all the forces in Morazán, including Venceremos. It still smelled like death where the village had been. Maybe a thousand guerrillas were there, most of them demoralised. We'd been crushed at Gotera, at La Planta, Commander Gonzalo[1] had been killed in Usulután, we'd just buried Ventura, a dearly loved squadron leader... From a distance I watched our leaders: María, Chico, Balta, Luisa, Carmelo, Licho, Memo, Manolo... All of them so young, I don't think any of them were over thirty. They looked serious too, weighed down by problems.

Jonás stood up in the middle of us.

"I'd like to ask you all a question," he started. "Are you demoralised?"

"No..." we all responded.

"Of course you are! It's written all over your faces. Discouraged and disappointed, that's what you are. It's to be expected, because they've whipped us badly in the past few months. Well, so what? That's how this shit works. You learn war by waging it, there's no other way. If you never climb up on a horse, you'll never fall off. But the story isn't over yet, no sir. Now is when the enemy's going to find out what the FMLN is made of!

"Demoralised? You ought to be mad as hell! And confident of our strength! Let's see, tell me, how many guns do you think we can recover in the next battle?"

"I'd say about fifteen, *comandante*."

"Fifteen! That's ridiculous! You, how many do you think?"

"Maybe thirty, *comandante*."

"Thirty! What are fifteen or thirty guns to us? We're going to get a hundred guns, do you hear? One hundred guns!" Jonás saw a few sceptical faces. "You don't believe we can? Of course not, neither do I! We won't get a hundred guns, no way! Because a hundred, look, is this," and Jonás angrily stabbed the air with one finger. "Two hundred guns is what we want!" and he raised two fingers, making a "V" for victory. "We won't be satisfied with a hundred little guns. We want two hundred!"

A tremendous roar ran through the crowd. Jonás's eyes gave off sparks, and all our eyes began to shine with the same anger and determination.

"The big battles are coming!" Jonás concluded, "and we're all going to be there! Journalists, radio operators, cooks, doctors, even the sick are going to fight! Everyone! Onward to victory!"

This happened at the end of May 1982. The following week we launched a big campaign called "Commander Gonzalo". The plan was to lay siege to Perquín to draw in the army's reinforcements and ambush them, but people left that meeting in El Mozote so fired up that we took the town wham-bam. The *cuilios* ran off scared to death and took refuge in San Fernando, about five kilometres away.

"Surround them and destroy them!" Licho ordered.

While our forces moved to surround the 250 troops ensconced in San Fernando, the army was up and on its way with 300 men to block us. The reinforcements came up the highway from Torola, and when they reached Moscarrón Hill they ran into one of our squadrons.

"Hold them there, we'll be right down!" Licho ordered by radio.

When they got there, a big battle ensued. Those of us from Venceremos were in the camp waiting for instructions.

"Get somebody ready to do a live report," they warned us. "We're making mincemeat of them!"

Without consulting anyone, Santiago grabbed his tape recorder and took off for Moscarrón. I stayed behind to announce with Butterfly and Rafi. A little while later, couriers started bringing us the first cassettes from the front lines:

At this very moment our guerrilla forces are advancing on the enemy's left flank. We can see several soldiers jumping from their trench. They're firing wildly, and they're being supported by machine guns and 90mm cannons. The compañeros *answer the fire... They've just set off a powerful contact bomb...*

Since the battle didn't end that first day, 9 June, our audience was left hanging. Who would win? The listeners wanted to hear more; they wanted to know what was happening, but for technical reasons we couldn't extend the programme. We announced that they should tune in again tomorrow to find out how the battle of Moscarrón developed — it was like a soap opera!

The next day, Santiago used a military radio to establish a direct line with us at La Guacamaya.

The helicopters are still flying low over the front lines. Three helicopters are firing... perhaps you can hear the guns... Our forces answer with a fusillade. We don't know if they've managed to hit one of those devils. Now they're turning around, flying off to the south...

Since the reporting was live from the front lines, all the sounds of gunfire, helicopters, A-37 planes, bombs going off, all the sounds most stations have on sound-effect records, went out on air, only here it was for real. The soap opera was real life!

The battle wasn't decided on the second day either. Our audience was left even more anxious, biting their nails to hear how the story would end. It was a battle told in episodes!

At last, on the third day, our *compas* stretched themselves to the limit and annihilated the enemy. The third episode of the soap opera of Moscarrón had a happy ending, and in thousands of Salvadoran homes Venceremos resounded reporting the victory:

El Moscarrón is now under guerrilla control. Perquín has been taken. San Fernando will soon fall. An arch of liberty is forming across the villages of Morazán!

It was an astounding victory. The enemy suffered badly — more than 200 casualties — young soldiers sent to fight by millionaire colonels who waged war from their desks. We captured some 40 prisoners, among them a lieutenant from the Belloso Battalion, trained in the United States.

"Your name?"

"William Reinaldo Sánchez Medina."

"Where were you trained?"

"Fort Bragg, Virginia."

"Who were the instructors?"

"North Americans."

"Do you know why the battalion is named after Ramón Belloso?"

"I don't know."

"Do you know that Ramón Belloso was the Salvadoran general who led the armies of Central America against William Walker[2] in the 19th century?"

"No, they didn't tell us that."

The battle of Moscarrón was a turning point. Suddenly our demoralisation was gone. A hundred guns? Two hundred guns? An entire artillery battery! Three 90 millimetre cannons! Heavy machine guns, military radios, piles of rifles, grenade-launchers, backpacks, thousands of rounds of ammunition! The *compas* were drunk with joy. I'll never forget what one of the combatants, a peasant, said when he returned to La Guacamaya: "My heart was bursting with joy! We had a volcano of guns!"

Despite the emotions, the victory was no flash in the pan, nor was it achieved by recklessness. It was a full-scale battle won by the side that fought better. Not long before, Jonás got hold of Clausewitz's black book, *On War*, and he spent every moment at the camp reading: about the inverted wedge, the pincer, about attacking on this flank and not the other — all about military strategy. It was strategy learned on the real stage of the soap opera, on the battle field, not at West Point or on the mahogany tables of the High Command. Jonás is someone who goes down to the front lines in the middle of a battle to say, "That isn't how you do it, sons of bitches", and he fires his shots and grabs some kid by the scruff of the neck who wants to run away and puts him back into the trench. Exuding confidence and energy, Jonás trained generations of combatants, including the ones who are leaders today.

After the battle of Moscarrón, a new stage in the war began: the time of the great battles. Our guerrilla army had reached maturity.

Convincing a Gringo

Fidel once spoke of the "Salvadoran guerrillas whose feats astonish the world". When I heard that speech on Radio Havana, my thoughts went to our *compañeros* and their assault on the bunkers of Jocoaitique. To knock off those fortified positions located on the bare hills surrounding the town was, militarily speaking, impossible. There was no way to do it, no way you could reach the big stone trenches where the guards sat with their boxes of munitions, receiving supplies and reinforcements directly by helicopter: totally unassailable.

Jocoaitique is a little town; its handsome plaza is lined with palm trees and benches, the church at one side. What's unusual is the way it's encircled by hills. One of them, the highest, is called La Planta, and it was

the scene of a shitload of battles. There must have been an electrical substation there once, who knows when. What's for sure is that La Planta, with its big bunker on top, is the highest strategic point in town. Whoever controls it, controls Jocoaitique.

I went along on the assault on La Planta to report for Venceremos, and also to accompany Raymond Bonner, the *New York Times* correspondent we had invited to collect testimonies and photographs of the massacre at El Mozote. That guy Raymond is a fine journalist. He was in Vietnam as a lawyer and had some experience with war. He always carried his camera and his little notebook to write everything down.

Licho was leading our troops. He put Raymond and me at the command post for greater security.

"Don't tell me you want to get closer," Licho warned. "Suppose they kill this gringo right under my nose, what happens then?"

But we were journalists; we wanted to see our special forces take the bunkers from the *cuilios*. Our troops would have to turn into animals to sneak up those bare hills without being spotted. These *compas* are cats in the night. When it's dark as can be, they go out practically naked, wearing only underwear, camouflaged with dirt from the same terrain. They sneak up, sticking close to the ground, measuring every centimetre, making no more noise than a shadow. They toss a contact bomb or a grenade from a few metres away, and launch the assault. That's how they took emplacements that seemed impenetrable.

When they attacked the first bunkers at La Planta, the secret was out and the shit hit the fan. That's when Raymond got impatient.

"Ask permission," he says. "Let's get up to the line of fire."

I approach Licho and he goes bananas: "Stop bothering me. You're seeing the war. What more do you want? To see the enemy's finger on the trigger? You two are staying right here. As long as I don't move forward, neither will you."

After seven hours of combat, in the middle of an infernal gun battle, they tell us that the soldiers are abandoning their posts, they're giving up.

"Let's go," Licho tells us. "Now it's okay."

We walked over to the spot where twelve soldiers stood with their hands on their heads. They defended the town command post right up to the end. By now all of the bunkers had been taken and the summit of La Planta was under our control.

"Take down their names," Licho tells me, "their age, the battalion they belong to, all that. Then get that journalist out of here. The army's reinforcements are already on the way. The counter-attack is going to be a bitch."

"Couldn't I see just a bit of Jocoaitique?" asks Raymond. "Take a few pictures, do some interviews? Since I'm here..."

"Look Mr Raymond, we had a deal. You, Marvel, take him for a turn around the plaza. Then, back to camp. I don't want this guy here when we have to defend the town. He's seen enough. Get him out of here."

We had a few minutes to go into the town, look around a bit, and at least from a distance see those four unconquerable hills surrounding Jocoaitique that were now in the hands of the FMLN.

"It's one of two things," Raymond says, "either you have the best special forces army in the world, or the morale of the soldiers defending those heights is less than nothing. What do you think?"

"Both," I reply proudly.

We followed a stream that led to the soccer field, looking for the way into town, and on the way we saw the first bodies, two soldiers. We went on. A *compa's* body lay on a corner. While we walked, Raymond was writing everything down in his notebook and taking pictures of the empty streets. Not a soul was about. No dogs were barking, you didn't even hear a chicken, no pigs running about. Nothing. No one. Just the penetrating smell of gunpowder, which made it hard to breathe. We moved cautiously, because when you take over a town you can't just walk in admiring the clouds. There could be snipers anywhere.

In the palm-lined plaza, the local command post looked like it had been hit by a hurricane. The last soldiers held out so stubbornly that we were forced us to wreck the building. Piled up outside were military radios, two dozen rifles, helmets, uniforms, all the booty. Roque, with his team of mules, was already packing it all up to supply our camps.

We continued through the ghost town. Raymond wanted to talk to the residents, interview them. How could we? All the doors, all the windows were shuttered tight. There we were standing in the middle of the street, all alone.

"This is so strange," Raymond began. "You say you've got the support of the people, but you just took over this town and all I see are dead soldiers and prisoners of war. You've recovered weapons, but you don't have people in the streets. You're like the US Army when they went into a Vietcong hamlet. They'd take the hamlet, walk in like victors, but not even a dog would go out to greet them. What do you say to that?"

The question stuck in my craw. You're not going to believe it, but at that very moment the door of the house in front of us creaked open. A child's face peered through the crack, she put out a hand and waved at me to come. I approached and the door opened half-way.

"Come in *compas*," I heard in a whisper from inside.

I waved to the gringo and brought him to the house. Click, the door closed behind us. Inside, everything was dark. When our eyes adjusted, we saw two candles and two women, an older one and one who could be her daughter. Each was at a grinding stone, grinding corn. Next to them was the fire with a *comal* for cooking *tortillas*. Beside the fire, a man at a table. On

the table was a box filled with ripe tomatoes and another filled with eggs. And there were three piles of *tortillas*, about thirty *tortillas* high. The man picked up a *tortilla*, put an egg in it and a tomato, and handed it to me: "Eat".

He made another with tomato and egg and gave it to Raymond: "Eat, you must be hungry. When you leave, tell another two *compas* to come and eat. When the shooting started early this morning we figured: 'Let's make *tortillas* because the boys are going to be hungry when they come in. We'll stay up all night.' So I told her, (she lives next door), and between her and my wife they made the *tortillas*. I brought in the tomatoes."

"But," the gringo spoke up.

"Shhhh!" the man said, "There are spies in town, you know, 'ears'. Here everybody's on your side, but there are a few frogs who sing when they shouldn't, understand? That's why nobody's outside. But knock on any door and they'll let you in. Everybody's watching through the cracks and there's food for you in every house. It's the middle of the night and you can hear people making *tortillas* and you can smell the fires!"

When we went out to the street, the woman, who had not said a word, said good-bye without a pause in her grinding: "Take care, boys".

We told the first *compas* who passed by. In twos, they went in and ate. Others knocked on other doors, and in every one, with less and less caution, they opened wide to let the guerrillas in.

Raymond sat down to take notes in his little book.

"Regarding your question..." I interrupted him.

"No, thanks," he said with a sheepish look.

The Bat Cave

After the battle of Moscarrón, when we got bombed by the A-37s, we couldn't carry on as if those planes didn't exist. We decided to remain at La Guacamaya, but the station had to have maximum security. The problem was how. Nolvo suggested a cave that he and his family used as a hideout when the army searched the villages.

"*Hombre*, I'm not going to say it's a first-class hotel, but it is well-protected. Not even Lucifer will find you there."

It was true. The cave Nolvo offered us was the safest spot on earth. It was hidden on a hillside with a good ten or fifteen metres of earth and rocks on top, so that any bombs that fell nearby wouldn't even scratch us. Getting in and out posed a few problems, though. First you had to walk along the edge of a path and then cross a fast-flowing stream on wooden two-by-fours that seemed to be made of soap in the rainy season. Incredibly dangerous. We ended up hanging ropes to keep from falling in head first. We also had to build some stairs on the last stretch leading to the mouth of

the cave. To dive into that hole, which was about a metre wide by a metre high, you had to leap like a gymnast.

As soon as you got inside a disgusting mess of bats would start to fly about, so many of them and so annoying that Nolvo baptised the hideout "The Bat Cave". We set out to make ourselves comfortable there, which from then on was to be Venceremos' recording and transmission studio. Apolonio installed lights with a twelve-volt car battery. We all chipped away at the walls to make them straighter. We levelled the floor and even put down bricks. We got the tables and benches we needed from some abandoned houses. The biggest problem, though, was the damp, a steady drip drip drip. We had to set everything up inside a bamboo structure. We spread a big plastic sheet over this so the water would run off, like a transparent roof against the wet. But of course it was still damp, and the floor soon turned to mud. Pure muck, especially in the rainy season.

We hid the motor outside under good cover, and managed to hang the aerial from the branches of some tall trees nearby. Inside, everything was in its place. We set up one little table with the mixer, the recorders, and a pile of cassettes, another table held the two microphones for the announcers, and at the back was a third where we set up the transmitter, our Viking II.

That place was very secure, but it was a cave after all, and there was a lot of reverberation. Sometimes it seemed like an echo chamber or one of those booths they use for special effects. Other times the babbling of the stream flowing right outside carried over the air. When it rained a lot, it seemed like we were broadcasting from under water.

The worst thing was the rats. You'd be talking on air and you'd see these hairy beasts running around. Corn-fed rats, fat and huge. At one point Marvel wanted to stay and work nights in the cave, but he couldn't stand it because they would come out and run between his legs. Absolutely disgusting. The one who did work there late was Santiago. He'd be up all night with his editorials, and then, at five or so in the morning when it was cold as the devil, you'd see him come out of the cave wearing a black rubber poncho he'd got hold of, with the bats flying all around him. He looked just like Count Dracula in search of unsuspecting necks.

At six in the afternoon, all of us on the Venceremos staff would pile in with the rats and the vampires to put our programme on air. There would be the hosts, Butterfly and Santiago, Marcela at the mixer, Rafi with his "Workers in Struggle" piece, and me with my "News Bullets", Marvel the reporter, Morena helping everyone out, Mariana coordinating it all, Apolonio at the transmitter. We spent nearly all of 1982 in that cave. For a year the rats, the bats, and our production collective all lived together, and we produced a lot, even quarrels.

As it turned out, the Bat Cave became even more notorious as the Cave of Passion. I don't know if the place itself had a peculiar effect on us or if we — a few in particular — were already psychiatrists' fodder, but the

fact is that this was the most emotionally confused time ever among the guerrillas. Everything revolved around Marcela. All the love was for Marcela. All the men's eyes followed Marcela. She was a very attractive woman, very sensual. She walked with her head held high, delicately balancing her body as if her feet never touched the ground. Imagine us stuck in that swamp and all of a sudden Miss Universe appears with these incredible hips, voluptuous, ravishing...

"If she stirs like she moves!"

"Oh mama, so many curves and me without brakes!"

In the camp compliments showered down on her, but she paid no heed. She'd go to her work and do it perfectly. Besides the mixer, they put her in charge of setting up the Venceremos archive. Nobody else could have done it better. Marcela was methodical, efficient, graceful, lovely, perfect. There were a lot of reasons for falling in love with her.

The first to succumb was Santiago. I think he had the hots for her ever since that day in Villa El Rosario when Marcela was elected mayor and he introduced her at the First of May rally. Afterwards, when the *cuilios* retook the town, Santiago brought her back to the camp. He trained her for the radio, taught her to run the equipment. Santiago, with his quixotic nature, started to see her as his Dulcinea.

Then Rafi joined in the race, and he employed a more realistic methodology: a love of fruits. While Santiago was writing her passionate poetry, Rafi was up early bringing her a ripe pineapple, a bunch of tiny bananas, a delicious sapodilla. Matter defeated spirit, and the mayor decided to hook up with Rafi. When Santiago found out, he nearly died. He got hold of a sword, I don't know where from, handed Rafi a lance and challenged him to a duel. Like errant knights, they jousted in front of Marcela, beating the shit out of each other. It was silly, but it was also serious. Marcela was really upset.

Just then Rafi got sent far away to carry out a mission in Jucuarán. Taking advantage of the empty seat, Marvel went into action. He's always been of the belief that in love and war any vacuum offers a bridgehead for combat. But his romance with Marcela didn't last, for a couple of reasons. First was Lolita, Marcela's grandma, who came to live with her when Villa El Rosario was taken back and who helped out in the Venceremos kitchen. Lolita's approval was crucial and Marvel was no saint of her devotion. The burned *tortillas* she sent him were an unequivocal sign. Marvel also had to travel — to Mexico to get fitted for a prosthesis and to do a few secret errands. Then, to the astonishment of Santiago who had not yet lost hope, Apolonio the engineer — Rafi's brother, to make things worse — proved he knew about more than adjusting the knobs on the transmitter.

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After the hammer and anvil operation, I was very sad. Toni's death really affected me. When I got back to El Zapotal, I went to Lolita's house and found her crying. I asked for Marcela and she said, "Apolonio, she's out there looking for you."

Marcela was Toni's sister, and she loved her brother with all her heart. When she found out he died in my arms, she wanted to thank me. I also wanted to tell her of his last moments, but when we met on the soccer field, the only thing I could do was give her a hug and stand there. I've never been any good at consoling, the words don't come.

Later, in the Bat Cave, I had to do all the broadcasts. Toni wasn't there to help me out, so Marcela came religiously and brought me food, soup, whatever she had. Then she'd sit there on the steps to talk. Lolita spoiled me too, she'd send me hot crispy *tortillas*. In spite of all that, I couldn't be too careful around Lolita. All it took was one bad joke or some comment about Marcela, and Lolita wouldn't talk to you for a week. Having Lolita for an enemy was worse than fighting Monterrosa. Nothing beats the stubbornness of a peasant, and nothing could beat her affection for and dedication to Marcela and Toni. They were her children — she'd raised them since they were small. That's why she was so over-protective. So to have a good relationship with Marcela, first you had to win over Lolita. She was the door and she let me in, above all because of what happened with Toni.

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When Rafi came back from Jucuarán, he faced a dramatic scene: Marcela, his mayor, shacked up with Apolonio, his brother. The jealousy! And to make the uproar complete, Marvel came back from Mexico and added his own passions to the stew.

At six in the afternoon, the bad feelings would reach a crescendo. All of us, the hopeful and the disappointed, had to shut ourselves up inside the same cave. Santiago, who faithfully nurtured his love, announced across from her; Rafi, his throat too dry to swallow, sat next to Apolonio. Even though at that time I was more preoccupied with airplanes than with boobs, I have to admit that her proximity set my insides flying too. With my mouth I said "Salvadoran people!" and with my mind I thought "What an ass!" But Marcela remained unperturbed, raising and lowering the mixer controls. Even the bamboo started to sprout leaves behind her chair, giving her the air of a Vietnamese goddess.

Weeks went by, months, and the situation, instead of easing up, got ever more complicated, like a soap opera. Marvel, seeking new fields to plough, fell in love with Mariana, but Mariana didn't love him. Santiago still drooled over Marcela. Marcela was with Apolonio. Rafi was angry with Apolonio. I was falling in love with Butterfly. Butterfly was falling in

love with everyone. I think the only one who calmed things down was Morena.

"Wouldn't you like a little coffee, boys?" she'd say, gourd in hand.

At a meeting for criticism and self-criticism attended by the monitoring team, the security squad and the logistics team, we tried to reach the river of truth.

"Santiago's work is a mess," Apolonio complained. "He leaves things all over the place, the cables, the cassettes. You can't work like that."

"What about you?" Santiago jumped on him. "You're so full of yourself. Just because you're the engineer you think you're hot shit!"

They were off again and nothing could keep the rest of us from leaping into the fray.

"That's enough backbiting," Luisa interceded. "Let's get down to the real problem."

"The real problem is the marquise," said Marvel, raising Marcela's rank since she remained so remarkably clean amid the mud-slinging all around her.

"The real problem", said Apolonio in a burst of sincerity, "is that Santiago wants to screw Marcela. That's why he's mad at me."

"It's not true! That couldn't be the reason!" Tom blurted out suddenly. (Tom was a kid from San Salvador, a lumpen with dark glasses and a scar running the length of his cheek.)

"Why do you say that, Tom?"

"Because if that were the reason, we'd all be pissed off with the engineer. Who of you here doesn't want to screw Marcela, eh?"

Everyone laughed at his foul mouth, except the two contenders, and Marcela, who sat through the entire meeting without saying a word, shedding a few tears now and then. Blue tears, I'd say, because she was an aristocrat even when she cried.

"Get it together," Luisa concluded. "If you go on like this, it's not the enemy who's going to destroy the station, but yourselves."

The waters receded slowly later on. They transferred Marcela, because of her many talents, to another area — press and propaganda. At her going-away party there was a lot of crying. Santiago cried, she cried, we all cried. It brought out the poet in me and I wrote her a few high-tension verses. I still remember them, I've got them somewhere.

Marcela and War

To love Marcela in wartime
is to carry a set of pointy cufflinks in your pocket
to love Marcela in wartime
is to go six feet under
and let yourself be ambushed by wonder.

To love Marcela in wartime
is to manoeuvre under fire and advance towards the unknown
to love Marcela in wartime
is to force yourself to abandon your routine
and explore your wildest dreams
it's to sign off on a love-dispatch
and make an orderly unpoetic retreat
to tear your heart asunder with contact-kisses.
To love Marcela in wartime
is to hate clocks
the way you hate the *cuilios.*
The fragrance of Marcela's collar
is like homegrown coffee
at four in the morning.
Marcela's eyes
are like the moment the Dragonflies have left
after dropping 16 bombs
in Guarumas
without hurting anyone.
Marcela's lips
are like the 105mm artillery shells
that fall far off but send shivers up your spine.
To caress Marcela
is like drinking water during a retreat
knowing you have to keep on marching.
Marcela is a sign up in the sky
she's a silent black cat.
Marcela is a march down the hill to the Torola River
at full speed.
To love Marcela in wartime
is, sometimes,
another war.

Marvin

Fear is for Men

There were two things that scared me to death: winter and A-37 planes.

When those big winter rainstorms began, I'd get so nostalgic I'd sink into a funk I couldn't find my way out of. I couldn't get out of the rain because *everything* was wet. The tent was wet, the bat cave was wet, the paper where I'd write up the news was wet, my clothes were wet... and what bothered me most was knowing that tomorrow everything would still be wet. I don't know how many times I dreamt of a dry shirt, all ironed, like

the ones I had at home! And the rains always reminded me of my daughter. I hadn't had news of her in months. I wasn't really afraid that something would happen to her, but that I would die without ever seeing her again.

The idea of death came from the air with the A-37s, the Dragonflies. In '82 I got obsessed with them, just as I had with the death squads when I worked at *La Crónica* in San Salvador. Just the sound of the motors far off, coming closer, would paralyse me. Then the roar when they'd dive, the pounding of the machine-guns, the thunder of the 500-pound bombs. I felt nothing but terror.

Perhaps driven by the intensity of my own fear, I used to go out after the bombings to survey the damage. After a bomb falls it's not only the destruction that gets to you, it's the feeling of death it leaves in its wake, the desolate landscape all around. The trees end up all twisted, bare, leaves on the ground. The rocks get blown out of place. In among the burned vegetation you see huge pieces of blackened shrapnel, razor sharp. Any one of them, just a bit closer, would have cut you up like a chicken.

Another thing that bugged me was the anonymity, though it was easier to take than the airplanes. In San Salvador I was part of a group of poets, artists, intellectuals, and in those circles names meant a lot. You'd sign an article or a painting. Here among the *compas* everything is "collective", all for one. Nobody worries about inanities like what's mine or yours. What counts is not who does things, but that things get done. I found that very hard.

Physical exercise? I've never been too bad at walking. What surprised me when I got to the camp was the physical strength of the peasants. Of course the people are malnourished, I know, I've written about it, but they've got legs like this! They're anaemic, it's true, but the world is all backwards. I had been eating three square meals a day, drinking milk, eating meat, yet after marching two hours I'd fall apart, my tongue down around my ankles, while the malnourished Indians with their muscles of steel were indefatigable! Once I got into shape, though, I got over my exhaustion on the marches.

What made my life bitter, as I said, were the airplanes — and missing my daughter. Marvel sensed I was going to break, so he came over and gave me some good advice, in his own way.

"What's the matter with you?" he said. "Get into the war. What do you want to be? A writer? A poet? If you leave here what kind of shit are you going to write? What are you going to write your poems about, you asshole, about the beauty of the sunrise? Open your eyes Marvin! This is where history is being made! If your number is up you're going to die anyway — in Managua or run over by a car in front of your house. Today you're afraid of the planes. Tomorrow you'll be afraid of cockroaches."

"But..." I began.

"But what?" Marvel lost patience.

"The planes scare the shit out of me, dammit!"

I was convinced the revolution was just, but let others make it, I told myself. As long as they fight wars with planes, count me out. I went to see Luisa.

"I'm leaving," I told her. "I'm not cut out for this."

"Fine," she said.

She accepted my decision, but some time went by before they could set things up for me to leave the front. Just then Alejandro Montenegro, a member of the leadership and commander of the forces in Guazapa, was captured. Alejandro cracked and started collaborating with the enemy. His betrayal really affected me, a lot, a real lot.

You can't call it anything but betrayal, the worst, because when a revolutionary gets caught, he knows what he's going to face. He knows perfectly well what's coming. There you are without a gun, without anything, alone with your beliefs. It's just you and your principles. Your friends, your memories of the organisation, your people, that's what you grab onto, not declarations or empty slogans. Your duty is to remain silent at all costs. If you say even half of something — experience has taught us — that's where they'll catch you and you'll end up singing like Pedro Infante.

Is it possible to withstand the worst tortures? Yes. Ana Guadalupe, Clelia, Chico, Galia — the bastards made their souls howl and yet they said nothing. Others have died and said nothing. You can always find an excuse: man, but they were breaking his finger, giving him electric shocks, sticking a mouse up her vagina, or who knows what other barbarity those psychopathic ogres come up with. I agree, anyone can have a moment of weakness.

Some *compañeros* talked and came out alive, and then they sent letters to the leadership criticising themselves, asking to be forgiven and to be let back in. Naturally, they were stripped of all their authority, but they came back. Mateo for example. But Alejandro Montenegro, a member of the organisation's central committee to make matters worse, not only broke down in front of the enemy, he stayed on to collaborate with them. He said things that cost the lives of several *compañeros*. He gave away positions. A well-paid Judas, that's what he was.

Montenegro betrayed us and the ERP put out a communiqué signed by Joaquín Villalobos. One phrase, above all, struck me: *One craven weakling will not hold back the revolution.* A craven weakling! I sat down under a tree in Agua Blanca and spent the entire night thinking about it. I thought about my daughter. What sort of expression will she have on her face when she finds out I took off?

"You ran away, Daddy," she'll say. When she learns the meaning of those words, that's what she'll call me: "a craven weakling". Cra-ven weak-ling. What do I want to do, go see my daughter, play with my daughter, watch her grow up so that one day she'll call me a craven weakling? How could I live the rest of my life labelled a coward? The next morning I went to look for Luisa: "I'm going to stay in this shit. No one's going to chase me out of here, not even with a stick! Until we win or until I die!"

"That's better," said Luisa, and she started to laugh, as she always does.

But I had to get over my fear of planes. If not, I wouldn't be worth an old rag. So I declared my war on the A-37s, a personal war against my fear. I started doing some strange things. The airplanes would come and everyone would dive into the shelters. I'd stay outside. I wouldn't go in because I just wouldn't. I'd hear the sound of the A-37 diving and my heart would start to bang away, thump-thump-thump... I'd grit my teeth and think of a poem by Almafuerte, the Argentine writer:

Don't feel defeated when you can't be saved,
even when you are, don't feel enslaved,
tremble with emotion, believe yourself brave
and leap to the attack when your wounds are grave.
Look to the strength of a rusty nail
which though old and ruined does not fail,
not to the craven bravery of the quail
who trims his plumage at first wail.
Go forth like God who never weeps,
or Lucifer who will not pray,
or like a grove of magnificent beech
that thirsts for water yet won't beseech.
Cry out your victory, scream and shout,
even as your head falls down and out.

How many times I recited that poem as I watched the Dragonflies race down at me! That's how I managed to get those A-37s out of me, with an overdose of stoicism. Of course, whenever they come over the horizon it gives me a shudder, like everyone else. Whoever denies that is a liar. Fear is for men, as Che used to say. But it stopped obsessing me. I could sleep and wake up and no longer be thinking only of the A-37s.

In my diary I wrote: *January '83: strategic defeat of the fear of planes.*

The Earth is a Football

No one invited me because I was just a crummy little Venceremos correspondent, and those meetings were for military officers. But I wanted to know. I'd taken part in battles, I'd broadcast the big gunfights, I'd seen plenty of the war, but I'd never seen them plan it out. How do they organise an assault? How do they choose one strategy over another? How do they deploy their troops? Jesus, my curiosity was eating me alive! I know the

best way to kill a craving is to give in to it, so I went over to where they were planning the attack on Osicala and Delicias de Concepción.

The little house looked like a schoolroom; the only furniture was two school desks at the back donated by the Alliance for Progress. Around one, Licho and his squad leaders were discussing the next day's military operation. Beside them, at the other desk, Licho's radio operator was leafing through a book. Since it was already night-time, the room was lit by candles. Making like I wasn't interested in what was going on, I approached the radio operator and, though it was none of my business, I asked him what he was reading. Of course, shooting the breeze with him was a cover so I could eavesdrop on the others.

"Have you seen this?" the *compa* asks.

"Of course," I tell him. "I had it at school!"

It was Levi Marrero's book *The Earth and its Resources*, and it was true, I still remembered the illustrations because it's a good textbook. Now I had an excuse to sit down. The radio operator got excited and started asking me what this geography thing is all about. I was even more excited, and I started explaining how the earth is like a ball and it turns around the bigger ball, the sun, and that the moon turns around the earth, because of the law of gravity and the law of balls... I wasn't in any hurry. On the contrary, with my mouth I explained and with my ears I eavesdropped on the neighbouring desk.

Licho was my hero. I called him Commander Panther because in combat that's what he becomes. If you could only see him, he's a pure Pipil Indian: skin the colour of roasted coffee, eyes like almonds, flat nose, thick lips, clean-shaven, muscular, hands calloused from work. A genuine *campesino* from Morazán, one of those who joined Christian base communities and from there went on to the guerrillas. I never saw him unarmed, and he's got infallible aim, no *cuilio* ever gets away from him. His military training, the basics, he got from the enemy. On the orders of our organisation, he let himself be recruited and did his year's military service. Many have done that. It's a good idea because they learn everything there. The army teaches you to shoot, you use up a few rounds of ammunition, you see how the army is structured on the inside, how it works, and then you come out and fight against them. Licho did that in '77. From there he went on to become one of the guerrillas' best military officers, and a great political cadre as well.

So there I was playing dumb, blabbing on about the moon with the radio operator and listening to what Licho was explaining to the other officers: "We're in this ravine, right? Okay, there's a big boulder there, remember? Well that's where we've got to rendezvous. From there we'll advance in silence about 75 yards uphill to the mango tree by the first trench we're going to attack. Then the enemy's going to react from south to north, they won't have any choice. They'll retreat through the little gulch and come

around this way, see? That's where we catch them. We ambush them in the little thicket on this side..."

I was fascinated by the way Licho explained it all, drawing lines on an improvised map. It was the first time I had a look at how they designed military strategy. What impressed me most was the absolute mastery these men had over the terrain. They talked about the battlefield as if it were their back yard. Inch by inch, they knew the potential of each spot, the difficulties of every path, and most important of all, they knew the relationship that the people — their's and the enemy's — would establish with that terrain. In war, such knowledge is half the battle.

"You take this height here. If there's any resistance, if it isn't over quickly, then all of you go off to the side and get your troops in order. They won't dare advance, they've got no protection there. This squadron will ask for heavier weaponry and they'll wait at the foot of the hill until it comes in from this flank here..."

They had photographic knowledge of the terrain, as if each stone and each tree had its own name! Licho knew where you could escape, where was the best place to lay an ambush, where you could find cover, where to carry out the wounded. All this information allowed him to put together an extremely rigorous, meticulous plan.

At about midnight, it was over. They finished up the last details and brought the meeting to a close. I said to myself: now I can go to bed. Now I know what's planned for tomorrow, and tomorrow I'll find out if they manage to pull off what they dreamed up here tonight. I started to get up from the desk, but Licho got up first and jumped on me like a panther.

"What's up with you?" he says.

"What do you mean?" I ask him.

"You were filling that kid's head with nothing but lies. What kind of garbage is this that the earth is round and it spins like a ball? Who said that?"

That's when I realised that the curiosity was mutual, that Licho was eavesdropping on me as much as I was on him. We'd spent the entire evening at the same party.

"What did you tell that monkey about the moon being cold? How do they know that? Sit down. Tell me."

Leaders don't beg. Licho is not a man to say, "Do me the favour." He leads 500, 800, 1,000 guerrillas, and if he says "Advance", they advance. What's more they will all have a blind faith that the order will take them to victory because it's been well thought out. Because it's an order from Licho. So, even though I was so sleepy I could barely sit up, I too had to advance. He launched into a scientific interrogation about the earth, the moon, the planets, lateral and rotating motion...

"What about the people who live in the south? How come they don't fall off if they're on their heads?"

Licho was fascinated listening to my explanations of geography and astronomy. We were at it until four in the morning. The supreme master of the terrain learned that night that the earth we stand on is round like a great big football!

It dawned. Our troops took Osicala and Delicias de Concepción, just as they had planned.

"María, Take Your Tit, Give Me Mine"

A shape appeared at the Sapo River. At first no one paid it any heed; later, several *compas* insisted. They said that when they passed by there at night, some animal would be making a noise in the water. At the slightest movement, it would run away to the other side.

"It's a sea dog," said the old folks.

This legend got tangled up with another one about a puma that was devouring the cattle on our front. Sure enough, we would sometimes find the remains of calves that had been killed and eaten, so they put together an operation to hunt the puma down. They set ambushes, even took radio operators along when the fighters went off to find it, a fully-fledged expedition. At last they cornered it and finished it off. A puma was a rare sight in Morazán, but there it was.

In high spirits from the hunt, the *compas* went off to find the sea dog. Since nobody found anything, they decided it must have been the puma that came out at night to drink at the river. But he who doesn't search can also find. Less than two weeks later, several *compas* came back to the camp white with fear. They'd seen the shape again. This time they saw its shadow clearly as it ran off through the thicket.

"It's a woman," one said.

"How do you know?"

"I saw her tits."

Some laughed, others got as serious as the ones who had seen it. This was nothing to joke about. Next to the river, at night, running and making men run: it could only be her.

"It's the Hag," concluded a member of the squadron.

"That's right," said an old man. "*La Ciguanaba* is around and we'd better keep our eyes peeled. She doesn't forgive."

"What can we do?"

"The only spell against her is this prayer: 'María, take your tit, give me mine'. You've got to repeat it many times, many times, until that damned woman disappears. It's the only thing that will make her flee."

"There's a better remedy," said a *compa* who'd had some experience. "Don't go near the river at night. Because when a man hears her laughter, he forgets the prayer. It happened to me. I froze like a stone, and that's the danger, because *La Ciguanaba* is cruel."

"What's this *Ciguanaba* you're on about?" mocked the sceptics. "That's bullshit, backward thinking. *La Ciguanaba* doesn't exist."

"But it does. I saw it."

"What did you see? Come on, tell us."

"A big black shape. It was horrible."

"It could be a *cuilio*. Or *El Cipitillo*."

"*El Cipitillo* is a dwarf, and besides he only goes after women."

"Well, come clean with us, if it's you she's after..."

"Don't kid around. Go to the river yourself. We can talk after that."

Some were crossing themselves and others were joking, but the legend soon spread throughout the guerrilla front. Believers and atheists alike broke into a cold sweat when it was dark and they had to stand guard or simply walk by that bend in the Sapo River.

Time went by, the BRAZ[3] was sworn in, Alvaro Magaña was inaugurated president of the country, '82 was over, '83 began, and the shadow was still an obligatory topic at evening bullshit sessions in the camps, because every once in a while, with faith or without it, someone would come in with the story that he'd seen it, or another that he'd caught a glimpse of it. One September night the boys of our squadron were doing exploratory exercises by the edge of the river.

"Look!" one whispered.

The shape took off like other times, but this time the *compas* summoned up their courage and followed it.

"María, take your tit, give me mine... María, take your tit, give me mine... María, take your tit, give me mine..." they all repeated down the line.

The shape ran off and they ran after it, until at last they caught up to it in the brambles. Sure enough, it was a woman, but a horrible woman. Her hair was all tangled and incredibly long, her face was caked with dirt, a few dirty rags barely covered that bag of bones.

"Are you from this life or the other?" they asked her.

She didn't say a word, just looked at them, her eyes out of orbit. The *compas*, still repeating the spell, took her and marched her back to the camp.

"We captured *La Ciguanaba*!"

In the uproar that ensued, someone had the sense to take her to the hospital. Eduardo, the doctor, examined her and checked her vital signs.

"This is a human woman," he told everyone.

"It's the Hag, doctor."

"She sure looks it, the poor thing. Give her a bath. Scrub her well."

"Any medicine, doctor?" a medic asked.

"Food," said Eduardo. "That's all."

They took the wretched woman to the washing hole, where they bathed her, dressed her and combed her hair. It was like a miracle: she became a pretty young girl, starving, but very pretty. They offered her coffee and beans. With the bath and the *compas'* good manners her tongue started working.

"What's your name, daughter?"

"Lucía."

"Where are you from?"

"From El Mozote, from before the killings."

This girl was one of the very few survivors of the massacre ordered by Colonel Domingo Monterrosa in El Mozote nearly two years before, in December '81. She managed to escape who knows how, while the soldiers of the Atlacatl Battalion machine-gunned everyone, and ran until she got to the Sapo River, which divides the region in two, separating El Zapotal from La Guacamaya. It's not very big, but in the winter it reaches up to some caves you can see along the banks. Lucía hid in one of those, and there she stayed, all by herself. The *cuilios* ended their operation, we set up the radio station again in El Zapotal, the front's life went on, and that girl, still terrified, only came out of her cave to go to the river. There she survived by eating leaves and a bit of fish. Nobody knew about her. Nobody looked for her because all her relatives, all from El Mozote, had died. She didn't know. New military operations were launched in the zone, the *cuilios* would bomb, then they'd leave. She said that when she heard the blasts she thought that they were still killing in El Mozote, that the *cuilios* hadn't left her town and never would.

She saw the face of the real monsters, the ones that do exist. She saw when they put children in the ovens and when they stabbed them with bayonets. She saw them rape the women and then cut their throats. She saw them shut her neighbours up in the church and machine-gun them. She saw so much horror that she didn't dare leave her hiding place. In the cave by the Sapo River she lost all notion of time and, being so alone, she even forgot how to speak.

"Now you can say all the things you've kept quiet these two years."

Santiago did a long interview with her for Venceremos. It was almost a series. We wanted everyone, every last person, to speak on the radio. Even *La Ciguanaba*.

Playing for Time

That year was one of great battles and spectacular victories. In the first few months of '83 we swept away the enemy's fixed positions north of the Torola River. In March we swore in the BRAZ and right from its first campaign it became the terror of the *cuilios*, gaining ground like a regular army. The truth is that in those days the only thing that made us guerrillas rather than a regular army was our audacity. The BRAZ had four battalions of 250 fighters apiece, and on top of that you'd have to add on the support

personnel — cooks for a thousand mouths, corn grinders, *tortilla*-cooks, mule teams carrying bags upon bags of corn to front lines that advanced every day. It was an amazing organisation, difficult to imagine for anyone who didn't see it in action.

Despite Monterrosa's incessant attacks, the BRAZ continued advancing, victory after victory, towards San Miguel in the south, La Unión in the east, and Usulután in the west. By the middle of the year, around June, we were holding so much territory, so many zones were under our control, that we were getting bogged down. We had to change strategies, because once you've managed to deploy your troops over a broad area, penetrating enemy territory, how do you handle the logistics of maintaining so many far-flung operations? You've got a thousand details to pin down and a thousand new things to coordinate. For a couple of months we didn't take any offensive action and the enemy interpreted this as weakness, that we had run out of steam. They were wrong! We were preparing the great offensive of September, the one that did them the most damage of all.

According to our conception of regular war, we had to begin with an overwhelming assault. We wanted to launch the new campaign by attacking nothing less than the Third Infantry Brigade in San Miguel, the largest and most important base in the entire country, which housed some 2,000 troops and was led at the time by bigshot Colonel Jaime Flores, a fat sonofabitch as evil as he was obese. The plan was to crush the base with massive artillery fire. Since the Third Brigade is a bit outside the city, the risk that shells would fall on the civilian population was very small. The operation required tremendous military skill — and an incredible degree of coordination.

For example we had two 120mm cannons which we had taken from the army in the battle of San Felipe. Imagine what it meant to transport those huge heavy mortars from Morazán to San Miguel, drag them with tractors or mules, for hours and hours right by enemy positions until we could set them up just five kilometres from the base. It wasn't a question of shooting three times. We had forty 120mm grenades, which are papayas this big, and a battery of 81mm mortars. There were two groups of M-60 machine guns which we had to set up even closer to the base. From the south, we'd attack with 50mm machine-guns and a 75mm cannon, which is very destructive.

All in all, it was going to be a battle like we'd never seen, like the end of the world. I don't think any guerrilla force in Latin America has ever attempted an action like this one. Just to transport the artillery pieces, set them up in secret, then bring them out without losing them, would be an incredible exploit. But these military things merit their own book and aren't what we should talk about here. Let's talk about Venceremos, because it also cut in at the dance of the Third Brigade.

The shooting was to start at eleven o'clock at night. How could Venceremos, which did its programme at six, keep people's attention in

order to broadcast the battle live? How could we keep our audience listening until eleven? Not only our audience but journalists from the other stations so the government couldn't deny the attack or censor the information the following day? It was pointless to win great battles if the media didn't cover it. The point was to cause a scandal in the papers, to make the propaganda impact as great as the military one.

This assault had a very special objective; to raise the morale of a people who had suffered genocide, to break the trauma of terror by defeating in their strongest fortress an enemy that claims to be invincible. But all this depended on everyone listening to us at eleven o'clock that Saturday night on 3 September.

The day before, on Friday, Atilio came over to the radio collective and told us: "Write a soap opera that lasts forty minutes."

"Forty minutes?"

"Yes, forty minutes, not one minute more or less."

"What about?"

"Any piece of shit, but make it funny, joke after joke. Let your imagination run wild. This soap is going to be crucial!"

We didn't know what they were cooking up. But in any case we had to make up forty minutes of kidding around. About what? The sex life of Reagan and Nancy? Monterrosa's intimate affairs? Since we didn't have a plot, we improvised a mix of all sorts of scenes, short dubbed-over commercials, a clown that would come on every so often to tell a dirty joke, things like that. We even had General Vides Casanova, the minister of defence, doing a Shakespearean monologue.

We spent the entire night recording; it seemed to go on forever. Laughing ourselves silly, we finally filled up forty minutes of jokes and skits. The mother of all of our "Subversive Guacamaya" pieces, nearly an hour long!

The next morning, still unaware of the plan, we went by truck to Ocote Seco, a hill from which you can see the city of San Miguel and the Third Infantry Brigade. Luisa, who along with Atilio had thought up the radio trick, came to tell us the news and to give us our instructions.

"Guys, we're going to assault that big fort you see over there. Get ready because it's going to be ugly. You've got to do this and this."

The idea, as I said, was to get the audience to stay tuned until eleven o'clock, zero hour, the precise moment of the attack. At six, as always, we put our usual programme on air. But throughout it we announced that during the second broadcast at eight — which was almost always just a repeat of the first — we would have big news.

Attention! All national media and all our listeners today, be advised that on our eight o'clock show tonight we will have an exclusive detailed report on the coup d'etat now being planned...

We made up the story about the coup to attract them and distract them at the same time. So they'd tune in, even if it was just out of curiosity to get the latest gossip, but they would never guess what was really on the way.

We started broadcasting again at eight, but only for a few minutes. Due to some technical problems, we said, we had to hold back the news until 9.30. But make sure you tune in, don't miss it, because the political scandal we're going to unveil is extremely serious. Oh yes, and we will also have an especially outrageous episode of the "Subversive Guacamaya"! Then we put on a few previews of the show, like the big stations do.

You'll hear this and much much more on our special broadcast at nine-thirty! A festival of fun on Venceremos!

When 9.30 came around we turned on the equipment once more and started our countdown.

In a few moments we will have the important news we've been promising. Don't miss it! It's urgent!

Some people from Perquín told us later that since the news didn't come on and neither did the Guacamaya, they put a chicken on to cook, invited over a few friends, and they all stayed up together waiting by the radio. Thousands of others in countryside and city were doing the same.

We ask you to please stay tuned, because in just a few short minutes...

We read a news brief, we repeated a commentary, gave another preview of the show, we broadcast whatever we could put our hands on. We had to burn up time.

At last, the clock crawled to 10.20. At that exact moment we put on our so well-announced and so quickly-slapped-together little show. Our tongues got a break. We had forty minutes to watch the cassette spin.

"Open your mouths!" Luisa turned up and shoved a no-doze pill in each of the broadcasters' mouths. Behind her came the gourd filled with coffee. We got so wired we plugged in another tape recorder and put on some music just for us, and there we were all dancing: Butterfly with Chiquito, Santiago with Luisa, me with the broom, everyone waiting for the show to finish so that the other one, the real spectacular, could start in San Miguel.

Two minutes left. Just as the clowns of the Guacamaya were signing off from their ever-faithful and ever-patient audience, we drowned them out with the Venceremos alarm. Ever since '81, everyone in El Salvador knows that when that siren goes off, something heavy is coming. Right then,

at 11:00 p.m. sharp, the BRAZ started firing on the Third Brigade and Santiago opened his mouth:

People of El Salvador! At this very moment we have begun a ferocious artillery attack on the Third Brigade in San Miguel!

Jesus, that wasn't today's news, it was a simultaneous broadcast! Up-to-the-hour news? Up to the minute? This was up to the second! Atilio, who was directing the battle from the command post, came over with a big smile: "The base is burning! And Colonel Flores is screaming like an old woman in an earthquake!"

Atilio sat down in front of the microphone and began to read the first war dispatch, which had been written ahead of time. But by military radio we already had news that the situation was under control, that the mortars were crushing the enemy and the *cuilios*, scared to death, didn't know how to respond. So Santiago and I, with our tongues hanging out like neckties, started writing the next dispatch while Atilio finished reading the first.

We were in this rush five minutes after the shit hit the fan, when our monitors heard that KL in the capital had interrupted their dance music to sound the alarm.

Attention! Attention all listeners! At this very moment the clandestine Radio Venceremos in a special broadcast is announcing that... We have our first telephone contact with that city... Our mobile units are on their way to San Miguel to see for ourselves what is occurring there...

Just then a frenzied journalist began reporting from a provincial station in San Miguel:

...it's like the end of the world, ladies and gentlemen! This is the end! The roar is terrifying, we can barely broadcast!

We did it! We hit the base and the press! The rest was a chain reaction across all the news shows in the country. Meanwhile, we were broadcasting live and direct from our camp where we could see the lights of San Miguel and the cloud of smoke that was rising from the infamously impregnable fortress of the Third Infantry Brigade.

We wiped the enemy out: 300 killed or wounded. Colonel Flores himself got a good scratch. Seven thousand pounds of shells rained down on the fort, which was the operations base for the gringo advisers and supplied all the forces in the East. It was left in rubble. Not one shell fell outside the base, all those big papayas dropped right on target. The artillery attack, ten on a military scale of one to ten, was led by Manolo, Captain Mena Sandoval, one of the patriotic officers who joined the guerrillas during the offensive

of '81. The entire operation was run by the BRAZ High Command, one of the most skilful and brilliant military units in the history of warfare. That's no exaggeration. You don't believe it? How much do you want to bet?

To the Cacahuatique Aerial

"From Cacahuatique you can see the world", a peasant from Morazán once told me. It's true. That volcano south of the Torola River is the highest spot around. From there you can see all the way to San Miguel and San Vicente and even to Honduras. Whoever controls Cacahuatique controls the entire province.

At the very peak of the enormous hill, the enemy had a base they called the Aerial where they had their communications centre, tracking equipment, television aerials, everything. Since the position was so vital, the US advisers had set up an incredibly sophisticated defence with fortified trenches, ditches, minefields. It was impregnable, but the BRAZ decided it was to be their next military objective.

To take the Cacahuatique Aerial was no piece of cake. Several days beforehand, in strict secrecy, we had to begin bringing in the support weaponry, the huge artillery batteries essential for such a large assault. The BRAZ columns left on a long march, skirting the usual access routes so the enemy wouldn't notice how many troops we were deploying. As on other occasions, I went along as correspondent for Venceremos. Marvin and Santiago stayed behind in the camp at El Pedrero to broadcast the attack live.

We arrived at the rendezvous point in the middle of the night. From there, on the side of the volcano, we were deployed to one flank or another. Luckily for me, I got to go up with Whitey Will's column, the one that was to take the base. Cacahuatique is a great big mountain of coffee groves. You should have seen us climbing past those coffee trees on tiptoe with all our gear, with mortars, even a 75mm cannon, the ones that have wheels! It took several men to push it uphill.

Before dawn broke, the secret was out, and the artillery fire began. Tape recorder in hand, I started reporting what I saw, live and direct. Since we expected the planes to show up right away, everyone carried a pick and a shovel. You'd get to a new position, dig yourself a trench and jump in before the bombs made mincemeat of you. A few minutes later, you'd head farther up the hill towards the Aerial.

The *compas* advanced quickly and soon we reached the base's first line of defence. It was a high point where several *cuilios*, dug in with a machine gun, kept us from even sticking our heads up.

"Just try and get us out of here, you shit-eating guerrillas! Come on up, sons of bitches, Pijirichi's here waiting for you!"

Rat-a-tat-tat, the stuttering gun kept us at bay. The *compas* tried to advance but we got nowhere. A political officer was cheering us on with a megaphone, and we were sent forward again to the tune of the National Anthem and slogans recorded from Venceremos, but again we'd hear that voice from the other side: "You dare, wimps! Pijirichi's here waiting for you!"

Rat-a-tat-tat again. Who was that damned Pijirichi? Our people would retreat. We'd get organised once more. Whitey Will: "You go that way, and you attack from here. I'll support you from this side. Send for our cannon... No, not yet. We haven't got this spot secured. We might lose it... I don't give a damn if we lose it! We've got to take that trench!"

"Come on up, *piricuacos*! Pijirichi's waiting for you!"

This was too much. The *compas* launched a mega-assault, they set up the 50mm cannon and a hellish gun-battle ensued. You'll think I'm kidding but a few minutes later I heard a *cuilio* yell out: "Duck down idiot or you'll end up like Pijirichi!"

At last we took the trench, along with our first prisoners, and we continued on up the side of the volcano.

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From our camp in El Pedrero we could see Cacahuatique perfectly. There far off, up high on the nipple of that big stone tit, we could see the Aerial we wanted to take.

Marvel had gone along as correspondent while Santiago and I remained behind to run the programme. Although we still didn't have the cassettes with the first dispatches, we could measure the *compas'* advance by where the planes were bombing. At dawn they bombed down low on the sides. By 9am they were bombing halfway up, and that's how it went. Our forces would climb a little higher and the bombs would follow. Given the lack of other means, we got the news by eye. While Santiago was announcing, I'd go out and climb up on some rocks from where I could get a good view. I'd see where the bombs were falling and I'd run back to the shelter: "Santiago, they're already at La Campana! They've reached La Campana!"

And Santiago with all his passion would turn on the microphone:

"In these very moments, at such-and-such o'clock, our forces have reached La Campana and they continue their victorious march towards the Cacahuatique Aerial. More information shortly!"

Then he'd go off, leaving a musical bridge, and stick his head out from among the rocks. He'd go back on even more excited:

"Special bulletin! Special bulletin! Our troops are marching on the Aerial! They can't be stopped!"

I don't think any anchor ever had more first-hand — or first-sight — information. The news wasn't hot, it was boiling!

***

The first soldiers we took prisoner told us everything we needed to know about the base in return for being handed over to the Red Cross. These fields are mined, you can only get in by that path, the walled emplacements are here and there. Weighing the difficulties, our commanders decided to make a final assault by night. To make sure of the information, Whitey Will sent out scouts, four guys in pyjamas, their skin painted black, nocturnal cats, nothing but shadows, and on their return they filled in the gaps.

"This is a tough nut to crack but it'll be no sweat. Two grenades each, we slink along the wall, we wipe out this trench here, we take that machine gun there, and then we take on the other, then seven more guys can slip in, and then us. Once we're inside, the game's over. Okay?"

"All right," said Will. "In half an hour."

The commanders coordinated their plans and at ten o'clock that night so much shooting erupted that it even made the crater of the volcano tremble. We did it. We planted the FMLN flag on the Cacahuatique Aerial. The proud bastion that the gringos said could resist a siege for over two weeks fell to the BRAZ in less than 24 hours!

Along with their lieutenant, the *cuilios* who weren't killed or wounded scrambled to get away towards one corner of the heliport. They jumped off a cliff trying to escape, a leap which turned out to be pretty suicidal. The lieutenant hurt his spine in the fall, but even worse for them, they chose to escape exactly where we were waiting for them. All we had to do was open up our knapsacks and watch them fall in, one by one, as many as sixty prisoners.

I entered the Aerial with my tape recorder running, describing all I saw. I crossed the heliport and there, in front of one of the communications huts, they were piling up the captured materiel: a mountain of rifles, another mountain of backpacks, another of military clothes... All the *compas* were euphoric, trying things on, changing their boots. The political officers were trying to control things, to keep the euphoria from becoming banditry, because that's the psychology of war booty, of course. The insanity of combat and the smell of gunpowder gives you that urge to plunder. You should see how the smell of gunpowder makes you drunk! Real drunk! But like I was saying, the political officers made sure that everything was distributed fairly later on. It could well be that the unit that made the assault didn't get any of it because we had another unit in the military school that needed it more, who knows?

I went into the transmission room and found Licho talking to the technician who operated it. Licho invited him to work with us but the man said no, he didn't like war, he was just a technician, the army had recruited him forcibly and kept him against his will.

"So what do you want to do?"

"Go home."

"Fine. Go ahead. But first tell me which is the transmitter for such-and-such a band" — a radio-communications network which we were never able to penetrate and which was one of the principal objectives of taking the Aerial.

"This is it," the technician patted an enormous Motorola, taller than a man.

"Perfect. How do you run it?"

"Like this and this. There are the spare parts."

"Take it apart. We'll take it with us."

What a prize! We had in our hands nothing less than the National Guard's super-secret internal network!

In the kitchen I continued reporting. The *compas* had found a storeroom loaded with provisions: boxes of eggs, boxes of sugar, Maggi soups, instant coffee... We were hungry, and a brisk cold wind was blowing in the early morning, so we built a nice fire and started cooking. We were in the midst of this victory party, telling stories and stuffing our faces, when we spotted in a corner a soldier who had been shot in the abdomen. He was on the floor trying to keep his intestines from falling out.

"Finish that man off," one of our commanders said. "There's no way we can save him."

It's one thing to shoot in battle, but quite another to kill a man in cold blood. The political officer in charge of the zone went over to the soldier: "Do you want us to kill you?" he asked.

An expression of horror came over the man's face and he shook his head, so the political officer didn't kill him. Let him die on his own, then. But the man wouldn't die, and for the rest of the night he was like a spectre dragging himself about on the ground begging everyone: "Get me out of here. Take me to a doctor."

"What doctor?" they'd say. "There's no doctor here."

With all the tumult, the fighters didn't even notice him, but I kept tripping over this guy everywhere, and he'd look at me with that pleading expression. What could I do? I took my reporting and my tape recorder elsewhere. As soon as I'd get there I'd feel him behind me again. "Help me, please..."

He was really getting on my nerves. Finally, in the morning about four o'clock, Licho says to me: "Let's go see the prisoners so you can interview them. Let them make a statement on Venceremos."

We climbed over the precipice where the soldiers had jumped with their lieutenant. As we were going down the hillside I ran into the man

again. There he was, falling down and pulling himself back up, heading downhill.

"Hey, where are you going?" an officer shouted.

"I'm going to find a doctor," I heard him say, his voice like a thread.

"Well, get as far as you can."

The wounded soldier went on down and several members of the BRAZ started arguing. These are the guys who a few hours earlier had been firing 50mm machine guns, 90mm cannons, the ones who attack like wild animals, who stop at nothing until they've taken their objective, and here they were getting all worked up over the dying man.

"I told you to kill him."

"But he's still alive. How can I kill him if he's still alive?"

"It's because he doesn't want to die. That's it."

"Worse for him. He's going to die anyway, but he'll suffer more."

"He'll probably make it, you know."

"No, *hombre*, make it? No way. The earth is already asking for him. Don't be cruel, man. Better do it with one shot so he won't die little by little."

"You kill him then."

But nobody could kill him. We went off to see the prisoners and I talked to all of them, one by one, including the lieutenant. After I'd been interviewing them for a while, a report came in that the Atlacatl Battalion was on the way from Osicala to take back the Aerial, and that the airforce were about to begin bombing again. This was about mid-morning, and then I saw our man go by again. He was still doing his thing, dragging himself down the volcano.

"Look," said one *compa*, "that soldier is escaping. Get him!"

"Let the man go," I said. "He's the only one who's going to survive this war. Some fucking will to live!"

We arranged with the Red Cross to hand over all the prisoners, including the lieutenant. It had to happen fast because Monterrosa's Atlacatl was already coming up the north flank.

"Marvel, write a full report of the battle," Licho said.

It was noon already. I sat down, left my rifle and knapsack beside a wall, pulled out my notebook, and started writing. I was leaning against a coffee tree. About ten metres away, Ada, Licho's radio operator, was also seated sending messages. In a few moments, Bravo came by dressed in camouflage and carrying a G-3 in his hands. Bravo was a very special *compa*, a great human being. He had been a soldier before and when we captured him, he said he'd like to join up. He took a course in our military school and soon became one of our best commanders. He was extremely well-liked and very brave, as if with the guerrillas he wanted to make up for time lost in the army. I saw him go by and I thought: let's ask Bravo something because an ex-soldier's opinion could give my report a nice touch.

There I was, interviewing Bravo, when bombs started to rain down right on the Aerial, which was close to the side of the volcano where we were standing.

"That plane!" Bravo yelled. "Run!"

I turned around and saw an A-37 diving right at us. I even saw it drop the bomb because you can see the little black ball falling, and you can tell if it's coming at you or not. It was coming right at us. Those were fractions of a second of course. Bravo squatted to pick up his gear, I ran a few metres downhill, jumped, and lay flat. As I hit the ground, the bomb went off. When I opened my eyes I couldn't see a thing. Everything was black smoke and the unbearable smell of gunpowder. My ears were buzzing like the howling of radio interference. I started touching myself to see what was missing. I've got my arms, both of them. I've got my legs, I moved them, they work. I checked myself all over and found no blood anywhere. When I sat up I heard Ada, the radio operator, shouting: "Marvel, are you there? They fucked me!"

I got up as best I could, got to her and she showed me her boot. There was a little hole in the heel and blood was pouring out of it like a spout.

"Don't take off that boot," I told her. "It's stopping you up like a cork."

"Take it off me. It hurts a lot. Look, here comes the plane again! Get me out of here!"

Again the A-37, which had turned around. I tried to pick her up but Ada was heavy.

"Hurry up, here it comes!"

I couldn't carry her. I dragged her, and since it was steep we ended up rolling downhill. Boom! the second bomb went off. That's when another fear gripped me, because the command post was in that coffee grove they were bombing. Licho was there, the political officers, everyone. Then I saw a medic coming.

"Sister, come here, help me! Ada's wounded!"

The medic cut her boot open with a pair of scissors and without any anaesthesia began to pull out the piece of shrapnel that had pierced her heel. Ada, crying from the pain, remembered: "Marv, I left my rifle up there. Please."

"I'll get it for you. I have to go anyway to get my pack and see what happened to the others."

I start climbing. When I get about halfway up, I get this horrible, uncontrollable urge to shit. I pull down my pants and since it was on a hillside I grab hold of a coffee tree. But when I start to shit I feel like throwing up, and I can't figure out which to do first. It must be the fumes from the bomb, I think. I empty myself out from both ends, clean myself off as best I can with some coffee leaves, and carry on up the hill.

When I got there, to the place where I had hit the ground with the first bomb, I started shaking. These are anti-personnel bombs. They don't make a crater, they destroy everything within a radius of twenty or thirty metres. There was nothing left, not a tree, nothing. Everything had been pulverised. I'd managed to throw myself down behind the dirt terracing that they build in coffee groves. There was the notebook I had in my hand when the bomb went off, and the distance between my notebook and the edge of the destruction was barely twenty centimetres. Since I fell onto a lower level, the shrapnel went over my head, and the destruction from the bomb ended twenty centimetres from where I had lain. I escaped death by that little bit of dirt! Oh, man!

A terrible fear gripped me and I got an icy feeling at the top of my stomach and an urge to shit that I can't describe. I pulled my pants down again and grabbed on to a coffee tree. When I was about to start, again the nausea. Vomiting and shitting at the same time. This time it isn't from any fumes, I thought. I pulled up my pants, grabbed Ada's gun, and since I didn't see anyone about I started back down the hill. Halfway there, again that sick feeling in my stomach, insufferable cramps, but this third time when I squat down I feel cold on my back. Cold? I touch it and look at my hand and it's soaked in blood. I'm dying and I didn't even know! Holy shit! What is this?

I take off my shirt to see the size of the hole. Sure enough, the shirt's all stained with blood, but when I look through it at the light I can't find any bullet hole. Then I remember the little hole in Ada's heel. It's a fucking piece of shrapnel. Where did it get me? Did it puncture my lung? I breathed deeply, remembering the awful noise other *compañeros* who had been wounded in the lungs made. Of course, I thought, the vomiting and shitting is because I'm torn to shreds inside. Now I get it! My thoughts filled with all the garbage you think when you're wounded, and holding my bloody shirt in my hand, I ran down to find the medic.

"Buddy, what's the matter?"

"Look me over quick. I think I'm dying"

"Take it easy, *hombre*."

"Hurry up, I'm bleeding."

"It's nothing, *hombre*. Just a little shrapnel."

"In my lung?"

"In your skin, *hombre*. It's nothing."

"Are you sure it's nothing?"

"You've got to be kidding. You won't hang up your sneakers on account of this one."

"Thank God and all the blessed souls in purgatory I don't have to join them yet!"

I calmed down and put my bloody shirt back on. Ada was still there, holding the foot the shrapnel had pierced.

"Ada can't walk," the medic says. "We've got to find some *compas* who can make her a stretcher. Go back up and let them know."

I climbed up again, panting. I found Licho back where the bomb fell, looking very serious. It was like a scene from a horror movie. In one hand he held the twisted barrel of a G-3. In the other, a mangled arm with the camouflage uniform still on it.

"Bravo died. The bomb tore him to pieces."

Who knows what expression I must have had on my face to make Licho speak me so sternly: "Marvel! What's wrong with you?"

"Nothing's wrong with me..."

"THEN WAKE UP, SONOFABITCH!"

When Licho yells, Licho yells. That must have been heard all the way to the enemy's command centre on the other side of the volcano. It worked because it knocked me out of my state of shock.

"War is war," he told me. "Come on, help me pick up Bravo. Are you all right?"

"I'm all right, but don't make me pick him up. I was right next to him when the bomb went off. It would be like picking up myself."

"You were here?"

"Here."

"Don't lie to me. If you'd been here, you wouldn't be here now to tell the story."

"Well I was here and I'm going to tell this story over the radio. I've got my report here still unfinished, with Bravo's last words."

"Put in your commentary that... that this is why we're fighting. So that this should never happen to Bravo or even Pijirichi or anyone. Put that in."

"Anything else?"

"Nothing. Oh, yes. We got word from the *compas* who were with the Red Cross. They say that at mid-afternoon a wounded soldier showed up."

"A soldier?"

"One with his intestines falling out. He's going to be okay."

The Devil's Always Ready

We began transmitting on FM in 1982, in September I think. We set up a low-wattage repeating station in Guazapa, and since it's only 25 kilometres from Guazapa to San Salvador, the signal entered the capital like a bullet. We started to get a big audience in the city, especially among the youth.

The technique was simple. From Morazán we'd send a signal on the two-metre band to Guazapa, about 120 kilometres as the crow flies. The

compas there would receive it clear as could be and bounce it towards San Salvador, and that was that.

In June '83, when Monterrosa came up the Torola River with the Atlacatl Battalion, we had to move to Colorado Hill. We set up a new link to send the signal from there to Guazapa, but at that height the enemy was able to zero in on us right away and they started interfering with both the short wave and the two-metre link. Since the signal they received in Guazapa was fuzzy, they couldn't send it on to the capital. Damn! They screwed us! As Lenin would say, what was to be done? Or rather, what was to be done with Lenin? Because "Lenin" was the code name for the big station that sent the signal from Morazán.

We thought of a trick: broadcast on two different frequencies, one to ring the bells and the other to send off the procession. We continued broadcasting on the two-metre band to Guazapa at six o'clock, the hour of Venceremos's usual programme, but that was only a ghost signal to catch their interference. Before that, at an agreed-upon time, we'd broadcast the same programme on the six-metre band. They'd record it on cassette and then carefully synchronise with us at six o'clock to play it as if they were just bouncing our two-metre signal at that very moment. The *cuilios* were dumbfounded, they went nuts. They interfered here but it still came out clean as a whistle over there, and in the capital people tuned in as if none of this were happening!

We needed a trick like that when we were in the camp at El Pedrero. The September offensive, the BRAZ's tremendous advance, gave us a stable rearguard, so much so that we were no longer satisfied with only having FM in Guazapa. We set up another in Torola to cover the middle of the country, another in Joateca to cover La Unión and the city of San Miguel, and one more in Usulután that sent the signal over to Santiago de María and all along the Chinameca Mountains. The three new repeating stations and the one in Guazapa, right under the enemy's nose, were small, under a hundred watts. With a simple aerial and two *compas* to guard it, you've got a repeating station.

The four little FM stations linked up with the big station known as Lenin in Morazán. Each of them also had a code-name. The one in Guazapa, for example, was "Hurricane", the one in Usulután was "Star". I don't remember what we called the ones in Torola and Joateca. Coordinating them was a lot of fun, because they all had to go on air simultaneously with us. If they didn't, it simply wouldn't work. This came on top of the normal pickle of having to keep the whole shebang running in the middle of a war, never knowing which front was going to be attacked. When six o'clock came around, you'd see the entire Venceremos broadcast team at their places, on the tottering tables at El Pedrero, amid the rocks fit only for *garrobos*. Marvel would be at the mixer and now, besides the technician, we needed five more *compas*, each with watch in hand, for the FM repeating stations.

Three minutes before broadcast, you could hear the internal communications: "Lenin ready!"

"Hurricane ready!"

"Star ready!"

And the other ready and the other ready. In the central studio we had our own code-name which was "Devil". So when all the FM's were connected up, the final question would come: "And the Devil?"

"The Devil's always ready, *hombre*!"

The countdown would begin: five, four, three, two, one... zero! The national anthem would ring out, and with all the buttons that were clicking you'd think you were in the Challenger.

"Radio Venceremos transmitting..." Santiago's voice would begin.

Suddenly a station would report: "Overmodulating!"

And another: "Overmodulating! Way overmodulating!"

"¡*Coño*! Chico, wait a minute," his Venezuelanness would come out. "You're going to give me a heart attack!"

That was really an exciting time. Our little network was taking off, reaching a larger and larger audience.

"Get down, brothers, we read you loud and clear!" the lads in the city would tell us.

You could hear us in the markets in San Miguel, where they put us on loudspeakers. You see, FM has a certain class. With FM you can put it on and start cooking. It's not like short wave where you have to struggle to tune in and it always sounds awful. Besides, by that time they were interfering with the short wave, but they never managed to disrupt the FM, I don't know why. Maybe because we broadcast right next to the frequencies of the commercial stations and it might have messed them up.

It was a great time, but it didn't last long. The station always developed in accordance with the military struggle, right? When we had the FM, we were busting the *cuilios'* ass in the great offensive of '83. I'm talking about the BRAZ and the Felipe Peña group of battalions, and the Julio Clímaco Battalion, the PRTC[4] troops... Large units made up of all the forces of the FMLN were crushing the enemy. In those days to capture thirty rifles was chickenfeed. These were the great battles of '83, with the enemy cowering in their barracks! It gave us the stability to be able to do what no insurrectional movement had ever done before: set up a network of guerrilla radio stations!

Later on, the military situation changed, and the window that allowed us to develop our network to such heights closed again. The gringos introduced a fleet of helicopters, expanded the army, brought in elite battalions... an avalanche of counterinsurgency activity that forced us to change our tactics radically. We could no longer sustain such an extended radio network. What is to be done, Lenin? What is to be done? Well, we boosted the signal of our own Lenin up to 400 watts, and tried to cover with

one strong signal what we previously covered with several little ones. It was never the same, but by the end of '84 we managed to reach several areas of the capital and much of the central and eastern part of the country with our FM from Morazán.

Today we want to increase the power of our transmitter even more, and we have incredible plans for FM, very ambitious. But we'll talk about them some other time, okay?

The Eagle Misses His Prey

Domingo Monterrosa Barrios. Lieutenant Colonel Domingo Monterrosa Barrios. He was the commander of the armed forces' first elite battalion, the Atlacatl. In December '81, when the station accused him of direct responsibility for the thousand murders in El Mozote and other hamlets in Morazán, he swore to get Venceremos. Destroying Radio Venceremos was one obsession. The other was winning the war against Villalobos. The enemy always personifies everything: Joaquín Villalobos was the genius, the inventor of the BRAZ. They will never understand that things are collective, that the BRAZ represents the efforts and the contributions of thousands of *compas*.

Monterrosa also had a personal grudge against Joaquín Villalobos. He didn't like one bit the secret document in which the gringos called Atilio the best field commander in the country: what about me? Nor did he like how they described Venceremos as a master of psychological warfare which the army ought to learn from. We laughed when we read that, because no one on the team had ever studied a single line of psychological warfare. They made Santiago out to be Machiavelli, a monster capable of making the army collapse. Santiago doesn't know a damned thing about psychological warfare, he just speaks from the heart. If that shakes them up, if it worries them while it gives morale to the *compas*, well that's another story.

Monterrosa was obsessed with the competition. In May of '83, acting on a tip, he launched a surprise attack on Agua Blanca. He knew the station was near the command post, so he reckoned he could kill both tormentors with one stone: Venceremos and Villalobos. Under cover of darkness, his Atlacatl brigade reached our camp. Unfortunately for him — not because we knew he was coming, but because we had launched our own operation in Santa Rosa de Lima — the command post and the station had been transferred to Colorado Hill. We'd been gone a week.

Monterrosa didn't hesitate. He knew we had to be nearby and he was ready to march.

"Set up a line of fire," Atilio ordered. "The colonel won't get past Agua Blanca."

At six in the afternoon, I don't remember what day in May, the shit started. The entire BRAZ was in that zone, so it was a battle between the BRAZ and the Atlacatl. Monterrosa didn't even request much air support. He wanted a personal confrontation, like a duel between medieval knights: him and Villalobos.

"If that's the way he wants it," said Atilio. "Fire!"

We had never been able to capture weapons from the Atlacatl. From other battalions, yes, but not from the Atlacatl. In that brutal firefight we took one of their positions, grabbed three of their rifles and captured two prisoners. The BRAZ couldn't match the Atlacatl in logistics, so what Monterrosa wanted was to draw us into a conventional battle where they would have the advantage. We taught them a lesson and that was that, or so we thought. The BRAZ pulled back.

The Venceremos team was on Colorado Hill, 45 minutes from the battlefield. Since the fight started at six in the afternoon, it provided sound effects for the programme. From the camp we could hear everything, we saw the tracer bullets, our microphone picked up the "boom" of mortar-fire. We were in the middle of broadcasting when a member of the security squad came running.

"We've got to get out of here," he shouts. "Just sign off and let's go."

Santiago, who was only halfway through his speech, finished up as best he could:

...and for all these reasons, compañeros, *for all these reasons... we have reached the end of our broadcast. Revolution or death!*

Quick, take everything apart. Quick, they're coming. Monterrosa faked a retreat, only to turn around and march on us. We packed everything up in seconds. We were trained to pack the equipment in plastic bags — this was winter, the rainy season — stick them in backpacks, take down the aerial, burn papers, don't leave a trace, and start marching. We took off like a bottle thrown by a whore.

Monterrosa reached the spot where we'd been. We heard him on his radio: "I've found the house of *the man*."

Our camp was empty. The BRAZ, the command post and Venceremos were all far away by then, but there on Colorado Hill, Monterrosa found a model built by an American architect who had worked with us and was later killed in combat. It was a scale model of Cacahuatique volcano which the BRAZ High Command had used to plan the assault on the Aerial. The model had little flags at different heights marking the access routes, the enemy positions, the entire battle plan. We didn't have time to destroy it before we left.

"Look how prepared these bastards are!" Monterrosa said. "Not even the army does this!"

He took the model to his office at the Atlacatl Battalion headquarters, which at that time was still in San Salvador. He was building a collection: earlier, he'd found several videos and other things belonging to the BRAZ, and he took them too. They were his little war trophies.

Before June was over, Monterrosa had launched yet another operation with his tireless Atlacatl. No question, under his leadership the Atlacatl pushed hard. All the other battalions were greenhorns — they stuck to little skirmishes, while Monterrosa stepped on the heels of the command post and Venceremos. His dream was to capture us. One operation followed another, and we saw we were pushing our luck.

"This guy is really obstinate," Atilio said. He got up, paced back and forth, went out and came back into the tarpaulin tent that held the command post. "We've got no choice but to kill him. I don't know how, but we've got to get rid of that big-nosed bastard. It's vital. If he lives, after we win he'll be the chief of the Salvadoran contras and he'll still cause trouble."

From the moment he took the reins of the eastern front, Atilio recognised the enemy's true nature. One thing is fundamental: you can't underestimate your enemy. You have to know his strengths if you're going to beat him. If you think he's stupid, you're the one who'll take a beating. Monterrosa was renowned for his military expertise, above all because he was one of the few officers who actually went to the battlefield. Apart from those he trained, Salvadoran Army commanders are all desk officers: a well polished table and a pointer on the map. Monterrosa wasn't like that; he was a trooper, a field strategist. He'd be on the front lines just like the guerrilla commanders. The fact that he was a son of a bitch doesn't mean he wasn't brave.

We drew up a plan to kill Monterrosa. We found out he had a girlfriend in Chinameca, so we laid an ambush there, but that day he didn't visit her. We mined the field where his helicopter was to land, but that time he didn't land. We pulled back from one failed plan, tried it again, made several attempts, but the guy seemed to smell it coming and he never fell into our traps.

We got a report that he was with his unit on Miracapa de Carolina Hill. Atilio coordinated the entire approach, we had them surrounded, and somehow he got away. Barely, but he got away. Then the *compas* from the BRAZ cornered him in San Luis, but he escaped once again. Now we were the ones stepping on his heels, but we couldn't get him either. By this time 1983 was over.

The '84 elections were approaching. With the gringos' help, José Napoleón Duarte was about to get back the presidential sash he had handed over to Alvaro Magaña a couple of years before. To analyse the situation, a meeting of all the BRAZ commanders was called on 19 February in San Gerardo, a little town in San Miguel. At that time the Salvadoran Army still hadn't picked up the gringo tactic of ferrying in troops by helicopter, at least

not on our front. By then, Monterrosa wasn't only the head of Atlacatl, but of the Third Brigade and of all the infantry troops in the eastern part of the country. Somehow he found out that all our commanders were at the meeting and in the blink of an eye he set up a helicopter assault on San Gerardo.

The *compas* who were there say that it started at six in the morning when almost everyone was asleep. No combat force was present, only the commanders, their bodyguards and their radio operators. As dawn broke, we could hear an observation plane overhead. Let's get ready, perhaps it's a routine bombing run. Sure enough, a few minutes later two Dragonfly A-37s came roaring overhead. Are they going to bomb the town? Suddenly the sound of helicopters reached us. We'd seen two or three, but this time a dozen choppers in a row were circling the hamlet. It was an excellent air command operation. The planes started bombing on the outskirts of town, while troops disembarked on the hills that lie on both sides of San Gerardo. We saw the first parachutists jump and the firefight started right there, on the streets of the town.

Jesus! How could we break out with the bombs falling and with that herd of choppers ferrying in more and more troops? The situation was absolutely critical. They were going to burn us to a crisp in a matter of minutes. Just then, the Virgin of the Rosary, or Tetecu, or who knows who, kissed the hand of one of our *compas* and he managed to hit a helicopter's propeller with a bullet from his AK. The blade broke apart and that beast swerved to one side, hit the propeller of another chopper, and the two of them went crashing down. Thirty killed, because when a helicopter really crashes everyone dies, and these were full of soldiers: Thirty parachutists! A parachutist is worth a lot, he's not just any soldier. From that moment on, their operation was out of control. Things fell apart in the air. They left holes through which we could escape. The *compas* took advantage of them and vanished into the hills like smoke.

We lost four people. None of the commanders were killed or wounded. Before leaving we had to execute seven spies we'd captured from Monterrosa's network of informants. We couldn't take them with us, in case they escaped and ratted on us again.

The *cuilios* occupied San Gerardo and soon the last helicopter arrived, Monterrosa's.

"Where are the dead?" he asks as soon as he gets out.

"There they are *mi coronel*," a *cuilio* tells him.

Monterrosa starts turning the bodies over with his boot.

"But, what shit is this? This is so-and-so, this is the other...!"

They were the seven spies, his collaborators.

"The others are over there, *mi coronel*."

"Four grunts!" Monterrosa screams. "Where are the *comandantes*? Where is Villalobos? Where is Jonás? The AKs! I want to see the AKs!"

We hadn't lost a single AK rifle. His operation, his golden opportunity, had left thirty army dead, plus seven informants lost and two helicopters downed.

We did a report on the story of San Gerardo and played it over Venceremos to celebrate. Later, when they told us this was a new tactic the army was going to start using, we sobered up. It's a Yankee tactic, they used it in Vietnam and it's called "The eagle catches its prey". This was the beginning of the terrifying helicopter assaults.

The Trojan Transmitter

After what happened at San Gerardo, we were more determined than ever to kill Monterrosa. The bitch was how. The people in the electronics workshop came up with some ideas; so did others.

"How about a letter with plastic explosives?"

"No, *hombre*," said Atilio. "You're going to be the ones who get killed. You've got to have special training to do that."

"A car bomb? Another mortar attack on the Third Brigade?"

"More guile and less force. We need to study the guy's psychology. What's he like?"

"An exhibitionist," said Luisa. "Being such a show-off could get him into trouble."

"Exactly," Atilio continued. "What has Monterrosa done since he came here? Who has he been after? The command post and Venceremos. What does he do when he leaves? He takes trophies. He took the model of Cacahuatique. He took the videos. Okay, he wants Venceremos? He'll get Venceremos. We're going to give it to him. What better souvenir of Morazán could he ask for?"

From that moment on, Atilio became a frequent visitor to Mauricio's workshop. They were cooking up something big. Besides repairing the thousand components of the radio-communications network and the station, the workshop began experimenting with integrated circuits for explosives, radio-activated time detonators, radio triggers for mines, all that sort of thing. One afternoon, Mauricio came over with a damaged transmitter, a Kenwood from the old days.

"What's this?" I asked. "Are we going to add another short wave signal?"

"We're going to add eight sticks of dynamite, dummy."

One day a C-47, one of those enormous reconnaissance planes, flew over our zone and dropped several white boxes swinging from little toy parachutes as they drifted down to earth. We were suspicious, since we had no idea what they were. Could they be placing microphones in our territory? Could it be bacteriological warfare? Mauricio sent for the plastic boxes and

opened one. Inside, he found a tiny atmospheric laboratory for flight information, with a little gadget that measured wind velocity, another for humidity, and an altimeter.

"We've got to thank those gringos," said Mauricio. "They run a good home delivery service."

The altimeter was a flexible disk that moved up or down according to atmospheric pressure. It had a needle that marked the altitude.

"We'll use this to set up a secondary mechanism for the bomb."

The bomb was to go inside the transmitter. It would be triggered by a remote control device like the ones you use to turn on a television set, except this one was more complicated. It worked on radio frequency. If the radio trigger failed for any reason, then the altimeter's little needle would complete the circuit when the transmitter was taken to a height of 300 metres, and the bomb would go off by itself.

"And who is going to carry the transmitter up three hundred metres?"

"Monterrosa in his helicopter."

That was the plan: leave the booby-trapped transmitter in a hiding place so that it would look like we didn't want it to be seen, but not so well hidden that he wouldn't find it. Then pray that the exhibitionist would arrive, discover it, and take the fake Venceremos with him. He takes off in his helicopter with the trophy and gets blown out of the air.

"Isn't eight sticks of dynamite a bit much, Mauricio?"

"The rocks have to match the toad."

"That's enough to knock down a three-storey building!"

"Better too much than not enough," Mauricio insisted.

"Okay," said Atilio. "Now we just have to wait for an opportunity."

18 October arrived. We were on one of the ridges of Pericón Hill, near Perquín, where we had been peacefully encamped for several months, but we could smell an operation coming. Suddenly at about ten in the morning, we started seeing helicopters pass overhead: one, two, three, four, five, six... sonofathousandbitches! This time it was for real! Twenty helicopters: the first big airborne assault on our front!

"Pack everything up, but fast!" shouted Ismael, the head of security.

"They've got us pinpointed, right on such-and-such coordinates!" the radio operators said.

"Let's get the fuck out of here!" we added. "They're going to fry us on this hill!"

"Wait," Atilio ordered. "Now is our chance. Let's leave the 'Venceremos' here and since they know where we are, they'll think we left it behind in the rush to escape. Abel, get it ready!"

Mauricio wasn't there, he'd gone off to repair our FM repeater in Joateca. He and Jonás's brother Abel, who was also a technician, were the only ones who knew how to connect up the charges and get the bomb ready, but the troops were already on the ground in Llano del Muerto, right nearby.

The bombs were already falling. We had only seconds. Abel raced to the workshop where he kept the transmitter open with the eight dynamite sticks ready to be put in place. One *compa* stayed outside to warn him if the *cuilios* turned up. Abel started making electrical connections and, nervous as he was, he let two wires touch and boom! They set off an explosion: not the TNT, but the ones that activate the main charge. When we heard the bang we ran over and found Abel with his midriff sliced open still trying to connect up the wires.

They carried Abel off in a hammock with his belly all bloody, amid the roar of helicopters and pandemonium as everyone tried to pull out.

"El Cheje!" Abel screams, "Tell El Cheje!"

El Cheje, the third technician, comes running over and Abel gives him the final instructions on how to activate the bomb: "Look, this is the frequency that it has to register, understand?"

He said the number that only he knew, and then he passed out. Just like in the movies when the hero reveals where the treasure is buried just before he kicks the bucket. Abel didn't kick it, but he told El Cheje what he needed to know to take charge.

"Now what?" he asks Atilio.

"Now nothing. First we have to take care of Abel. Let's go."

"What about the device?"

"Take it with us. It'll work next time."

It was almost noon when we started marching. We reached the road that runs from Joateca to Arambala and crossed it in groups of five, crouched over, our guns on automatic. It started to rain. We crossed the Sapo River in a downpour. In front of me was the mule carrying the infamous transmitter with the eight sticks of dynamite, the present we didn't get to give the colonel. We marched for hours and hours until we reached a place they call Volcancillo.

"We'll stay here," Atilio told us. "Go on air and tell Monterrosa his operation has been a total failure."

It was 5:45 p.m. We had 15 minutes to set up the radio, the real one. Open up the packs, take out the mixer, set up the recorder, align the link-up, the generator and the gasoline, who has the cassette?, find a bit of table and a bit of roof because the downpour continued. El Cheje took the controls and we did the announcing, all of us huddled together against the cold, soaked to the skin, not having eaten, absolutely exhausted, but at six o'clock our tongues were lashing out at the army. We did an hour-long programme. It was more shouting than anything else, for sure — well, it wasn't quite the moment for a pedagogical discourse, was it? What we wanted to do was insult them and to rub it in that they hadn't caught us. To maintain our good radio manners we put on a musical bridge between swearing at them and cussing them out. Afterwards, we packed everything up again because we didn't know what fate held in store for us, then we crashed out under the mango trees.

The next morning Atilio said: "We can't go on carrying that bomb around. Let's hide it here. What can we do? Our plans got messed up. If we leave it now as bait, they won't bite. Back in Pericón they would have, since we had to leave in such a hurry. But that we just left it by the side of the path, no one will swallow that one."

We hid the bomb-transmitter in Volcancillo and continued the march towards Garrobo Hill, which is more or less five kilometres towards Joateca as the crow flies. It forms a triangle with El Mozote which is also about five kilometres away. From the heights where we set up camp, you couldn't see Joateca, though you could see the hollow where the town lies and the church belfry. The command post, the Venceremos team and the radio communications team set up shop.

Another day went by, the third one of the operation. In the early morning of 21 October, Chiquito comes over and shakes me.

"Wake up!"

"What's wrong?"

"Write commentaries for Venceremos."

"Commentaries in the middle of the night?"

"That's right, start writing."

"About what?"

"Anything at all, but it's got to be in your handwriting." (On other occasions the *cuilios* had found notebooks of ours and they knew our handwriting.)

"What for?"

"Stop whining! Write and don't ask questions."

I was lying propped up on my elbow in my tent, filling up pages by flashlight, when I heard noises outside. It was Mauricio, just coming back from somewhere, and Atilio, in a big hurry: "Look Mauricio, you go to Volcancillo and bring that thing back. We're going ahead with it. It's now or never!"

Later, I heard him speaking with Nolvo, the guide who was with our unit. Nolvo is a *campesino* who looks a lot like Farabundo Martí [5], brown-skinned, moustachioed, with a big pistol and a rifle.

"Look Nolvo, Monterrosa's time is up. He's going to pay for all he's done."

"God willing."

As dawn broke, Atilio brought together the little team that would carry out the plan.

"We're going to fake a battle where someone gets wounded and we have to abandon the transmitter. Simple as that. Julito Perica, you lead the security squad and carry the device. It's got a bomb inside. It's a booby-trap. Get into a shooting match with a squadron of *cuilios* and then shout out: 'Leave that shit behind! Get the wounded out!' Come on, let's hear it."

"Leave that shit behind! Get the wounded out!" Julito Perica rehearsed.

"Perfect, but you've got to make sure the *cuilios* hear you. Get close enough to them before you scream."

"Then what?"

"Take a rooster with you. Slit its throat and leave a trail of blood. Let them see the blood of the 'wounded'."

"And then?"

"Then, right then, and only when you're sure the *cuilios* are on your heels, get a little stick and push up this switch. Look. Inside this little grate you turn on the whole system. Make sure it's up, that it's on. Then leave the device on the path. Got it?"

"Got it, chief."

"Adilia, come over here. You're going with them too. When you run out of there send this message over the radio: 'We've got trouble. We lost the package. What do we do?' Repeat it."

"We've got trouble. We lost the package. What do we do?" rehearsed the green-eyed radio operator.

"Send the message clean, without any code. The operator at the other station will be ready. He'll answer: 'Don't talk to me here. Go on such-and-such a frequency.' So you go to that frequency and give him the same message, this time in code, understand?"

"But they know that code."

"That's why we're using it. The *cuilios'* computer will decipher the message right away. That's what we want. You send the message and then add: 'We've got a wounded man'. The other operator will respond: 'Forget about the package and pull out with the wounded'."

Everything was meticulously planned so as not to arouse suspicion. Immediately, a report would be sent to the commanders over a more secret internal network, also in a code in use for a long time. Atilio would communicate with María outside the country. He'd give the "bad news" and say that we'd have to figure out how to buy another transmitter and get it into the country. The point was to make the enemy's entire intelligence service absolutely convinced that they had captured Venceremos.

"Mauricio," Atilio concluded, "you take charge."

The word he used was *garantizar*. It's a sacred word for us. The only excuse for failing to *garantizar* is to be dead. Everyone knew what they had to do, and Mauricio knew what everyone had to do. He took charge of the entire plan.

Mauricio, Julito Perica, Adilia and the security squad headed off. They reached the point where the *cuilios* were supposed to have been and found no one. That's not unusual for them: they report to their superiors that they're where they're supposed to be, but they don't really go that far, because they're afraid. Anyhow, our team had to go in closer to Joateca. At about five in the afternoon they found the *cuilios* and the show began. They shot back and forth a few times and then came the shout, the rooster, the switch and the message.

From up on the hill, we could hear the gunfight. A minute later Adilia's voice came over the communications radio: *Xylophone, potato, tango, charlie, whisky, delta, stripes.*

"That's the message in code. Everything's going well."

Now the green radios, to hear what the enemy would say. Atilio was pacing back and forth like a caged lion, and we were all chewing our nails. At long last they were capturing us, capturing Venceremos!

It came an hour later, without code and with a euphoria we'd never heard from them before:

"Witches Company of Fonseca Battalion reports... that we've captured Venceremos!"

"What? Repeat."

"We captured Venceremos's equipment! There were 200 of them, but we beat the pants off them!"

Half a minute later:

"Fonseca Battalion commander calling Charlie Carlos.[6]*"*

"Go ahead, go ahead," Monterrosa answers. "I hear you. Over."

"We have captured Radio Venceremos on a ridge of Tizate Hill, in the jurisdiction of Joateca, at such-and-such coordinates."

"Wonderful! Congratulations! Look, take that to Joateca and wait for orders. I'll be right there."

They had it. We figured that they spent what was left of the afternoon comparing intelligence reports to see if it all checked out. Those of us who worked on the broadcasts were told we wouldn't go on air that day. Never, in four years of war had such a decision been taken: today there will be no programme!

That night went on for ever. The entire monitoring team spent it going back and forth over the dial, waiting for the news. At last it came:

News flash! The army just reported that the clandestine Radio Venceremos was captured a few hours ago in Tizate, Joateca, after fierce combat. More details from our correspondent in San Miguel!

We sat in a circle in the big canvas military tent where we all slept. Atilio was bursting, more excited than ever. He wasn't sleepy, so he started telling stories about when he was a student, about the boys in his *barrio*, Santa Anita in the capital, about when they'd watch the girls on the corner in high school, about the student struggles in 1970, about the first urban guerrilla cells, about Rafael Arce Zablah, the ERP's first leader who was killed in combat in '75.

"If Lito had lived...!"

It was late. People deserted him one by one. Eventually I gave in too and went off to sleep. I can't remember what other stories Atilio told that night.

The next morning the Voice of America, after its usual and unpleasant *the following programme is in Spanish*, announced its top story:

After so many days of uninterrupted broadcast, Radio Venceremos has stopped transmitting. The Salvadoran Army reports that the clandestine station was captured in...

In San Salvador all the stations — YSU, KL, Sonora — were giving the story big play, and of course we were getting coded messages from the other organisations, from alarmed friends.

"We'll explain later," was our only response.

Licho, who was on another mission, called up immediately: "What the fuck! What do you mean we lost the station?"

"We'll explain later."

The uproar was growing; the story became more and more triumphant. One station even put out a news flash that the Venceremos announcers had been captured.

"Did you hear?" said Butterfly, dumbstruck by the news, as she came up to Santiago, Marvel and me.

"What, Butterfly?"

"The announcers!"

"But we're the announcers, shrimp! You are Venceremos' announcer! Monterrosa's the one who's going to get it!"

But Monterrosa didn't show. He gave no sign of life. Abraham's beetles, the boys of the intelligence team, who hadn't slept a wink all night, continued on alert in case there was a report of a helicopter coming to pick up the captured transmitter. Nothing. All afternoon, nothing. "We'll explain later" was becoming an awful lot later, and the situation was turning against us. The fighters, demoralised, were sitting by the radio, fixed on our frequency, hearing nothing, hoping that we'd come on the air to tell them this disaster wasn't true. Their station! Their station captured! That's when I realised how much Venceremos meant to them and what's meant by the audience empathy you read about. Messages were pouring in, not only from the war fronts, but from journalists, allies, people overseas. Jesus! That second night of silence nearly drove us mad!

23 October. We awoke to the same news and the same tension. Atilio paced back and forth. He carried a stick and kept slapping it on the palm of his hand. He stopped next to Abraham.

"What do you think? Where have they got it?"

"They've got it in the town hall in Joateca. Where else?"

"What would happen if we set it off right now?"

"Well..."

"Will it work in the helicopter?"

"Let's hope so, *hombre*. It'll work."

"If it doesn't, we're the biggest jerks in the world. We're handing them the victory they didn't get in Pericón! Even if what they picked up isn't the real thing, who's going to believe it when they show off the device

and we've stopped broadcasting? Who is going to explain that it was all a misunderstanding, a booby trap that trapped us?"

Just then, a helicopter appears. We pick up a helicopter's radio. It's nine in the morning.

"Who is it?" Atilio asks.

"I don't know," says Abraham. "He hasn't identified himself."

"Then it must be Monterrosa, because he's the only one of them who is careful never to identify himself."

"No, it's not him," a young radio operator butts in.

"Why not?" says Atilio impatiently.

"It isn't him," the kid insists. "I know the voice of Monterrosa's pilot. That's not him."

"Do you have it recorded?"

"Yup, listen."

They sit down and listen to the tape, and agree that it isn't him.

"But, suppose it is? Let's go up above!"

Atilio, the commanders and all the rest of us climbed uphill a few metres to the highest point, where the radio operators were set up for strategic communications. From there we had a panoramic view of the valley, with Joateca in the distance. Mauricio carried the remote control, the radio-detonator, and El Cheje had the aerial, a directional aerial that the technicians built just for this operation.

The helicopter comes into view, lands in Joateca, stays there a few minutes. It takes off and, when it starts back towards San Miguel, the arguments begin.

"Suppose we fire and that isn't it?"

"And if we don't fire and it is?"

Since the kid insisted that it wasn't him, they believed him and didn't shoot. The little guy was right, because later on we learned that the helicopter was carrying medical personnel who had gone in to pick up a wounded man.

At noon, Radio Sonora in the capital announced an interview with Lieutenant Colonel Domingo Monterrosa Barrios. We leapt from our posts and surrounded the radio.

Journalist: How is the operation north of the Torola River going, Colonel Monterrosa?

Monterrosa: Well, what we're doing is not just any old operation. It's a region-wide action. It's going well.

Journalist: How long do you think the operation will last?

Monterrosa: We're going in to stay. As I said, this time it's different. We're not going to leave like the other times.

Journalist: What's the story on Venceremos?

Monterrosa: It's true, we've captured Radio Venceremos. I'd like to say that the myth of Morazán is over. We've given the Witches of the

Fonseca Battalion who achieved this feat a well-deserved one-month furlough. This afternoon at four o'clock I've asked the national press and foreign correspondents to come to the Third Infantry Brigade in San Miguel. I will show them the radio personally.

He was coming! He had to come to pick up his trophy! Or would he send someone else to Joateca to get it? Damn! We were in an agony of enthusiasm and nerves. The whole camp was counting the minutes on their fingers, counting the seconds. No one could even think about eating. Everyone was watching the sky, the clouds, just waiting to catch sight of him.

At about two o'clock we picked up a helicopter approaching.

"Now that one is Monterrosa's pilot," said the same kid as before.

"Did he actually say so?" Atilio asked.

"No, he didn't say so, but it's his voice."

"The kid's right," Abraham interrupted. "I'll put my balls on an anvil that's him."

The helicopter was on its way. From our hill we watched it all like on a big movie screen. We saw as the helicopter approached, hovered, settled down and disappeared into the town. Of Joateca, as I said, we could only see the church belfry.

The helicopter flew up over Joateca.

"Is Monterrosa on it?" Atilio asked.

"I don't know," the radio operator answered. "They haven't said so. But it's his pilot."

"Where the dog goes, so goes the master. Get everything ready."

There was El Cheje with his aerial lined up, Mauricio looking ten years younger, Atilio truly thrilled, Chiquito flushed with tension. Everyone feverish with the excitement of that decisive moment. The helicopter came towards us.

"Fire, Mauricio!" Atilio orders. "Fire!"

Mauricio pushes the button of the radio-detonator, he pushes it again, and nothing happens.

"Fire, I tell you!" Atilio screams. "Cheje, aim it right!"

El Cheje, holding his aerial as if it were a rocket launcher, following that point in the sky. Mauricio pushing the button so hard he nearly breaks the switch. But the helicopter peacefully continues its course.

The silence that followed was a sonofabitch. Mauricio aged a thousand years. El Cheje wanted to hang himself from the highest tree. It was Chiquito who said: "We blew it."

Mauricio started checking the remote control, to see if it was the circuit or the connection to the aerial or what it was that failed. His hands were shaking.

"Wait, Mauricio," Atilio said. "Isn't there a failsafe?"

"Yes."

"How high is that bird now?"

"Over three hundred metres."

"And the altimeter?"

"I don't know. It didn't work either."

"*¡¡Puta!!*" was the last thing Atilio said, and he stalked off.

Chiquito, demoralised, slumped down in some tall grass. Julito Perica buried his face in his hands. I remember old Germán, our political officer, going off towards the kitchen: "At wakes they serve coffee. Anybody want any?"

Right then Atilio jumps up as if he had springs in his butt.

"Mauricio, come here!"

The aged, ruined technician comes over, dragging his feet.

"Mauricio, what would happen if we had a radio operator in Joateca now and we wanted to talk to him? Could we establish communications with him?"

"It would be possible from a height. If he climbed up in the church belfry, because the town is down in that hollow, boxed in, and radio waves travel in a straight line..."

"It's difficult?"

"Yes."

"The transmitter is still in Joateca!" Atilio shouts. "That's the problem! They haven't taken it out of Joateca!"

"Then they must have discovered the bomb."

"No *hombre*, how could they have discovered it? They would have reported that over the radio."

"So why didn't it blow up on the ground?" asks Julito.

"That's why, because it can't. There's no direct line. Monterrosa is still in Joateca!"

Atilio goes over and shakes Chiquito.

"Chiquito, it didn't work because the device is still there."

"And I'm still here."

"Don't be a crybaby. Come on, get up!"

While Atilio is explaining and arguing, we hear the sound of another helicopter approaching from San Miguel. It's quarter to four.

"You see? There he is! Let's go Mauricio, get moving, check the cables! Cheje!"

Everyone on their feet again, and the excitement begins all over again. When the helicopter calls in, our operator confirms it: "That's Monterrosa's bird. Same pilot."

The speculation begins. Didn't he come on the first flight? Or did he come and not go? Where is he, on the ground or in the air? One thing for sure, his helicopter was making its approach. It landed again in Joateca. Those minutes while the helicopter was down and we couldn't see it...!

Atilio is a very tall man and Chiquito is like his name, tiny. There were the two chiefs, big and small, each with his eyes on Joateca. Atilio didn't lower his binoculars even for a second.

Another kid comes over, another of Abraham's radio operators who are busy scanning everything with the seven communications radios we captured from the enemy.

"From the Third Brigade they're telling Monterrosa that the press is all waiting for him."

"So he *is* in Joateca!" Atilio screams. "Now his time has come!"

The helicopter starts climbing into that blue sky. It starts moving horizontally. When we have it in front of us, exactly in front of us, Atilio orders:

"Mauricio... fire!"

As soon as he says it I see a ball of fire, a huge ball of fire that sends showers of flames out the sides.

Have you ever heard the Brazilian soccer team score a goal in Maracaná stadium? That's what the yelling was like! Chiquito wrapped his arms around Atilio. Mauricio and El Cheje were hugging each other. The radio operators, the kids, everyone in the command post in one big cheer, hugging and kissing each other like at a wedding!

"Long live Morazán! Long live the FMLN!"

Germán climbed downhill to tell the rest of the camp waiting in the kitchen, since everyone couldn't fit up above, and from the kitchen another uproar arose.

"Silence!" says Abraham. "Shut up!"

"Have they said it yet?" Atilio asks.

"They haven't said anything."

You see, with all this cheering all we knew was that a helicopter had been downed. We had to confirm that Monterrosa was on board. We were all sure. But the devil has his devilish ways.

Once again it was quiet, as everyone waited by the green radios to hear what the enemy would say. About twenty minutes later, the voice of the head of the battalion in Joateca requested communication with the Third Brigade in San Miguel.

"Send me a bird immediately."

"We just sent one. What happened?"

"Look, this is an emergency. Send me a bird immediately."

"What sort of emergency?"

"We've had problems with the bird you just sent."

"Where... where was Charlie Carlos travelling?"

"Affirmative. Affirmative. Hurry."

Again we started yelling and screaming! A goal scored in the stadium of the world! Our guerrilla camp went wild! Atilio then called Leti, who was in charge of communications on the front.

"Send a message to all the stations that we just got Domingo Monterrosa, the murderer."

His helicopter fell right between Joateca and El Mozote, where he had committed one of his worst crimes. He and his "Angels of Death", as he liked to call his Atlacatl Battalion, went to El Mozote. He gave the order to machine-gun the very people he had asked to congregate in the church. He authorised the rapes, he laughed at the children stuck with bayonets and thrown into the ovens alive. He did all that. In December of '81 alone, a thousand innocent people were murdered very close to where he had just been blown to pieces in his helicopter, at 4:15 in the afternoon of that judgement day, 23 October, 1984.

Atilio ran over to the strategic communications centre to talk with María overseas.

"We got Monterrosa!"

"Are you serious?"

"Absolutely. You've got to telephone the stations here and tell them that Venceremos will go on air right now, at six o'clock. Tell them we have a surprise for the journalists who are still waiting for Monterrosa at the Third Brigade in San Miguel!"

"Is it confirmed?"

"Absolutely confirmed."

"So the colonel didn't read the story of the Trojan horse in time."

That's right, the Trojan horse. Never had an ancient legend of war seemed on target. In a few minutes we learned that it wasn't only Monterrosa. Other Trojans were with him.

"So Charlie Carlos was there?"

"Affirmative. That's right."

"Listen, and my Charlie too?" asks the one from the Atlacatl Battalion.

"Affirmative. Your Charlie was there."

On board the helicopter was Major Armando Azmitia, Domingo Monterrosa's assistant and successor, who took over the Atlacatl Battalion when his boss was promoted! Azmitia, the best hope of the Salvadoran Army, considered by many to be just like Monterrosa only better!

"Listen, was my Charlie there too?" asks the one from Gotera.

"Affirmative."

What? Calito too? Lieutenant Colonel Herson Calito, well-known bastard, commander of Military Detachment Number Four!

"And my Charlie?"

Another asks, and then another. All the strategic commanders of the Torola IV operation were dead! The six heads of battalions, Monterrosa's entire high command, the ones he had trained, his key men in that crazy operation he and the gringos had designed! He'd called them all to come to Joateca to witness the unveiling of the captured Venceremos! He'd also

invited a military priest to congratulate the soldiers and bless their victory. He'd brought along a journalist from COPREFA[7], a cameraman and a soundman to film the moment when Monterrosa personally helped carry the transmitter-bomb into the helicopter. They and their lieutenant colonel, the gringos' Rambo in El Salvador, were all dead. The only one who missed the appointment was James Steele, head of the US advisers, who ran the Torola IV operation along with Monterrosa. Not even the devil wanted to have him.

"Set up Venceremos, we've got to go on air at six on the dot!"

I will never forget that broadcast. Even though it was October and the rainy season, the sky in Morazán was choked with stars. A thousand of them had names.

We declare this day 23 October a day of vindication for the patriotic martyrs murdered in El Mozote, La Joya, Los Toriles, Poza Honda and all the hamlets and villages of Morazán where this executioner massacred so many innocent lives. This is Radio Venceremos, indestructible like our people!

When the programme was over, Atilio called us all together: "Now, get the band and let's have a big party! We aren't going to celebrate the death of a man, we're going to celebrate the people who'll live now that he's gone!"

Footnotes

[1] Francisco Martínez, killed in combat on 28 March 1982 in Usulután.

[2] An American adventurer who invaded Central America in 1855 with an army of mercenaries.

[3] Rafael Arce Zablah Brigade, the elite fighting force of the ERP.

[4] The Revolutionary Workers Party of Central America, one of the five member organisations of the FMLN.

[5] Salvadoran revolutionary of the 1920s and 30s, after whom the FMLN is named

[6] Monterrosa's nom de guerre.

[7] The press office of the Salvadoran Armed Forces.

Microcasting Basics
By Tom Roe

While there are countless reasons to launch a low-power FM transmission, CB communication, or walkie-talkie message, there's only one way to send that signal: someone makes a noise and sends it through an array of electronic parts that create a wireless wave of electromagnetic energy, which is released through an antenna. While ìmicrocastingî is not difficult, it is an exact science where the signalís path cannot be interrupted, so it is important to do it correctly.

Microcasting is just like broadcasting, except not as powerful. There is no universally identified line in the sand between what constitutes a low-power microcast, and a large broadcast (in the United States, 100 watts serves as a dividing line among FM transmitters). In general, microcast transmissions cover rooms, buildings, or neighborhoods, while broadcasts reach entire cities and large regions. Short wave (also known as Ham radio) communication is broadcasting, as the signals can be sent around the world. FM radio can be either, from 100,000-watt transmitters sending signals from giant towers, to a tiny, cigarette lighter-size transmitter that lets you hear your iPod on your car stereo. Microcasting, largely the focus of this essay, can be done quickly, easily, cheaply, and can be made into a mobile operation. It also works well in conjunction with other transmissions on other parts of the spectrum, to create relay stations, field reports, and to add other voices. Setting up a full-time station could cost between $1,000 and $1,500, depending on what you are attempting. You need a microphone, a mixer, various audio components (CD player, computer, turntables, etc.), a transmitter, power supply, coaxial cable, antenna, limiter/compressor, and power supply.

What are you putting on the air?

Whether you are interested in setting up a full-time radio station or a one-day art installation, you should start first by thinking about your content. This may be in conjunction with a large group, an entire community of listeners, or just yourself. But there's not much point going to the lengths described below if you donít have well-considered content to bestow.

Choosing a frequency

You need to select a frequency and learn more about legal regulations in your area. First, search your radio dial for empty spots. Then find out what government body regulates the airwaves in your country, and what rules they have go about using radio. If you are in the United States, go to the website of the Federal Communications Commission (www.fcc.gov). There, if you take the time to wade through all the bureaucratic jargon, is all the information about what authorized organizations use which frequencies in your area (In the United States, only ultra-low power transmissions that cover rooms are allowed without an elaborate and costly application processes). You also want to repeatedly listen to the FM stations or CB channels that you are considering using, as unauthorized organizations might also be using the frequency you choose, sometimes only occasionally or for a few hours a day. In New York City, for instance, one unauthorized station on 91.9-FM microcasts between 10 p.m. and midnight every day for over five years.

If looking for an FM frequency to use in a rural area, you should use a third-adjacent frequency if possible. That means, if you hear a station on, say, 88.9-FM, then you want to be three stations away, on either 88.3-FM or 89.5-FM (radio stations are on odd-numbered frequencies in the U.S.). In urban areas, the radio spectrum is likely so crowded you will have to be on a second-adjacent frequency, either 88.5-FM or 89.3-FM. You never want to be only one station away, on 88.7-FM or 89.1-FM, as that is a sure way to interfere with another station, or, more likely, to have your signal drowned out by the other station. You want to make sure you are separated from other signals on both sides of your frequency. Most FM radio receivers can tune in between 88.1 and 107.9, so you probably want to choose one from those parameters. 87.7, additionally, can be picked up by many radio receivers, and also is where audio for Channel 6 on American televisions lies. So if there is no Channel 6 TV station in your area, you can use televisions as radios to receive your audio signal if you transmit on 87.7-FM.

Choosing a transmitter

After you figure out what you will microcast, and on which frequency, you need a transmitter. Do you feel comfortable soldering a kit together from scratch, or do you need a transmitter built for you, so you can just plug it in and start your show? No matter what type, your transmitter will have three connections to outside equipment: one to a power supply, one to an antenna, and one to an audio source. Here's a very brief survey of a few FM transmitter kits and plug-and-play models available, and make sure to get one that includes a low-pass filter:

VERONICA
www.veronica.co.uk
Veronica makes the best transmitters, if you want to spend money on a pre-built transmitter that works perfectly. Many of independent

transmitter builders use their parts, as they are the best made transmitters available. They also have kits available.

BROADCAST WAREHOUSE
www.broadcastwarehouse.com
Broadcast Warehouse has good transmitters and kits. Best buy is a 1-watt with only minimal soldering that anyone can do.

FREE RADIO BERKELEY
www.freeradio.org/
Free Radio Berkeley's Stephen Dunifer leads the microradio movement, and makes good transmitters, and often gives classes and lectures.

TETSUO KOGAWA SCHEMATICS
http://anarchy.k2.tku.ac.jp/radio/
Kogawa kickstarted the microradio movement during the 1980s in Japan, and his site has extensive designs and do-it-yourself advice for those not afraid of soldering delicate electronics.

RAMSEY
www.ramseyelectronics.com
Ramsey makes the cheapest do-it-yourself kits. This may be a good place to buy a cheap transmitter kit and learn to solder.

Also, check online auction sites, as many different types of transmitters are available there. While a transmitter from an auction site should be ready to turn on and come with the necessary accoutrements (see below), many of the others might require minimum soldering, or you will need additional equipment.

Once you figure out which transmitter or kit is best for your needs and skills, and the transmitter has arrived and you have put it together, you still need a few other things. For one, get a small fan, and aim it at your transmitter during use so it does not overheat.

Power supply

You will also need a power supply. Most likely you have a transmitter that requires a 12-14 volt power supply. You can either get a small 12 volt lead-acid battery that is very mobile but will last only a few hours (rechargeable batteries are recommended), or a supply that plugs into an outlet. Most likely your transmitter will have a black wire and a red wire that each need to be attached to the battery or power supply. Make sure you attach the red to the positive post and the black wire to the negative post, or you will break your transmitter beyond repair.

Antenna

Donít plug in your transmitter yet, though. You also need an antenna. Never hook up your transmitter without an antenna. Your transmitter is creating a wireless wave, and your antenna is necessary to release it. If the wave is trapped, it will ruin your transmitter.

There are a variety of antenna possibilities. Do you want to transmit in all directions, or are you targeting a specific area? Again, do you feel comfortable making your own antenna, or do you need to buy one ready-to-go? Building a receiving antenna is fairly easy, as anything that conducts electricity is an antenna (your body, for instance, could be an antenna, but not a very good one). Transmitting antennae are more complicated, as they must be made to match the size of the wave you are creating. Dipole antenna are a common type for omni-directional transmissions, and Yagis are better suited for directional microcasting. Comet makes an antenna that is relatively easy to use and perfect for repeated mobile operations. Attach a 50-ohm coaxial cable (available at electronics shops as RG211 coaxial cable with PL259 plugs, make sure not to get the more common 75-ohm coaxial cable) to your transmitter and to the antenna. Your signal will be more efficient with a shorter length coaxial cable. Then use the chart included to set the length of the antennaís main pole to match the wave created by the frequency you choose. Here are a few antennae resources:
http://www.cometantenna.com/
http://www.qsl.net/sv5byr/slimjim.htm
http://www.pcs-electronics.com/en/guide.php?sub=antennas

You should also get a small SWR meter. SWR stands for standing wave ratio, and measures how efficiently your antenna is working. If it gives a bad reading, you adjust the length of your antenna to better match the wave of the frequency you are using. You hook it up in line with an extra coaxial cable between your transmitter and your antenna. Then you set it to “Forward,” and tune it to your frequency by moving the dial until the meter is at zero. Then flip it to “Reflect” or “Reflective Power” and see what your reading is. It should be as close to one as possible. You can adjust the length of your antenna to get a better reading, and send a more efficient signal. A frequency counter is also useful to insure your frequency is not fluctuating.

If your aim is to cover as much territory as you can, you want to mount your antenna as high as possible. Effective radiatied power (ERP) is measured by multiplying the power of your transmitter (how many watts)

by the height of the antenna above average terrain (HAAT). The higher your FM antenna, the farther your signal will travel. Be careful hanging antennae, as winds will bring down any that are poorly installed. If your goal is just to cover a room or a building, you may not need an antenna, but can use a dummy load. A dummy load attaches to the coaxial connection on your transmitter in the same way as an antenna, and allows the electromagnetic power to leave the transmitter by dissipating all tranmistted power in the form of heat. It is basically a heat sink, that absorbs the energy created by your signal by simulating a antenna impedance of 50 ohms. You can buy one for $100-$200, or you can make one yourself with a coffee can, a few electronics, and vegetable oil to aborb the heat. You should have one to test your equipment, as you can use it without running at full power.

Audio source

Once you have a transmitter, antenna, and power supply, you are ready to send your transmitter audio. Never turn on your transmitter unless it is connected to the antenna, power supply, and an active audio source. That audio source should never be too powerful, or overdriven, as that will cause your signal to be distorted. You should run your audio into some sort of audio mixer. You should never let that signal get into the red on your mixerís level readings. When your signal is in the red, it will sound distorted to radio listeners. If possible, connect a limiter/compressor to the audio after it leaves the mixer and before it gets to the transmitter. This will eliminate the possibility of your signal distorting, sending even levels to your transmitter no matter who is using your equipment. Also, make sure that your audio wires are not crossing your electric wires, and keep them all neat and orderly to eliminate ground hums.

Other possibilities

Now that you have set up your microcast, consider integrating other transmissions into your project. Perhaps you want a remote studio, in a different location from your transmitter. Special relay transmitters are now being designed for microcasters that make this very easy. You could also use internet web streaming, cell phones, walkie-talkies (in the U.S., these frequencies are called Family Radio Services, or FRS) or Citizenís Band radios. All these forms can be reconfigured to accept line-in audio, or already come with everything you need to make an remote studio. Always check local regulations to see what is legal on these bands in your area.

Steve Goodman

CONTAGIOUS TRANSMISSION: ON THE VIROLOGY OF PIRATE RADIO

> The tower block, condemned as a vertical slum by a Control that would rather update its architectural dimension into forms more amenable to representation. . . becomes an "incubator." The thicker the forest of towers, the more antennae perched above the city, the more the Radiant City, botched, radiates.
>
> Matt Fuller, *Media Ecologies*[1]

The summer of 2003, holed up in a small room on the 12th floor of a residential tower block in Bow, East London, the sweat running down the inside of the walls. The floor is carpeted in grime and dust. The room is built inside a larger room, a hastily constructed endo-architecture to cocoon the studio, protecting the pirate transmission and transmitters from intruders. The electrics are sporadic but functional. A decimated fan makes what little air there is, circulate in the room, generating a turbulent microclimate of dust and smoke. Wires snake their way out of messily drilled holes (also working as steam valves), out through windows, trailing and flapping against the outside of the block, leading up to the transmitter on the roof. Inside this pirate radio studio, the megalopolis is screaming through the MCs, at a rapid rate, which seems to exceed the limits of the human system of vocalization. The pressure of millions channelled via a few mouths. They call out the name of their rivals in a lyrical assault and battery so cutting, so acerbic that even the DJ winces at the verbal violence as he drags the record backwards, halting the proceedings only to return to the edge and roll again, this time building the intensity level that little bit higher.

For a moment, the scene freezes. The MC stops insulting and becomes an "encryptor."[2] His mouth becomes a modem, transmitting an asignifying stream of digits to the audience distributed across London's airwaves: "out to the 365, the 768, the 976, 315. . ." Signalling that you are locked into the station's transmission is made via phoning the studio number, letting it ring once, then hanging up. Acknowledgement of this signal is provided by the host/DJ/MC reciting the last 3 digits of phone numbers from his log of missed calls on the studio handset. The connection made, the transmission swells, the rate of text messages incoming to the studio escalates, while the studio phone vibrates. Matt Fuller has noted how, within the media ecology of pirate radio, mobile phone rings "have developed as a way to use the telecommunications architecture at no cost to receiver or sender and to process a relatively large number of feedback signals at speed. . .they work as password. In this case, they don't so much allow the user to gain access — they are that access."[3] Unusually, one caller persists. A private number. Most callers hang up on one ring, the missed call functioning as a request code for the DJ to rewind the current track to the beginning. But the phone keeps ringing. The MC's focus shifts from his rivals to the DTI (Department of Trade & Industry), and now Offcom,[4] the branch of the British state responsible for policing the radio spectrum. "You know how we do. . .no pri-

vate numbers. DTI get bun!" Answering the mobile phone to a private number potentially allows Offcom, monitoring signal transmissions via the airwaves, to locate the studio much easier. A whole circuit of connection and disconnections, of contact and evasions. A veritable sonic war machine temporarily occupying a slice of radiophonic territory, hacking the national grid in a logistics of infection. Offcom, a centralized radio disease control agency monitoring outbreaks of "viracy" in the frequency spectrum.

Although London pirate radio has its own specific history of predator and prey, Offcom's low intensity war on "viracy" now converges with a global tendency that has been tagged "war in the age of pirate replication."[5] Piracy, in all its strains, pulses blocks of affect in from the system periphery, either external or internal, feeding the viral nature of digital capitalism. The auditory dimension of this viral culture is exemplified by the contagious transmissions of East London pirate radio. Conceptually, a set of problems is thrown up by this focus, problems that demand piecing together a specifically tuned methodology. We call this methodology, "audio virology,"[6] implying the transcription of the dialectical terminology of "underground" and "mainstream" sectors of the music industry into a materialist ecology of sonic markets and anti-markets; individual artists or producers, for example, become carriers, events become epidemiological incidents, scenes become fields of contagion, trade, an exchange of contagious sonic fluids or particles, radio a literal transmission network, mixtapes, CDs and vinyl as contamination vectors, and acoustic cyberspace, in both its analog and digital domains, becomes an epidemiological field of affective contagion.

The first problem confronted by an audio virology concerns this planetary context of "war in the age of pirate replication." The early 21st century is a strange time to be an audio pirate, whatever the strain. Under the slogan of "piracy funds terrorism," the war on terror has made a point of forging together the vast secret economies of pirated media (producing millions of unlicensed copies of CDs & DVDs particularly from South East Asia), anonymous, illegal online file trading (using an array of p2p platforms) with ubiquitous, decentralized insurgency networks such as Al Quaeda. From the point of view of agencies of control attempting to produce one global system, this multitude of targets is linked via the general dread of trans-medial viral invasion — electromagnetic, biological, terrorist, audiovisual. In fact, the virus constitutes the model for all threats to cybernetic control societies. Ubiquitous digitalization has intensified pirate replication, fuelling the viral nature of cybernetic capitalism. During the first wave of mp3 panic/excitement, gangsta rapper Ice T compared the file format to a biological weapon unraveling the cell walls of a global organism constituted by the major entertainment megacorps. Yet there is no necessary contradiction between unrestrained file trading and the subsequent reterritorialization of this into pay-for-downloads — merely a change in speed of propagation.

Trading activity is channeled through a labyrinth of credit card transactions, slowing transmission but simultaneously untapping a potential for escalation both by feeding cash back into production labs *and* bolstering the zone of parasitic mediation which sustains corporate bodies in capitalizing on and monopolizing mass listening.

A second, and related problem derives from the politicized discourse of underground media versus mainstream media, and the mutual parasitism between them. Whether as temporary autonomous zone of pirate utopias[7] in "parasitic rejection"[8] of, or in a campaign of resistance via "guerrilla semiotic warfare"[9] against major techno-cultural networks, the fear is of incorporation into the body of the beast which feeds off its innovations. However, such formulations tend to be overly unilateral, ignoring the symbiotic relationship that characterizes emergent media ecologies within the intrinsically viral culture of late capitalism. Pirate radio is parasitic of a state media space only in so far as this bandwidth is already colonized by parasitic anti-market media systems. Instead of incorporation therefore, modelled on the hierarchical binary of underground-mainstream, an audio virology is concerned with transversal propagation vectors across an array of social machines, focusing on sonic potentials opened or closed by mutation, and transmission channels breeding in the cracks.[10] It moves beyond the apparent contradiction between the intellectual property protection/radio licensing and its violation, focusing instead on the complementary, symbiotic functioning of these media ecologies, expressed in the movements of pirate deterritorialization and formalized reterritorialization.

Despite the rhetoric, global and local pirate economics does not merely function as a "parasitic rejection of the global order." Rather these hybrid mixtures of formal and informal economy are the signs of a turbulent globalization in which waves of innovation sweep in from the periphery, which surrounds and transects the core. What is interesting is where tactical media (localized DIY pragmatism engaged in jamming, hacking and short circuiting communication grids) at the periphery converges with soundsystem cultures (see Shanty House theory below) and mongrelized music, synthesizing machinic assemblages tuned for affective mobilization. This leads us to the final problem to be untangled by an audio virology concerning the affective dimension of pirate radio. According to Gaston Bachelard in an essay "Reverie and Radio"(1993) radio engineers should be accompanied by what he calls a "psychic engineer" to aid in creating a mode of radio which communicates the unconscious; "it is through them that it will find a certain universality, and that is the reason for the paradox: the unconscious is something we know little about."[11] But the average pirate radio broadcast from East London constitutes what is more accurately described as "affect engineering," where the pulsing waves of sonic contagion across the radio waves are "processed directly in the body". As Fuller points out, the "sonic unconscious is material that is collectively produced and is gated and in-

media Ecologies

tensified by multiple layers of processing — it becomes malleable, potentiated, in reception. These are types of music that are fundamentally synthetic. They declare the whole spectrum of vibrations at any speed or frequency subject to their inventive power."[12] Cerebral radio listening is short circuited to be overridden by the "full-body-ear-drum" of the skin, and a sometimes mobile,[13] distributed network of bass delivery systems. Parallel sonic wars (in the age of pirate replication) are being waged across the planet by an array of viro-sonic microcultures.

While much of the war against pirate media takes place online, its earlier local frontlines across the analog sonic megalopolis persist. As urban critic Mike Davis outlines in an essay entitled "Planet of Slums," the demographics of urbanization on 21st century earth are in terminal transition. The key agents in the emergent global configuration are the "new megacities with populations in excess of 8 million, and, even more spectacularly, hypercities with more than 20 million inhabitants,"[14] as the result of massive unilateral rural-to-urban migration. For the first time in the evolutionary history of the human species "cities will account for all future world population growth, which is expected to peak at about 10 billion in 2050."[15] As de Soto notes in "Mysteries of Capital," radio has functioned as magnet in this process, advertising the opportunities of urban living across the rural world.[16] Radio, McLuhan's "tribal drum,"[17] thus acts as a mobilizing call to urban replication. "The Planet of Slums", for Davis, is composed of "interchangeable and spontaneously unique" components, "including the bustees of Kolkata, the chawls and zopadpattis of Mumbai, the katchi abadis of Karachi, the kampungs of Jakarta, the iskwaters of Manila, the shammasas of Khartoum, the umjondolos of Durban, the intra-murios of Rabat, the bidonvilles of Abidjan, the baladis of Cairo, the gecekondus of Ankara, the conventillos of Quito, the favelas of Brazil, the villas miseria of Buenos Aires and the colonias populares of Mexico City."[18] This periphery, as turbulent zone of bass cultural innovation, does not reside exclusively in the 2nd and 3rd worlds but transects the core of the world system. The digital wars of viral economies thus parallel the massive exchanges of migrant populations, highlighting the frayed edges of McLuhan's global nervous system as it undergoes cellular decomposition, molecular mutation and trade in sonic fluids.

The sonic anarchitecture of these emergent urban entities has usefully been tagged by music blogger, Woebot (Matt Ingram) via what he terms "shanty house theory," referring to the coincident music network which has arisen out of these planetary locales, from the grime pirate radio stations of East London, Crunk from the Southern US, dancehall from Jamaica, Carioca Funk from the Brazilian favelas, Kwaito from South Africa, Reggaeton from Puerto Rica, etc.

For Ingram,

> ...shanty House is the new strain of post World Music engaging in the same cultural and social dynamics that have given us Crunk and Grime in the first world and Dancehall in JA. Detractors might bemoan the need to give Favela Funk, Kwaito and Desi a brand name. However, like it or lump it these forms are always going to exist on the peripheries of most people in the west's experience of music. If they aren't called something specific then they'll be less absorbable in their own right, and conversely will be viewed as an extension of World music. The concept of "World Music" is inextricably intertwined with concepts of the natural, the earthen, and the rooted. However, the new wave of global urban music is mercilessly hooligan in it's agenda, synthetic by choice and necessity, often produced in a crucible of urban existence yet more extreme, precarious and violent than that which characterises the temperature of New York, London, Berlin.[19]

In a somewhat condemning article in the Village Voice on M.I.A., the artist whose work masks as a "conference-call" between these degenerate locales of the planet of slums, Simon Reynolds elucidates the condition of shanty house theory as "world-is-a-ghetto musics: impurist genres. . .that typically suture bastardized vestiges of indigenous folk forms to pirated elements of rap, rave, and bass 'n' booty. Locally rooted but plugged into the global media sphere, these scenes don't bother overmuch with sample clearances, and vibe-wise they typically project ruffneck raucousness leavened with party-up calls to shake dat ass. They also speak, vividly if obliquely, of a new world disorder where Tupac Shakur vies with Bin Laden as a T-shirt icon and terrorists keep in touch via text messaging."[20]

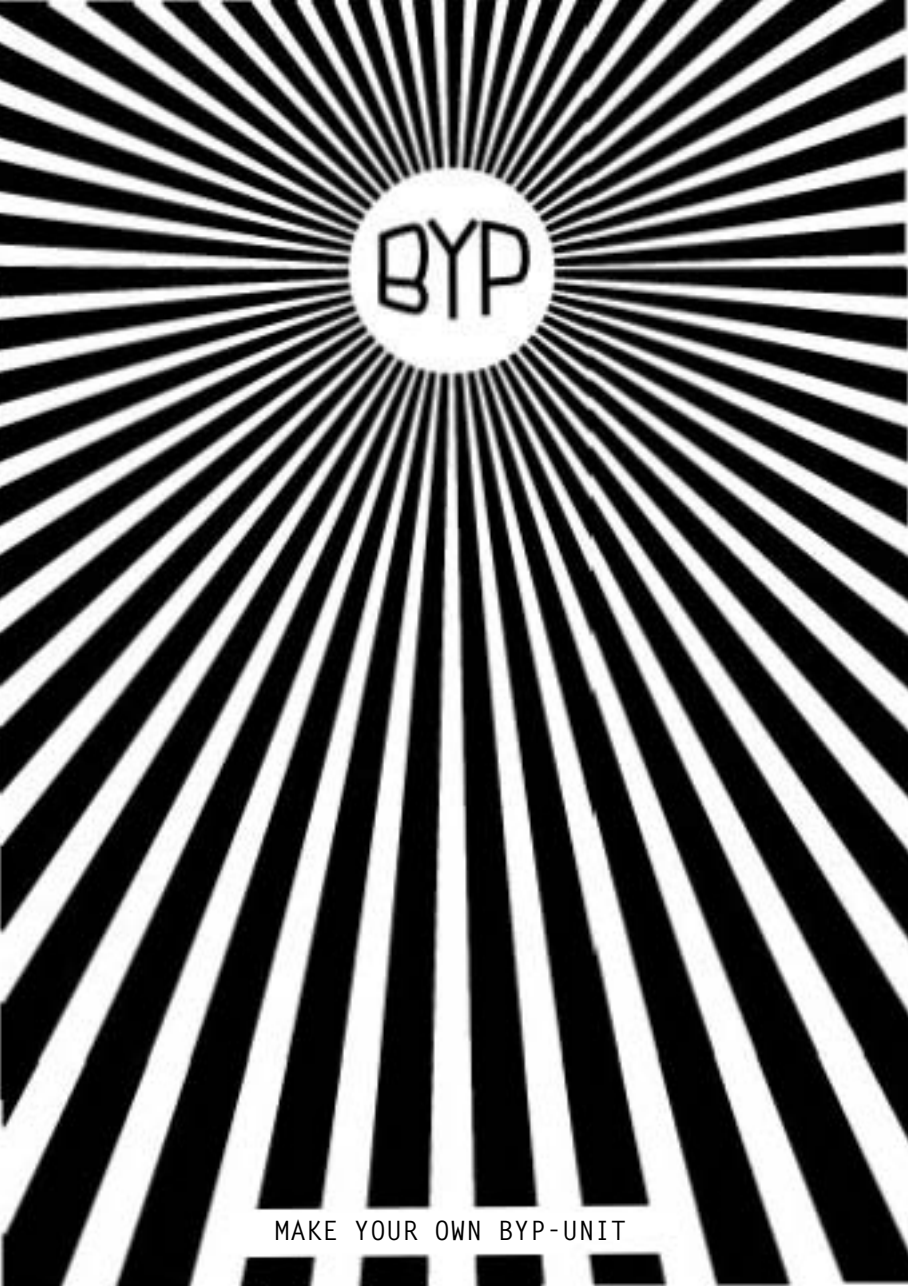
Drawing from strains of science fiction, epidemiology, and affective theories of sonic media, an audio virology is tuned to mapping what Matt Fuller has recently termed these "affordances," "potentials" or "activated relations" of "media ecologies" within the shifting bio-technical meshwork of pirate radio. An audio virology focuses on pirate radios zones of transmission, incubation, its electromagnetic war for bandwidth, its bacterial nomadism within the vertical city, its asignifying contagious trade in numerical code and sonic fluids, and its power to generate virtual collectivity. Instead of merely making connections between individual cells, an audio virology probes the mutational potential of pirate media, asking what cellular transformations, and what new modes of contagious collectivity such sonic microcultures may provoke.

Perhaps the infectivenss of such analog and digital sonic transmissions makes them an audio portal into cultural futurity, affording an optimal laboratory for synthesizing modes of collective distribution yet to come, and new sonic cultural machines of joy. Their abstract machines are never

purely sonic, and always possess a power of transduction and application into other social, cultural and economic fields. To engineer change in a radiophonic Babylon, we must pay more affective attention to the sometimes inaudible,[21] vibratory, carrier waves which animate the babel of voices; how do the affective orientations of bass cultures and their deployment of sound systems, from pirate radio to the dancehall, work to produce invention in terms of movement and sensation. What is this simultaneously seductive yet forceful, contagious listening transmitted underneath and in between?

Notes

1: Matthew Fuller, *Media Ecologies* (Cambridge, MA: MIT Press, 2005), p. 16. **2:** Simon Reynolds, *Energy Flash* (London: Picador, 1998), p. 231. **3:** Matthew Fuller, *Media Ecologies*, p. 50. **4:** See http://www.ofcom.org.uk/media/news/2005/11/illegal#content for recent ant-viral activities. **5:** See Govil in the Sarai Reader 2004, p. 378 available at www.sarai.net. **6:** Audio virology may also be understood as a mutant strain of machinic materialism. **7:** See Hakim Bey, *T.A.Z.* (New York: Autonomedia, 2003). **8:** Bruce Sterling, "The Sham Economy" in *Wired* (13.03) March 2005. **9:** Simon Reynolds, *Energy Flash*. **10:** In the UK, an interesting case study is the publicly funded digital channel, BBC1extra (http://www.bbc.co.uk/1extra) in which, simultaneously, underground music cultures are incorporated into/infect the body of State sponsored media. Contemporary capitalism is driven by the very tension between formal licensing structures and informal pirate radio markets. **11:** Gaston Bachelard, "Reverie and Radio" in ed. Neil Strauss, *Radiotexte* (New York: Semiotexte, 1993), p. 219. **12:** Matthew Fuller, *Media Ecologies*, p. 29-31. **13:** A key site of pirate listening is often in low frequency intensified car sound stereos. **14:** Mike Davis, "Planet of Slums" in *New Left Review*, 26, March, 2004, p. 6. **15:** Ibid., p. 5. **16:** Hernando De Soto, *The Mystery of Capital* (New York: Bantam Press, 2000), p. 70. **17:** Marshall McLuhan, *Understanding Media* (Cambridge, MA: MIT Press, 1994). **18:** Mike Davis, "Planet of Slums", p. 14. **19:** http://www.woebot.com/movabletype/archives/000850.html **20:** http://www.villagevoice.com/music/0508,reynolds,61282,22.html **21:** Sometimes inaudible in the sense that an average radio speaker has limited bass response.



MAKE YOUR OWN BYP-UNIT

Dear Recipient,

This is your very own Do-It-Yourself Broadcast-Your-Podcast manual.
In most cases this manual is accompanied by a set of all the neccessary electronics. If not I would like to point you to one of the last pages of this manual, which lists all the places where I found the cheapest parts online.
It is also accompanied by a DIY BYP match box set, to protect your transmitter. And of course you're receiving a couple of stickers on which you can write your frequency. These you can stick through your neighbourhood to notify your neighbours about your broadcasted podcast.

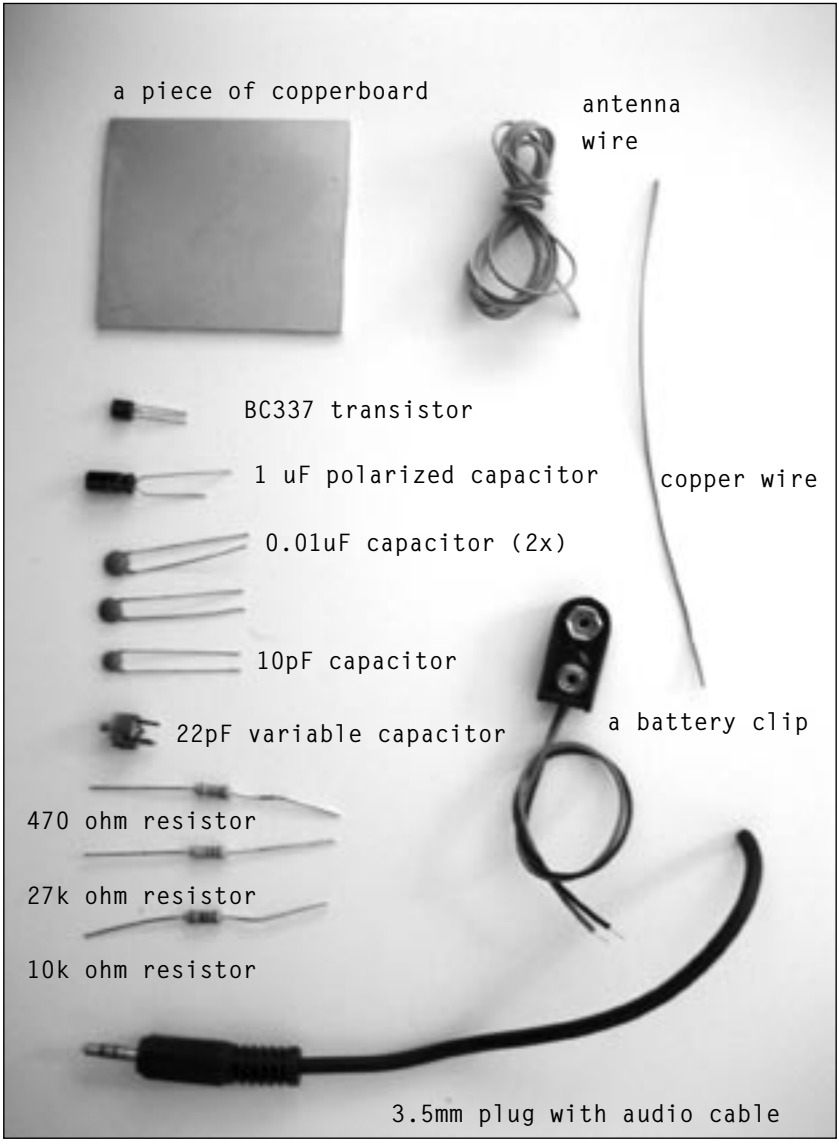
I hope you first of all get the transmitter working, then love it a lot, and subsequently update your profile on the BYP page, so even more people can know about your broadcasted podcast.

Have a good day and spread the word!

Lotte Meijer

19.06.2006
http://www.broadcastyourpodcast.com

THE INGREDIENTS

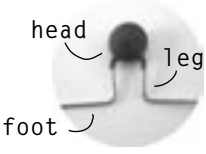


To make a transmitter. you need the following elements:
You should find these all in the little brown bag.

- a piece of antenna wire (1m)
- a 10 cm piece of 0.8mm copper wire
- a 9 Volt battery connector
- a piece of single sided copper board (5.5 x 6.3 cm)
- a 3.5mm audio plug with cable attached to it.

- a BC337 transistor
- two 0.01 uF capacitors
- a 10 pF capacitor
- a 1 uF polarized capacitor
- a 20pF variable capacitor
- a 470 ohm resistor (yellow - violet - black - black)
- a 10k ohm resistor (brown - black - black - orange)
- a 27k ohm resistor (red - violet - black - orange)

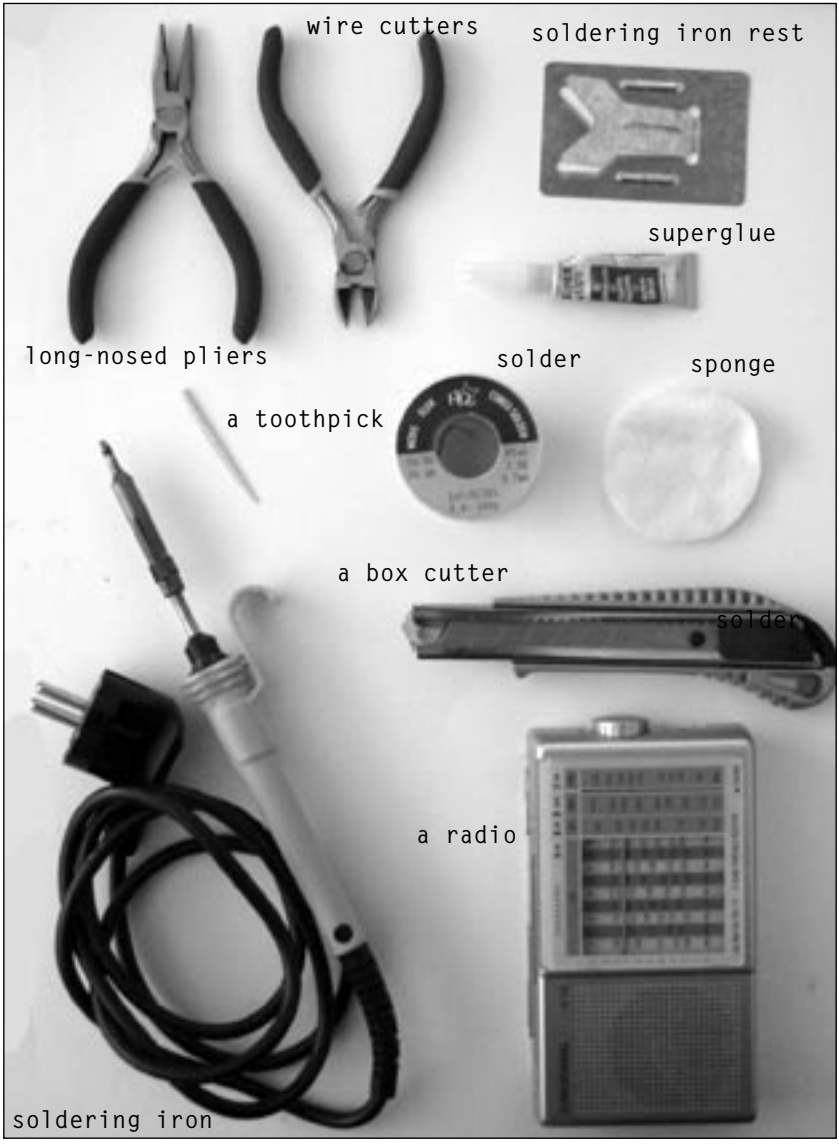
I will refer to the components with the words "head", "leg" and "foot". You can see on the picture on the right here what is what.



TIPS:
You can see what the value of a capacitor is by looking closely at the head of the capacitor. It is usually written on there in very small print.

All resistors are color coded. You will see five bands on the resistor, the four color codings ending with brown.

THE TOOLS


wire cutters
soldering iron rest
superglue
long-nosed pliers
solder
sponge
a toothpick
a box cutter
solder
a radio
soldering iron

To make the transmitter. you need the following tools:

For preparing the board:
- a box cutter (or a similar sharp knife)
- superglue

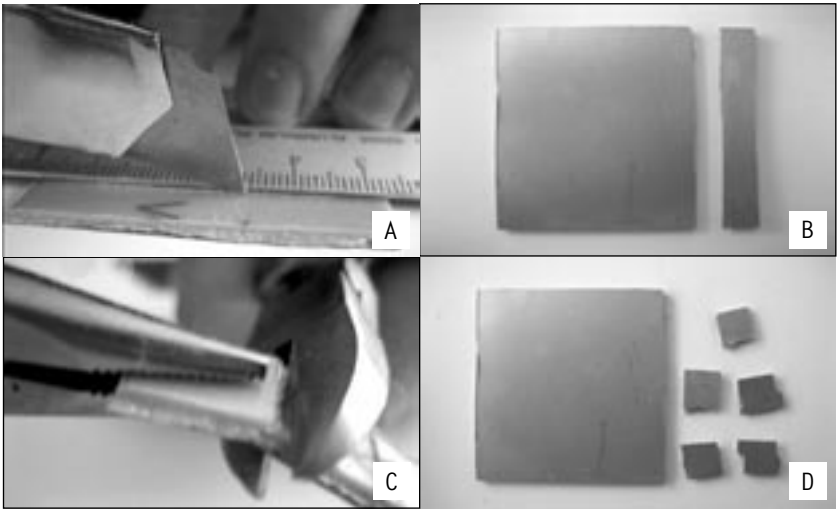
For building the transmitter:
- long-nosed pliers (for holding and bending the parts)
- wire cutters (for cutting the legs off)
- a soldering iron
- soldering sponge (or cotton) to clean your iron
- soldering iron rest
- solder wire (thinner is easier)

For using and testing the transmitter:
- a toothpick or other long piece of wood or plastic
- a sounddevice with a 3.5 mm headphone-output
- a radio
- a 9 Volt battery

Make sure you've got everything before you start.

TIPS
From now on I will refer to the soldering iron as iron.

STEP 1: CUTTING THE BOARD



This board is called single-sided copperboard. Which means one side is copper, the other compressed paper. Eventually you want 1 big piece (5 x 5.5 cm) and 5 smaller ones (of 10 x 8 mm). [D]

• Grab your box cutter and something with a straight edge

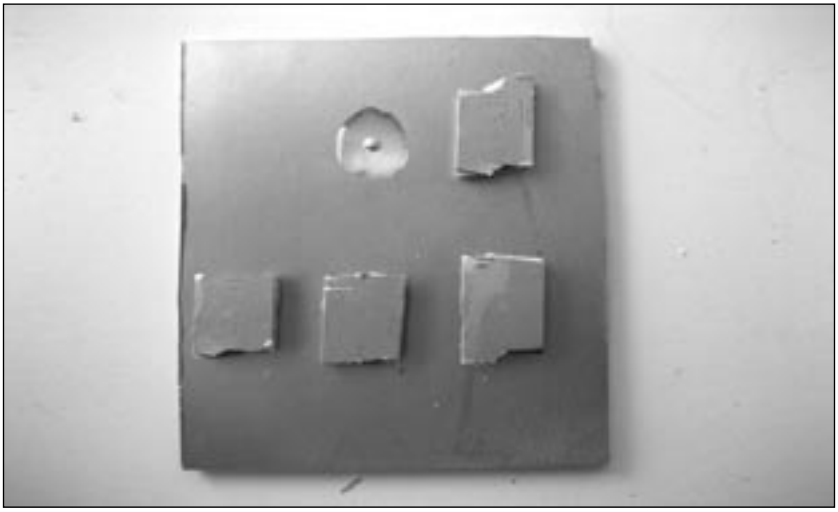
• Score one long straight 8mm wide strip of your piece of copperboard. [A] Repeat this several times until you feel you can snap the strip with a pair of pliers. [B]

Cut/break five pieces out of this strip:

• First pre-cut the lines with your knife, then

• Hold the strip with your wirecutters, and bend/break the other part off with the long-nose-pliers [C]

STEP 2: GLUEING THE SMALL SQUARES TO THE BOARD



In this step you have to glue the smaller squares to the board.

• First drop five blobs of glue onto the copperboard, Three on the bottom, two on the top. Like you see above.

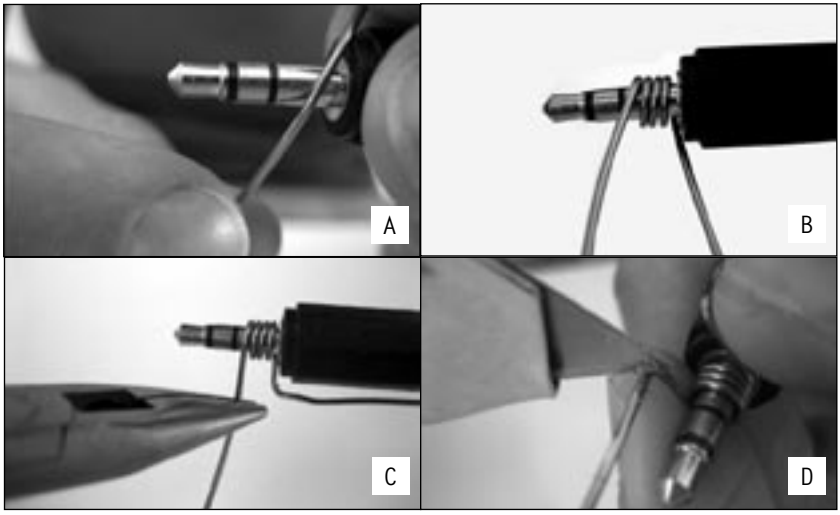
• Then, using your pliers, place the small squares, with the copper side up, on the glue drops.

• Wait till they dry, and while you wait. turn on your soldering iron, and wet the sponge a bit. Use the soldering-rest to protect your table from burning.

TIPS

Really use the pliers. Super glue on your fingers is super annoying

STEP 3: WINDING THE COIL



Before you begin the actual transmitter building, you need a coil. This coil has to be made of 4 winds of 0.8mm copperwire, and the diametre of each wind should be about 5mm. The mini jack is a perfect tool for this!

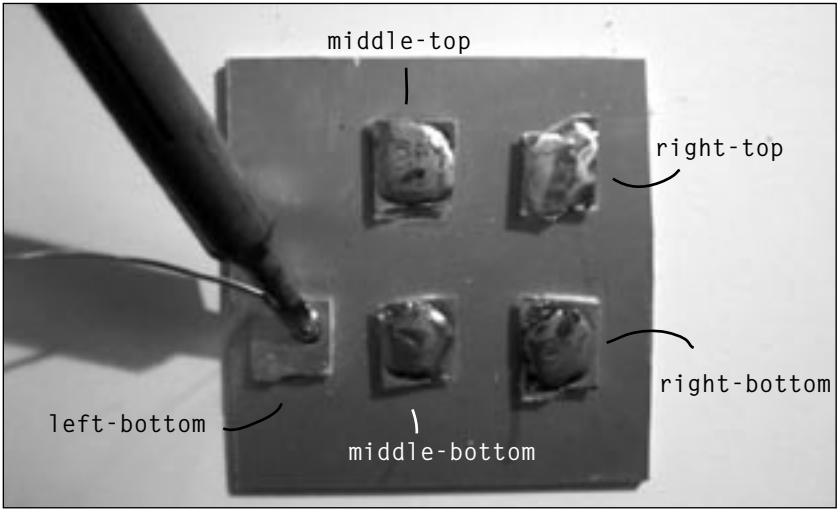
• Grab the piece of 0.8mm copper wire and the mini jack. [A]

• Now twist the wire around the plug 3 times. From the top this should look like 4 winds, with the two legs sticking out to the bottom. [B]

• Fold the legs out, so that the wound part, is a bit higher than the feet. [C]

• Because this copperwire is plastic-coated, it will be near impossible to solder on. So you have to scratch the plastic off the feet with the knife. It is easiest if you still hold it attached to the plug. [D]

STEP 4: COVER THE SQUARES IN SOLDER

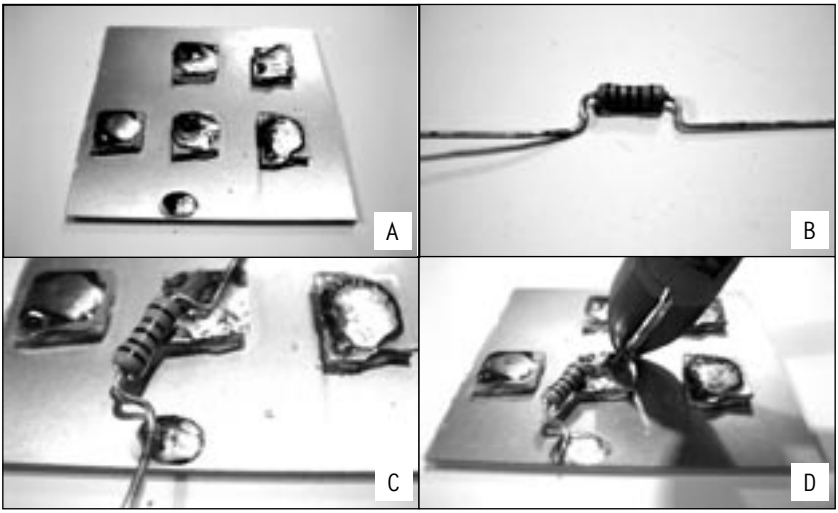


To make life and soldering easier. It is recommended that you first cover the small squares in (melted) solder.

- Hold your hot iron directly onto a copper-square for two to three seconds.
- Then push the solder wire into the point where the soldering iron meets the copper. (hold your iron there)
- Keep pushing the solder wire into the board, until the entire surface of the little square is covered evenly with solder.
- In the rest of the manual, I'll refer to these smaller squares with the names you see written in the picture.

TIPS
I usually stick my board to the table with a piece of tape, so that it doesn't move when I'm working.

STEP 5: SOLDER ON THE 10K OHM RESISTOR



Now we start for real.

• Make one blob of solder on the board a cm below the middle-bottom square. [A]

• Now get the 10k Ohm resistor. This will be the one with the color sequence brown black black orange brown, and bend its legs with the pliers so that it gets little feet. These should be about 1 cm apart and fit between the middle-bottom square and the blob below it. [B]

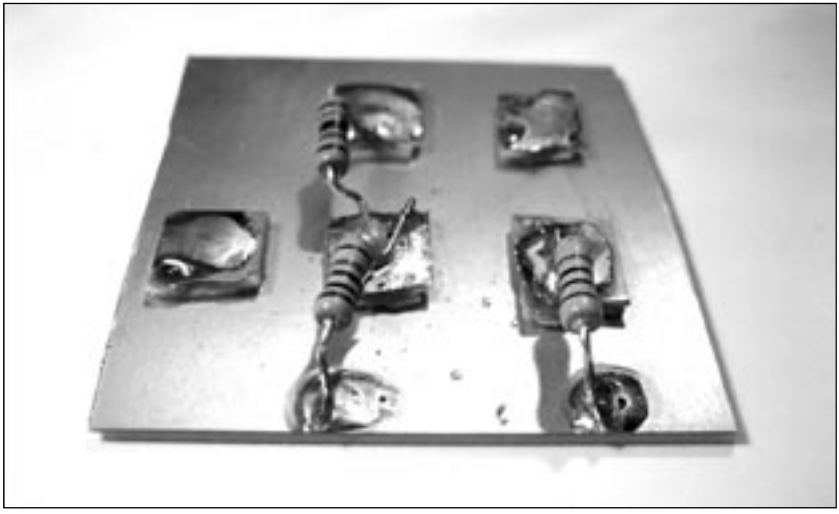
• Heat up the solder on the middle-bottom square until it melts

• Hold the resistor with the pliers, and stick one of the feet in the hot solder. Take your iron away and wait for it to settle. (this should take seconds). [C]

• Now heat the blob below, and stick the other foot of the resistor in it.

• Cut off the bits of feet that are too long. [D]

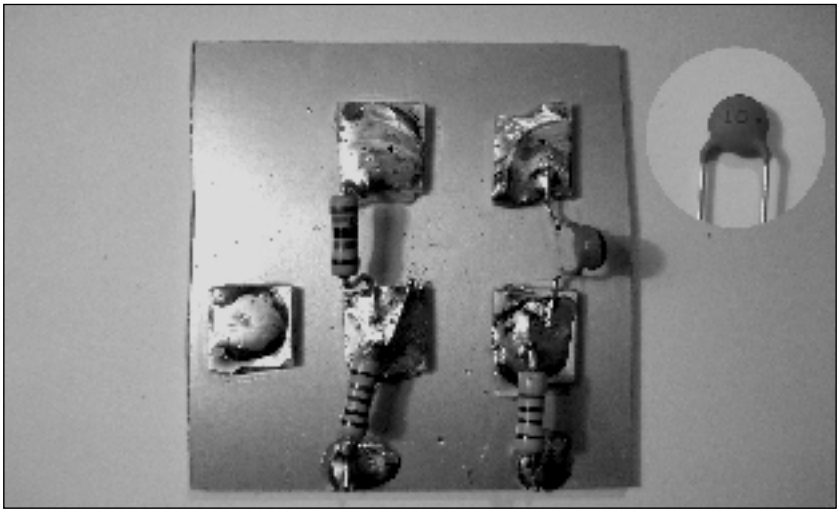
STEP 6: SOLDER ON THE 27K AND THE 470 OHM RESISTOR



• Put a blob of solder on the board below the right-bottom square.
• Grab the 470 Ohm resistor (yellow violet black black brown), fold its legs, so it gets feet. Solder one foot to the right-bottom square, the other to the blob, and cut off the excess feet.
• Now solder the 27k resistor (red violet black orange brown) between the middle-bottom square and the middle-top square.

TIPS
Make sure the blobs don't merge into each other. If they do: try to separate them, by dragging them out a bit with your soldering iron, or use your knife.
The shorter you make the legs, the further your transmitter will transmit.

STEP 7: SOLDER ON THE 10PF CAPACITOR



Now we are going to solder the capacitors.

• First get the 10pF capacitor. It probably looks a lot like the 0.01uF one. You can see the difference in the text printed on the head. Usually the 10pF has “10” written on it, the 0.01uF has “103”. You might want to use a magnifying glass, because the type can be very small.

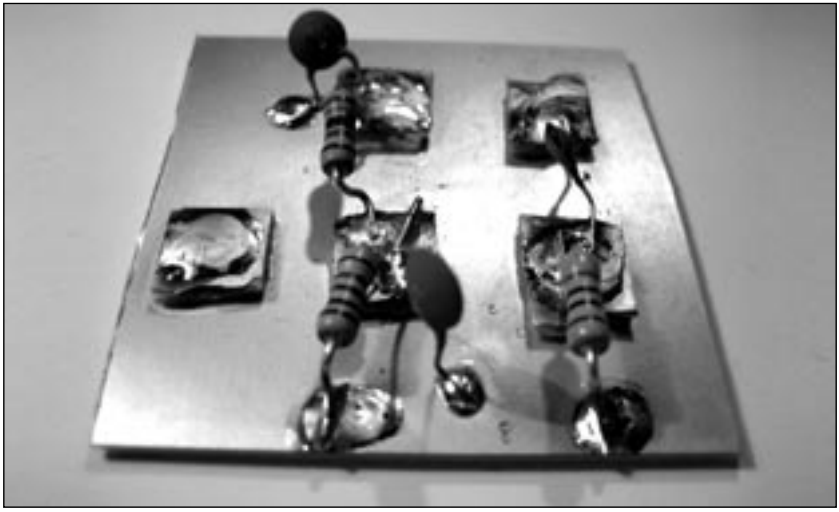
• Bend the legs of the capacitor, so that it fits between the top & bottom right squares.

• Now hold it with the pliers. and solder it down.

TIPS

If you feel like you do not have enough solder, just heat up the solder on the square, and stick the solder wire in it, to create a larger blob. Feel free to mix it all up so it looks pretty and the feet are covered well.

STEP 8: SOLDERING ON THE 0.01UF CAPACITORS



As you read before, you can recognize the 0.01uF capacitors, by the number “103” written on its head.

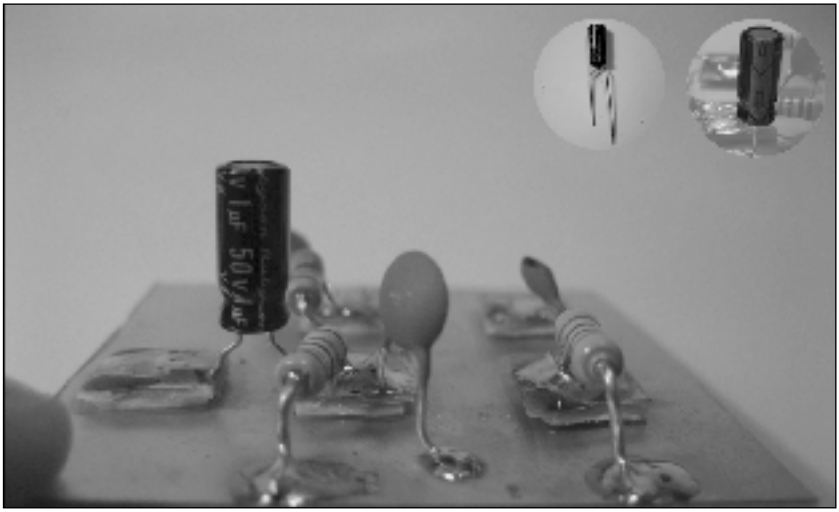
• Make one blob on the left of the middle-top square, and one blob below the middle-bottom square.

• Bend the legs, solder one of the 0.01uF capacitors between the top square and the blob to its left. And one between the middle-bottom square and the blob below it. And once again cut off the excess feet.

TIPS

Since you’re advanced now, you can also precut the feet. this sometimes actually makes it easier, because they don’t get in the way of other parts when you try to solder them on.

STEP 9: THE POLARIZED CAPACITOR.



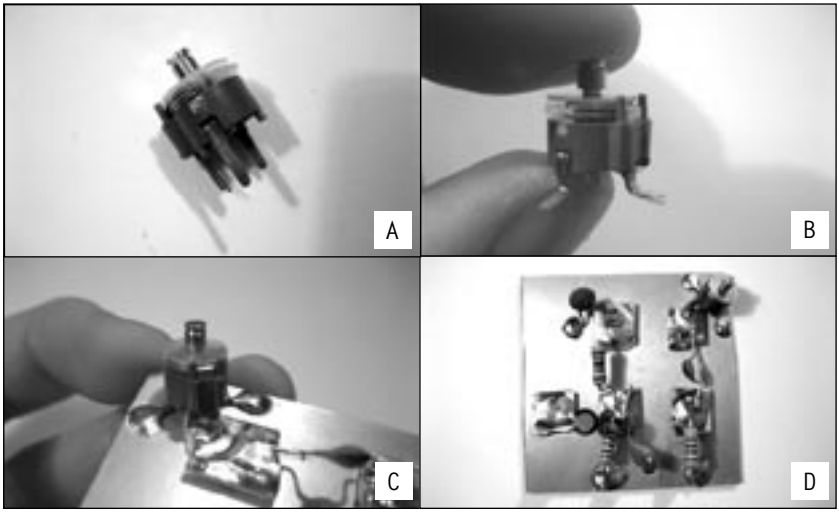
The polarized capacitor is special. This one does need to be soldered on the right way round.

• Pick up the polarized capacitor (it is the part with the big black head, and the long feet). You will see that on one side it has a different color (in this case white) band printed with a dash (-) in it. This is its negative side.

• You want to solder the leg on the negative side to the left-bottom square, and the other (positive) leg to the middle-bottom square.

TIPS
You can also recognize the negative and positive side of the polarized capacitor by the length of its legs.
The negative leg is shorter.

STEP 10: THE VARIABLE CAPACITOR



Now it is time for the variable capacitor. With this part, you can later change the frequency of your transmitter, so it is very useful.

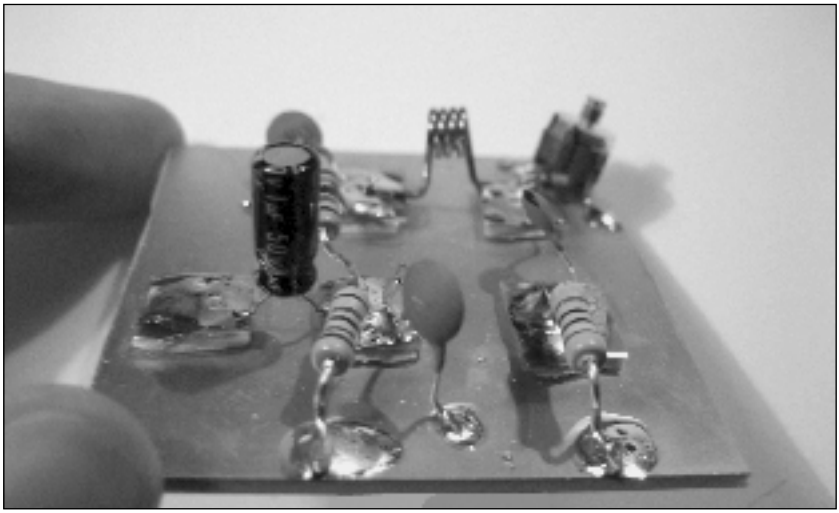
• Try to find it. It is a small green round part with three little feet. [A]

• Fold the feet out to the sides [B]

• Now you want to solder the middle leg to the right-top square, [C] and the two legs opposite of each other to the copperboard. Watch your fingers, because the part gets hot when you're soldering it.

• We are now halfway through! [D]

STEP 11: SOLDERING ON THE COIL

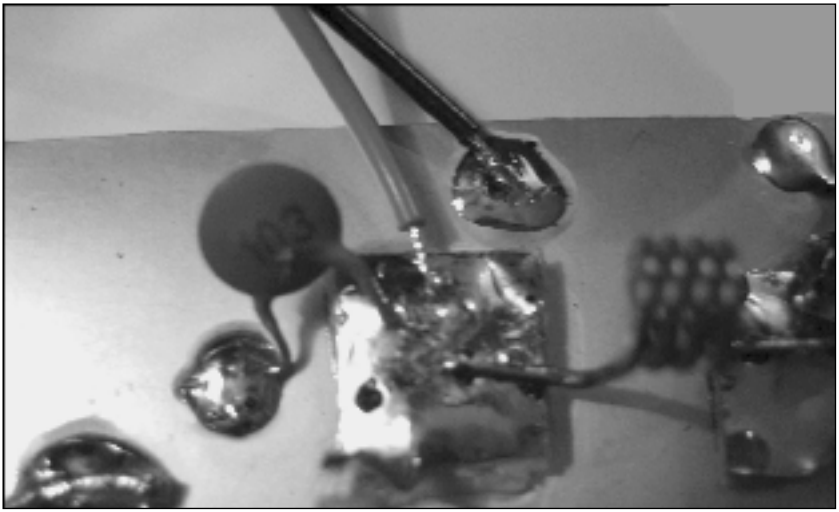


Get the little coil that you made in step 3. This one has to be soldered between the top two squares, and it is tempting to hold it with your fingers, but that's a bad idea. Soldering on the coil is a bit difficult.

• Stick the coil to the mini jack with a piece of tape.
• Make sure there is a lot of solder on the middle-top-square (add a bit if it's not enough)
• Melt the solder on the middle-top square, and stick one foot of the coil in.
• Do the same with the right-top square and the other foot of the coil
• You can now remove the plug.

TIPS
If the solder won't stick to the feet of the coil you need to scratch them a bit more.

STEP 12: ATTACH THE BATTERY CLIP



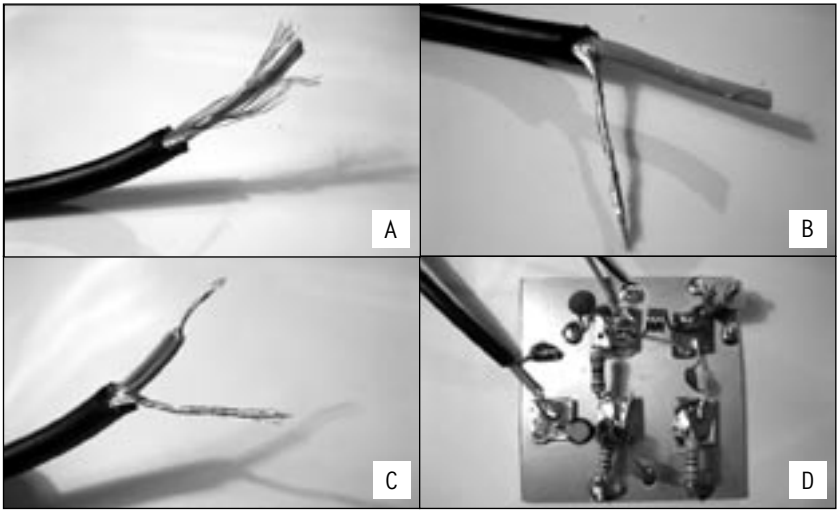
The battery clip has got two wires attached to it, one red, one black. The red is the positive one, the black negative.

• Do not attach the battery to the battery clip

• Make a little blob of solder above the middle-top square, and attach the wire sticking out of the black leg to it.

• Solder the foot sticking out of the red leg to the middle-top square,

STEP 13: SOLDERING ON THE AUDIO-INPUT



The audio-signal will enter the transmitter through a cable with a mini jack attached to it.

• Cut about two cm of thick plastic off the end of the cable. You will see one (mono) or two (stereo) core(s) covered in colored plastic, and a bunch of wires around it. [A]

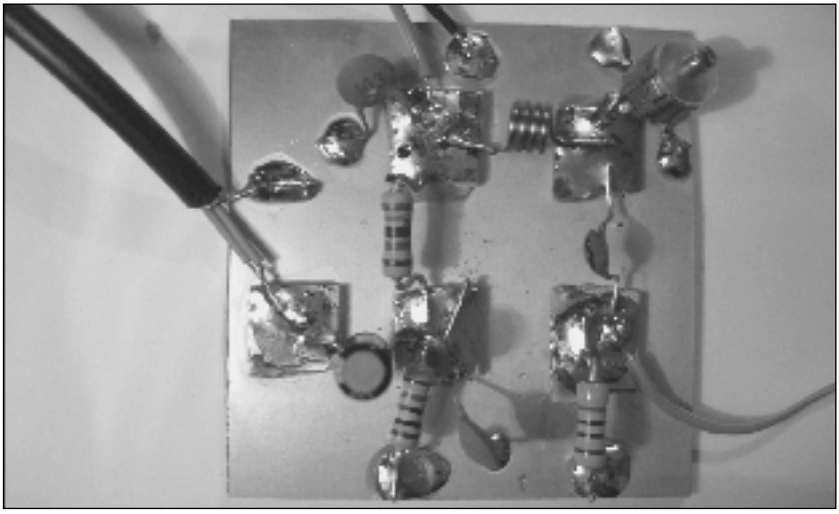
• Twist the external wires together.[B]

• Then strip the plastic about one cm off the core(s) (be careful to not cut the wires in it), and twist those wires together too. [C]

• Now solder the core wires to the left-bottom-square, and the other to the board.

Make sure the two do not touch! [D]

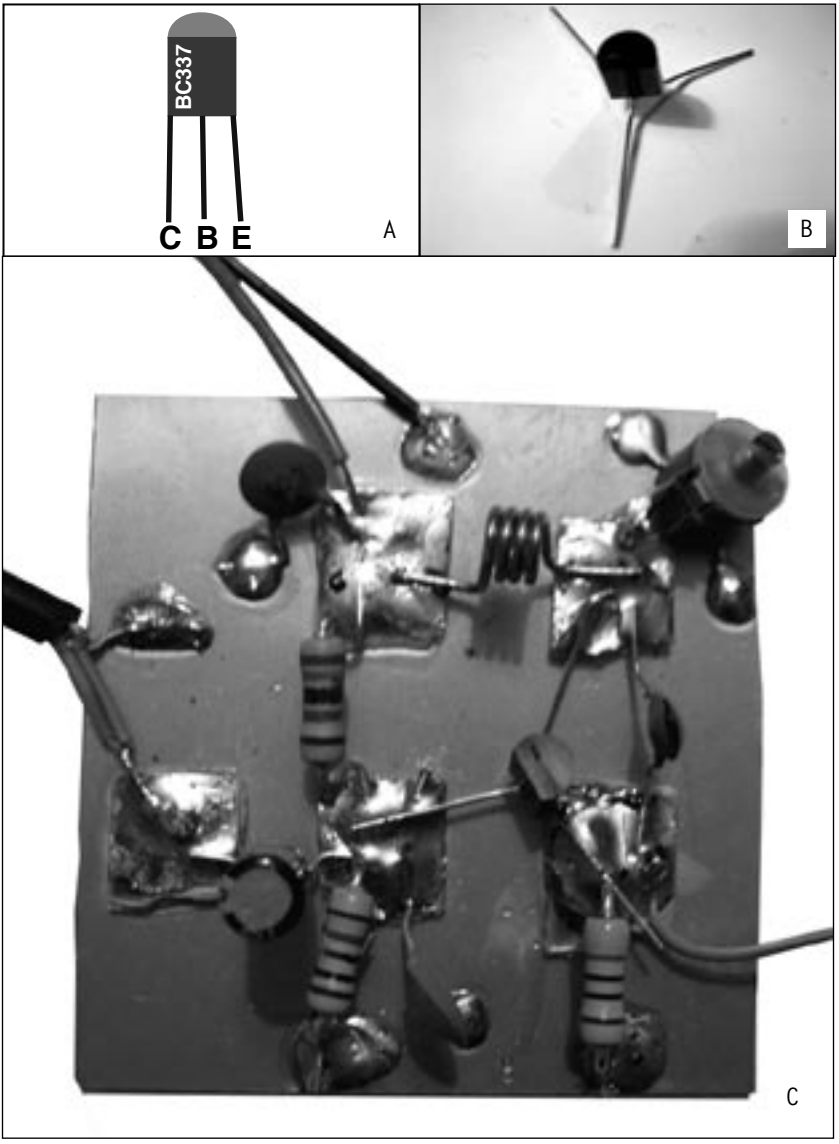
STEP 14: ATTACHING THE ANTENNA



So now you're almost done with the building part. As you will understand, the antenna makes the signal go further. It does not help to make this thing as long as possible, actually every frequency has a preferred antenna length. Which I'll discuss later.

- First strip a cm of plastic off the antenna-wire, to expose the wire.
- Twist the wire inside to one solid wire
- Solder it to the right-bottom square.

STEP 15: THE BC337 TRANSISTOR

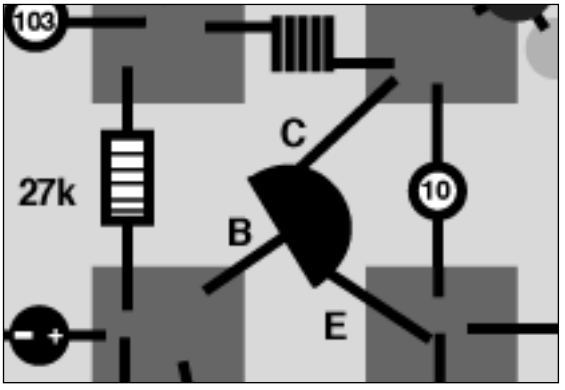


The trickiest part is the BC337 transistor. If this part is not the right-way-round, it will not work.

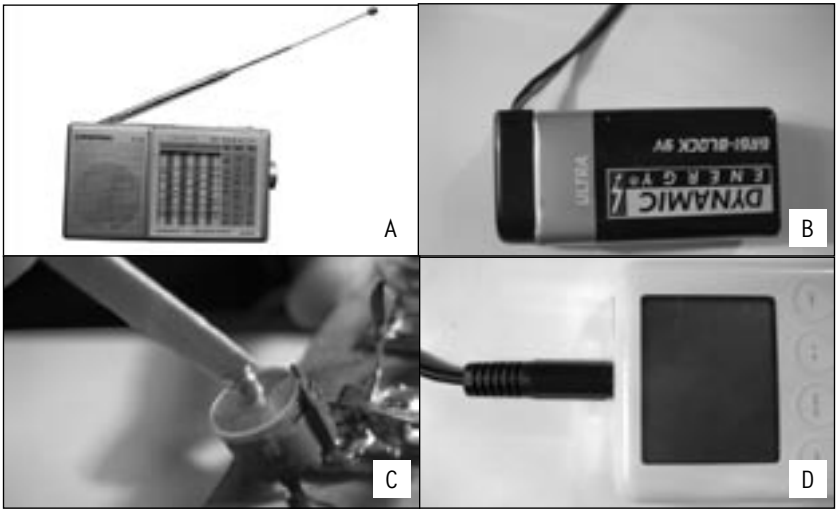
• You see the part has got three legs. If you keep the flat side towards you, the left leg is called “C”, the middle one “B”, and the right leg is called “E”. [A]

• Fold the middle leg towards the front. the right leg towards the back-right and the left leg towards the back-left. [B]

• Now hold the transistor, so that the middle leg, which you folded to the front touches the middle-bottom square, the right leg touches the right-bottom square, and the left leg touches the right-top square.



STEP 16: TESTING THE TRANSMITTER



It is finally time to test.

• Turn on your radio, and look for an empty frequency [A]

• Attach your battery to the battery clip. [B]

• Now use the toothpick (or another non-conductive (plastic/wooden) stick to turn the little screw on top of the variable capacitor slowly until you hear the static on your radio disappear. [C]

• Now stick the mini jack into the headphones output of a sound device, such as your ipod, cd-player or computer. And set that device to play.[D]

TIPS

Sometimes you have to pick a different frequency. As a last resort you can scan the dial to see if you hear your ipod anywhere.

TROUBLESHOOTING

If you didn't hear your stuff during testing, you can try all the following things:

• Check if all your parts are in the right place.
• Check if polarized capacitor (the black thing in the left bottom) has the negative sign to the left.
• Check if the variable capacitor has its middle leg to the square and the others to the board.
• Wobble all the parts to see that they are attached right. if they get a bit loose: put more solder on. Make sure that each part makes good contact with the copper board or squares. (if possible)
• Melt the solder on the squares, and sometimes put more on, to make sure everything is well-covered/attached.
• Check if your battery is attached well, and that it is not empty.

Test again. If you still don't hear anything (not even scratching if you plug your 3.5mm plug in/out) try the following:

• Unsolder and then rotate the BC337 transistor to test all possible leg-to-square connections (you can limit yourself to the two right squares and the middle-bottom one)
• Try a different frequency on your radio, and set it louder.
• If you still don't hear anything: Take a picture of your transmitter and post to the BYP-forum for help. http://www.broadcastyourpodcast.com/forum

STEP 17: TRIMMING THE ANTENNA

Once you found a frequency which gives you a good reception. You can cut the antenna to the right size to make it better.
The length of the antenna should be longer/shorter depending on the frequency according to the following formula: length in cm = (300 / frequency) * 25

For example, if you are transmitting on 100FM, you antenna should be (300/100) * 25 = 75 cm long.
• So calculate the length of your antenna by the formula, and cut it to the right size

TIPS
One centimetre is 0.39 inches
Your transmitter will transmit better when you make the antenna as straight as possible

STEP 18: FANCY BOX

Of course now you can put your transmitter in a pretty box. I had found a batch of old army flashlights from “PERTRIX” in my local army surplus store, which functioned as the first BYP holders.. Unfortunately, they now ran out and I noticed that they’re sold for 15-50 Euro’s online.
So, I’ve included a fold-it-yourself match box, the folding should speak for itself.

- I recommend you to build a little cardboard border between the transmitter and the battery, so that if you walk around with it, they don’t touch too much.
- To get the 3.5mm plug through the hole: it isn’t possible. You have to unsolder it, stick it through and resolder it (right-way-round) to the board.

TIPS FOR USING TRANSMITTER

The frequency of the transmitter can change a bit, depending on how full the battery is.

• If you plan to use the transmitter on one steady location. It might be smart to buy a 9-12 Volt power supply at a local electronics store. You can cut the plug at the end off, and solder the wires of the power supply to the transmitter. DO NOT let the two wires touch, or you'll blow a fuse. (or more) And do not solder the wires while the power supply is plugged in!

SHOPPINGLIST

I've bought most of the parts in bulk online. The code behind the part is the partnumber on the website, to help you search. Your local electronics retailer will probably also sell these parts.

At http://www.maplin.co.uk I found:
battery-clips (NE19V)
copperboard (WF38R)
22pF variable capacitor (WL70M)

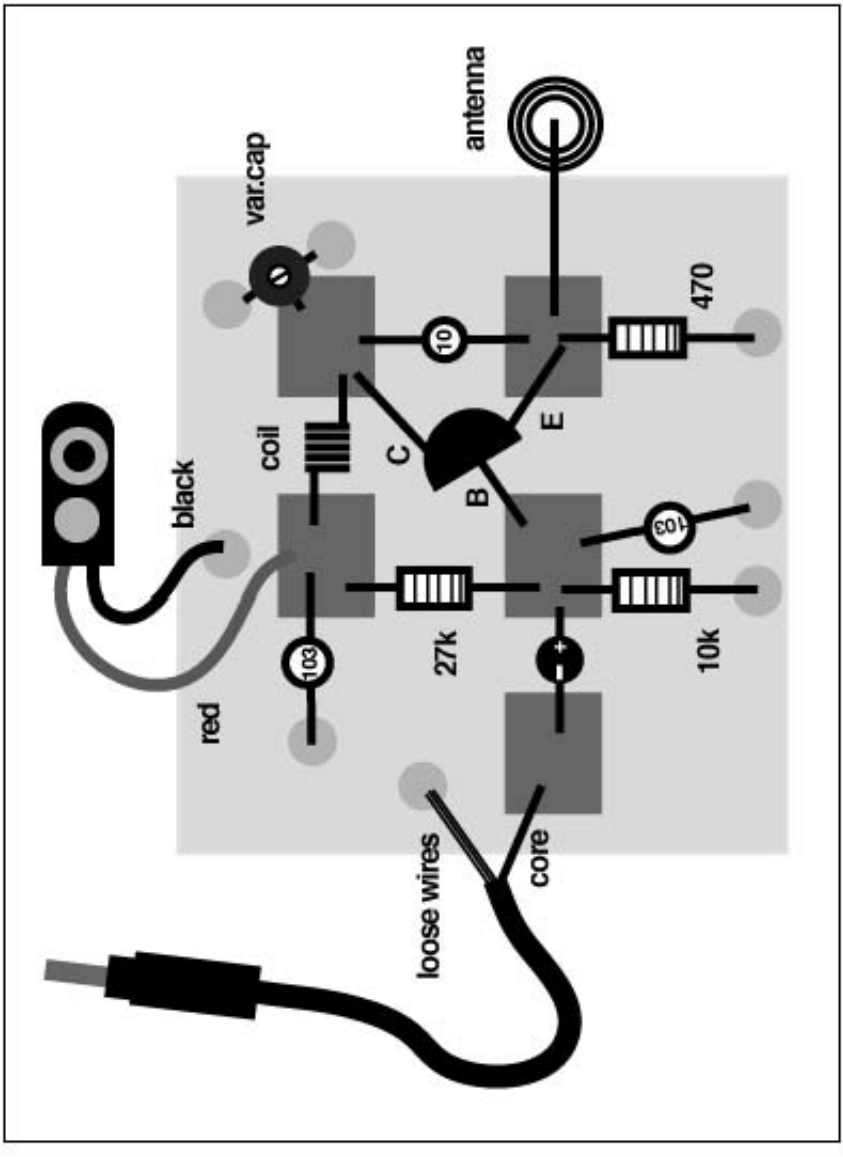
At http://www.rs-components.nl/ I found:
resistors (149-672, 149-818, 149-868
the BC337 transistor (131-1430)
10pF capacitors (829-249)
0.01uF capacitors (829-586)
copperwire (357-772)
antenna wire from flat ribbon cable/wire (105-5281)

I've actually bought the flat ribbon cable/wire at my local electronics store. That way I didn't have to buy 30 metres. There I also found my solder & soldering iron.

The toothpicks, cottonswabs, super glue and 9 Volt battery were bought at my local "euroland", any dollarstore would do.

The 3.5mm plugs I got from the russian electronics market in Riga. These things can be really expensive. The cheapest I've found online were from www.markertek.com. Part number: M-M-3

DIAGRAM OF TETSUO KOGOWA'S MINI-FM TRANSMITTER



text,
design,
photography,
transmitter building,
copyright,
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care by:

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lotte@broadcastyourpodcast.com
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help,
guidance,
inspiration &
support by:

Adam Hyde
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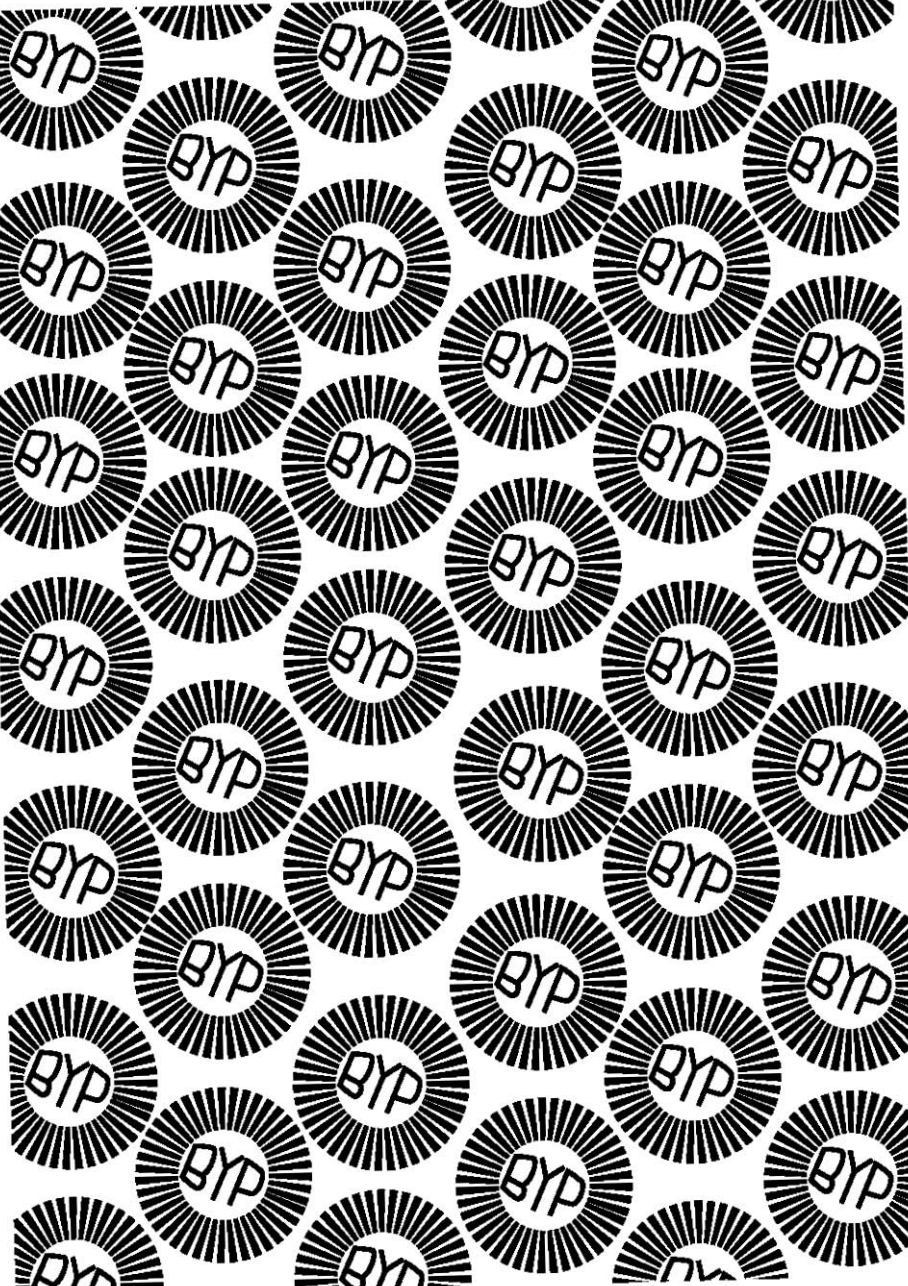
http://www.streamingsuitcase.com

transmitter diagram design by:

Tetsuo Kogawa
http://anarchy.translocal.jp/


BYP

8

Mini-FM: Performing Microscopic Distance (An E-Mail Interview with Tetsuo Kogawa)

Tetsuo Kogawa with Annmarie Chandler

and Norie Neumark

Tetsuo Kogawa introduced free radio to Japan in the early 1980s and helped found many microradio stations (including Radio Polybucket and Radio Home Run) that were part of the "mini-FM" boom in Japan. Mini-FM utilizes micropowered transmitters to create a micro broadcasting and communication context, acting as an alternative to the mass-media, large radio stations and global communications.

Question: You've written a number of articles in English on mini-FM (e.g., in *Radio Rethink* and on the Web <http://anarchy.translocal.jp/non-japanese/index.html>) and more in Japanese that have not yet been translated. We're very interested in the mini-FM phenomenon for a number of reasons, including the relationship between art and activism, performance and play, professionalism and "amateurism," distance, communication, networks, and social transformation.

Our first question has to do with the Japanese context for the mini-FM movement, including the post–World War II historical background. Can you discuss the specificities that helped shape the development of mini-FM? For instance, can you talk about government-controlled media in Japan after World War II, in relation, say, to concepts and habits of individualism, nationalism, citizenship, and foreign influence? Can you also address how Japanese youth culture helped shape the development of mini-FM?

Tetsuo: The mini-FM movement was encouraged by a number of Japanese social and cultural factors. As soon as the Allied Forces occupied Japan on August 15, 1945, the CIE (Civil Office of Information and Education), part of the GHQ (General Headquarters), brought all the Japanese mass media under control. The short period of transition just after the war paradoxically created a radical consciousness of freedom from the old system and customs. Ironically enough it was particularly via radio, at least at first, that they tried to educate the Japanese into freedom of speech—that is, in the Western modernist sense of democratic, political and religious "freedom." But even those who were against the U.S. politics did not reject their lifestyle. In 1951 NHK (Nippon Hoso Kyokai–Japan Broadcasting Corporation) started television broadcasting. American pro wrestling fascinated the audience. Electric washing machines, refrigerators, electric vacuum cleaners, Coca-Cola, Kleenex, and blue jeans became widely popular. To say nothing of American movies and pop music.

Several other long-term changes within the mass-media industry structures, the technological environment and social consciousness also prepared the ground for the mini-FM movement. For me individually, there was both my personal intentions and dreams to promote free radio that could be independently controlled by nonprofessional ordinary citizens, as well as the fact that as a college teacher, I had felt a strong need for a medium to bridge the isolated communications context of my seminar students. By this I mean that after the end of the student movements in the late sixties and early seventies, feelings and ideas about sharing with each other and political and cultural collaborations were rapidly declining among students.

The student movements in the late sixties had opposed authoritarianism, first in the schools and then in government and world powers. Influenced largely by the Cultural Revolution in China, and mixed with the impacts of various movements such as the American counterculture, underground theater, French *nouvelle vague* cinema and the Fluxus performances and happenings, the students started their rebellion outside existing parties and political organizations. The New Left student movements had encouraged new types of cultures of solidarity and collaborations among young people, including both those who were activists and those who were apolitical.

Sometimes national solidarity seemed viable but, as the pressure and repression by the police became stronger, separation between groups developed, with struggles over policy and conflicts between the factions. More hard-line or extreme Marxist and Leninist ideologies escalated and some of the groups started to arm. There were executions of the members of Rengo-Sekigun (the Allied Red Army) in the deep mountain area and then heavy gunfights with the police in 1971. These incidents changed the mood drastically and destroyed the dream of a peaceful "revolution." Especially among students who believed in change, the shock was very strong. In this sense, the system used the incidents very cleverly to suppress antiestablishment trends. The mood of radical change quickly disappeared. Distrust among students grew too.

Social-cultural institutions, such as broadcasters and schools, were unable to respond to this situation. The content of radio and television was still fifties-U.S. style and was unable to fulfill the needs of listeners who wanted more diverse programming. I think that Japanese broadcasting was still strongly controlled by the state government and therefore the number of radio/television stations was fewer in comparison to other advanced industrial countries. In the late 1970s there were only two national FM stations. There were local FM stations but their programs were mostly franchised from the national broadcasters.

This was very different from Australia, U.S., Canada and Europe where hundreds of local and community radio stations provided diverse programming on the FM dial. It was quite natural that a feeling of isolation became strong while the mindless enthusiasm for spending money and massive purchasing was escalating. At the same time, the postindustrial or service-oriented era was starting. Commodities were becoming more and more personal, rather than group/family-oriented.

Although Japanese culture was labeled and characterized as having an uncritical *banzai*-collectivity, the Sony Walkman (which appeared on the Japanese market in 1979) allowed people to individualize technologically even without their being explicitly conscious of it:

> The pre-war Emperor System replaced the spontaneous, regional and diverse collectivity with a highly artificial homogenous collectivity, what I called "*banzai* collectivity." *Banzai* is a special shout and hand gesture of a person or group who blesses the authority (the State, the Emperor, the employer). When a group shouts "*banzai*" with one voice, their leader shouts it first, and the others follow. *Banzai* collectivity is not spontaneous but manipulated as a cult. This manipulated collectivity was especially organized after the middle of the Meiji era, around 1890, by means of total integration of the educational system, the military system and family life into the Emperor System. Haruni Befu, Yoshio Sugimotto, Ross Mouer and others revealed that such stereotypes of the Japanese as workaholics or "devoting the self to the group" are not spontaneous social patterns but political phenomena, which are largely imposed from above by the authority.[1]

The rapid spread of personal car ownership also changed the homogenous group-oriented tendencies into a kind of individualism. The gradually escalating economy changed the housing situation, too. As the large family disappeared and the percentage of women workers grew, the nuclear family became popular. The number of one-child families was also increasing. This further intensified Japanese individualism. I once named such a peculiar individualism "electronic individualism." Later on, this notion had a popular term, *otaku,* and it spread outside the country.

A commentator on youth popular culture, Akio Nakamori, recognized a new type of youth emerging, where they called each other "*otaku*" instead of "you." They were possessed by a mania for comics, movies, etc. Nakamori started a column, "A Study of '*Otaku,*'" in 1983 in his magazine *Tokyo Otona Club.* Later on, mass-circulated newspapers and television adopted this term. This was the period when personal computers started to become popular and the means for virtual communication rather than face-to-face was becoming interesting and distance cultures began. Movies like *Being There* (1979), *Blade Runner* (1982) and *Videodrome* (1983) were favorites amongst the *otaku.*

This term *otaku* became popular in the English vernacular of popular culture in nineties magazines such as *Wired* where it was used synonymously for *nerd,* emphasizing a monomaniacal interest in computers, TV games, animations, and collecting gadgets. *Otaku* has other meanings, however. *Otaku* in Japanese originally meant "your house." But it could also be understood as a personal pronoun meaning "you" as well. The difference between the common understanding of "you" and *otaku* is that *otaku* has a connotation of slight distance.

Question: Can you talk further about how this *otaku* mentality and the gloomy political situation played a role in your developing interest in electronic art and radio?

Tetsuo: I started experiments using electronic devices in my seminars in April 1980 just after I came back from New York. From the mid-1970s to March 1980 I spent many years in New York as an ACLS (American Council of Learned Societies) fellow to the Department of Sociology at New York University. Maybe this was my idiosyncratic memory of that feverish era and my experience in New York where people of different backgrounds and languages talked, both in a friendly way and aggressively, but my seminar classroom felt too quiet. Although people were kind and wanted to talk to each other, they hesitated to talk directly because they were too reserved ("shy") and sensitive about cutting in on others. This behavior is not abnormal but is actually a part of Japanese culture that I call the "culture of distance."

As far as I was concerned, I had to solve the communication problems of my students; otherwise it was difficult to proceed with discussions in my seminars. This was my challenge to what I had in mind about communication, democracy and medium. At that time, I had already started to experiment with free radio in my own way, strategically utilizing very weak airwaves to

transmit signals. The first system was a remodeled wireless microphone with an adequate antenna added. It was already being used as a popular toy by some children and young people for playing "broadcaster." However, few people considered seriously using such a thing as a working transmitter for FM broadcasting. It wasn't long before I brought the system to my classroom.

After thinking hard about my students' reticence, I brought in a portable tape recorder and used it in my seminar. Each of the students spoke a few words or sentences onto it and passed it to the others. Rather than experiencing the difficulty of person-to-person communication, they could talk to the machine. When everybody finished talking, I replayed the tape. What I did was a kind of reverse of a William S. Burroughs' "cut-up" using the tape recorder instead of paper. When the tape was replayed, they found in otherwise random utterances an unexpected continuity and context that they had not intended but had unconsciously created. It was an expression of an unconscious (unwilled) collective work happening beneath our communication, which made sense to them through Merleau-Ponty's concept of "entrelacs." It also interested them as an area of performance art. This created a virtual and temporal consensus for us to continue further talks and progress to a further level.

Question: This interweaving of philosophical concerns, pedagogical issues, and engagement with electronic devices and art seems to be very important to your work as an artist and teacher. Do you want to add anything further?

Tetsuo: As a person who studied philosophy and was later inspired by the New Left movements, I did not want to "teach" my students. How could I teach? Communication problems are always interrelated. No one-sided solution is possible. I had to start from the beginning. But my early experience helped me to do so. I have to tell you a bit of a long story before going on about radio and education. I grew up as an only child and was accustomed to being alone. During my childhood in Japan (in the forties), one-child families were rare. I had no problem with person-to-person communications in small groups, but to join a group I had to intentionally change myself. Unlike today, rules and customs of homogeneous collectivity ("*banzai*-collectivity") were very strong. It may have been as a response to this situation that I became interested in amateur radio in my early junior high school period. It is difficult to describe how fascinating to me my first success with contact on the air felt. You may recall the beginning scenes of Robert Zemeckis's movie

Contact where young Ellie (Jodie Foster playing the grown-up Ellie) has her first experience of amateur radio communication. However, I soon had to give up this emancipating recreation due to impending preparations for entrance examinations to senior high school and college.

In my late teens, existentialism was the philosophy that justified my "loner" attitude. In Japan, existentialism appealed to intellectuals after the end of the forties and the influence continued until the sixties (up to the explosion of the New Left movement after 1968). Existentialism theoretically refuted collectivism and justified those who were isolated and independent as more "authentic" in their existence. These ideas triggered my decision to enter the Department of Philosophy to study phenomenology. One of the hottest topics in philosophy at the time was solipsism versus collectivism. Every intellectual who was captivated by existentialism had to confront the theoretical difficulty of solipsism. How can 'I' as an isolated existence find a window to the outside and communicate to other 'I's? It was lucky that I studied phenomenology, which relates not only to existentialism but also to more social theories. The late sixties was the period of the "renaissance of phenomenology," where new approaches to Edmund Husserl and advanced phenomenological studies in cultural anthropology and sociology appeared. Merleau-Ponty convincingly overcame the existentialist solipsism by reconsidering the 'I' and the body as not separated; for him 'I' am by nature embodied. 'I' and the other don't meet as essentially separated beings. They are "intertwined," "coexisting," "cofunctioning," in "communion." His notions of "chiasm" and "entrelacs" condense these ideas.[2]

Using Merleau-Ponty to break through my students' nihilism and isolation, as I talked about above, was successful, but I was still working as an "ordinary" schoolteacher, using books. Meanwhile I had also become more involved in the arts and in cultural activism and was looking for a new way of teaching, as a performance artist—as I came to call myself. My New York experience had inspired and nourished me a lot. At the same time, the students' attitudes had changed too. They read less and less. The printed medium wasn't working as an interpersonal communication space. Video, film and graphics interested them instead. That's why I started to use the tape recorder, 8 mm camera and the videotape recorder for communication (rather than as a documenting device). The film of an 8 mm camera runs for three minutes. My students shared this 180 seconds among the group (ten or so) and shot what each person wanted to express for the shared seconds (fifteen or so) in the classroom. The following week (film developing required a week) we watched the full film. We were fascinated by the unexpected plot or context or coherence. At worst, it could be considered as an "incomplete" surrealist artwork. Discussing the films, I would bring up Merleau-Ponty and other related theories such as structuralist semiotics and I even circulated relevant printed texts. I found that after such a workshop they were able to read and the print medium interested them again. My workshops using a tape recorder had the same objective. 8 mm film provides an interval while the film is in the lab being developed; during this time the students become a film audience rather than the makers. The tape recorder can replay quickly and is easy to use in intensive segments. First each student talked or created sounds for sixty seconds (record → pause → pass the machine on → record → pause . . .) and then at the end they listened to the ten- to fifteen-minute tape. In the following sessions the talking was reduced to thirty, fifteen, seconds. Over time, they found themselves spontaneously talking not only in monologue but also dialogue. In the end they forgot to use the tape recorder and just began talking to each other. Do you think this is a trick by a machine? Not in my opinion. The medium always has this function of neither just documenting nor simply carrying information but of "intertwining" people and creating interpersonal space. What I would call a "weaving" medium.

Question: We are very interested in the performance side of mini-FM: Could you to talk more about it? Can you discuss whether there was any tension (difficult and/or productive) between performance art and communication goals in mini-FM—an art/activism tension? Also, did groups address each other and the audience as *"otaku,"* and/or were there other direct ways in which the culture of the youth movement shaped the practice of mini-FM?

Tetsuo: The radio movement using low-power transmitters started in 1981 and then boomed in 1983 when many newspapers and magazines and even television stations reported it. The term *Mini-FM* had become popular since, I think, an article in *Asahi* newspaper used this term on May 11, 1983. Before that we used *free radio;* others used *independent radio* or *home-made radio*—there was no single terminology.

I mentioned that the Japanese youth culture of the 80s had a kind of *otaku* culture of distance where people wanted some kind of distance between each other in relation to communication, relationships and behavior. Mini-FM

was an appropriate medium for this culture because it kept such a distance and at the same time enabled them to feel at home when they communicated with others. In my observation, however, those who started mini-FM stations after 1981 had a mixed sensibility of both getting together and of *otaku,* or distance, in a sense. Authentic *otaku* communities were, by the way, actually passive and did not want to organize anything by themselves.

The seminar workshop I ran did not directly lead to mini-FM. Mini-FM had a different motivation—not to do with either education or making people feel at ease. As soon as I came back from New York in April 1980, a couple of my friends and I started to discuss how to start a free-radio movement, such as in Italy where free radio had been and still is flourishing. We were serious about opening an alternative radio station associated with community interests. The main aim was to use the radio medium as a means to deliver information and messages. This is quite different from what I later theorized for mini-FM as a form of cultural catalyst and performance art. At that point, though, it was just ordinary radio in micro size. Micro, because it had very-low-power broadcast, needed no license, and was able to use the massive free space on the FM dial (which was there unused because of the inflexible policy of the Ministry of Post and Telecommunication). It was possible to link every microunit to each other. I have been thinking of a similar idea for today's Wi-Fi hot spots although in analog radio at that time it was very difficult to link a number of transmitters with a consistent sound quality. But the idea was fascinating and we believed in organizing a large-scale model of mini-FM networks to cover a large area.

It was in this period that I brought a set of micro transmitters into my classroom and let my seminar students use it. They were quickly fascinated and some of them started their own station, Radio Polybucket, on the campus. Using this as an example I wrote articles for mass-circulated cultural journals. News about free radio in Europe was also appearing in the major newspapers. People were becoming interested in "new media." Low-cost electronic toys like wireless microphones were also readily available. Within a year, mini-FM exploded way beyond my expectations and even major radio/television stations were interested in it. I learned that even big companies, which had been irritated by the government's inflexible policy on broadcasting, now expected that they could easily open their own radio station using mini-FM. After the end of 1982 many mini-FM stations were established in Tokyo and other big cities. Radio Polybucket was also developed under the new name of Radio Home Run, which was recognized as the earliest mini-FM station in Japan.

Question: Can you say more about Radio Polybucket and Radio Home Run?

Tetsuo: Radio Polybucket was opened in 1982. The name derived from the plastic (polyethylene) bucket, which is a popular Japanese garbage can. The students imagined this as signifying something hodgepodge and something minor/marginal/negligible. It was also influenced by Guattari's *La revolution moleculaire* and an implicit criticism against "big is beautiful" careerism.

When they graduated, the students started to develop their radio activities at their new station Radio Home Run, located in Shimokitazawa, the most bohemian area in Tokyo. The name is a baseball term but its connotation was to "cross distant borders," because they wished to cross the borders of every obstacle (not only the airwave regulations but also sociocultural difficulties). The station finished in 1996 because the members became too busy with their "main" occupations and some of them moved far away from Tokyo. Soon afterwards we started Net.RadioHomeRun, an Internet radio, and tried to reorganize the members who were separated in different locations in Japan. It still operates every month but the excitement and enthusiasm is over.

Radio Home Run had an almost anarchic policy where nobody controlled it and anyone visiting the station could become a member. As the station used a room of one of the members' apartment, nobody had to pay except for the cost of making the programs. Depending on who took care of the program, the content and way of running it differed. Some of the programs were similar to regular radio but most of them used radio as a catalyst for talking, playing and getting together. The interesting thing was that as the atmosphere livened up during the program, listeners couldn't help coming over to our place. The location was very convenient and in our service area (one-kilometer radius) there were a lot of cafes, bars, and restaurants where young people gathered with their portable radios or Walkmans with FM radio functions. Some people visited, first hesitantly, and then within a week started their own program. Some audience enthusiasts parked their cars nearby to listen. This radio was just like a theater or a club where the audience themselves approached it instead of staying at distance. The whole activity was so diverse that it is difficult to summarize what they did (figure 8.1). While homeless

Figure 8.1 Radio Home Run holds a special broadcast in the countryside, 1984. Photo: Toshiyuki Maeda.

people came along, we were also visited by famous people such as Félix Guattari, Ivan Illich, DeeDee Halleck, and Hank Bull (figures 8.2 and 8.3).

There are many Japanese reviews of Radio Home Run (some in English)—in newspapers, journals and on radio and television. Toshiyuki Maeda, one of the founding members, who is now a professional photographer, has thousands of pictures of what happened at this station. There are sound/video documents too. You can see some of them at my Web site <http://anarchy.k2.tku.ac.jp/radio/homerun/histryrhr/>.

Question: Can you say a bit more about the response to mini-FM Outside Japan?

Tetsuo: In the eighties there were a number of people outside Japan who really appreciated mini-FM: DeeDee Halleck, Félix Guattari, Ivan Illich and Hank Bull. DeeDee had just started Paper Tiger Television, the first public-access television in New York City, and was interested in mini-FM's free networking and its positive "abusing" of the regulation. Félix Guattari found in mini-FM a kind of "micro revolution." Ivan Illich praised mini-FM's creative use of low-tech and grassroots character. Their evaluations were different but what they shared is that they considered mini-FM to be a medium.

Figure 8.2 Félix Guattari at Radio Home Run, 1985. Photo: Toshiyuki Maeda.

Figure 8.3 Ivan Illich at Radio Home Run, 1986. Photo: Toshiyuki Maeda.

Hank Bull was a bit different. He was more interested in mini-FM as art. He was one of the pioneers of telecommunication art using telephone, fax, and videophone. Therefore he was interested more in the "noncommunicating" function of mini-FM and associated it with "radio art." In the meantime, radio art had become popular and the first international conference of radio art was held in Dublin in 1990.

The understanding of mini-FM has changed since then. With the earlier "immature" Internet, people were accustomed to a "low" quality of technology and this even produced some artistic aspects of mini-FM. Club culture also supported mini-FM as an art form. In 1993 in the U.S., the microradio movement arose. The leading person was Stephen Dunifer in Berkeley, California. I first met him in 1992 when Jesse Drew of Paper Tiger West organized a radio party for me. I held a workshop to build a one-watt FM transmitter and then we instantly opened a radio station. A lot of activists joined the discussion. Jesse wrote,

> The first evening's program ranged from excited talk about the possibilities of pirate radio to tapes of music by local groups to a live clarinet performance by an 11-year-old. As one activist observed, the one-half- to one-mile radius the transmitter covers is about the size of a voting precinct. Neighborhood groups could use these stations to discuss political issues and report on local events not covered by Bay Area and national news shows.[3]

Stephen had been involved in pirate radio but he underestimated such a small power as one watt. It was amazing that in a year or so he started an activity to let people know about a mail order DIY [do-it-yourself] kit to build a transmitter. Meanwhile, his own pirate radio station, Free Radio Berkeley, was fined $20,000 by the FCC [Federal Communications Commission]. This triggered a lot of interest as well as protest by activists who were interested in alternative media and who had been disgusted with the controlled mass media under the "pool system" during the Gulf War. Since 1993 the microradio movement grew in the US. Microradio was not the same as mini-FM because its size, "micro," was larger than "mini." But it is very interesting that in the circumstance where too many radio stations existed and one could own one's own station (if one had the money) people became interested in relatively smaller size of communication.

Question: Getting back to your performance art work with mini-FM and what you write about it, this opens up different ways of thinking about communication and art. Can you talk more about this?

Tetsuo: Being deeply involved in the mini-FM movement, one day I noticed that most of the stations were less aware of the audience but more interested in the sender themselves: They were absorbed in what they were doing on the spot. If they had become anxious about the size of the audience, they would have given up very quickly. They found the audience too small and sometimes nonexistent. But the station worked. It seemed to me that mini-FM was "radio without an audience" (figure 8.4). Later I found the convincing explanation of this phenomenon in Humberto R. Maturana and Francisco J. Varela's criticism of "the metaphor of the tube for communication." They argued that "communication takes place each time there is behavioral coordination in a realm of structural coupling. The phenomenon of communication depends not on what is transmitted, but on what happens to the person who receives it. And this is a very different matter from 'transmitting information.'"[4]

In 1984, there was a monumental event, the Hinoemata Performance Festival, where over fifty performance artists and art critics got together in a mountain venue. This allowed artists from different areas and genres to collaborate with each other and then gave them the chance to show their work in galleries, museums, theaters and public spaces. Performance art suddenly revived after a twenty-year vacuum (from the end of the fifties to the early sixties performance art had been active in Japan only through external movements such as Fluxus). Since I had been already involved in writing about performance art, I was naturally engaged in this trend and even started to show my own performance pieces which used electronics. My career as a performance artist started at this moment. While I was involved in the message-oriented mini-FM movement, I started to experiment with what I had theoretically rethought about mini-FM.

I think, at the time, there were very few who were convinced about the new artistic or even "therapeutic" or social possibilities for mini-FM. A lot of potential did exist, however, for seeing it as more than just a "means of communication." In order to try to deconstruct the conventional function of radio, I tried a sound installation using micro-FM transmitters and radio receivers in a garden, a collaboration with dance performers carrying

Figure 8.4 Radio Home Run on motorcycle, 1984. Photo: Toshiyuki Maeda.

transmitters to create fade-in/-out sounds on the receivers from their moves. There was also a kind of concert where the audience was in a house with radio sets on the floor and I walked around the house with a transmitter talking and playing tape sounds and so forth. Transmitting at the same frequency by a couple of transmitters was interesting, too. Later I named it "palimpsest art." The technique of "palimpsest" derived from Paolo Hutter of Radio Popolare in Milan in the seventies, which mixed various live sound sources during a program. Even a person who just happened to call in could instantly join the live mix. I tried this method through airwaves jamming. "Radio party," as I called it, is another one of the basic forms of mini-FM as performance art. This usually starts in my workshop, building a microtransmitter by myself (sometimes the participants do the building) and then people get together and begin a party using the completed transmitter to talk, play, eat and drink. In an hour-long radio party people also go for a short "picnics" outside carrying radio receivers.

Question: Have you worked with video or television in the context of your mini-FM or performance projects?

Tetsuo: In the late eighties we tested a microtelevision by a using a small transmitter, which was made of a booster and the RF [radio frequency] modulator of a VCR. The service area was as small as Mini FM but it worked to deliver moving images and sounds to our community areas. However we soon found that the viewers did not want to come to the station but kept watching. Television in particular seems to pin the viewer down to his or her own location. But ten years later when I started streaming radio with moving pictures by *RealVideo,* I found that the low quality of this medium helped motivate the audience to move. Since they were located a long distance from Tokyo, they could not come to the station but eagerly called in or mailed to our location. I suspect more sophisticated video transmission would not enable such a response. As Mitch Kapor said, low bandwidth sometimes has high "emotional bandwidth."

Question: You've mentioned Fluxus. Do you think that your approach was influenced by Fluxus? Did Fluxus have a particular inflection in the Japanese context?

Tetsuo: I like to consider myself as an irresponsible "descendant" of Fluxus. Apart from my activities as a media critic and as an artist, I've been faithful

to my own intuition and idiosyncratic taste. But whenever I was challenged to do something new, I found that Fluxus artists had been involved with something similar conceptually. John Cage (who is beyond Fluxus) did everything. Certainly Fluxus has a particular connection with Japan. And Cage was influenced by Taisetsu Suzuki, the Zen guru. Quite a few Japanese performance artists such as Takehisa Kosugi, Yasunao Tone, Yoko Ono and Ay-O were in the Fluxus network.

Among the various art movements from outside Japan, Fluxus was the one that most appealed to Japanese "avant-garde" artists in the sixties. Since the end of the fifties there had been a constant connection between New York and Tokyo. Yoko Ono was in SoHo and her loft was a hotbed of what later on [1961] George Maciunas called Fluxus. She had a lot of Japanese connections. Her partner at the time was Toshi Ichiyanagi, an artist of "avant-garde music." As Tone repeatedly said, however, the fact was that artists in Japan already had Fluxus ideas before they knew about Fluxus. So I should say that they had shared with Fluxus earlier influences such as existentialism and surrealism.

Actually, Fluxus-type performance art had already started in the late 1950s. Takehisa Kosugi, Chieko Shiomi, Shuko Mizuno, Yasunao Tone and so on eventually organized Group Ongaku in 1960. This was a very influential group not only for experimental music but also for other "avant-garde arts." In 1960 Ushio Shinohara with his companions such as Genpei Akasegawa, Shusaku Arakawa, and Shousaku Kazekura declared themselves to be "Neo-Dada organizers." They experimented with "happenings" as late as in 1958 and many popular magazines and newspapers wrote about this. Sofu Teshigawara, an "avant-garde Ikebana" artist, started the Sogetsu Art Center, the most magnetic art space, and most of experimental artists in this period showed their works there. This center invited Cage and [David] Tudor in 1962. [Cage's] first visit was a sensation. When I went to his "concert" at Tokyo Bunkakaikan-sho Hall, I found many notorious experimental artists I had heard about in various indy media. This event turned out to be the catalytic meeting for those who were involved in contemporary arts. Anyway, I can't summarize this very complicated history here, but let me just say that it's possible to think that many Japanese experimental artists found their "home" in Fluxus.

Question: Can you tell us anything more about your current radio work?

Tetsuo: I am presently more interested in much smaller scales of radio transmission along with sound art experiments. Radio Kinesonus <http://anarchy.translocal.jp/kinesonus/> was started exclusively for this. It was after the midnineties that more people became interested in mini-FM as something different from ordinary radio. I argued that in the age of public access via satellite communication, global communication would become somewhat banal; artists should be concerned instead with the microunit of the medium. The Internet has rapidly developed global communication literally and the exchange of data has become too easy. This gives us an opportunity to rethink our more micro and local area of space and time. Radio also allows me to rethink the relationship between art and the body. High technology can substitute equipment for our body elements. Media art, techno-art, and computer art tend to reduce the bodily involvement in an artistic creation. It is because technology has been commonly and bureaucratically used in these directions. However, *technology* has dual aspects: *techne* (techno-) and *logos* (-logy). *Logos* logicizes everything and eventually establishes *logistics*. Our modernist way of life and the military system have become ever closer to each other. *Techne*, however, means hand work. *Ars* (art) is the Latin translation from *techne*. So technology does not have to be only "high tech" but could also work on the scale of hand work and at the distance of human limbs. This is a new area for the electronic arts and perhaps provides an alternative to the present way of life.

As for my own recent work in radio art performance—having used microtransmitter(s) as a catalyst for experimental communication, I have become interested in more minimal transmission of airwaves. While mini-FM's range was walking distance, my present attempts are done within waving-hands distance. By moving my hands over very-low-powered transmitters, I can make my hand movements evident as well as the noise/sounds deriving from the interference that my hands and transmitters create. I am interested here in the relationship between hands and airwaves because I think the hand is the minimum integral part of our body. Immanuel Kant allegedly wrote that "the hand is the outer brain of human being." The brain is also a part of our body and is the most complicated and dense part. So our hands can act for our whole body. In the last couple of years, Kazuo Ono, who was born in 1906 and was one of the most important founders of Butho dance, has been performing using only his hands because he cannot move his other limbs due to paralysis. Leon Theremin invented his famous instrument

and many musicians have used it as a music instrument. Although the Theremin has been used as an instrument to be played, I think this invention is also suggestive about ways to create a new form of radio art using our hands and airwaves.

Question: What you say about radio and art and body is very interesting. Please expand on these ideas.

Tetsuo: The history of Western civilization is a process of substituting technological artifacts for the human body. Performance art is a compensation for the loss of the body. The artist's body is the battlefield between technology and the body. As modern technology has introduced new phases starting from machine technology to electronics to biotechnology, technology has driven the performance artist's body into a "body without organs."

Conscious of Artaud, Deleuze and Guattari took this concept as the matrix of our body. To my mind, the "body without organs" means what our body is and how it is. In the era of machine technology, the performance artist could rely on reconstructing the "living" (bare, naked, aural, and flesh-oriented) body-organ. Machine technology had already invaded the human body from external spaces (the city, architecture and so on). Computer-generated technology, however, has left less room for the performance artist for any "natural" spontaneity of the body. Simulation technology still needs at least a sample of embodiment though. In biotechnology, the change goes to the extreme. Cloning technology checkmates the body itself. It finishes off any optimistic counting on the body's spontaneity. This means the body must now deconstruct itself into a "body without organs." This situation could be interpreted as the realization of the Hegelian idea of "the subject-object identity" where our subjectively "physical" (embodied) and, at the same time, objectively "physical" (disembodied) body ends.

The technology of electromechanical reproduction climaxes in biotechnology where the distance between the original and the reproduction completely disappears. The "natural" body cannot be the criterion of the world any more. Distance exists but does so virtually. This does not mean that distance becomes fake and illusory. Rather, it means that distance does not rely on what is familiar any more. It becomes totally manipulative. So what is distance in media? It is not defined by conventional space and time. Even if virtual, we could experience numerous forms of distance with new technologies.

To put it another way, today's technology is going to remove every distance that defines the human body as well as the objectified body and the physical world. Geographical and spatial distances have been shrinking with global media. Digital technology erases the distance between the original and the reproduction. But I don't think that these trends homogenize everything. We need to change our conventional epistemology and macroscopic approach and we need to differentiate distances, or else everything might seem to be the same. The fact is that global media create "translocal" enclaves of cultures. They are very local as well as going beyond locality. It is difficult to understand such a translocality unless we insist on a microscopic approach, in order to find the diverse differences in the shrinking but increasingly dense distance. Mini-FM would be merely one examples of such a microscopic approach.

Notes

1. Tetsuo Kogawa, "Beyond Electronic Individualism," *Canadian Journal of Political and Social Theory/Revue Canadienne de theorie politique et sociale* 8, no. 3 (Fall 1984): 15.

2. Maurice Merleau-Ponty, *The Visible and the Invisible,* ed. Claude Lefort, trans. Alphonso Lingis (Evanston: Ill.: Northwestern University Press, 1968), 130–155.

3. Jesse Drew, "This is Kxxx: Mission District Radio!" *San Francisco Bay Guardian News* May 13, 1992, 26, no. 32, p. 13.

4. Humberto R. Maturana and Francisco J. Varela, *The Tree of Knowledge,* rev. ed. (Boston: Shambhala, 1992), 196.

2

Immaterial Material: Physicality, Corporality, and Dematerialization in Telecommunication Artworks

Tilman Baumgärtel

The last 150 years have been a period of intense dematerialization. New media and telecommunication technologies such as the telephone, radio, television, and on-line networks such as the Internet have dramatically changed our sense of time and space. The increased speed of machine-supported movement with trains, cars, and planes adds to this new sense of space. Although the distances between various different places remain objectively the same, the increased speed with which we are able to cross the territory in between has created a new perception of these spaces.

With telecommunication media, this modernist experience has become even more elementary. With new media such as the telegraph, telephone, and Internet, the body itself plays no role at all anymore in the communication of a message from one point to another. Whereas trains, cars, or planes still move bodies and material goods from one location to another, with telegraph or telephone it became possible for the first time to move messages without any material aspect at all. The discovery of electromagnetic waves in the late nineteenth century by Heinrich Hertz marks the great divide between the material and the telematic age, which is characterized by the split between message and sender, between signal and body. After that discovery, it was no longer the body or a material object that had to travel to communicate information, but rather it was invisible and immaterial waves transporting signals from one point to another, from station to station.[1] These technical advances created a space, or rather, nonspace, that was previously beyond the imagination: a (non)place in which time and space collapsed into one another and which was accessible potentially from everywhere, by everybody, and at all times.

This development has been further radicalized by the introduction and dissemination of computers and computer networks such as the Internet. Here the signals have been broken down into the smallest imaginable elements, zeros and ones that not only can be transported over long distances in an instant, but also can be processed, channeled, filtered, searched, and revised. The immaterial data traveling over these networks not only move information from one place to another, they can also manipulate processes in the physical world, be they Web cams, automated teller machines, or Internet-controlled telerobots.

These new means of telecommunication punch "a hole in space"—not coincidentally the title of one of the first telecommunication art pieces, a television-satellite link between Los Angeles and New York by Kit Galloway

and Sherrie Rabinowitz, who operated under the name Mobile Image.[2] *Hole-in-Space* is only one of many art projects that try to come to terms with the new "space" that has developed "within" the telecommunication network space. Created in 1980, it belonged to the first wave of artworks that employed communication satellites for artistic purposes and is one of the earliest and conceptually most interesting examples of the artistic use of an electronic telecommunication network. The piece is part of the ongoing attempt to use these new, immaterial networks for the creation of art. Be it the telephone, the fax machine, the bulletin board systems of the 1980s and early 1990s, today's Internet—every new telecommunications medium has been tried out as a tool by artists. One of the most important aspects of the telecommunication networks that these artists examined was the immateriality of the media they worked with. Just as was the case with video art—but to an even more extreme extent—the telecommunication media were intangible and without physical presence, a quality that was frequently addressed by the works that were realized for these media.

This chapter concerns itself with the historic exhibition Les Immatériaux, which took place at the Centre Pompidou in Paris in 1985 and addressed the issue of immateriality, and the concepts about the *immateriel* developed by its cocurator, the French philosopher Jean-François Lyotard. I will examine how Les Immatériaux attempted to grapple with the difficult task of showing something that was by definition "immaterial" and therefore almost impossible to present in a traditional exhibition. This topic has been an important issue in the art that exists exclusively within new telecommunication spaces and that, because of its very immateriality, has presented numerous problems for galleries and exhibitions that wanted to show these works. The press release for Les Immatériaux talked of a "nonexhibition," because many of the phenomena that were presented were hardly visible or not visible at all, therefore difficult to show in an exhibition: "The subject of the show itself calls the traditional methods of representation of an exhibition into question, the tradition of the salon of the 18th century and the gallery."[3]

Les Immatériaux was troubled by some of the same problems that haunt every show that tries to incorporate projects that have been created for telecommunication networks. Although the show chose some very different approaches to exhibiting "immaterial materials," its subject matter was very similar to that of many arts projects that use telecommunication media, es-

pecially the Internet. In particular, very early Net art projects from the mid-1990s showed a strong sensitivity to the issue of immateriality and its artistic consequences. It almost seems as if the earlier in the short history of Net art these pieces were created, the more conscious they were of the special qualities that the medium they worked with entailed. Some of these works will be the subject of the second part of this chapter.

Les Immatériaux was a landmark in the development of a discourse on the postmodern society. It not only promoted Lyotard's philosophy but also played an important part in the Central European debate on the shifts in society, technology, and labor that went on in the 1980s in the writings of thinkers such as Jean Baudrillard, Paul Virilio, and Friedrich Kittler, among others.[4] Many of the topics the show touched upon were also addressed in the telecommunication and Internet art that appeared in the 1990s, mainly out of Europe. In some cases, it is even possible to show that a number of telecommunication and Internet artists and theorists either saw the show or at least had significant information about it. However, many more of the activists of the telecommunication and Net art period of the 1990s did not see the show or even know about it, yet they dealt with some of the same subjects; so it appears that Les Immatériaux dug up, almost instinctively, ideas that were about to surface in the arts in the following years.

Les Immatériaux was an original exhibition that touched on a number of topics from very different fields and disciplines, including art and philosophy, automation and microelectronics, telecommunication and computerization. "It is important for philosophers to deal with subjects, that are none of their business," Lyotard pointed out in an interview. "It is not our intention to sum up the new technologies in this exhibition (in part, because they make any kind of encyclopaedic knowledge impossible) or to explain how they work. All it attempts is to discover and raise a sensibility that is specific to Post-Modernism, and we assume that it exists already. This new sensitivity is still hidden, though, and not conscious of itself."[5]

The show was to highlight the technologies that were prerequisites to what Lyotard had called "la condition postmoderne" in one of his best-known books.[6] Modern telecommunications technologies were among the most prominent examples of these technologies that the show put forward, and Lyotard frequently stressed that these technologies transcended matter and corporeality. In an interview on the show, Lyotard added:

The term "immaterial" refers to a somewhat daring neologism. It merely expresses that today—and this has been carried through in all areas—material can't be seen as something that, like an object, is set against a subject. Scientific analyses of matter show that it is nothing more than an energy state, i.e., a connection of elements which, for their own part, are not understandable and are determined by the structures which each have only a locally limited validity. The increasing mutual penetration of matter and spirit which is equally clear in the use of word processing systems is now felt in the classic problem of the unity of body and soul shifts.[7]

And in a conversation with Jacques Derrida, he added that Les Immatériaux "designate a structure, in which there is no room anymore for the traditional difference between intellect and matter."[8]

As a synopsis of the postmodern information and service society, Les Immatériaux not only put a great emphasis on the influence that the new methods of on-line communication might have on our life, it even included an on-line conference with a number of philosophers and journalists, conducted during the show on Minitel, the state-sponsored French on-line system.[9] The conference participants included Daniel Buren, Michel Butor, and approximately twenty other French intellectuals. Lyotard commented: "The experiment seems to me to be especially interesting in terms of how all the times of writing are changing: the time of inspiration, the time of re-reading one's own text, the time where one has the text in front of oneself, the time to check with other texts. And in relation to time this experiment has to be examined."[10]

This on-line conference was an early attempt in collaborative writing, networked discourse, and moderated on-line debate that both precedes and resembles the many similar projects that have taken place on the Net since. Mailing lists such as nettime, re:code, Rohrpost, and Spectre, as well as the many discussion projects that take place on-line for a limited time, have since taken up and popularized this concept. Both the show in general and the on-line writing in particular exerted a strong influence on the development of a discourse on on-line media and of a network-specific art.[11] For example, German artist and hypertext researcher Heiko Idensen points out Les Immatériaux and the possibility of a sophisticated intellectual on-line communication that he encountered at this show as one of the major reasons that he wanted to get involved with computer networks as an artist and critic.[12]

Les Immatériaux incorporated some works by artists that from a contemporary point of view can be considered to be groundbreaking for artistic practices on the Internet and with other telecommunication media: some conceptual artists and some preconceptual minimalists such as Joseph Kosuth, Dan Flavin, Giovanni Anselmo, Robert Ryman, and Robert Barry. Marcel Duchamp, who has frequently talked about his concept of an "anti-retinal" art, was also included. So the show presented some of the most prominent conceptual artists, whom Lucy Lippard wrote about in her book *Six Years,* as well as the art she referred to in the book's famous introduction as "dematerialized": "Conceptual art, for me, means work in which the idea is paramount and the material form is secondary, lightweight, ephemeral, cheap, unpretentious and/or 'dematerialized.'"[13]

This, of course, would also be a good definition of some of the Net art of the following years. Much of the art that was presented at Les Immatériaux was a direct predecessor of telecommunications and Internet art, which is also not only dematerialized, but also unpretentious, ephemeral and (an aspect that is often overlooked) mainly cheap to produce. These qualities are an important source for some of the motifs that appear quite frequently in early Net art pieces: references to physical space and the body, so-called gateway projects that try to connect the virtual space of the Net with the "real world," and projects that address human identity and its trappings in an on-line environment.

Les Immatériaux was structured into a number of sections that had titles such as "Peintre sans corps," "Tout les copies," "Memoires artificielles," "Homme invisible," or "Théâtre du non-corps." Each of these section titles would make perfect sense as chapter titles in an imaginary study on motifs in Net art, because all of the topics they represent are addressed in early Net art pieces, and none of them would have any significance if it weren't for the immateriality of on-line media. The absence of the body, the ease with which endless copies of a digital "original" can be produced, faked memories, and the vanishing of identity and body are all topics of telecommunication and Net art for a good reason: They play upon distinctive qualities of the very media that are used for telecommunication. Digital and communication media have produced a number of recurring motifs, and these motifs mirror the technical infrastructure of telecommunication network architecture.

Some prime examples of early telecommunication art were the projects that the Canadian N.E. Thing Company, Ltd., produced in the late 1960s

and early 1970s. A newspaper article described one of the company's concepts for the use of the international telex system as follows:

> So one can imagine the telex at General Motors sounding a sprightly prelude of bell ringing, followed by the N.E. Thing Co. logo ("the world's only telexable logo"), then the admonition: "DON'T LOOK AT THIS UNLESS YOU ARE READY FOR ANYTHING," followed by an invitation to consult the N.E. Thing Co. on "IMAGINATION . .THE G.N.G. . GROSS NATIONAL GOOD . . IDEAS . . ANYTHING," at their offices in Vancouver or Ottawa.[14]

Needless to say, the N.E. Thing (pronounced "anything") Company, Ltd. (NETCO) wasn't a proper company that was offering its services to a blue-chip company like General Motors. It was instead an art project by Canadian artists Iain and Ingrid Baxter. Long before the short period of "business art" in the eighties and nineties, the couple marketed themselves as a company that provided "art services" to the art market. Connected to the conceptual art movement of the late sixties, when such art was still called "idea or information art" by many critics, the Baxters registered N.E. Thing as a company in 1969. Its provincial incorporation lists the expressed objects:

i. To produce sensitivity information:
ii. To provide a consultation and evaluation service with respect to things:
iii. To produce, manufacture, import, export, buy, sell, and otherwise deal in things of all kinds.[15]

N.E. Thing's "business activities" earned the Baxters not only an invitation to a number of major international exhibitions of conceptual art but also a membership in the Vancouver Board of Trade. In a show at the National Gallery of Canada in Ottawa, they set up an office as their headquarters in the museum and published their corporate archive in *The N.E. Thing Co. Ltd. Book*.[16] But most importantly in the context of this chapter, they, along with Hans Haacke and his installation *News* (1969), were among the first artists to use the telex for artistic purposes. In the context of their ironic inhabitation of commercial and bureaucratic institutions, this makes them the forerunners of the many attempts to establish fake institutions and companies within (electronic networks) by artists such as etoy, Stuart Rosenberg, IRWIN, Heath Bunting, and Rachel Baker.

The telex was a perfect medium for establishing a "virtual identity" for a pseudocompany such as N.E. Thing. In the dematerialized territory of electronic communication, it gave the company respectability. Unlike the Internet, the telex network was difficult to access and available only at high prices that mostly companies could afford; individuals were rare among the customers of the telex companies because of the prohibitively high costs. N.E. Thing was sponsored by a communications company for its experiments. When Iain Baxter talked to a reporter from the *Vancouver Sun* describing his fascination with the telex, he almost sounded like early Net art enthusiasts: "It's an open channel. No one can stop the telex from working because it's a twenty-four-hour-a-day communication hookup. As soon as you dial the number you are really into that office and then, depending on the personality of the people and their attitudes and so on, well it's up to them what happens. . I'd like to find out what the machine can do, what are the processes inside it that can provide new ways of looking at our total environment."[17]

N.E. Thing used the telex not only to establish its "virtual identity," but also to send instructions to remote galleries and museums about how to set up its pieces:

> In the Company's interpretation of McLuhan, communications media were used to an advantage by sending telex and telecopier messages from geographic, political and economic peripheries, creating what Ingrid [Baxter] called an aesthetic of distance—a means through which the Company could traverse time and space, inserting its presence in territories that it would otherwise be excluded from. Furthermore, communication works were also a cheap, easy, quick and portable means of artistic demonstration which allowed for an infiltration of national and international corporate and artistic systems that traverse geo-political boundaries.[18]

Creating pseudo-identities and -entities on the Net has been an important subject for on-line artists ever since.

With the telex system as with the Internet, the data were by definition "everywhere and nowhere" at the same time, because transmission of the data took place in a telecommunications network. The data "materialize" only when accessed from a telex machine somewhere (or anywhere) else. This "space" is characterized by dematerialization. Without any physical existence and physical distances, it plays no significant role on the Net. When N.E. Thing used the telex system, it did not only operate in this environment,

it reflected in its work the very qualities of this nonspace. Like the Net artists of the 1990s, N.E. Thing created a number of installations and on-line pieces that dealt precisely with the problematic question of location and space in an on-line environment and that often attempt to make the exchange of digital data on the Net physical again.

When Rosalind Krauss wrote her seminal essay "Video: The Aesthetics of Narcissism"[19] in 1976, she observed how a particular formal quality of the then-new medium video became a subject of the works of many video artists. The fact that video is able to record and transmit at the same time, producing instant feedback, led to a huge number of works by artists such as Richard Serra, Nancy Holt, Vito Acconci, and Joan Jonas that dealt with the possibility of turning the human body into the central instrument and subject matter for this recording. "The body is therefore as it were centered between two machines, that are like the opening and the closing of a parenthesis. The first of these is the camera; the second is the monitor, which reprojects the performer's image with the immediacy of a mirror,"[20] Krauss wrote and identified this phenomenon in the works of a number of video artists.

Similar mechanisms are at work in projects that were created for the Internet and other telecommunication media. Whereas one of video's capacities is the possibility of recording and transmitting, in the case of on-line media, the "material" of telecommunication and Net art is exclusively immaterial data and "immatériaux," to use Lyotard's term. The most successful on-line projects are native to their medium, because they make use of the specific formal qualities of that medium and turn those qualities into subject matters of their work. The pseudo-entities and companies, the relationship between real territory and corporeal cyberspace, the correlation between human and "data body" are central topics to Net and telecommunication art, because they also deal with one of the most significant properties of Net and telecommunication media. By "semiotizing" the phenomena of the real world, the Net opens up very specific gaps for artistic intervention. Although fakes and works that deal with the contradictions between the physical and real and the virtual and immaterial are not limited to Net art but have been dealt with in other, more traditional art forms, in the environment of the Internet and its technical structures, they have an even greater relevance.

As quoted earlier in the chapter, Lyotard said in an interview that Les Immatériaux "attempts to discover and raise a sensibility that is specific to Post-Modernism, and we assume that it exists already. This new sensitivity

is still hidden, though, and not conscious of itself." Telecommunication and Net art works try to express this "new sensitivity." They make us conscious of the immaterial phenomena that have developed within telecommunication technologies. They don't do it with a theoretical approach, they do it by actually engaging with these "immatériaux," by taking these new conditions, with which we have grown familiar so very quickly, to an extreme in order to create an opportunity to experience them again and make them unfamiliar again.

Notes

1. See also Peter Weibel, "Techno-Transformation and Terminale Identität," in *Telematik–NetzModerneNavigatoren,* ed. Jeannot Simmen (Cologne: Buchhandlung Walter König, 2002), 8–15.

2. Frank Popper, *Art of the Electronic Age* (London: Thames and Hudson, 1993), 136–138.

3. From the reprint of the press release in Jean François Lyotard et al., *Immaterialität und Postmoderne* (Berlin: Merve, 1985), 11–12. Translation of all German sources by the author.

4. Probably because of language constraints, the show seems to have had much less of an impact in the English-speaking Anglo-Saxon world. However, a very thorough discussion of the philosophical implications of Les Immatériaux is Anthony Hudek, "Museum Tremens of the Mausoleum without Walls: Working through Les Immatériaux at the Centre Pompidou in 1985" (M.A. thesis, Courtauld Institute, London, 2001).

5. Lyotard et al., *Immaterialität und Postmoderne,* 33.

6. Jean-François Lyotard, *La condition postmoderne* (Paris: Les Editions de Minuit, 1979).

7. Lyotard et al., *Immaterialität und Postmoderne,* 22.

8. Ibid., 23–24.

9. Ibid., 26.

10. Lyotard et al., *Immaterialität und Postmoderne,* 56.

11. For an extended discussion of the early history of these artistic telecommunication experiments before Internet art, see Tilman Baumgärtel, "Net Art: On the History of Artistic Work with Telecommunications Media," in *net_condition: art and global media*, ed. Peter Weibel and Timothy Druckrey (Cambridge, Mass.: MIT Press, 2000), 152–162.

12. See interview with Heiko Idensen in Tilman Baumgärtel, *net.art—Materialien zur Netzkunst* (Nuremberg, Germany: Verlag für moderne Kunst, 1999), 46–54.

13. Lucy Lippard, *Six Years: The Dematerialization of the Art Object from 1966 to 1972* (Berkeley: University of California Press, 1973), vii.

14. Joan Lowndes, "'Easel' is a Telex," in *You Are Now in the Middle of a N.E. Thing Landscape: Works by Iain and Ingrid Baxter 1965–1971*, ed. Nancy Shaw and William Wood (Vancouver: University of British Columbia, Fine Arts Gallery, 1993), 48–49, 48.

15. William Wood, "Capital and Subsidiary. The N.E. Thing Co. and the Revision of Conceptual Art," in *You Are Now in the Middle of a N.E. Thing Landscape: Works by Iain and Ingrid Baxter 1965–1971*, ed. Nancy Shaw and William Wood (Vancouver: University of British Columbia, Fine Arts Gallery, 1993), 11–21, 12.

16. *The N.E. Thing Co. Ltd. Book* (Vancouver and Basel: NETCO and the Kunsthalle Basel, 1978), unpaginated.

17. Vancouver Sun, January 9, 1970. Cited in Joan Lowndes, "'Easel' is a Telex," in ed. Nancy Shaw and William Wood, *You Are Now in the Middle of a N.E. Thing Landscape. Works by Iain and Ingrid Baxter 1965–1971* (Vancouver: University of British Columbia, Fine Arts Gallery, 1993), 48.

18. Nancy Shaw, "Siting the Banal," in ed. Nancy Shaw and William Wood, *Works by Iain and Ingrid Baxter* (Vancouver: University of British Columbia, Arts Gallery, 1993), 25–41, 32–34.

19. Rosalind Krauss, "Video: The Aesthetics of Narcissism," in ed. Gregory Battcock, *New Artists Video* (New York: Dutton, 1987), 43–64. Reprinted from *October* 1, no. 1 (Spring 1976).

20. Ibid., 45.

Sabine Breitsameter

FROM TRANSMISSION TO PROCESSION: RADIO IN THE AGE OF DIGITAL NETWORKS

"Something shocking has happened!
Who on earth allowed all those people to speak?!"[1]

"You-you-you-you are listening to Radio Ozone..." The trailer sounded like a machine, of remoteness and the presence of data. The compressed, robotic voice, the peeping and crackling during pauses, the minimalist composition – the electrons seemed to make all of this audible as they thrust their way from Riga, Latvia through data lines far and wide, to manifest on computer speakers the world over as sound. Aesthetically an adequate counterpart for radio during the epoch of the I/O principle and networks, it characterized its time much like the stern, atmospheric announcements with their gongs and their "Achtung, Achtung!" (at least in Germany) stood for the early terrestrial radio of the 1920s. The Latvian artist collective re-lab.net began broadcasting its Radio Ozone program in 1996; live on the Internet for an entire evening, at least once each week, with sounds that can broadly be categorized as Electro-pop or as part of the budding Electronica movement. re-lab.net belongs to the group of pioneers once referred to in the context of "webcasting" – a term analogous to "broadcasting," which was created to indicate the transmission of audio-visual programs on the Internet.

"The Net" didn't become a generally accepted term until the beginning of the 1990s. Originally conceived as a means of exchanging alphanumeric data, it didn't take long before audio content was being transmitted. In the middle of the 1990s the first streaming software became widely available, with RealAudio leading the way. It was now possible to listen to sound at the same time the audio data was being accessed and transmitted from the Net. The Internet had, indeed, already been able to transport sound, but only in data formats that demanded a painstakingly slow download to a computer. Streaming allowed most audio files to be easily accessed on demand. It was then possible for anyone with the proper hardware and software to practice on the Internet what had traditionally been reserved for radio stations, namely the broadcasting of programs – even live.

Instead of having to go through the burdensome (and in most cases highly complicated and unsuccessful) process of applying for a radio frequency, whose range was still limited to a specific territory, the Internet established a technical distribution structure that anyone could employ. Since then, everyone with the basic tools can have his own station and publish audio content on the Net. The first ones to systematically exploit the transmission of sound this way were artists[2] – of all kinds.

Anyone who experimented with the early versions of the RealAudio software will surely recall the noisiness and stuttering of playback. Would the industry attempt to force users to accept this poor sound quality in order to simplify their marketing channels? Would we have to get used to a sonic culture limited to sound bites, just because the flow of data within the networks could not be optimized? Would this be the future of listening?

For as much skepticism as there was, there was just as much celebratory anticipation – particularly by artists – about the opportunities the future would bring. It quickly became clear that the new medium of the Internet, which had been strongly characterized by its visual component, would realize great depth in the element of sound – an element inextricably linked to the corporeal and the three-dimensional, which opened the space beyond the monitor to create a new electro-acoustic, multidimensional space. Beyond these aesthetic-conceptual considerations, however, the Internet was mainly attractive because of the possibilities if offered to distribute audio content around the globe. This translated into independence from established radio stations and recording labels, which had previously been necessary for distribution. In a broader scope, this development became tangible with "Hybrid Workspace," exhibited at the Documenta X (1997) in Kassel, Germany. Following that event, one festival after the other dedicated itself to the new frontier of webcasting. Parliaments, stockholder's meetings, US police radio, and others followed suit. Soon it was possible to listen to thousands of programs from around the world on the Internet. The networked computer had become a global receiver.[3]

Skeptics, however, started to ask whether it could still be called "radio" if the transmission of sound is no longer achieved by the waves within the electromagnetic spectrum referred to as "radio waves." According to Wolfgang Hagen, creator of radio content and theoretician, the Latin term "radius" refers to the circular rays that appear to emanate from lighted bodies. Hagen also refers to the fact that radio is a technical prefix, "which describes what engineers first saw – sparks of condenser discharge in the first transmission devices."[4] Internet radio has almost nothing in common with such a metaphor, as its mechanism is difficult to observe visually, and even when it can be observed it is in the context of a user interface belonging to the production or playback software. Neither one displays any sparks, nor does anything radiate from a central point. Instead, there is a branched transfer of data packets through a sometimes tightly and sometimes loosely woven network. The transmission of Internet radio is limited to the unspectacular physical incidents of the clatter of a keyboard and the clicking of a mouse. And, while traditional radio is a "push" medium, which throws[5] its content out into the ether, the Internet operates on the "pull" principle. Data flows only if the user logs in and specifically calls up the bits and bytes to start moving in his direction. Finally, classical radio addresses everyone – technically speaking – in that an unlimited number of recipients can set a frequency and receive the currently available program. Those who log in to an Internet station, however, can be out of luck when the standard playback software allows access only to a limited number of users. Because the necessary software is prohibitively expensive, listener numbers that climb into the thousands only materialize on stations with strong financial backing.

The radio metaphors of sparks, rays, and waves, therefore appear to be rather unfitting when it comes to the Net, becoming instead quite secondary when one imagines how radio is experienced. Radio – radius; to put sound into motion, regardless of the medium, in order to transcend space and time. Such is the anthropologic stipulation of radio that has been used to describe the thousands of years-old longing to eliminate the bond between a sound event and its place of origin. This longing can be referenced in countless myths in human history.[6] With the Internet, there is a new apparatus with which sound can be transported across distances. For a listener it is typically irrelevant which technical medium is used to transmit the sound he hears. If we look at the apparatus of the Internet more specifically, we can envision its specific properties: network characteristics, data exchange, data processing, etc. We may thus recognize that the audio options in the Net barely reflect these properties, but rather mimic those of its traditional predecessor, namely the broadcasting principle. The audio stream that I call up functions for me as a listener in a manner no different than the transmission of a normal radio station. One transmits while many receive. Even listening to audio-on-demand files, which are often referred to as a net-specific form of radio in terms of practical reception, occurs in a way that is based on the old model. The industrial design of standard playback software allows for nothing different. It continues to adhere to the idea of a defined mono-directional, linear relationship between transmitter and receiver. The latter has no opportunity to intercept or even to return anything. Software has not even provided for the simultaneous playback of multiple programs and the creation of individual mixes.[7]

The pioneers of Radio Ozone in Riga were not much interested in simple webcasting based on the standard model. For them, the central star-shaped broadcasting principle was obsolete – a consequence of their experience during the Soviet era and the period following the dismantling of the Iron Curtain. The unrestricted access of the Internet media structure appeared as if it had been specially ordered. Here they would be able to publish what they found important, without having to pass through the eye of the needle fashioned by the established media. It wasn't enough for them to portray Internet radio by means based solely on the concept of streaming. Their plan was to exploit the network characteristics of the new medium and to make the Net really start to sound off. At the end of the 1990s, their so-called loop actions were legendary. For the events, the Latvian artists met with other sound artists and independent webcasters, including some from Sidney, Banff, Amsterdam, Ljubljana, and Berlin. The principle was that every station would take a live stream from another station, add their own sounds, make them available to the next participant, who would then mix his own sounds into the stream and pass it on, until it was called up at its place of origin – with a delay of about 10 to 15 seconds. The loop was then closed. The more often the stream circulated, the noisier it became. The

sound quality still so poor at the time didn't trouble any of the participants, nor did it disrupt the random sonic results, which were created by the incalculable time delay of the Internet and which made a synchronous collaboration impossible. But this was of little consequence for the participants.

"Initially we were surprised that anyone would consider our experiment art. That was never our intention,"[8] reported Rasa Smite, founder of the Latvian group. "Actually we wanted to make a break from art. But then it became obvious — we're artists. What we do, we do as artists. And it wasn't about a fixed result, but rather about the process of sonic collaboration on the Internet."

The loop actions of re-lab.net were an important prelude for artistic aural activities that make use of the Net as a medium of digital data exchange and divert from the star-shaped broadcasting principle. The potential of establishing a flexible, dynamic relationship between sender and receiver elicited a series of important artistic experiments, from which a new conception of radio was derived. Some places hurried to rave about the "new possibilities" of the age of the digital network. Indeed, it is useful to take a comprehensive look back into its history. It is safe to assume that the Riga artists were not aware of the connection, but the loops of re-lab.net had their forerunner in Max Neuhaus' "Public Supply" actions of the early 1970s. At that time, Neuhaus, the world-famous avant-garde percussionist, applied a principle very similar to that of looping to play with practically the entire National Public Radio network. Similar configurations are to be found in a number of other Internet radio projects. Precursors to network-based radio-Internet projects are to be found not only in the 1960s and early 1970s. Those wishing to truly understand the promise the Internet possesses to change the traditional notion of radio should secure a listening post from which they can tune their ears to the early history of radio broadcasting.

The first original German radio play, broadcast from a station in Frankfurt in October 1924, leads us directly to the electro-acoustic space of digital networks and its potential for a radio of interaction and participation. The title of the play was "Zauberei auf dem Sender" (loosely, "Radio Magic"). Its author was Hans Flesch, then director of the Frankfurt station and later director of radio in Berlin, one of the most innovative, politically daring, and media-savvy radio creators of the Weimar Republic. One of his main motivations with the medium of radio was to avoid forms familiar in newspapers, theater, books, concerts, and vaudeville. Instead, he called for the investigation and exploitation of the specific possibilities of the radio medium itself.[9] Broadcast during a time when radio was the modern medium par excellence, "Radio Magic" told the story of a mysterious sonic disturbance. Instead of the Blue Danube Waltz that had been planned for the show, listeners were served up a concoction of noises, music, and human voices. No one had ever heard anything like it. The people working at the radio station are

bewildered. The program director is stunned: "Who on earth allowed all those people to speak?"

It seems as if an unidentified person seizes the station and its frequency and begins broadcasting cheerfully away. For the program director in "Radio Magic," the idea that some unauthorized person could be a broadcaster is categorically intolerable. "Where would we be if everyone did everything he felt like?" he wonders.[10] He insists on restoring the order of the broadcasting principle, the transmission monopoly, and editorial authority, and demands to quickly determine the reasons behind the aural anarchy, then impose silence. The wild mix of audio, we finally discover, is the product of a magician. With his supernatural powers, he ties together all the sound and radio waves flying through the air, and casts them into a single program. This was likely how early radio sounded in the USA before the First World War. Every night, hundreds of radio amateurs would assemble in the ethers. Call and answer occurred on the same frequency – by the dozens, simultaneously. The whole thing was like a modern day Internet chat scenario, but you could hear every bit of it. Indeed, "Radio Magic" found its topic in the conflict between two concepts of radio – two different media architectures. It was a conflict that, back then in the middle of the 1920s, was still rather virulent. "Radio as broadcast" versus "radio as multi-user space," "One sends while many receive" versus "many communicate with many." A one-way versus a two-way medium.

Mono-directional broadcasting, as Hans Flesch elucidated in this first German radio play, is not the natural state of radio. Its media architecture is much more the result of a political decision that was made in the 1920s in Germany – as in most other countries. The fear of the propagandistic effect of the medium – the incitement of the masses – was very strong at the time. The broadcasting principle, the state-controlled transmission monopoly, seemed to the fearful German military and the reactionary political bureaucrats to be the lesser evil, if public radio was altogether unavoidable. This stipulation regarding the medium of radio as a state broadcasting monopoly and one-way communication medium would be criticized long into the next decade by artists and theoreticians such as Bertolt Brecht (1932)[11] and Rudolf Arnheim (1933). "Radio: one speaks without hearing and everyone else hears without being able to speak."[12] While Brecht called for democratization along with his push for a two-way medium, Arnheim very generally pointed to the communicative paradox of the broadcasting principle – to the power differential inherent in the face of an absence of options for direct response. In both criticisms is the reproach that that which is not call and answer or statement and response is neither dialectic nor truly enlightening.

The broadcasting principle also lays claim to substance and authority. As a consequence of its mono-directional structure, it benefits from both of these while it also encompasses – if not outright insists on – abuse as a result of the nature of a monopoly. The role distribution also becomes clear:

the one transmitting must take the initiative, while the receiver and addressee accept. Mission – transmission: the sacred connotation of the term never fails to resonate. The effect lingers from the time when it was considered a miracle that voices and sounds could travel magically through the air,[13] and also points to the power discrepancy between those on the one hand who considered particular content worthy of broadcast and therefore operated with a certain "broadcast consciousness," and those on the other hand who received the directive to shut up and listen – and to adopt the program as their own.

With much self-mockery, but not without regret, in 1924 "Radio Magic" heralded the victory of the broadcast monopoly over the network and multi-user principle. Beyond its political and communications-cultural objections, the first original German radio play additionally exhibits how a media architecture that is directed to participation and interaction also requires a reevaluated aesthetic criteria. The linear, defined program of the one-way medium challenges the polyphonic collaged improvisation of the multi-user space – a media architecture that seeks alternative materials, forms, and dramaturgical developments, requires other strategies of creating significance and meaning, and calls for a new concept of the artist, the recipient, and art itself.[14]

During the coming seven decades, radio and its imaginative and experiential world would develop almost exclusively from the mono-directional media architecture of the broadcasting principle. Interest in the concept of networked or two-way communication and interaction, however, continued to swell, requiring its own treatise in order to show how the principle of networking established the basis not only of the legendary 1938 American radio show "War of the Worlds," but also a number of Nazi radio propaganda programs.[15]

The call for reshaping radio into a two-way communication medium – in the Brechtian tradition – once again increased in volume, particularly in the context of the anti-authoritarian movement in the middle and end of the 1960s. There were some attempts to allow the sentiments of listeners directly into programs by employing the telephone, even in a few radio plays.[16] But the real push toward interactive art, which was so indicative of this period, hardly found its place in the medium of radio. At that time the Pentagon was having its first successes with technical networking experiments using computers, which gave birth to the forerunner of the Internet. However, it was known only to a very few artists and gatekeepers. Networking, de-hierarchization, and interactivity: all of these were key words for the arts of the time, which in the age of political emancipation were not part of the common vernacular. In beginning to realize these ideas, however, artists were soon confronted by the fact that neither interactive media architectures nor suitable technologies were at their disposal.

Despite the expansion of microelectronics and computers, the progress was slow for those artists who began to use early computer networks at the beginning and middle of the 1980s, such as the circle around the Canadian telecommunications artist Robert Adrian. Not long thereafter, composers and sonic media artists such as Alvin Curran and Bill Fontana created a stir with their net-based radio compositions, some of which were prize-winning, but which also showed that their excellent technical and audio quality was only achievable with very expensive equipment. Satellite connections, radio conferencing hook-ups, and stereo lines were all part of networks accessible only to those who gained access to public broadcasting centers and whose gatekeepers were able to be won over by off-beat ideas. This is not to say that they were not interested, in principle. If for no other reason than extreme cost considerations, however, such projects remained an exceptional adventure.

The digital networks of the 1990s were the first to provide the technical prerequisites with which the medium of radio could function with alternative communication systems, no longer exclusively within the broadcasting principle. The established media rarely explored principles and methods of making radio on the technical or conceptual basis of networked media architectures. But for that very reason, the exploration was more often undertaken by artists.

One prototype of early net-based radio experiments was "Horizontal Radio" from 1995, which was conducted under the auspices of ORF art radio and its editor Heidi Grundmann. This global 24-hour radio action set out to aurally implement the network principle as it entered the public consciousness through the World Wide Web — with the help of all available audio transmission technologies. Telephone lines, conventional radio transmission technology, ISDN, satellite transmission, and the Internet were all applied. Thirty radio stations[17] participated in the project, from Jerusalem to Linz and Berlin to Australia, as well as eight Internet servers and over a hundred artists in their studios. Each of the participants was an equally valuable node in a global network. An autonomous audio event occurred at all of these locations simultaneously. Using the conglomeration of lines, each event was able to adapt the sounds of the other stations at their discretion and link it to their own productions. In this way, they created mixes from the surprising to the cacophonous, depending on whether the sounds were specifically coordinated between the creators or wholly spontaneous. The result could then be sent by online or on-air connections and thus made available to the participating audience. If, for example, Stockholm jammed with Berlin and Jerusalem over stereo radio lines, the mix could be heard on the radio at all of these three locations, depending on the range of the local stations. It was also simultaneously broadcast on the Internet and could be accessed by other stations in the global net and integrated into their own sound productions.

"Horizontal Radio" thus broke through the broadcasting principle to the advantage of unabashed transmitting and receiving. The kind of soundscape that was presented to the listener was dependent on the listener's location, as well as on the networking between stations and the aesthetic decisions made there. "There were infinitely many variations of 'Horizontal Radio'," recalls Heidi Grundmann, "but none of the participants, including the radio listeners as well as the Internet users, could experience everything. That was impossible."[18] Those who wanted to listen to "Horizontal Radio" but were outsiders in the classical sense had a difficult time. The action was primarily designed for those who were directly involved. Only by participating was there a purpose for the direction of the data flows, for distance and proximity, and for the participating media and their qualities.

In this and similar undertakings, critics failed to find a concept or a sense of accountability oriented toward an end result. What randomly and unpredictably came out of the mixes was not always created for the purposes of pleasing the ear. Where the Internet was selected as the channel of audio exchange, the general result also suffered from the poor sound quality of the streaming software being used at the time. But what remained especially unsatisfying for many participants was that their carefully produced contributions were anonymously crammed into an expansive project while those who used and appropriated them failed to contextualize them according to original artistic intent. The promise of the Net to provide two-way communication for the purpose of power sharing did not pay off. For some of the participants, "Horizontal Radio" ended up being more of an experience of powerlessness.

A number of artists, however, came to the project with a different level of awareness. They understood the individual contribution to be a sort of building block that would be able to be integrated in ever-changing contexts, thus modifying the original work. "Horizontal Radio," an early and wide-ranging attempt at creating networked radio, elucidates that propositions of its kind must not be disregarded on the outset, but instead evaluated based on a fundamentally redefined discourse. The perceptions of concepts such as author, artist-subject, program, work, editorial responsibility, and the implicit distinction between sender and listener that had been accepted until now all transport criteria that could not be properly addressed amidst the happenings of the 24-hour event.

The first thing we can say about such a project is that it is comparable to a carnival, in that small and large groups of participants in the alleys and streets of a city have their fun, sometimes meeting up with other players, amusing each other, then moving off to other parties, going along together in different sizes of groups, and then maybe finally integrating into a larger procession down Main Street, which then as a whole offers something to curious onlookers. Here, radio does not connote information or pleasing sounds, but is experienced rather as communication in the context of a son-

ic rendezvous, indeed a form of intercourse. The Net ends up presenting a structure capable of being filled with audio data, which can then be perceived only by those who participate. Just how gratifying this aesthetic-communicative experience is for each person depends on the individual's specific criteria. The question must remain open about exactly what this kind of net-based collaborative radio action offers listeners sitting in front of speakers, who follow the entire process as they would a program on a radio station.

The interactive radio play "The Wheel of Fortune,"[19] broadcast at the end of September 2001 by the BBC, offered an indicative answer. Recalling a kind of acoustic hypertext principle, it worked with the technical principles and structures of a network. Three different radio plays, in which the content was carefully coordinated, were broadcast simultaneously on three different channels. One of the shows was to be heard on BBC Radio 3, one on BBC Radio 4, and the third as an Internet stream. At key points in the story, a recognizable signal was given for listeners and users to choose to switch to a different stream or channel, thereby selecting an alternative story progression. There were so many options that the probability was very high that each listener, depending on his selection (indeed, if he chose to make any selections at all), would hear a different version of the play. The concept of this acoustic hypertext was oriented around offering the listener a linear work — despite the selection options — that would approach the standard radio and radio play experience. Even if recipients chose not to navigate through the play, they were guaranteed to have a consistent experience. In any case, what they heard was a completely conventional radio play of traditional dramaturgy. But what should induce a listener to play within this conventional form, without actually being able to extend beyond the authorial frame of experience? Why select between options when a dedication to the linear flow of one version already achieves the desired and familiar listening experience? Those who stick with conventional forms will rarely have to worry about in-house conflicts. The station's concern about the consistency of the program and its reception was greater than its curiosity about plumbing the depths of the possibilities of appropriating a different media architecture and endowing it with meaning — a missed opportunity.

This question about the methods of appropriation and the endowment of meaning on the side of the listeners and users has been a focus of the "Tele-tap"[20] project from the Amsterdam artist group CUT-n-PASTE, which since 2001 has been exploring new configurations of networks, telephony, and broadcasting. The latter has benefited the project because it avoids the one-time event that hits the air waves for a brief time and is then considered to be celebrated history. In long periods of preparation, the artists continuously attempt to develop new forms of representation with which they can activate their Tele-tap system. Its underlying principle is based on mobile communications. A selected number of protagonists are sent off with a con-

tinuously connected mobile phone and plunged into the Amsterdam nightlife. What they experience there is transmitted throughout the course of the evening to an Internet server that produces live streams from the information it receives from the telephone, as well as to a radio studio and/or other venue. The individual streams of each of the mobile phones can be heard on the Web. Comparatively, the radio[21] functions as a meta-channel, which linearly and successively reproduces and moderates the multiple happenings experienced out there by the eight protagonists, and "mediatizes" the anticipated audio experience, dramaturgy, and ways of representation and communication.

Anyone interested in listening to the players during their unadulterated nightlife experiences can hear each one individually in the Net and thus — as consciously calculated by the artists — succumb to his own aural voyeurism. Things get interesting at just the point where radio would normally discretely fade out because, for example, one of the protagonists finds himself in the red light district and his encounters become increasingly bizarre — all of which we are privy to, thanks to the microphone in the mobile phone. It was also exciting — particularly without a moderator's commentary — to follow one of the participants, an expert on bats, as he intruded into a boarded up building one night, only to excite a mass of the winged creatures, which then flew wildly out. Broadcast and net versions complement each other well here, illuminating the different ways of creating meaning and context. The artists are in the process of further technically developing the setting in order to make additional flows of communication an essential component of the system. How would it be if the players could be contacted by listeners or other players using mobile or standard phones? What would the recipients perceive and experience if the Internet streams, which until now were separated, could be heard all at the same time? And what would change if the listeners — instead of a moderator — could control exactly what happens on the radio meta-channel?

The Tele-tap system demonstrates how the borders between intimate and public spaces break down in a mobile and interactively communicating society. This "reality radio" is not the result of staging or adaptation, but rather the media-architectonic concept of the artists. A number of media apparatuses were configured to coordinate with each other in order to activate alternative communication flows. They challenge expectations in recipients and provoke them to take a stance about their perception — listening, eavesdropping, and wiretapping as much as intervening in order to specifically influence one's own audio experience. "Tele-tap" shows that, depending on its specific architecture, every listening medium generates its own ear — its own way of being sonically perceived. And it is not the medium that mediatizes, but rather the perceiver, who adjusts his attention appropriately.

With "Horizontal Radio" from ORF art radio and the loop actions of relab.net, it was still about affirmatively realizing the state of being connected and being networked, the result of which was the crystallization of the question of what the medium does with its users. While the BBC project cautiously assumed that the new, other medium "didn't do anything" to its users – meaning it offered them nothing that conflicted with the user's typical radio experience – "Tele-tap" specifically addresses the interplay between manipulation and being manipulated.

Indeed, the medium does something with the recipients because they do something to it. This concept is also the basis of Atau Tanaka's radio-Internet play "Frankensteins Netz"[22] ("Frankenstein's Net") from 2002. It used the Internet not only as a structure for data exchange, but mainly for data procession. The users could upload audiovisual data in order to construct a personalized, agile, digital creature that was processed by the system in accordance with a complex server programming, based on its own ever-changing dictates and moods. The man-made creature thus transformed based on user input, turned the user into a central component of its protean nature, and encouraged the participants to become engaged with its material basis for a period of several weeks. During the concluding event of a live performance, the data organism was to act as a virtual performer – that is, as an audio artist – who in the same way as the human musicians would process material live in concert, which the Internet users would upload to the creature during the performance.

The technical and dramaturgical basis of "Frankensteins Netz" was the programmed data process as controlling command, which merges and develops the input of listeners and users based on aesthetic criteria. However, the composer abandoned the idea just before commencing the live performance scheduled to travel through the ethers[23] because he was concerned that hackers would destroy the overall effect. Out of fear of failure, the artist salvaged the project within a programmed setting and protected himself from any loss of control. Failure in this case would have meant a collapse of the program – dead air instead of continuous audio data procession.[24] Thus did the interactive concept and its democratic participation end up being exactly the opposite.

Generally speaking, failure is an indispensable component of settings in which absolute control over content and input is abandoned. But in a cultural climate built on the ideal of the perfect work and on authorial accountability for the final product, transmitted with a fully realized and archivable message, the cultivation of failure hardly seems acceptable. Failure here connotes a collapse of the concept, and thus of the author. The model of procession, however, which is based on participation as well as the processing of input, addresses other premises. Hacking and other destructive interventions become a central component of the participation and communication experience. "Program as product" versus "procession as activity."

At the place where radio and digital networks begin to meld, much has transpired since Radio Ozone's loop actions in the mid-1990s. The software that now enables webcasting no longer require much in the way of expertise to operate. Access to high-speed connections has also vastly expanded. Furthermore, sound quality has improved immensely, thanks to the mp3 revolution. Thus is the Web, now more than ever, full of both mono-directional and interactive radio. The structure of the Net, however, with its potential for exchange, participation, and processing, has remained focused on the aesthetic level of sound. It is still rare that forms are developed that transport complex verbal statements, content, and opinions without trying to adapt them into a linear program principle. For this reason, it is worth mentioning the latest attempts by the Berlin media artist Ulrike Gabriel, even if they are currently[25] in the development phase. In her "Flow" series,[26] Gabriel provides a platform for fundamentally critical political opinions live on the telephone, as she confronts them with pre-produced or directly transmitted opinions from the mainstream of established media. In so doing, she attempts to create a dramaturgy of contextual confrontation that also incorporates electronic live music, a commentator, and a periodically imposed narrator. The work does not concern itself with the presentation of pre-selected opinions and commentaries in a familiar way such as we find in the classic news media, but rather with the creation of critical counterpoints in a kind of dialogue — better yet, multilogue. She attempts to achieve freedom of speech in the act of publishing the spoken word.

As a result of its spontaneous, explicit, and often very unorthodox statements, it would be surprising if this bold form and content experiment secures access to the programming of established private or public stations here in Germany. Too unpredictable is the political message that can develop from the verbal and non-verbal communication flows in the process of a live production. Objections to such radio projects are still rooted in the same fear of the propagandistic effect of the medium of radio, such as was the case in 1924. Although Ulrike Gabriel's "Flow" concept has not integrated the Internet as a mechanism of sound transportation, it would be unimaginable without the influence of network thinking, data procession, and the anti-authoritarian democracy promised by the Brechtian two-way concept.

Digital networks have the conceptual potential to change our notion of radio as a medium for transporting sound. The examples depicted herein indicate that radio can be produced using other methods. It may thus become the apparatus of direct exchange, of being connected, of intersubjectivity, and the fluid or processual. An essential aspect is that the universally accessible Internet has broken down the previously high barriers that complicated the options for producing radio content. The trend in the established media is to increase accessibility by reducing production quality — along with the level of intellectual difficulty. In this way, they hope to reach

a broader audience. However, accessibility in the literal sense has manifested in a different way, which has been evidenced in the past few years, as an increasing number of alternative cultural activists have received approval to establish their own stations. They don't need to look long for content creators, since the desire to express oneself using sophisticated content and alternative — even new — forms and communication processes is, by definition, immense.[27] Access and participation are the key words in this progress, which is catalyzed by the digital network media. If the concept continues to become more popular — and much indicates that it will — the consequence could be a new role for radio. The model of the authorial program for which the listener is obliged to remain silent and receptive in order to be entertained or instructed is now confronted by a different and equally legitimate model, one that is open, processual, and communication and participation-oriented, in which the roles of creator and public are no longer strictly separated. As the artistic examples indicate, in order to keep such forms from becoming trivial, a carefully constructed framework, more intelligent strategies, and occasionally more complex programming are required in order to create worthwhile settings in which others can be active. Even "radio activity" requires quality criteria. Due to the lack of experience and actual opportunities, there is a lot to be done in this regard. It remains to be seen whether such a new kind of positioning for radio can prevail in our culture, particularly in the face of the established criteria for broadcast media.

The broadcasting principle certainly will not die off. Quite the opposite is true. The star-shaped broadcasting principle may develop its greatest strengths in combination with networks and their potential for operative participation and interaction. The broadcasting principle offers the opportunity for contemplative reception — that is to say, listening. Without listening there is no communication, no exchange, and no understanding. It is a prerequisite for participation, intervention, and interactivity that one's input responds appropriately to the aesthetic-communicative intention of the media-defined setting, fulfills it, and completes it. Even in the age of networked media architectures, the practice and discipline of listening remains the origin of creative and intellectual sovereignty.

Notes

1: From the dialogue spoken by the "Program Director" in Hans Flesch, "Zauberei auf dem Sender," Frankfurt Main 1924. "Zauberei auf dem Sender" ("Radio Magic") was the first original radio play made in Germany. **2:** One of the first radio productions to use the structures and possibilities of the Internet is "State of Transition" (ORF 1994), which connects radio listeners with Internet users, as well as a group of artists in both Graz and Rotterdam, all live via telephone, data lines, and radio transmission technology. See also the documentation at http://kunstradio.at/1994B/stateof_t.html **3:** While private stations in Ghana, state radio in India, and stations in the US Pacific were streaming their programs in the Web, public stations in Germany were slow to join. This was due not in small part to the complicated legal situation of Internet broadcasting at the time. **4:** Wolfgang Hagen, "Der Radioruf. Zu Diskurs und Ge-

schichte des Hörfunks," unpublished script, p. 1. **5:** "Broadcast" – from the English, "to cast." **6:** See also R. Murray Schafer, "The Tuning of the World," Toronto 1977. **7:** The composer Atau Tanaka developed one of the few reliable players for his production "Constellations" that enabled the playback of several mp3 files. See http://www.sensorband.com/atau/constellations/program.html. See also his Internet sound installation "mp3q." **8:** Sabine Breitsameter, "AudioHyperspace – Hör-Spiele im Internet," SWR 1998, p. 12. http://www.swr.de/swr2/audiohyperspace/ger_version/sendungen/19981210/index.html **9:** About Flesch's projects, media-specific productions and programs, including the founding of a studio for electro-acoustic music, see also Wolfgang Hagen, "Der Neue Mensch und die Störung," Radio Bremen 1999, script. **10:** Hans Flesch, loc. cit. **11:** Hans Flesch, loc. cit. **12:** See also Rudolf Arnheim, "Rundfunk als Hörkunst," Munich/Vienna 1979. **13:** In choosing a name for the state radio of India, "Akashvani," meaning voices of heaven, the magical nature of radio continues to the present day. **14:** Hans Flesch had an intimate knowledge of the artistic and musical Modern. See also Wolfgang Hagen, "Der Neue Mensch," loc. cit. **15:** See also Sabine Breitsameter, "Vom Hörspiel zum AudioHyperspace," lecture series for the Kulturreferat Munich, script, 2002. **16:** Phone-in programs are, particularly among commercial programs, more popular than ever. While such programs in the 1970s were usually unfiltered and spontaneously broadcast, often resulting in inconsistent, jarring, or boring material, a few years later listener participation became more controlled for the specific program format. If the caller screening process failed, the remedy was to fade in some music. **17:** Among others, also the members of the European Broadcasting Union EBU. **18:** Sabine Breitsameter, AudioHyperspace, loc. cit. **19:** Please see http://www.bbc.co.uk/radio4/wheel/ **20:** Please see http://www.swr.de/swr2/audiohyperspace/ger_version/akustische_kunst/projekte/tele-tap.html **21:** As occurred September 2001 on the Netherlands station VPRO. **22:** Produced under the auspices of Südwestrundfunk (SWR), in co-production with, among others, ZKM Karlsruhe, Radio Canada, Goethe Institute Tokyo, IAMAS Ogaki/Japan. See also http://www.swr.de/swr2/audiohyperspace/ger_version/frankensteins_netz/index.html **23:** On almost 20 stations in Europe and Canada. **24:** See also Sabine Breitsameter, "Netzwerke und Schnittstellen. Der Medienkünstler Atau Tanaka," script, SWR 2002, available as download at: http://www.swr.de/swr2/audiohyperspace/ger_version/sendungen/20020704/index.html

25: Fall 2003. **26:** See also http://amsterdam.nettime.org/Lists-Archives/nettime-bold-0302/msg01892.html, http://www.xxeno.net/FLOW/. **27:** See also, among many others, Resonance FM/London, Ersatzradio IS THIS ALSO BERLIN? and Juni-Radio/Berlin as well as the initiatives of Bootlab/Berlin in 2004.

PART TWO: SYNAESTHETIC CINEMA: THE END OF DRAMA

"The final poem will be the poem of fact in the language of fact. But it will be the poem of fact not realized before."

WALLACE STEVENS

Expanded cinema has been expanding for a long time. Since it left the underground and became a popular avant-garde form in the late 1950's the new cinema primarily has been an exercise in technique, the gradual development of a truly cinematic language with which to expand further man's communicative powers and thus his awareness. If expanded cinema has had anything to say, the message has been the medium.[1] Slavko Vorkapich: "Most of the films made so far are examples not of creative use of motion-picture devices and techniques, but of their use as recording instruments only. There are extremely few motion pictures that may be cited as instances of creative use of the medium, and from these only fragments and short passages may be compared to the best achievements in the other arts."[2]

It has taken more than seventy years for global man to come to terms with the cinematic medium, to liberate it from theatre and literature. We had to wait until our consciousness caught up with our technology. But although the new cinema is the first and only true cinematic language, it still is used as a recording instrument. The recorded subject, however, is not the objective external human condition but the filmmaker's consciousness, his perception and its

[1] For a comprehensive in-depth history of this development, see: Sheldon Renan, *An Introduction to the American Underground Film* (New York: Dutton Paperbacks, 1967). And for a survey of initial critical reaction, see: *The New American Cinema*, ed. Gregory Battcock (New York: Dutton Paperbacks, 1967).

[2] Slavko Vorkapich, "Toward True Cinema," in *Film: A Montage of Theories*, ed. Richard Dyer MacCann (New York: Dutton Paperbacks, 1966), p. 172.

process. If we've tolerated a certain absence of discipline, it has been in favor of a freedom through which new language hopefully would be developed. With a fusion of aesthetic sensibilities and technological innovation that language finally has been achieved. The new cinema has emerged as the only aesthetic language to match the environment in which we live.

Emerging with it is a major paradigm: a conception of the nature of cinema so encompassing and persuasive that it promises to dominate all image-making in much the same way as the theory of general relativity dominates all physics today. I call it *synaesthetic cinema*. In relation to traditional cinema it's like the science of bionics in relation to previous notions of biology and chemistry: that is, it models itself after the patterns of nature rather than attempting to "explain" or conform nature in terms of its own structure. The new artist, like the new scientist, does not "wrest order out of chaos." Both realize that supreme order lies in nature and traditionally we have only made chaos out of it. The new artist and the new scientist recognize that chaos *is* order on another level, and they set about to find the rules of structuring by which nature has achieved it. That's why the scientist has abandoned absolutes and the filmmaker has abandoned montage.

Herbert Read: "Art never has been an attempt to grasp reality as a whole—that is beyond our human capacity; it was never even an attempt to represent the totality of appearances; but rather it has been the piecemeal recognition and patient fixation of what is significant in human experience."[3] We're beginning to understand that "what is significant in human experience" for contemporary man is the awareness of consciousness, the recognition of the process of perception. (I define perception both as "sensation" and "conceptualization," the process of forming concepts, usually classified as "cognition." Because we're enculturated, to perceive is to interpret.) Through synaesthetic cinema man attempts to express a total phenomenon—his own consciousness.[4]

[3] Read, *op. cit.*, p. 18.

[4] In defining consciousness I concur with R. G. Collingwood: "The kind of thought which stands closest to sensation or mere feeling. Every further development of thought is based upon it and deals not with feeling in its crude form but with feeling as thus transformed into imagination." *Principles of Art* (Oxford: Clarendon Press, 1938), p. 223.

Synaesthetic cinema is the only aesthetic language suited to the post-industrial, post-literate, man-made environment with its multidimensional simulsensory network of information sources. It's the only aesthetic tool that even approaches the reality continuum of conscious existence in the nonuniform, nonlinear, nonconnected electronic atmosphere of the Paleocybernetic Age. "As visual space is superseded," McLuhan observes, "we discover that there is no continuity or connectedness, let alone depth and perspective, in any of the other senses. The modern artist—in music, in painting, in poetry—has been patiently expounding this fact for decades."[5] The modern synaesthetic filmmaker has been patiently expounding this fact for decades as well, and with far more success than painters or poets.

Finally, I propose to show that synaesthetic cinema transcends the restrictions of drama, story, and plot and therefore cannot be called a genre. In addition to matching McLuhan's view of contemporary existence, it also corresponds to Buckminster Fuller's observations on natural synergetics and consequently is negentropic. Before discussing specifics, however, we must first understand why synaesthetic cinema is just now being developed into a universal language, more than seventy years after the birth of the medium. Like most everything else, it's because of television.

[5] Marshall McLuhan, Quentin Fiore, *War and Peace in the Global Village* (New York: Bantam Books), p. 13.

Global Closed Circuit: The Earth as Software

Television Renders Cinema Obsolete as Communicator of Objective Reality

Just as every fact is also metaphysical, every piece of hardware implies software: information about its existence. Television is the software of the earth. Television is invisible. It's not an object. It's not a piece of furniture. The television set is irrelevant to the phenomenon of television. The videosphere is the noosphere transformed into a perceivable state. "Television," says video artist Les Levine, "is the most obvious realization of software in the general environment. It shows the human race itself as a working model of itself. It renders the social and psychological condition of the environment visible to the environment."

A culture is dead when its myths have been exposed. Television is exposing the myths of the republic. Television reveals the observed, the observer, the process of observing. There can be no secrets in the Paleocybernetic Age. On the macrostructural level all television is a closed circuit that constantly turns us back upon ourselves. Humanity extends its video Third Eye to the moon and feeds its own image back into its monitors. "Monitor" is the electronic manifestation of superego. Television is the earth's superego. We become aware of our individual behavior by observing the collective behavior as manifested in the global videosphere. We identify with persons in news events as once we identified with actors or events in fiction films. Before television we saw little of the human condition. Now we see and hear it daily. The world's not a stage, it's a TV documentary. Television extends global man throughout the ecological biosphere twenty-four hours a day. By moving into outer space, television reveals new dimensions of inner space, new aspects of man's perception and the results of that perception.

This implosive, self-revealing, consciousness-expanding process is irreversible. Global information is the natural enemy of local government, for it reveals the true context in which that government is

operating. Global television is directly responsible for the political turmoil that is increasing around the world today. The political establishments sense this and are beginning to react. But it's too late. Television makes it impossible for governments to maintain the illusion of sovereignty and separatism which is essential for their existence. Television is one of the most revolutionary tools in the entire spectrum of technoanarchy.

We recognize television's negative effect on the popular arts: that it induces a kind of sedentary uniformity of expression and generates a false sense of creativity. In its broader consequences, however, television releases cinema from the umbilical of theatre and literature. It renders cinema obsolete as communicator of the objective human condition. It has affected cinema in much the same way as the invention of photography affected sculpture and painting. Cubism and other means of abstracting the realistic image were born with the photographic plate because painting no longer provided the most realistic images. The plastic arts abandoned exterior reality for interior reality. The same has happened to cinema as a result of television: movies no longer provide the most realistic images so they've turned inward.

We're in direct contact with the human condition; there's no longer any need to represent it through art. Not only does this release cinema; it virtually forces cinema to move beyond the objective human condition into newer extra-objective territory. There are manifold trends that indicate that virtually all cinema has felt the profound impact of television and is moving inevitably toward synaesthesis. The progression naturally includes intermediary steps first toward greater "realism," then *cinéma-vérité*, before the final and total abandon of the notion of reality itself. The fact that we're now approaching the peak of the realism stage is demonstrated by Warhol, for example, whose recent work contrasts "reality" with "realism" as manifested in the spontaneous behavior of actors pretending to be acting. In addition there's virtually all of Godard's work, as well as John Cassavetes' *Faces*, James McBride's *David Holzman's Diary*, Peter Watkins' *The War Game*, Gillo Pontecorvo's *The Battle of Algiers*, Paul Morrissey's *Flesh*, and Stanton Kaye's *Georg* and *Brandy in the Wilderness*.

Most of this work is characterized by an astute blending of

scripted and directed acting with spontaneous improvisation, in which the actor randomly fills in the parameters of a characterization predetermined and predestined by the director. Yet precisely because they attempt to approximate objective reality without actually being real places them firmly in the tradition of conventional Hollywood pretend movies, with the exception of camera presence or what might be called process-level perception.

It's only natural that contemporary filmmakers should be more successful at imitating reality since the intermedia network makes us more familiar with it. But there's a curious and quite significant aspect to the nature of this new realism: by incorporating a kind of bastardized *cinéma-vérité* or newsreel style of photography and behavior, the filmmaker has not moved closer to actual unstylized reality itself but rather a reality prestylized to approximate our primary mode of knowing natural events: television. We accept it as being more realistic because it more closely resembles the process-level perception of TV watching, in which unstylized reality is filtered and shaped through the process of a given medium.

The traditional dramatic structure of these films becomes more easily discernible in contrast with pure *cinéma-vérité* work such as Jean Rouch's *Chronicle of a Summer,* Pennebaker's *Don't Look Back,* or Chris Marker's brilliant *Le Joli Mai.* A comparison of *Faces* or *David Holzman's Diary* with Warhol's *Nude Restaurant* is even more revealing: the difference between prestylized and predestined realities on the one hand, and Warhol's totally random and only partially prestylized reality on the other, is brought into sharp focus. Warhol has expressed regret that a camera cannot simply be switched on and left running for twenty-four hours, since the "important" (naturally-revealing) events seem to occur at that moment just after it stops turning. Godard disclosed similar sentiments when he said: "The ideal for me is to obtain right away what will work. If retakes are necessary it falls short of the mark. The immediate is chance. At the same time it is definitive. What I want is the definitive by chance."

Synaesthetic Synthesis: Simultaneous Perception of Harmonic Opposites

Time, said St. Augustine, is a threefold present: the present as we experience it; the past as present memory; the future as present expectation. Hopi Indians, who thought of themselves as caretakers of the planet, used only the present tense in their language: past was indicated as "present manifested," and the future was signified by "present manifesting."[6] Until approximately 800 B.C., few cultures thought in terms of past or future: all experience was synthesized in the present. It seems that practically everyone but contemporary man has intuitively understood the space-time continuum.

Synaesthetic cinema is a space-time continuum. It is neither subjective, objective, nor nonobjective, but rather all of these combined: that is to say, *extra-objective.* Synaesthetic and psychedelic mean approximately the same thing. Synaesthesis is the harmony of different or opposing impulses produced by a work of art. It means the simultaneous perception of harmonic opposites. Its sensorial effect is known as *synaesthesia,* and it's as old as the ancient Greeks who coined the term. Under the influence of mind-manifesting hallucinogens one experiences synaesthesia in addition to what Dr. John Lilly calls "white noise," or random signals in the control mechanism of the human bio-computer.[7]

Any dualism is composed of harmonic opposites: in/out, up/down, off/on, yes/no, black/white, good/bad. Past aesthetic traditions, reflecting the consciousness of their period, have tended to concentrate on one element at a time. But the Paleocybernetic experience doesn't support that kind of logic. The emphasis of traditional logic might be expressed in terms of an *either/or* choice, which in physics is known as *bistable logic.* But the logic of the Cybernetic Age into which we're moving will be *both/and,* which in

[6] Benjamin Whorf, *Language, Thought and Reality* (Cambridge, Mass.: Massachusetts Institute of Technology, Publications Office, 1956).

[7] John C. Lilly, *The Human Bio-Computer* (Miami, Fla.: Communciations Research Institute, 1967).

physics is called *triadic logic*. Physicists have found they can no longer describe phenomena with the binary yes/no formula but must operate with yes/no/maybe.

The accumulation of facts is no longer of top priority to humanity. The problem now is to apply existing facts to new conceptual wholes, new vistas of reality. By "reality" we mean relationships. Piet Mondrian: "As nature becomes more abstract, a relation is more clearly felt. The new painting has clearly shown this. And that is why it has come to the point of expressing nothing but relations."[8] Synaesthetic cinema is an art of relations: the relations of the conceptual information and design information within the film itself graphically, and the relation between the film and the viewer at that point where human perception (sensation and conceptualization) brings them together. As science gropes for new models to accommodate apparent inconsistencies and contradictions, the need for seeing incompatibles together is more easily discerned. For example, the phenomenon of light is conceived in *both/and* terms: both continuous wave motions and discontinuous particles. And we have noted our incapacity for observing both movement and position of electrons.

This is but one of many reasons that synaesthetic cinema is the only aesthetic language suited to contemporary life. It can function as a conditioning force to unite us with the living present, not separate us from it. My use of the term synaesthetic is meant only as a way of understanding the historical significance of a phenomenon without historical precedent. Actually the most descriptive term for the new cinema is "personal" because it's only an extension of the filmmaker's central nervous system. The reader should not interpret "synaesthetic" as an attempt to categorize or label a phenomenon that has no definition. There's no single film that could be called typical of the new cinema because it is defined anew by each individual filmmaker.

I've selected about seven films that are particularly representative of the various points I wish to make. I'm using them only to illuminate the nature of synaesthetic cinema in general, not as specific archetypal examples. Sufficient literature exists on Brakhage's *Dog Star Man* to preclude any major expository analysis here, but it is exemplary of virtually all concepts involved in the synaesthetic mode, in particular syncretism and metamorphosis. Will Hindle's *Chinese Firedrill* is an outstanding example of the evocative language of synaesthetic cinema as distinct from the expositional mode of narrative cinema. Pat O'Neill's *7362*, John Schofill's *XFilm*, and Ronald Nameth's *Exploding Plastic Inevitable* provide some insight into kinaesthetics and kinetic empathy. Carolee Schneemann's *Fuses*, in contrast with Warhol's *Blue Movie* and Paul Morrissey's *Flesh*, illustrates the new polymorphous eroticism. And, finally, Michael Snow's *Wavelength* has been chosen for its qualities of extra-objective constructivism.

[8] Piet Mondrian, *Plastic Art and Pure Plastic Art* (New York: Wittenborn, Schultz, Inc., 1945), p. 50.

Syncretism and Metamorphosis: Montage as Collage

The harmonic opposites of synaesthetic cinema are apprehended through syncretistic vision, which Anton Ehrenzweig has characterized as: "The child's capacity to comprehend a total structure rather than analyzing single elements . . . he does not differentiate the identity of a shape by watching its details one by one, but goes straight for the whole."[9] Syncretism is the combination of many different forms into one whole form. Persian tapestries and tile domes are syncretistic. Mandalas are syncretistic. Nature is syncretistic. The majority of filmgoers, conditioned by a lifetime of conventional narrative cinema, make little sense of synaesthetic cinema because their natural syncretistic faculty has suffered entropy and atrophy.

Buckminster Fuller: "All universities have been progressively organized for ever-finer specialization. Society assumes that specialization is natural, inevitable and desirable. Yet in observing a little child we find it is interested in everything and spontaneously apprehends, comprehends and coordinates an ever-expanding inventory of experience."[10]

It has been demonstrated that all species of life on earth that have become extinct were doomed through overspecialization, whether anatomical, biological, or geological. Therefore conventional narrative cinema, in which the filmmaker plays policeman guiding our eyes here and there in the picture plane, might be described as "specialized vision," which tends to decay our ability to comprehend the more complex and diffuse visual field of living reality.

The general impression that syncretism, and therefore synaesthetic cinema, is empty of detail or content is an illusion: ". . . it is highly sensitive to the smallest of cues and proves more efficient in

[9] Anton Ehrenzweig, *The Hidden Order of Art* (Berkeley, Calif.: University of California Press, 1967), p. 9.

[10] Fuller, *Spaceship Earth* , p. 13.

identifying individual objects. It impresses us as empty, vague and generalized only because the narrowly-focused surface consciousness cannot grasp its wider more comprehensive structure. Its precise, concrete content has become inaccessible and 'unconscious.' "[11]

Synaesthetic cinema provides access to syncretistic content through the inarticulate conscious. Similarly, it contradicts the teachings of Gestalt psychology, according to which we must make an *either/or* choice: we can choose either to see the "significant" figure or the "insignificant" ground. But when the "content" of the message is the relationship between its parts, and when structure and content are synonymous, all elements are equally significant. Ehrenzweig has suggested that syncretism is "Gestalt-free perception," and indeed this must be the case if one expects any visual "meaning" from synaesthetic cinema.

Paul Klee, whose syncretistic paintings closely resemble certain works of synaesthetic cinema, spoke of the *endotopic* (inside) and *exotopic* (outside) areas of a picture plane, stressing their equal importance in the overall experience.[12] Synaesthetic cinema, primarily through superimposition, fuses the endotopic and exotopic by reducing depth-of-field to a total field of nonfocused multiplicity. Moreover, it subsumes the conventional sense of time by interconnecting and interpenetrating the temporal dimension with images that exist outside of time. The "action" of *Dog Star Man*, for example, could be an entire life-span or merely a split second in the inarticulate conscious of Stan Brakhage. I stress "action" as commonly understood in the cinema because synaesthetic syncretism replaces montage with collage and, as André Bazin has observed, "montage is the dramatic analysis of action." Bazin was perceptive enough to realize that "only an increased realism of the image can support the abstraction of montage."[13]

Synaesthetic cinema subsumes Eisenstein's theory of montage-as-collision and Pudovkin's view of montage-as-linkage. It demonstrates that they were certainly correct but didn't follow their own observations to their logical conclusions. They were restricted by

[11] Ehrenzweig, *op. cit.*, pp. 19, 20.

[12] Paul Klee, *The Thinking Eye* (London: Lund Humphries, 1961).

[13] André Bazin, *What Is Cinema?* trans. Hugh Gray (Los Angeles, Calif.: University of California Press, 1967), p. 39.

the consciousness of their times. Synaesthetic cinema transcends the notion of reality. It doesn't "chop the world into little fragments," an effect Bazin attributed to montage, because it's not concerned with the objective world in the first place. The new filmmaker is showing us his feelings. Montage is indeed an abstraction of objective reality; that's why, until recently, Warhol did not cut his films at all. But synaesthetic syncretism is the only mode in which the manifestations of one's consciousness can be approximated without distortion.

There's no conflict in harmonic opposites. Nor is there anything that might be called linkage. There is only a space-time continuum, a mosaic simultaneity. Although composed of discrete elements it is conceived and edited as one continuous perceptual experience. A synaesthetic film is, in effect, one image continually transforming into other images: metamorphosis. It is the one unifying force in all of synaesthetic cinema. The notion of universal unity and cosmic simultaneity is a logical result of the psychological effects of the global communications network.

If montage is the dramatic analysis of action, a film without classic montage thus avoids at least the structural element of drama inherent within the medium. All that remains to avoid drama entirely is to exclude dramatic (i.e., theatrical) content by making content and structure the same. Warhol's films are not dramatic, and neither are films at the extreme opposite end of the spectrum, synaesthesia. The classical tension of montage is dissolved through overlapping superimposition. For example: we have shots A, B, and C. First we see A, then B is superimposed over it to produce AB. Then A fades as C fades in. There's a brief transitional period in which we're seeing ABC simultaneously, and finally we're looking only at BC. But no sooner has this evolved than B begins to fade as D appears, and so on.

This is a physical, structural equivalent of the Hopi "present manifested" and "present manifesting" space-time continuum. It's the only style of cinema that directly corresponds to the theory of general relativity, a concept that has completely transformed all aspects of contemporary existence except traditional Hollywood cinema. The effects of metamorphosis described above become more apparent if shots A, B, and C happen to be of the same image

but from slightly different perspectives, or with varied inflections of tone and color. It is through this process that a synaesthetic film becomes, in effect, one image constantly manifesting.

And finally we're forced to admit that the pure art of cinema exists almost exclusively in the use of superimposition. In traditional cinema, superimposition usually gives the impression of two movies occurring at once in the same frame with their attendant psychological and physiological connotations coexisting separately. In synaesthetic cinema they are one total image in metamorphosis. This does not imply that we must relinquish what Eisenstein called "intellectual montage." In fact, the conflict-juxtaposition of intellectual effects is increased when they occur within the same image. Fiction, legend, parable, myth, traditionally have been employed to make comprehensible the paradoxes of that field of nonfocused multiplicity that is life. Synaesthetic cinema, whose very structure is paradox, makes paradox a language in itself, discovering the order (legend) hidden within it.

Stan Brakhage: *Dog Star Man*

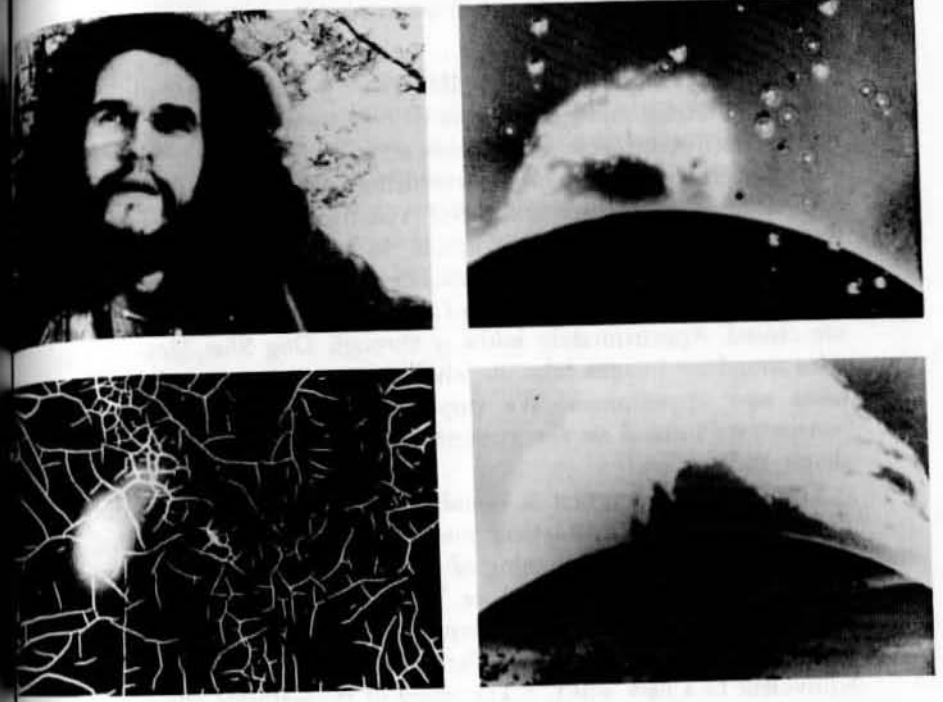
Dog Star Man is a silent, seventy-eight-minute film divided into *Prelude* and *Parts One* through *Four*. It was shot in 1959–60 and edited during the next four years. *Prelude* is an extremely fast collage of multiple-level superimpositions and compounded images that emerge from a blurry diaphanous haze and slowly take form, only to be obscured by other images and countermotions. We begin to discern specific objects, patterns, and finally a motif or theme: the elements of Earth, Air, Fire, and Water; a childbirth; a man climbing a mountain with his dog; the moon; the sun throwing off huge solar prominences; lovemaking; photomicrography of blood vessels; a beating heart; a forest; clouds; the faces of a man and a woman; and literally thousands of other images to appear in the rest of the film.

These images exist essentially autonomously and are superimposed or compounded not for "dramatic" effect but rather as a kind of matrix for psychic exercise on the part of the viewers. For example, over an expanding solar prominence we might see Brakhage's leonine face or a line of snow-covered fir trees in the mountains of Colorado. We are not asked to interpret or find "meaning"

in these combinations, though vastly rich experiences are possible. When the images emerge from a hazy blur, for example, we are not asked to interpret this as the creation of life or some similar dramatic notion, but rather as a perceptual experience for its own sake, in addition to the contextual relationship of this image to the rest of the film, or what Eisenstein indicated by the term "intellectual montage."

Whereas *Prelude* is a rapid barrage of multiple overlays, *Part One* is superimposed sparingly, concentrating on interface relationships between individual shots. However, every effort is made to subdue any effect that might be considered montage. The shots fade in and out very slowly, often fading into a color such as red or green. The fragments of *Prelude* fall into place and an overwhelming sense of oceanic consciousness evolves. We begin to realize that Brakhage is attempting to express the totality of consciousness, the reality continuum of the living present. As his solitary figure climbs the snow-covered mountain, we see images of man's world from the microspectrum of the bloodstream to the macrospectrum of the sun, moon, and universe. Both time and space are subsumed in the wholeness of the experience. Superimposition is not used as an economical substitute for "parallel montage"—indicating simultaneous but spatially separate events—for spatio-temporal dimensions do not exist in the consciousness. Brakhage is merely presenting us with images orchestrated in such a way that a new reality arises out of them.

When we see the sun superimposed over a lovemaking scene, it's not an invitation to interpret a meaning such as cosmic regeneration or the smallness of man in the universe, but rather as an occasion to experience our own involuntary and inarticulate associations. The images are not symbolic, as in *The Seventh Seal*, or artfully composed as in *Last Year at Marienbad*. Brakhage does not manipulate us emotionally, saying: "Now I want you to feel suspense" or "Now I want you to laugh" or "Now is the time to be fearful." This is the ploy of the commercial entertainer: an arrogant degradation of cinema, using film as a tool for cheap sensationalism. This is not to say that spatio-temporal experiences, or suspense, humor, or any emotion cannot be found in synaesthetic cinema. Quite the contrary: because we're dealing with our own personal associations,



Stan Brakhage: *Dog Star Man*. 1959–64. 16 mm. Color, black and white. 78 min. "The totality of consciousness, the reality continuum of the living present."

emotion is guaranteed. And it will be more genuinely profound than the formula-triggered gratification of conditioned response that we receive from commercial entertainment.

Brakhage has spoken of "restructuring" vision through his films, and often refers to the "untutored" vision of the child before he's taught to think and see in symbols. In what he calls "closed-eye vision," Brakhage attempts to simulate, by painting and scratching on film, the flashes and patterns of color we perceive when our eyes are closed. Approximately midway through *Dog Star Man,* otherwise mundane images take on wholly new meanings and in some cases new appearances. We stop mentally labeling images and concentrate instead on the synaesthetic/kinaesthetic flow of color, shape, and motion.

This is not to suggest a nonobjective experience. The images develop their own syntactical meaning and a "narrative" line is perceived, though the meaning of any given image may change in the context of different sequences. This constitutes a creative use of the language itself, over and above any particular "content" conveyed by that language. (Wallace Stevens: "A new meaning is equivalent to a new word.") The effect of synaesthetic cinema is to break the hold that the medium has over us, to make us perceive it objectively. Art is utter folly unless it frees us from the need of art as an experience separate from the ordinary.

Wittgenstein has described art as a game whose rules are made up as the game is in process. The exact meaning of words (images) becomes known only in the context of each new statement.[14] E. H. Gombrich, on the other hand, demonstrates that objective realism also is a game, but one whose schema is established prior to its use and is never altered. Artists and society thus learn to read the schema as though it were objective reality. But since the language itself is not used creatively, the viewer is seduced beyond form into an abstract content with an illusion of being externally objective.[15] Thus the viewer is captive under the hold, or spell, of the medium and is not free to analyze the process of experience.

[14] Ludwig Wittgenstein, *Philosophical Investigations* (Oxford: Blackwell Press, 1963).

[15] E. H. Gombrich, *Art and Illusion,* The Bollingen Series XXXV (New York: Pantheon Books, Inc., 1960).

Brakhage expressed this concept with respect to his own work: "Imagine an eye unruled by man-made laws of perspective, an eye unprejudiced by compositional logic, an eye which must know each object encountered in life through a new adventure of perception. Imagine, a world alive with incomprehensible objects and shimmering with an endless variety of movement and gradations of color. Imagine a world before the beginning was the word."[16]

[16] Stan Brakhage, "Metaphors on Vision," ed. P. Adams Sitney, *Film Culture* (Fall, 1963).

Evocation and Exposition: Toward Oceanic Consciousness

There is an important distinction to be made between *evocation*, the language of synaesthetic cinema, primarily poetic in structure and effect, and *exposition*, the language of narrative cinema, which chiefly conforms to traditional, literary narrative modes. Intermedia artist and filmmaker Carolee Schneemann has characterized evocation as "the place between desire and experience, the interpenetrations and displacements which occur between various sense stimuli. "Vision is not a fact," Miss Schneemann postulates, "but an aggregate of sensations. Vision creates its own efforts toward realization; effort does not create vision."[17]

Thus, by creating a new kind of vision, synaesthetic cinema creates a new kind of consciousness: oceanic consciousness. Freud spoke of oceanic consciousness as that in which we feel our individual existence lost in mystic union with the universe. Nothing could be more appropriate to contemporary experience, when for the first time man has left the boundaries of this globe. The oceanic effect of synaesthetic cinema is similar to the mystical allure of the natural elements: we stare in mindless wonder at the ocean or a lake or river. We are drawn almost hypnotically to fire, gazing as though spellbound. We see cathedrals in clouds, not thinking anything in particular but feeling somehow secure and content. It is similar to the concept of *no-mindedness* in Zen, which also is the state of mantra and mandala consciousness, the widest range of consciousness.

Miss Schneemann defines perception as *eye-journey* or *empathy-drawing*. It is precisely through a kind of empathy-drawing that the content of synaesthetic cinema is created jointly by the film and the viewer. The very nature of evocation requires creative effort on the part of the viewer, whereas expository modes do all the work and the viewer becomes passive. In expositional narrative, a story is being *told;* in evocative synaesthesia an experience is being created.

[17] Carolee Schneemann, "Snows," *I-Kon*, ed. Susan Sherman, Vol. 1, No. 5 (New York: March, 1968).

The figure of Stan Brakhage in *Dog Star Man* actually moves through a psychic environment created by the viewer, whose deeply-hidden creative resources and hungers have been evoked by the film.

With typical poetic eloquence, Hermann Hesse has summarized the evocative effects of oceanic consciousness in this memorable passage from *Demian:* "The surrender to nature's irrational, strangely confused formations produces in us a feeling of inner harmony with the force responsible for these phenomena . . . the boundaries separating us from nature begin to quiver and dissolve . . . we are unable to decide whether the images on our retina are the result of impressions coming from without or from within . . . we discover to what extent we are creative, to what extent our soul partakes of the constant creation of the world."[18]

Will Hindle: *Chinese Firedrill*

There have been essentially three generations of personal filmmakers in the United States. The first began with the invention of the medium and continued in various stages through the 1940's. The second began approximately in the mid-1950's with the increasing availability of inexpensive 8mm. and 16mm. equipment. It represented the first popular movement toward personal cinema as a way of life. The third generation has evolved since the mid-1960's, primarily in the San Francisco area, where the latest trend is toward a blending of aesthetics and technology. One reason personal cinema is more eloquent than commercial cinema is that the filmmaker is forced into a closer interaction with his technology.

Will Hindle is exemplary of this recent technological awareness, a combination of engineering and aesthetics. Trained in art, literature, and professional television filmmaking, Hindle has applied his knowledge to personal cinema in a singularly spectacular fashion. His ability to invest a technical device with emotional or metaphysical content is truly impressive. He has, for example, developed the technique of rear-projection rephotography to a high degree of eloquence. He shoots original scenes with wide-angle lenses, then "crops" them by projecting and rephotographing this footage using a special single-frame projector. Thus extremely subtle effects are

[18] Hermann Hesse, *Demian* (New York: Bantam Books, 1968), p. 88.

Will Hindle: *Chinese Firedrill.* 1968. 16mm. Color. 24 min. "We discover to what extent our soul partakes of the constant creation of the world."

achieved that would be prohibitively expensive, if not impossible, if done through conventional laboratory optical printing.

Although many synaesthetic films are wonderfully evocative, Hindle's recent works are especially notable for their ability to generate overwhelming emotional impact almost exclusively from cinematic technique, not thematic content. Hindle has an uncanny talent for transforming spontaneous unstylized reality into unearthly poetic visions, as in *Billabong* (1968), a wordless impressionistic "documentary" about a boy's camp in northern California, and *Watersmith* (1969), a spectacular visual fantasy created from footage of an Olympic swimming team at practice.

Chinese Firedrill, unique in Hindle's work, was prestylized and "performed" almost in the traditional sense of a scripted, directed, and acted movie. The difference is that Hindle used the images not for their symbolic or theatrical content but as ingredients of an almost iconographic nature, to be compounded and manipulated through the process of the medium. Although there are "actors" (Hindle plays the principal role), there is no characterization. Although there are sets, we're not asked to suspend our disbelief.

Chinese Firedrill is a romantic, nostalgic film. Yet its nostalgia is of the unknown, of vague emotions, haunted dreams, unspoken words, silences between sounds. It's a nostalgia for the oceanic present rather than a remembered past. It is total fantasy; yet like the best fantasies—*8½, Beauty and the Beast, The Children of Paradise*—it seems more real than the coldest documentary. The "action" occurs entirely within the mind of the protagonist, who never leaves the small room in which he lives. It's all rooms everywhere, all cubicles wherever we find man trapped within his dreams. Through the door/mirror is the beyond, the unreachable, the unattainable, the beginning and the end. Not once in the film's twenty minutes can we pinpoint a sequence or action that might be called "dramatic" in the usual sense. Yet almost immediately an overwhelming atmosphere of pathos is generated. There are moments of excruciating emotional impact, not from audience manipulation but from Hindle's ability to realize metaphysical substance, stirring the inarticulate conscious. Every effort is made to distance the viewer, to keep us aware of our perceptions, to emphasize the purely cinematic as opposed to the theatrical.

We find Hindle kneeling on the floor of his surrealistic room stuffing thousands of IBM cards into boxes. Over this we hear a strange monologue of fragmented words and sentences in an odd foreign accent. This is punctuated by fierce thunderclaps and howling wind that evolve into ethereal music and tinkling bell sounds. Periodically the screen is slashed across with blinding white flashes while the central images constantly are transformed through lap-dissolves and multiple superimpositions. There are flash-forwards of images to be encountered later, though we don't recognize them and therefore don't interpret them. We see nude lovers, a small boy bathing, a beautiful woman with candles, a huge eyeball, a battery of glaring lights. These are noted for their inherent psychological connotations and not as narrative devices.

The most memorable sequence of *Firedrill,* possibly one of the great scenes in the history of film, involves Hindle lying in anguish on his floor and slowly reaching out with one hand toward the glimmering void beyond his door. Suddenly a mirror-like reflection of his arm and hand appears on the opposite side of the mirror. When he removes his hand we see the vague shadowy figure of a nude woman silhouetted ghostlike, her skin sparkling. In slow motion the silhouette of a nude man enters from an opposite direction and the two gossamer figures embrace in a weightless ballet of graceful motion in some dream of bliss. In the film's final image, the haunted man has become a child once again, splashing in his bath in a series of freeze-frames that grow ever fainter until they vanish.

Synaesthetics and Kinaesthetics: The Way of All Experience

The term *kinetic* generally indicates motion of material bodies and the forces and energies associated with it. Thus to isolate a certain type of film as kinetic and therefore different from other films means we're talking more about forces and energies than about matter. I define *aesthetic* quite simply as: the manner of experiencing something. *Kinaesthetic,* therefore, is the manner of experiencing a thing through the forces and energies associated with its motion. This is called *kinaesthesia,* the experience of sensory perception. One who is keenly aware of kinetic qualities is said to possess a kinaesthetic sense.

The fundamental subject of synaesthetic cinema—forces and energies—cannot be photographed. It's not what we're seeing so much as the process and effect of seeing: that is, the phenomenon of experience itself, which exists only in the viewer. Synaesthetic cinema abandons traditional narrative because events in reality do not move in linear fashion. It abandons common notions of "style" because there is no style in nature. It is concerned less with facts than with metaphysics, and there is no fact that is not also metaphysical. One cannot photograph metaphysical forces. One cannot even "represent" them. One can, however, actually *evoke* them in the inarticulate conscious of the viewer.

The dynamic interaction of formal proportions in kinaesthetic cinema evokes cognition in the inarticulate conscious, which I call *kinetic empathy.* In perceiving kinetic activity the mind's eye makes its empathy-drawing, translating the graphics into emotional-psychological equivalents meaningful to the viewer, albeit meaning of an inarticulate nature. "Articulation" of this experience occurs in the perception of it and is wholly nonverbal. It makes us aware of fundamental realities beneath the surface of normal perception: forces and energies.

Patrick O'Neill: *7362*

New tools generate new images. In the historical context of

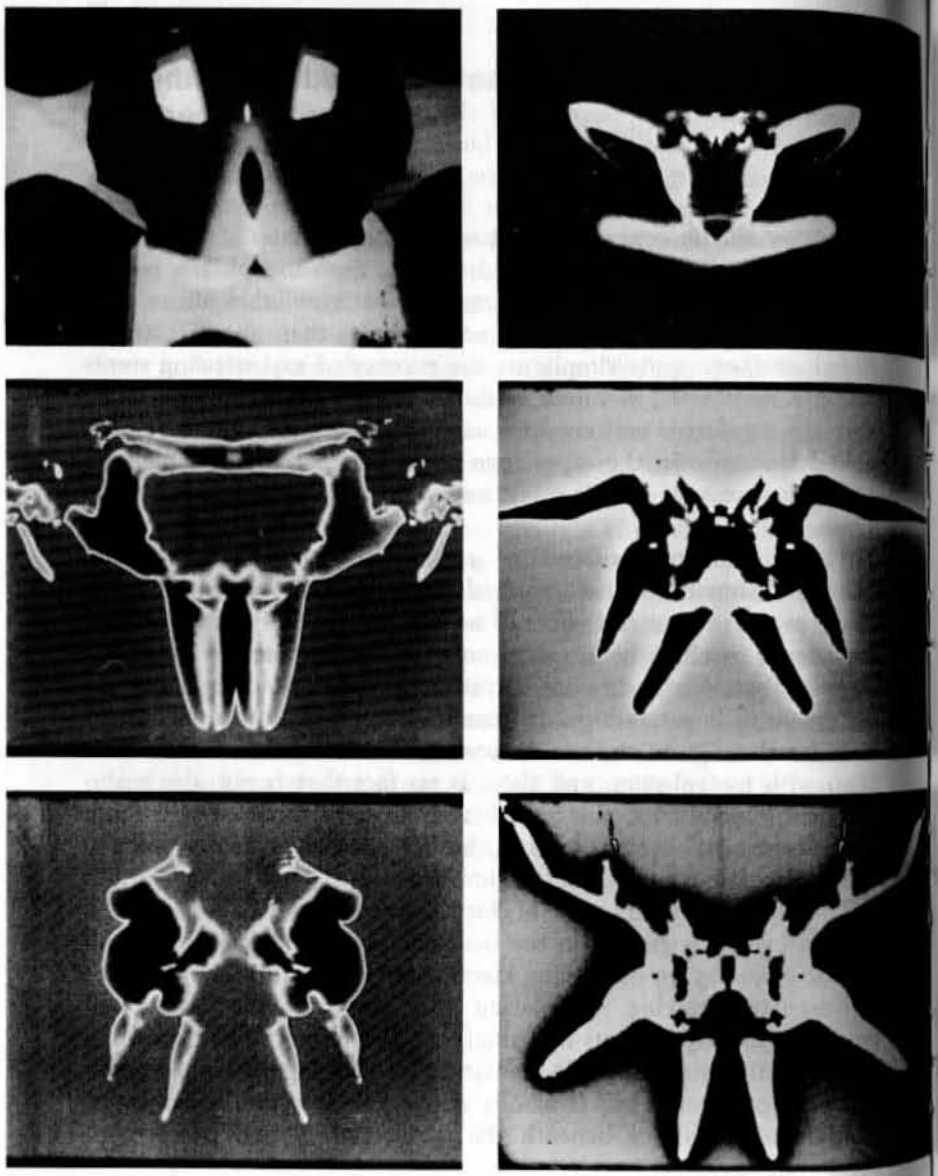


image-making, the cinema is a new tool. *7362* is among the few purely cinematic images to evolve from this new seventy-year-old tool. All the visual arts are moving toward the cinema. Artists like Frank Stella or Kenneth Noland have been credited as significant painters within the last decade because they kept the game going. One is impressed that they merely discovered new possibilities for a two-dimensional surface on stretchers. But the possibilities are so narrow today that soon there will be nowhere to go but the movies.

Pat O'Neill is a sculptor with a formal background in the fine arts. Like Michael Snow, also a sculptor, O'Neill found unique possibilities in the cinema for exploration of certain perceptual concepts he had been applying to sculpture and environmental installations. *7362*, made some five years ago, was the first of many experiments with the medium as a "sculptural" device. The term is intended only as a means of emphasizing the film's kinetic qualities.

7362 was named after the high-speed emulsion on which it was filmed, emphasizing the purely cinematic nature of the piece. O'Neill photographed oil pumps with their rhythmic sexual motions. He photographed geometrical graphic designs on rotating drums or vertical panels, simultaneously moving the camera and zooming in and out. This basic vocabulary was transformed at the editing table and in the contact printer, using techniques of high-contrast bas-relief, positive/negative bi-pack printing and image "flopping," a Rorschach-like effect in which the same image is superimposed over itself in reverse polarities, producing a mirror-doubled quality.

The film begins in high-contrast black-and-white with two globes bouncing against each other horizontally, set to an electronic score by Joseph Byrd. This repetitive motion is sustained for several seconds, then fades. As though in contrast, the following images are extremely complex in form, scale, texture, and motion. Huge masses of mechanical hardware move ponderously on multiple planes in various directions simultaneously. The forms seem at times to be recognizable, at others to be completely nonobjective. Into this serial, mathematical framework O'Neill introduces the organic fluid

Patrick O'Neill: *7362*. 1965–66. 16mm. Color, black and white. 11 min. "Human and machine interact with serial beauty, one form passing into another with delicate precision."

lines of the human body. He photographed a nude girl performing simple motions and processed this footage until she became as mechanical as the machinery. At first we aren't certain whether these shapes are human or not, but the nonrhythmic motions and asymmetrical lines soon betray the presence of life within a lifeless universe. Human and machine interact with serial beauty, one form passing into another with delicate precision in a heavenly spectrum of pastel colors.

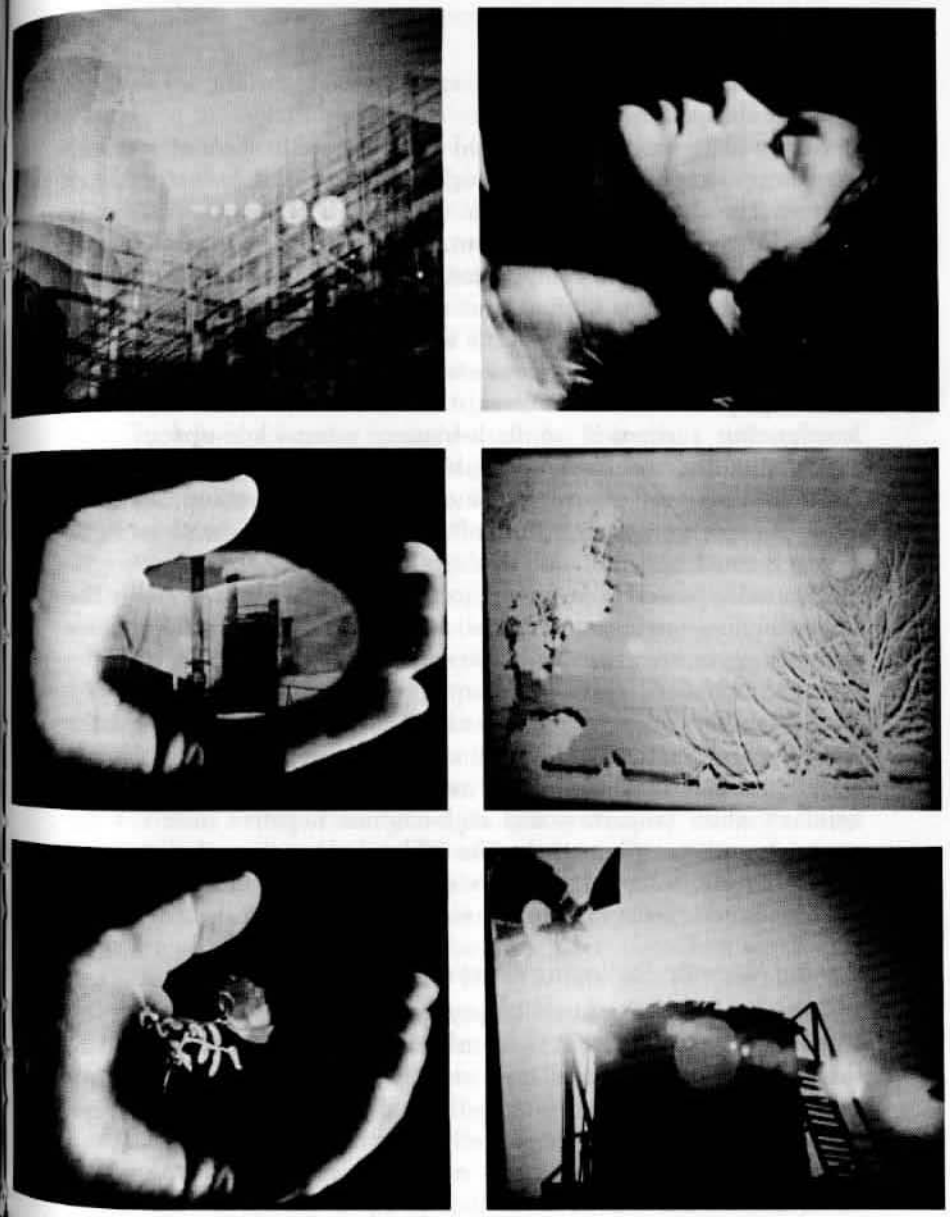
John Schofill: *XFilm*

The young Berkeley physicist John Schofill has exhibited a thorough and creative grasp of kineticism as regards the representational organic image. Although *XFilm* is a spectacular example of montage-as-collage, it does not ignore the conflicts of volume, scale, mass, and graphic direction that Eisenstein found so central to film form. Other physiological montage effects postulated by Eisenstein—metric, rhythmic, tonal, overtonal—also are used by Schofill not for any result that might resemble montage, but rather to generate an overpowering sense of kinaesthesia, or rushing dynamic force.

Through precise manipulation of individual frames and groups of frames, Schofill creates an overwhelming sense of momentum practically unequaled in synaesthetic cinema. There is almost a visceral, tactile impact to these images, which plunge across the field of vision like a dynamo. Yet they are punctuated with moments of restful quietude. It is a composition of point-counterpoint, the better to accentuate kinaesthetic content.

Schofill has developed a method of A-B-C-roll editing for superimpositions, adapted from Karel Reisz's methods of cutting single footage.[19] It's a rhythmic concept, that is, a shot is divided into definite kinetic "beats." The kinetic activity begins, reaches a middle point, and ends. In triple superimpositions, the corresponding

[19] Karel Reisz, *The Techniques of Film Editing* (New York: Hastings House, 1968).



John Schofill: *XFilm*. 1967. 16mm. Color. 14 min. "Images which plunge across the field of vision like a dynamo . . . punctuated with moments of restful quietude."

rhythms of each piece of film are matched, fading in and out without abrupt cuts.

XFilm begins with quiet formal imagery: static shots of factories spewing poison into the sky, strongly reminiscent of Antonioni's *Red Desert*. The structures are seen in eight levels of superimposition of eight different zoom-lens positions. The sound track explodes with an extraordinary tape composition by Berkeley composer William Maraldo, a synthesis of East Indian and rock music that perfectly counterpoints the visuals with its own sense of dynamic thrust. We see a series of tableau statements in which a nude girl's cupped hand opens to reveal a flower, then a factory. Then begins an accelerating succession of flash-frames, macro-close-ups of electronic circuitry, tree bark, dirt, plants, human flesh. Each image is balanced in terms of scales, volumes, masses, directions, and textures of objects within it. Quite often a particularly smooth or static image is counterpointed with strobing flash-frames.

The most powerful sequence, one which deals purely with the kinaesthetic experience, involves a time-lapse sunset that begins with a low horizon, bare-limbed trees, and a blue sky. Suddenly the action is speeded: clouds and squiggly jet contrails rush up and over. Maraldo's sound track takes a spiraling, droning dive and the sun appears, sinking rapidly like a comet from upper left to lower right. Just as it reaches the horizon the foreground and trees flash brilliant white (superimposed high-contrast negative over a high-contrast positive silhouette). The effect is stunning. A train, approaching the camera, becomes visible as the sun fades, continuing the kinaesthetic sense of dynamic volumes and trajectories.

Ronald Nameth: *Exploding Plastic Inevitable*

To some extent the so-called psychedelic discotheque was to the cinema of the sixties what the Busby Berkeley ballroom was to the thirties. In a larger sense, however, they are by no means in the same class either socially or aesthetically. The Berkeley extravaganzas, like Hollywood, were not places but states of mind. They generated their own ethos, their own aesthetic. They answered an obvious need for escape from the dreary hardships of the times. Life imitated art. But thirty years later Hollywood had degenerated to the point that it was, at best, an imitation of an imitation. The

spate of "hip" Hollywood films, which began to appear after 1966, was about as socially significant as the various Kennedy assassination "souvenirs," and was proffered with the same exploitive street-vending zeal. Like all commercial entertainment, these films were *about* something rather than *being* something, and so were the discotheques they imitated.

Andy Warhol's hellish sensorium, the *Exploding Plastic Inevitable*, was, while it lasted, the most unique and effective discotheque environment prior to the Fillmore/Electric Circus era, and it is safe to say that the *EPI* has never been equaled. Similarly, Ronald Nameth's cinematic homage to the *EPI* stands as a paragon of excellence in the kinetic rock-show genre. Nameth, a colleague of John Cage in several mixed-media environments at the University of Illinois, managed to transform his film into something far more than a mere record of an event. Like Warhol's show, Nameth's *EPI* is an experience, not an idea.

In fact, the ethos of the entire pop life-style seems to be synthesized in Nameth's dazzling kinaesthetic masterpiece. Here, form and content are virtually synonymous, and there is no misunderstanding what we see. It's as though the film itself has exploded and reassembled in a jumble of shards and prisms. Gerard Malanga and Ingrid Superstar dance frenetically to the music of the Velvet Underground (*Heroin*, *European Son*, and a quasi-East Indian composition), while their ghost images writhe in Warhol's *Vinyl* projected on a screen behind. There's a spectacular sense of frantic uncontrollable energy, communicated almost entirely by Nameth's exquisite manipulation of the medium.

EPI was photographed on color and black-and-white stock during one week of performances by Warhol's troupe. Because the environment was dark, and because of the flash-cycle of the strobe lights, Nameth shot at eight frames per second and printed the footage at the regular twenty-four fps. In addition he developed a mathematical curve for repeated frames and superimpositions, so that the result is an eerie world of semi-slow motion against an aural background of incredible frenzy. Colors were superimposed over black-and-white negatives, and vice-versa. An extraordinary off-color grainy effect resulted from pushing the ASA rating of his color stock; thus the images often seem to lose their cohesiveness as

though wrenched apart by the sheer force of the environment.

Watching the film is like dancing in a strobe room: time stops, motion retards, the body seems separate from the mind. The screen bleeds onto the walls, the seats. Flak bursts of fiery color explode with slow fury. Staccato strobe guns stitch galaxies of silverfish over slow-motion, stop-motion close-ups of the dancers' dazed ecstatic faces. Nameth does with cinema what the Beatles do with music: his film is dense, compact, yet somehow fluid and light. It is extremely heavy, extremely fast, yet airy and poetic, a mosaic, a tapestry, a mandala that sucks you into its whirling maelstrom.

The most striking aspect of Nameth's work is his use of the freeze-frame to generate a sense of timelessness. Stop-motion is literally the death of the image: we are instantly cut off from the illusion of cinematic life—the immediacy of motion—and the image suddenly is relegated to the motionless past, leaving in its place a pervading aura of melancholy. Chris Marker's *La Jetée,* Peter Goldman's *Echoes of Silence,* and Truffaut's *400 Blows* are memorable for the kind of stop-frame work that Nameth raises to quintessential beauty. The final shots of Gerard Malanga tossing his head in slow motion and freezing in several positions create a ghostlike atmosphere, a timeless and ethereal mood that lingers and haunts long after the images fade. Using essentially graphic materials, Nameth rises above a mere graphic exercise: he makes kinetic empathy a new kind of poetry.

Ronald Nameth: *Andy Warhol's Exploding Plastic Inevitable.* 1966. 16mm. Color, black and white. 30 min. "An eerie world of semi-slow motion against an aural background of incredible frenzy. He makes kinetic empathy a new kind of poetry."

Mythopoeia: The End of Fiction

"If what we see depicted had been really the truth, successfully created in front of the camera, the film would cease to exist because it would cease, by the same token, to be a myth."

ANDRÉ BAZIN

In 1934 Erwin Panofsky wrote: "To pre-stylize reality prior to tackling it amounts to dodging the problem. The problem is to shoot and manipulate unstylized reality in such a way that the result has style." The problem that concerned Panofsky was how to work with the two qualities unique to cinema alone, not to be found in any other aesthetic medium.

The first is its ability to capture and preserve a picture of time. This is fine until the filmmaker wishes to comment upon or interpret the events he has captured. Thus we come to the second unique property of cinema, its aesthetic element: the ability to post-stylize natural reality. To understand this concept we must examine the three general purposes to which cinema historically has been applied: fiction, documentary, and *cinéma-vérité*.

Cinematic fiction should be understood as prestylized or manufactured reality that did not exist prior to the making of the film. The only true reality that remains in the finished film is the objective awareness of the stylization itself. That is to say, a theatrical scenario-based fiction film deals with a prestylized reality distilled and recorded through the personality of the writer, then visualized by the director, crew, and actors according to certain schemata. Not only is this not objective reality; it's not even the cohesive, unique reality of one artist's perception.

A documentary also deals with prestylized reality. The documentary filmmaker shifts and reorganizes unstylized material into a narrative form that explains that reality to the viewer. Thus a documentary is not an explanation of reality, but rather the reality of an explanation.

Cinéma-vérité, or direct cinema, is based on recording actual unstylized reality as it exists at a particular moment before the camera. The filmmaker is never to intrude by directing the action or in any way alter the events taking place (that is, beyond the unavoidable alterations caused by his very presence). The filmmaker's refusal to intervene directly in the reality before his camera, and the resultant loosely-organized structure, bring this type of cinema closer to the truth of the way events move in actual reality.

Synaesthetic cinema is all and none of these. It is not fiction because, with a few exceptions, it is based wholly on unstylized reality. It is not documentary because the reality is not organized into an explanation of itself. And it is not *cinéma-vérité* because the artist shoots and manipulates his unstylized reality in such a way that the result has style.

This process, best described as "post-stylization," is accomplished through cinematic equivalents of the four historical styles of art: realism, surrealism, constructivism, and expressionism.

Cinematic realism already has been defined as *cinéma-vérité*: capturing and preserving a picture of time as perceived through unstylized events.

Cinematic surrealism is achieved by the juxtaposition of unstylized elements so incongruous and remote that close proximity creates an extra dimension, a psychological reality that arises out of the interface.

Cinematic constructivism, as we've discussed it, actually is the universal subject of synaesthetic cinema: a constructivist statement, a record of the process of its own making.

Cinematic expressionism involves the deliberate alteration or distortion of unstylized reality, either during photography with lenses, filters, lights, etc., or after photography with optical printing, painting, or scratching on film.

Post-stylization of unstylized reality results in an experience that is not "realistic" but neither is it "fiction" as generally understood, because none of the elements is altered or manufactured prior to filming. In essence a myth is created, a myth born out of the juxtapositions of the paradoxes of reality. Webster defines myth as a story that "serves to unfold part of the world view of a people or explain a practice, belief, or natural phenomenon." The natural

phenomenon explained by synaesthetic cinema is the filmmaker's consciousness. It is a documentary of the artist's perception. Since this is not a physical reality, it must be a metaphysical reality, that is, a myth. In the approximation of this intangible, however, the artist's language is reality, not fiction. What we see on the screen is not an act. True, it's processed through the medium until it no longer is objective reality, but it is nonetheless real. This is *mythopoeic reality*. In one sense it renders fiction obsolete.

At the beginning of *Alphaville*, Jean-Luc Godard states: "There are times when reality becomes too complex for communication. But legend gives it a form by which it pervades the whole world." This is the legitimate role of fiction: to establish a framework that provides insights into otherwise inaccessible areas of the living present. But most insights inherent in fiction as the simulation of objective reality have been absorbed by the collective consciousness. The structure of the system is an index of the performance that may be expected from that system: the simulation of reality has delivered its maximum performance; it no longer benefits us as it has in the past.

Obviously, filmmakers will continue to prestylize reality; in one sense the very nature of art is the rearrangement of the environment for greater advantage to humanity. Yet this prestylization will not be so clearly separated from "reality" as it has been. Because of technology, we have now reached the point at which it is possible to manipulate reality itself in order to create new legends. It may be that insights most relevant to contemporary society will be achieved primarily through this language.

Synaesthetics and Synergy

Synaesthetic cinema by definition includes many aesthetic modes, many "ways of knowing," simultaneously omni-operative. The whole, however, is always greater than the sum of its parts. This is a result of the phenomenon called *synergy*. Synergy is the behavior of a system unpredicted by the behavior of any of its parts or subassemblies of its parts. This is possible because there is no a priori dependency between the conceptual and design information (i.e., the energy) of the individual parts. The existence of one is not requisite on the presence of another. They are harmonic opposites. In physics this is known as the Theory of Complementarity: the logical relation between two descriptions or sets of concepts which, though mutually exclusive, are nevertheless both necessary for a complete knowledge of the phenomenon.

Dramatic narrative cinema is antisynergetic. Individual parts of linear drama predict the behavior of the whole system. For a genre to exist it must include parts that are integral to the a priori purpose of the system. As E. H. Gombrich has demonstrated, the function of its "words" must remain constant and predictable. To gratify conditioned needs for formula stimulus, the commercial entertainment film must follow prescribed rules that predict the whole system of conflict-crisis-resolution.

We have seen, however, that the behavior of a conflict or game is always governed by its weakest moment, which is equivalent to the notion of a chain being only as strong as its weakest link. This idea, however, presupposes a linear chain under opposing vectors of stress, i.e., narrative drama. Fuller: "We tend to think it is logical to say that a chain is no stronger than its weakest link—which immediately is thrown out of validity when we join the other end of the chain back on itself. We think a chain ought to be just an infinite line rather than a circle because we inherited the Greek concepts of linear and plane geometry [which] imposed the concept of an infinite surface and the infinite line as logical to the then-prevalent belief that the earth was flat . . . However, in nature all the lines

are completely curved and all chains do eventually return upon themselves."[20]

The malfunction or absence of any one element in a linear narrative constitutes a break in the system and relinquishes the system's hold over the viewer's consciousness. But synaesthetic synergy is possible only when the parts behave with integrity and without self-consciousness. If the metals in chrome-nickel steel tried to retain their individuality, the synergetic effect of tripling the tensile strength through alloy would never occur. Fuller has noted that the individual tensile strengths of chromium, nickel, and iron are in the approximate range of 70,000, 80,000, and 60,000 pounds per square inch respectively. Yet in alloy they yield 300,000 psi tensile strength, which is five times as strong as its weakest link and four times as strong as its strongest link.

The entertainer makes a package that is equal to the sum of its separate parts; the artist fuses his parts into an alloy greater than its ingredients. That is, synaesthetic synergy does not tend toward greater complexity, but rather produces an effect that in physics is known as *elegant simplicity*. An elegantly simple construction accomplishes that which previously required many different mechanisms, either physical or metaphysical. Recent revolutionary concepts in biology are an example. John McHale: "The DNA/RNA mechanism construct renders obsolete an enormous number of separate 'biological facts' and relates biology via biochemistry to biophysics—and thence to a more elegantly simple configuration of structural hierarchies as extending outward from the micro-nucleus through the median range of ordinary perception towards macro-structural hierarchies at the level of galaxies."[21]

Let us briefly review what we mean by synergy as applied to the cinema. We have learned that synaesthetic cinema is an alloy achieved through multiple superimpositions that produce syncretism. Syncretism is a total field of harmonic opposites in continual metamorphosis; this metamorphosis produces a sense of kinaesthesia that evokes in the inarticulate conscious of the viewer recognition of an overall pattern-event that is in the film itself as well as

[20] R. Buckminster Fuller, *Ideas and Integrities* (New York: Collier Books, 1969), p. 65.

[21] McHale, "Knowledge Implosion," *Good News*.

the "subject" of the experience. Recognition of this pattern-event results in a state of oceanic consciousness. A mythopoeic reality is generated through post-stylization of unstylized reality. Post-stylization simultaneously involves the four traditional aesthetic modes: realism, surrealism, constructivism, and expressionism.

Herbert Read has suggested that these four styles are intercorrelated to the four modes of human consciousness: thought, intuition, emotion, and sensation. Of course, they are operative in commercial entertainment as well; but it's the nature of synaesthetic cinema that one is made aware of the process of one's own perception; thus one invests the experience with meaning by exerting conscious control over the conversion of sight impressions into thought images. We can easily see how thought, intuition, and sensation may be directly engaged or indirectly evoked in the synaesthetic viewing experience; the role of emotion deserves further comment.

The emotional content of dramatic narrative cinema is predominantly the result of expectations that the viewer brings with him to the theatre, and thus he remains passive during the viewing experience so that his conditioned response to the formula may be fully gratified. In this way he satisfies his unconscious need to experience the particular emotions that he has already decided to experience. The film is "good" or "bad" in relation to its effectiveness as a catalyst for these predetermined emotions. However, the emotional content of synaesthetic cinema exists in direct relation to the degree of conscious awareness of the act of perceiving, and is thus seldom predictable. Synergy is the essence of the living present, and it is the essence of art. Where synergy does not exist, energy tends toward entropy and change becomes increasingly unlikely.