

*Science today has become a machine of outrageous representation*

Paul Virilio

**The Physics of Physicality**

Hyperrhythm generates a new physics of physicality. Kinaesthetic disorientations become audible in the astrophysical track titles of 4 Hero's '94 concept double album *Parallel Universe*, in the sensory superparadoxes of Escher's '54 lithograph *Tetrahedral Planetoid*. Space titles announce that the physical laws of rhythm are about to be involuted, just as a wrinkle in time collapses the fabric of space-time. The scientific title makes rhythmic psychedelia audible. The science in Breakbeat science doesn't drain sensation; instead it opens up a possibility space of hypersensation. Rhythmically speaking, science sensualizes. Physics doesn't numb the senses, it intensifies them. When the eye's capacity to explain the ear breaks down, physics takes over. Science takes control as soon as the visual collapses. The cognitive dissonance of science amplifies the perceptual wrench of rhythmic psychedelia.

Quantum physics translates easily into Marvel comics and Warner Bros cartoons because quarks, gluons and the Big Bang all point to the malleable laws underpinning physical reality. It's not God's Word that underpins the subatomic Universe, it's Plastic Man's.

Breakbeat science therefore opens a continuum between title and track across which sensory concepts move freely. Rhythmachines d/evolve into Sonic Science. Science d/evolves into Foucault's sensational phantasmaphysics, the 'speculative fantasy of science' that Ballard called for back in '62.

The impossible physical states of quantum chromodynamics easily become Parliament's quarks and gluons. Radio astrophysics becomes Drexciya's aquawormholes. Physics is the gateway into a kinaesthesia in which geometry is physical, topology sensual.

Breakbeat science is the physics of rhythm. It impacts at levels barely explicable in the normal languages of sensation. Beats become abstract at the point when the body succumbs to sensations which induce a gulf crisis in speech, when language falls away and fails, happily.

**The Abstract**

Time stretches into a state of sensory shipwreck that producer Roni Size in '94 termed the 'Phizical'. Rather than disembodiment the body, the digital Breakbeat intensifies it, at a level more sensed than explicated. This communication breakdown is what Breakbeat science calls abstract.

Abstract doesn't mean rarefied or detached but the opposite: the body stuttering on the edge of a future sound, teetering on the brink of new speech.

Breakbeat science's extreme rhythmic involution forcibly inducts you into a new motor system, turns you into a stepper rollin' with reinforced reflexes. Listening sharpens up the senses until they bristle like spikes. The body is being mutated limb by limb, as jungle producer Marvellous Cain insists, by phizical convolutions that language hasn't caught up with yet. Language drags its flabby arse after sound. Therefore it is misspelt, contorted, rinsed out. Language lags behind beats and must be mashed up. Your motorsensory system communicates paralinguistically from a future which today's media can't even begin to decrypt.

To say that today's producer is inarticulate and monosyllabic only reveals how standard criticism is deaf to the sensory spectrum captured in Sonic Fiction, PhonoFiction and machine mythologies. It is ordinary language that's dumb and which must be adapted. The nervous system, the first sensory field to be overhauled by digital rhythm, is now far in advance of all Trad understanding. Breakbeat science compels you into the state diagnosed by Norman Mailer in '57: 'We are obliged to meet the tempo of the present and the future with reflexes and rhythms which come from the past; the inefficient and often antiquated nervous circuits of the past strangle our potentiality for responding to new possibilities.'

**The Distributed Brain Is a Body**

The sensory motor reflexes of the body are centuries ahead of minds still locked into dead traditions. The body is a distributed brain, a big brain whose zones are nonetheless separated from each other by centuries, inherited habits.

4 Hero's *Parallel Universe* is all drumtrips and drumtricks, whose purpose is to spring the sensorium into activity, to turn on the entire body as a big brain. The body thinks in unknown kinds of bodily intelligence because it's a large brain, because the brain is distributed across the entire surface of the body. Rhythmic psychedelia therefore activates new kinds of dermal thought, 3rd-Ear hearing, the transensory

capacities of embodied thought. The ear's power to locate the shape of sound in time, what audiovisual theorist Michel Chion calls its 'temporal resolving powers', are sped up and involuted, baffling the body's sense of location in time. In *Solar Emissions* detuned anamorphic warps and quarks flare above your head, make your ears squint.

Rhythmic psychedelia triggers the eye in your ear, the feeling in the ear, roborapper Craig Mack's 'flava in the ear': 'When kinetic sensations organized into art are transmitted through a single sensory channel, through this single channel they can convey all the other senses at once, rhythmic, dynamic, tactile and kinetic sensations that make use of both the auditory and visual channels.'

### Breakin' in Space

*Parallel Universe* crosses texturhythmic thresholds. Collapsing pitch ambushes you into a transformation scene on fastforward, draws you into new sensory spectra, mixed feelings, polyparadoxical drum emotions not yet named. *Shadow Run* is a sequence of grandfather clockchimes running down with an offkey queasiness until what sounds like tape starts to buckle and bump as if it's spooling out over the mixing desk and into space. Keyboards bend and shift pitch into glutinous, melting infra-gamelan. The bass buckles and wilts. Rhythmic signals are filtered through synthesizers until they coil like cables and springs.

Percussion melts into spongy texturematter that spills its guts over the track, escaping from the world of the track to probe around your head, circling your heat. Titles such as *Sunspots*, *Solar Emissions* and *Wrinkles in Time* suggest that breaking down standard speeds into molecular plastic, into stuff you play with, is the aural equivalent of going through the Star Gate in 2001. Computerization allows 4 Hero to investigate microscopically the microtones of pitch in drums, bass and synth. Mark Clair of 4 Hero recalls that 'We used to have weekends where we'd just make sounds and process breaks.'

By using the sampler's quantum expansion of the ASDR envelope to alter rather than repair the broken beat, rhythm crosses the threshold from wood to metal to what producer Jay Magick terms 'needlepoint magick'. Drumsticks writhe like poised rattlesnakes, beats become blades that slash and scythe at 170 bpm, knitting needles that hit tinfoil so fast that each impact triggers a spitting crackle of fuzz.

*The graffiti artist cracked the letter first.  
Now I use a Mac to do the same thing*

Goldie

### Of Pictogrammatology

Graffiti turns the message into the medium. Instead of looking through the letter, the eye is arrested by the letter, travels across its surface. In transforming the letter into the pictogram, the word becomes an image-environment. Looking becomes a movement into the dimensions of the pictogram, a fall through the impossible topology of the 3rd dimension that emerges from the 2nd-dimension wall.

### Beyond Wildstyle: Computer Style

Wildstyle intensifies graffiti's 3D impossibility into the hyperimpossible image-levels of 5D. Kaze 2: 'Wildstyle was the coordinate style and then computer. That's what I brought out. Nobody else can get down with it 'cause it's too 5th-dimensional. I call it the 5th-dimensional step-parallel staircase, 'cause it's like Computer Style in a step-formulated way. It's just sectioned off the way I want. Like if I take a knife and cut it, and slice, you know, I'll slice it to my own section and I'll call it Computer Style.'

Kaze 2's 5D art translates Escher's '53 lithograph *Relativity* to the letter. Beyond Wildstyle, the Computer Style is when the letter as environment becomes the letter as an Escherized maze. Computer Style is the alphabet gone digital, typography remodelled, remixed and encrypted. The writer becomes DJ Hype's computerizer.

### The Battle of Planes

In the notes for *Relativity*, Escher explains that 'three gravitational forces operate perpendicularly'. In Wildstyle, civil war breaks out between operating "gravitational forces" so that 'background and foreground take turns changing functions. A continuing competition exists between the two.'

To look is to have your head wrecked. Computer Style involutes the senses, puts them through a mental gymnasium, reassembles the sensorium ready for the hi-pressure future it depicts. It folds the mind into an origami state, a battle style. The senses are kinaesthetized into an origami army, armed for a contest of lines. To look is to be rocketed across the planes of the letter, shot along diagonals that charge space with acute dynamics, gradients that reverse gravity like skyscrapers that

To technofy is to evolve a mindstate which grasps the migration paths of machinic processes, builds Sonic Fictions from the electronics of everyday life.

To technofy is to optimize the machinic mutation of music.

### Synthesize Yourself

Behind the disappearing of Detroit Techno in the US, there's the sense that Techno betrayed an unspoken oath. It was seduced by Manuel Gottsching, by Liaisons Dangereuses — by all that Euro synth music — and this triggers the unspoken but persistent sense of abandoning African-American tradition. This loyalty assumes an umbilical connection to r&b. Detroit Techno breaks exhilaratingly with r&b — but then it was never rooted in it to begin with.

It was always synthetic, from the aeriels up.

Crits would still ask, 'How could Grandmaster Flash and Bambaataa like Kraftwerk?' Obvious. Bambaataa is attracted to an alien Euro sound, bored with and indifferent to familiar Af-Am sound. But at the same time, white sound isn't alien at all. Nothing that attracts is alien. Bambaataa wants to artificialize himself. White-framed slitshades scanning the track, the fashion of a Parliafunkadelicment outpost left on an offworld colony to develop its own silicon-based MythSystems. The dj's role is to intensify estrangement, to transmit the currents of the alien. But the dj doesn't know what she wants until she hears it. The Futurist is helpless in the face of fascination. Yesterday this track was unknown, unheard, undreamt. Today you follow it like a sleepwalker.

Journalism inverts this unknowingness — How can I know what I want? — into a demand: 'How can you like what you like?' Journalism's job is to build the border, be the gatekeeper, man the crossing. The Futurist moves carelessly past a polarization which was never there.

White journalism always asks the same question: 'How could this whitest of groups exert this powerful influence over Black Music?' Simultaneously smug and incredulous, it tells you, over and over, that Kraftwerk are Techno's precursors, its routes-rockers. But having taught Techno producers all they know, the originators must recede into the distance as Techno, simple lessons mastered, advances inexorably into the future.

### White Noise for Snares

Drums and Electronics converge on the new possibility space of rhythematics and syncussion. As Kraftwerk realized, sound machinery de-skills and dephysicalizes music, allowing 'thinking and hearing' precedence over 'gymnastics. Practising is no longer necessary.'

The musician becomes an electronic programmer, a push-button percussionist who taps ENTER with the fingertips.

The drum-machine is really a synthesizer which plays back sequences of automatic intensities, pitch, noise. Model 500 makes up 'drum sounds on the Korg MS10 synthesizer. I would play around with white noise and pink noise and come up with drum sounds. I heard a Kraftwerk record the first time. The record was *Man Machine* and on a lot of the songs they were using white noise for snares in just the same way that I was.'

*Science fiction doesn't predict the future, it determines it, colonizes it, preprograms it in the image of the present*

**William Gibson**

### Preprogram the Future

Detroit Techno organizes a history and preprograms the future direction of the Rhythmachine. As Juan Atkins declares 'It was so amazing. It was like the answer. It was the future for me. I thought man, this is the future and this is where I'm trying to go. If you listen to *We Are the Robots* there are no cymbals. I heard my snare sounds and I heard my kickdrum sound on this record. But the thing was that it was more precise. It was like what I was trying to do but couldn't get to, you know? Then I heard the gated noise snare and the gated noise kick with no cymbals. It just froze me in my tracks.'

### The Cyborg in the Network of Forces

In naming himself Model 500, Juan Atkins affirms the machine state which used to be called dehumanization. Gunther Frohling's '78 *Man Machine* sleeve shows a chorus line of bachelormachines. The inside sleeve art shows Kraftwerk with dyed black hair, black eyeliner, red lipstick on their minuscule, sealed-up mouths, red shirts and black ties. The right arm is held at the hip and all are looking right. Posed on a metal stairway with red rails, all bachelors with no bride.

The name Model 500 announces the producer as the next model, the synthesizer of the future. The producer is now the modular input, willingly absorbed into McLuhan's 'medium which processes its users, who are its content.' Tapping into the energy flow of the machine, the Futurist becomes an energy generator. Cyborging turns the human into Samuel Butler's machinate mammal, part of an ongoing connection machine. Machines R US. Donna Haraway: 'The machine is us, our processes, an aspect of our embodiment.'

To cyborg yourself you name yourself after a piece of technical equipment, become an energy generator, a channel, a medium for transmitting emotions electric. The psyborg plugs into machinic processes, draws on the electronic energy of... everything. It becomes a component of the unbuilt future world machines, an element in Goldie's cuboidrome piece, in Basquiat's sampladelic *Pegasus* machine. Cyborging, to borrow the words of Norman Mailer, 'takes the immediate experiences of any man, magnifies the dynamic of his movements, not specifically but abstract so that he is seen as a vector in a network of forces.'

### Heteronyms

Like Underground Resistance as X-102, World 2 World, Galaxy 2 Galaxy, The Martian, like Kool Keith as Funk Igniter Plus, Rhythm X, Dr Octagon, like 4 Hero as Tek 9, Internal Affairs, Tom & Jerry, Nu Era, Juan Atkins multiplies himself into machine names: M500, X-Ray, Channel One Frequency, Audiotech and Infiniti. The producer disappears into each alterego but the machinate name is not a pseudonym, a fake name. Rather it's a *heteronym*, a many-name, one in a series of parallel names which distributes and disperses you into the public secrecy of open anonymity. I is a crowd: the producer exists simultaneously, every alterego an advertisement for myself. The Rhythmachine actively sets out to manufacture as many personalities as possible. Alteregos are more real because you choose them. Ordinary names are unreal because you didn't. Multi-egos are more real still because they designate your parallel states.

Children, instinctual animists, identify with toys and dolls, subjecting themselves to and projecting onto the Inanimate: every 12-year-old knows that I is an other and another and another. In the 70s, the Bowie heteronyms – Major Tom, Aladdin Sane, Thin White Duke – were serial. Now heteronyms come in parallel. Today, the Futurist producer is always greater than one, always multiplying into omni-duos, simultaneously

diverging selves that never converge into knowledge of self. Instead of disciplining others through the despotic standard of keeping it real, staying true to the game, representing or staying black, Alien Music proliferates mindstates which never amount to one mind. To unify the self is to amputate the self.

### Rhythmic Consciousness

To technofy means to synthesize music from the same robotic rhythms that took Detroit's humans out of the loop. M500: 'Berry Gordy built the Motown sound on the same principles as the conveyor belt system of Ford.' Motown amplified the soundscape of the 60s motor town metropolis: 'Today the plants don't work that way. They use computers and robots to build the cars.'

### Metroplex = Metropolitan Complex

Model 500's record label – Metroplex – amplifies the assembly-line lanes of the 80s metropolitan complex. The metroplex is the futuropolis in the Third Wave of the Techno Era. 'I'm probably more interested in Ford's robots than Berry Gordy's music.' This crowd of cyborgs – Model 500, Audiotech, X-Ray, Channel One, Frequency – all tune into the chunk-a-chunk-a rhythms of the Ford robot. Building a car becomes the Dance of the Industrial Robotniks.

### Automanikk

To technofy is to turn the automatic sequence into what A Guy Called Gerald terms an automanikk track. Far from being mechanically predictable, the automatic becomes manic. The gated-noise kick of the Roland 808 and 303 machines, their signature hardstrike, causes language to onomatopoeize the 'c' into 'kk'. With Techno the machine goes mental.

### Defrictional

Techno defrictionalizes the funk. Its angular attack velocities are the opposite of any snake-hipped 70s groove. Where Parliament urged you to dance your way out of your constriction, Techno triggers a delibidinal economics of strict pulses, gated signals – with Techno you dance your way *into* your constriction. Diagonals corner you, creating a new kind of tension that doesn't resolve in expected places. This in turn creates new expectations in the listener and the producers begin to call this feeling

abstract. Techno's uptightness, its everywhichway-but-looseness is not so much maladroitness as malandroid.

### Cubular

Techno is angular funk for androids, mandroids and womandroids. More than angular, it's cubular: Techno transmits sensations of cuboid and tubular sound, sets off a cognitive dissonance throughout the large brain of the body. Its texturhythms provoke an inextricable intricacy, a maze of limbic dissonance that blocks and baffles, threatens and entreats.

With Rhythim is Rhythim's '92 *Ikon* and *Kao-tic Harmony [Relic of Relics]*, sequencing complexifies into an allatonceness, an algebra of untitled emotions. 'My concept has always been to get the feel from all drum-machines simultaneously,' May explains. 'I try to connect all the feels so that they accent and bounce off of each other.' The sequencer is tied to a single clock, but running 3 rhythm patterns and 2 bass sequences at once yields a bewitching mosaic of overlapping rhythmelmelodies, an aural algebra that confounds counting, that tugs at you everywhichway, compelling an all-over omniattentiveness. When sequences bounce and clock cycles nudge, when the rims of texturythm meet the edge of rhythmelmelodies, time touches time in a machinekiss.

By sampling a chord and playing it back as a single note, the original chord expands into a keyboard. Unlocatable intermediate tones emerge, which May then exaggerates by jumping between octaves of the expanded chord spectrum so that the sound shockcuts as treacherously as springloaded stalactites. The result is a sense of solemn exaltation. Rhythim is Rhythim's syntharmonic orchestration move you through an impalpable portent, a cosmic indifference exemplified by the title and arrangement of '87's *It Is What It Is*. 'My string sounds are very cold, very callous,' he explains. This callousness is anempathetic in Michel Chion's sense, because 'it doesn't care and for this very reason, takes on, in a massive transference, the weight of a human destiny which it sums up and disdains.' In *Kao-tic Harmony*, these glacial tones turn aquamarine, are heard underwater. The spheres have long since collapsed into a sublime spacewreck, a bombed-out relic of relics.

*UFOs, they're drawn to electric power. They hover over the powerplant, just over there*

**Fox Mulder**

### Ufonic

Sung with the drained fanaticism of an abductee, Model 500's '85 *No UFOs [Original Vocal Mix]* drags you into the ufonic experience. 'When the synthesizer came along it was perfect for me because it allowed me to make sounds that were impossible.' For Juan Atkins, electronics switches on an unreality principle. 'I was into UFOs landing and taking off, and spaceships. The synthesizer allowed me to create, in my bedroom, the sound of what it would be like if a UFO landed in the front yard.' Eddie "Flashin" Fowlkes recalls 'a story about Juan and the other Cybotron guys going to a building and some guy drawing a circle around them. They sat in a circle waiting for the cybotrons to come down.'

*I wanted to land a UFO on the track*

**Model 500**

### The Mouth Is a Hole for the Soul

The M500 voice hollows the soul into an affectless, traumatized void. The mouth is a hole through which the soul drains away. The M500 accent doesn't emote: instead it [r]emotes, recedes into earshot, oracular portents from the end of a tunnel. *No UFOs* has the ominous imminence of whiteness synthesized out of Bauhaus, Depeche Mode and Gary Numan: 'Tell me if it's alright/You said I should not fear/things you haven't seen before/are coming very near.'

### Your Brain Is Caught up in the Net

By running 2 Rhythmachines at once, programmed with separate parts, *No UFOs* blocks and bounces your body in a maze of interlocking inhibitions. Woodblocks with the wood deleted and replaced with the anempathy of metal on metal. Handclaps, the impact of palm on skin, are replaced by white noise gated into mekanik matchstrikes, amplified into the inexpressive aspiration of machines with asthma. The Song is replaced by nonsequential sequences of rhythmic electricity. Gating cuts off the attack of the envelope so that Roland 808 and 909 beats are all abruptness: from 0 to 1 like a trap shutting.