R

RASTER-NOTON

R

experiment

analysis

structure

model

background

working mode

fiction

science

a

b

a

Column labels (top, vertical):
- bauhaus
- time and space
- russian avantgarde
- ordinal factor
- improvisation
- raster
- technical processes in patterns
- check, decision
- translation to acoustics
- scientific phenomena
- artificial intelligence
- patching elements of a system
- logical entity of relations
- metalevel
- precision
- artificial intelligence
- circle, repetition, random
- intension
- macroscopic view
- exploring the future
- design of information

Row labels (bottom, horizontal):
- reduction to dot, line, plane
- density and void
- european minimalism
- logical entity of relations
- rhythmic construction
- static, clear
- rigid metric addition /subtraction
- network
- concentration
- boarder line experience
- binary space
- audiovisual processes
- scientific modes
- time flow, crystals
- mistakes, errors
- technical sequences reflect intellectual systems
- reverse, forward, linear
- nature
- microscopic view
- code, a message
- pattern, mathematical chance

Brainmap as a result of email contacts between Pinky Rose and Raster-Noton artists

unsorted

magic moments · oscillation · dependence on resolution · testtones · error = character · empty · (technical) limits · economically relevant object · translation to acoustics · cut, copy, paste · artificial intelligence · architecture · logical entity of relations · metalevel · precision · statement · circle, repetition, random · control · macroscopic view · abstract identity · gesamtkunstwerk

space — software — synthesis — sound

product — hardware — acoustic — movement

work with electricity · still sequence · structure of data · experimenting with unnatural effects · overtones · clippings · process · music · holistic thinking · morphing/merging · sine wave · hearing · parallel shift · new correspondence · wave architecture · intense reaction · reverse, forward, linear · white cube · microscopic view · emotion · simulation

CASEY REAS

'Structure emerges through the interactions of autonomous software elements'

The core of all my work is the concept, not the implementation. I work in print to reveal the resolution of the system, I work with animation to have complete control of how the image unfolds over time, and I implement the structure in software so it's possible to interact with it. The software implementation is closest to my actual concept, but the other media provide additional views into the structure.

Casey Reas, p.63
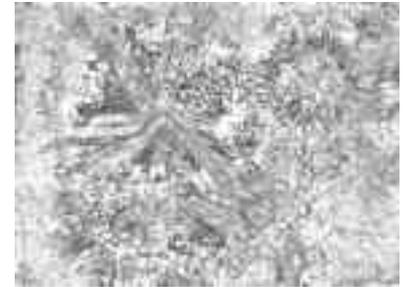
Casey Reas, **Structure,** 2004,
still images generated with Processing
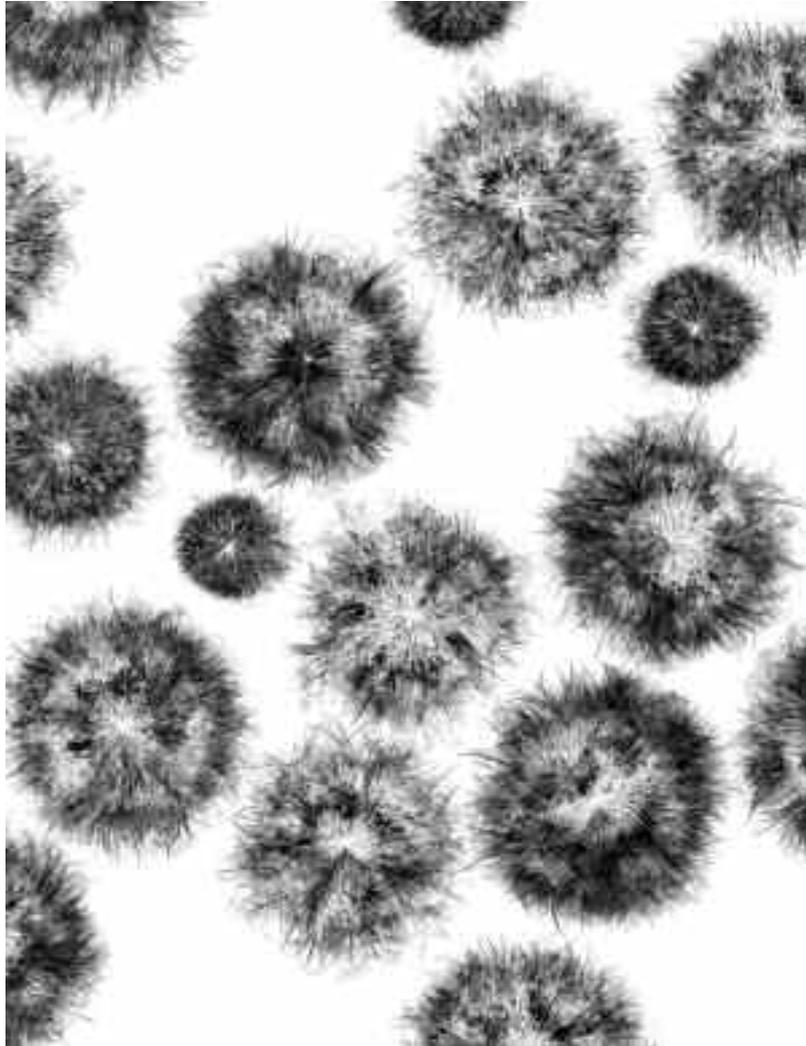
Casey Reas, **TI,** 2004,
print, image generated with software TI

'TI is an environment of enigmatic growing forms.'
Casey Reas, p.64
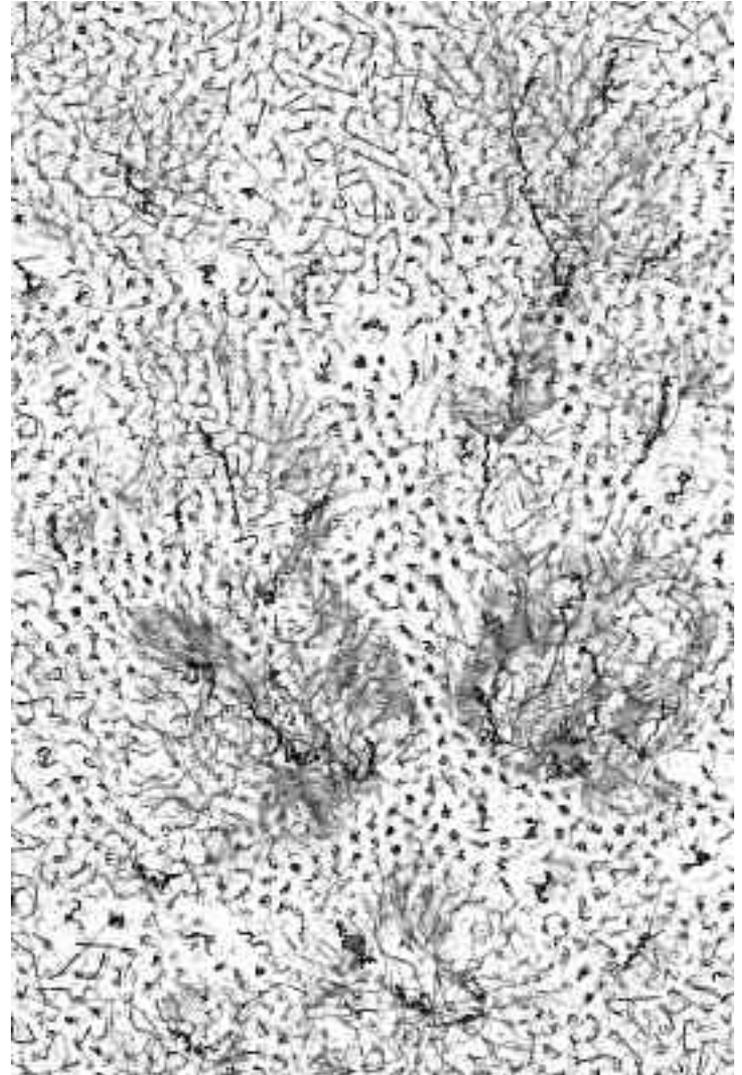
Casey Reas, **Furrow,** 2004,
still image from generative software Furrow

Casey Reas, **MicroImage,** 2003,
still image from the software MicroImage

RES (Recycling Entertainment system)

RES is a musical instrument: up to six players can play with hundreds of soundfiles using obsolete Nintendo controllers. It was built by Benjamin Gaulon, a French artist and designer who deals with the issues of trash and recycling. On the website digitalrecycling.com he recycles and shares free digital trash.
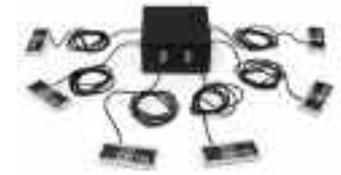
Benjamin Gaulon, **RES (Recycling Entertainment System),** 2004,
six Nintendo controllers, custom made electronics, digital soundfiles.
Photo Dezzie Dimbitsara

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THE REVERB ENGINE
tobias c. van Veen

Canadian 'renegade theorist' tobias c. van Veen digs into the modernist and futurist inclinations of a contemporary underground that's caught up in a huge feedback loop.

Cue the question for these 2000 words:

> **'If underground arts culture is always looking backwards, what does this say about the rest of underground culture (politically)?'**

post by Strata G. on Philip Sherburne's blog[1]

Since the decline of rave culture, the electronic genres have been cannibalizing their past (real or imagined). While this remix has flourished new directions of potential, such as the retooling of old genres with new software, leading to emergent hybrids, it has also driven creativity toward a dead-end. Sample Philip Sherburne: 'Pop music today is a necrophile, in love with from-dust-to-dust, pulverizing its way back to some idealized, ashen origins one pilfering at a time.'[2] In the desire to ressurect what has come to pass, as a reverence for the past that nonetheless forgets, destroys, and glorifies a past that many musicians never experienced, electronic music comes to dig into the very fabric of its time: modernism. Or, modernism's relation with romanticism, which situates, temporally, this phenomenon in another, earlier past: the turn of the twentieth century, rather than the encoded '21C.'

In all its diversity, electronic music encompasses the retro-electro of pop-punk to the recurrent 'avant-garde' experiments in noise, collage and improvisation. Whether it's *musique concrète* relooped or acid house retooled, the echoes of Sherburne's necrophilia resound. Modernism set out to destroy its own (art and social) history at the same time that it sought to save art a special place in modern history (art in service of revolution, in service of itself, art as its own process of commodification, et cetera). In the 21C, post-modernism is the target: (electronic) music especially seeks to destroy the style-laden '80s and rave-driven '90s at the same time that it replays its cocaine and ecstasy dreams. De facto, destruction is a recurrent movement of salvation (a theo- and philosophical bassline, so to speak). The remixing of the old into the new is obsessed with killing its predecessors only to, ostensibly and inescapably, resurrect its myths. Crate digging becomes an erotic and metronomed grave digging.

As Tim Hecker notes, electronic music became caught in a feedback loop, a fetishization, of the 'man-machine' aesthetic.[3] With its multiple monikers, faceless producers, and performance aesthetics of the DJ, the cyborg model countered rock music's focus on the celebrity show; electronic music events were structured around the relation of human to machine, and each body to the beat, as dance wired the commons. This ensemble collapsed under its own weight, its tendencies to sadistically abuse its masochistic relation of the body to sound, and its naïve idealism of projected, dance-friendly world utopias which were easily marauded by supersessions of organised crime and venture capitalists.

To escape the limitations of the cyborg – which, for Hecker, became an entrapment rather than a promised third position, as Donna Haraway imagined – the electronic genres sundered. Two truncations Hecker predicted: toward 'nature' (which 'fails as just a metaphysical and overly abstract concept as the perils of the man-machine') and a 'romantic return to the integration of acoustic instruments; however this seems to be more the workings of a veiled nostalgia than anything else.'[4] From this bifurcation, Hecker's proposition is toward reducing technology to a 'trace,' specifically via granular synthesis to produce an apparently Deleuzian 'smooth space' allowing for 'an organic development'.

In the 21C, granular synthesis has become a hallmark of the very nostalgia Hecker eschewed (a nostalgia which graces – and not without some trademark Heckerian irony – his own albums).[5] Hecker's final call is to the 'chaotic', to 'transgress the rational paradigms that machines inherently bring to the compositional process'. Hecker's refrain is an inverse futurism, a kind of harkening to the romantic, if not a twisted Luddism, that seeks to 'conduct war against machines' – using the machines to do so, of course, which

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is why the modernist element never quite left its futurist past behind. Andrew Hewitt, in his reassessment *Fascist Modernism, Futurism, and 'Post-Modernity'* writes that 'we must repress the cultural impulse represented by futurism – because it is politically volatile and unpredictable,' because it is 'fascistic to the end,' an end which operates under the logic of the 'at one and the same time,' of duplicity.[6] Hewitt argues, despite the attempts of art historians such as Poggioli, that futurism, specifically in its Italian incarnation, cannot be disassociated from the theory of the avant-garde and the project of modernism.[7] Most would agree today that such a disassociation is impossible. However, what is also impossible is Hewitt's imperative to repress the 'futurist' impulse: the logic of duplicity is not inherent to futurism per se, it is the basis upon which repression, as well as its antithesis, re-turns – what Hecker calls the 'trace'.

The cyborg offered an aesthetic that wasn't necessarily self-referential. The creation of pseudonyms, the 'facelessness' of electronic music throughout the '90s, after the death of synth-pop, also opened a strategy

of non-representational affect through music. Attention was directed to the experiential rather than to the performer. Electronic music was meant to be felt – as motion, as rhythm, in the dance, as high voltage waves of sound to be absorbed. This called for organisational tactics that were capable of producing the space and time for these events, which led to orchestrated social movements that echoed punk's DIY ethic rather than a characteristic audience-performer relation. The operant of the fluid collective, alongside a ready adoption of mobile technologies (such as the cell-phone and voicemail), kept the warehouse and the field one step ahead of the authorities.[8]

The return of the face to electronic music – the nostalgia for the estranged, '80s synth-pop performer – also accompanies a return to its polar opposite: what Kim Cascone identifies as the 'lack of gestural theatre' in laptop performance at the turn of the 21C.[9] The laptop performer's apparent lack of the face, and thus performative stage presence, has been cause for intriguing debate as to the validity (as well as value) of the 'live' in electronic

music performance.[10] Cascone's strategy aims to combat the basis of this critique by questioning the assumption of gesture – which amounts to evidence of human participation – in musical performance. Like Hecker, Cascone signals a similar analysis of the role of software in music; for Hecker, it is 'music which sings the songs of its tools,' while for Cascone, 'the tool has become the message'.[11] Yet Cascone calls for an entirely different cut: 'In order for the signifier of the laptop to stabilize there needs to be a recuperation of codes that move away from the use of spectacle, that establish aura.'[12] Cascone 'thankfully' finds this in acousmatic (electroacoustic) music, where 'There is no suspicion of counterfeit because this particular [academic] audience holds little of the expectations that pop music encourages; the aura this type of music presents is located in the musical content, not stage sets or costumes'.[13] In response to electronic music's ambiguity, Cascone's tactic is to sever its excess, shunting what remains into an institutional and established academic paradigm, as well as division, of performer and audience, content/

message-tool/ medium.

It also has the effect of negating all bodily expression, and the specifically Afro-American (as well as, in its sci-fi, man-machine, and non-representational forms, Afro-Futurist) innovations of percussive music, by equating all gesture with the pop machinations of 'spectacle', wherein the 'omnipotent presence' of the artist 'produces a demand for records containing the artist's aura. This system forms the basic apparatus by which the political economy of pop media operates: the production of demand by counterfeiting aura.'[14] Thus Cascone also disposes of the possibility (and attempts to circumvent the potential) for social organisation by regimenting the audience back into their seats for an authentically aura-ed appreciation of nothing but sound.

Which is the crux: electronic 'music' isn't just music, nor has it ever been. It's a chaotic yet programmed relation to technology, this 'antimodern primitivism' – an oxymoron of its own – that far exceeds considerations of genre and of music, the madness of our own inventions, to electricity, and in our time, to the digital.[15] All of

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which implies a relation to the social and the fabric of the political. As Simon Reynolds writes concerning the growth of acid house, the musical content from Detroit, Chicago and elsewhere quickly became a culture. Although Derrick May and Eddie Fowlkes may have 'indicted' the 'acieed' rabble, they soon faced a mutation beyond their control: 'Eventually the cultural framework [ravers] built actually changed the music itself, mutated and mutilated the Detroit blueprint, adding new inputs and intensifying certain elements...'[16] A few years since Cascone's homologous concerns over microsound and laptop performance, are we not seeing yet another, globalized feedback loop in the permutation of emergent digital culture, wherein yesterday's listeners now challenge the context of sonic appreciation as re-producers?

The shift from analogue instrumentation to digital processing, storage, editing, and innumerable software tools has also signalled a shift in what electronic music has been doing: from creating sounds with synthesizers, to sampling, to disseminating the digital itself (the bleeding of peer-two-peer networks into all aspects of technologized life – in one word, ubiquity). Likewise, the hardware, condensed in the laptop, has centralized these components into a powerful apparatus, one capable of exchanging, creating, and destroying – a war machine.

War – and the sound of war, are to be found in Russolo's *intonarumori*, the futurist noise machines. Italian futurism glorified the mechanisms of violence and the act of violence itself, which is where the world's political topography, enmeshed in various structures of authority – religious, transnational, technological, yet also aesthetic – calls us. The cool veneer of today's killing machines exude all the seductiveness of their mythic power. It is only through the chinks in the armour, by displacing the machinery of control, the laptop as war machine, as business machine, into alternate contexts, that technology stumbles back upon itself to a condition of uneasy peace. This turn, which both Cascone and Hecker advocate, and which is a return with a difference, a repetition, but also, a re-presentation, is also cultural. Rave culture as futurist impulse, rife with nostalgic myths and the myths of nostalgia, is a phenomenon that needs to be traced in light of the nostalgia inherent today which seeks to return to rave. And no less, the attempts to control the controlling machine – the laptop – follows much the same path: the desire to overprogram the context of not only a particular listening event, but of a genre's culture and its contextual apparatus. Via the pining for both rave culture and the academic acousmatic, it seeks to recover not only post-modernism, but its modernist, and thus futurist, origins.

Technology, when interiorized as determinant of the modality of art and music, its context, culture and codes, tends to compromise, and set as ultimately functional, its own horizon, sealing it as a repetition to futurism's past. Yet, attempts to repress the futurism which is incorporated through modernism's past, and thus to our future – our world of technology and violence – ends in just that reoccurrence sans awareness (without representation). In such a situation, and as Foucault warned, control becomes invisible, and as such, ubiquitous, not through surveillance, but through a term which the 21C military has taught us well: embedding. And this embedding – and not only of media that reinforces a global perception of technology in its violent glory – returns to anchor the spectacle. But what is the spectacle, in relation to futurism, electronic music, and rave culture?

As a term that itself has become embedded in popular culture, Cascone offers a reading of the spectacle against popular, and thus global, culture. For Cascone, spectacle apparently becomes actualized in 'stage sets or costumes,' or better, 'gesture,' through the 'counterfeiting aura' that overwhelms 'alternative music' (and their 'new performance codes'). Alternative music is expected to conform to spectacle's demand for what Cascone identifies as 'counterfeit aura' (the show). In the confusion (the apparent failure to meet this demand), 'Drowning in a sea of pop spectacle, the signifier ['of [the] laptop'] floats unanchored and remains unstable, unable to transmit aura, convey origin or demonstrate its musical contribution through gesture.'[17] It remains, up to this point, ambiguous as to whether Cascone or the spectacle calls for aura, origin, and ultimately, authenticity. Yet, in the end, it is Cascone who asserts the necessity of

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aura, as we have heard, in the call for a 'recuperation of codes that move away from the use of spectacle, that establish aura, and that show the audience how to differentiate "representation by the machine" from "repetition of the machine".'[18] Yet it remains unclear, again, as to which – representation or repetition – Cascone desires, and which he sees on the side of non-spectacular aura. According to Guy Debord, spectacle isn't an ensemble of images, but a social rapport, between people, mediated by images: 'Le spectacle n'est pas un ensemble d'images, mais un rapport social entre des personnes, médiatisé par les images.'[19] If Cascone's 'performance codes' are 'images' operating within the context of sound – representations – then Cascone's demand to change the codes of performance calls for a simple shift in representation (which does not amount to a change in the relation or the person, remaining a basic re-presentation). So it is at the same time that Cascone demands a 'move away from' embodied, physical practices – a materialist change to not only the context of sonic appreciation, but to that which embeds the actions of the body, and thus, an imperative to the subject. Here, the embedded relations between people are determined – but in favour of the reinstitution, or in Cascone's own signifier, the repetition of the modernist, audience/performer schema, which is also a re-presentation, and a representation. (A historical image of nostalgic value, worth recovering, worth digging from the grave. Cascone's writing, in this sense, is a manifesto).

Is spectacle averted in this shift? And if so, at what cost? If the balance of the future lies in our understanding of, on the one channel, modernist futurism – and its ultimate tendency, if not incorporation, of fascism – and on the other channel, the understanding of spectacle, with its own codes for social behaviour and performance, and thus, for strictly defining the contextual operating field of human (as well as machinic) relations, which is to say, the milieu in which 'content' comes to pass – to spin again, the political – then it is arguable that, with the spread of technology, we are still playing out the tunes of modernism, and all that lies buried in the record.

Notes
1. See <http://www.philipsherburne.com>.
2. See 'Clocks are melting,' July 7, 2004 at <http://phs.abstractdynamics.org/archives/003546.html>.
3. Tim Hecker, 'Sound and 'The Victorious Realm of Electricity' *Parachute* 107, 2002, 60-67. All Hecker quotes from this article.
4. Hecker, p. 66.
5. Acoustic instrumentation graces the lovely nostalgia of *Haunt me haunt me do it again* (Substractif, 2001) where it recombines with extensive granular synthesis on *Radio Amor* (Mille Plateaux, 2003), both of which, through their photographic imagery, connote various 'natural' moods and settings (radio static notwithstanding), a desire which was inverted and self-mocked with characteristic love and irony in the Van Halen funeral pyre that is *My Love is Rotten to the Core* (Alien8, 2002).
6. Andrew Hewitt, 'Fascist Modernism, Futurism, and 'Post-Modernity'', in Richard J. Golsan (ed.), *Fascism, Aesthetics and Culture*, University Press of New England, Hanover, 1992, pp. 38-55. pp. 55, 39.
7. Renato Poggiolo, *Theory of the Avant-Garde*, Belknap, Cambridge, 1968.
8. The classic example is Sunrise's Tony Colston-Hayter (UK), who, working with an early cellphone (1988+), used a combination of multiple locations, voicemail numbers, and checkpoints to keep police – as well as ravers – guessing, resulting in a final, mad rush to the site before police could intervene. Also fascinating is Colston-Hayter's duplicitous use of Thatcherite logic. According to Reynolds, he 'turned Tory ideology against Tory family values, protesting 'surely this ridiculous three AM curfew on dancing is an anachronism in today's enterprise culture?' See Simon Reynolds, *Generation Ecstasy*, Routledge, New York, 1999, pp. 74-75; and Wayne Anthony, *Class of '88: the true acid house experience*, Virgin, London, 1988.
9. Cascone uses the term in 'The Microsound Scene: An Interview with Kim Cascone,' by Jeremy Turner, *Ctheory* A101 (12/4/2001), <http://www.ctheory.net/text_file?pick=322>; and elaborates on it in Kim Cascone, 'Laptop Music-Counterfeiting Aura in the Age of Infinite Reproduction.' *Parachute* 107, 2002, pp. 52-58.
10. See Steve DiPasquale, 'The Liveness of the Live', conference paper: Refrains Conference, Vancouver, UBC, 09.25.01.
11. Hecker, p. 63; Kim Cascone, 'The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Computer Music', *Computer Music Journal*, 24:4 Winter 2000, p. 17.
12. 'Laptop', p. 58.
13. 'Laptop', p. 57.
14. 'Laptop', pp. 55-56.
15. Richard J. Golsan, (ed.) *Fascism, Aesthetics, and Culture*, UP of New England, Hanover, 1999, p. xi.
16. Reynolds, pp. 71-72.
17. 'Laptop', p. 58; various quotes pp. 56-58.
18. 'Laptop', p. 58.
19. Guy Debord, *La Société du Spectacle*, Gallimard, Paris, 1992, thèse 4, p. 16.

tobias c. van Veen is a renegade theorist & pirate with strong addictions to techno-turntablism and absynthe martinis. He creates as a Concept Engineer for La Société des arts et technologiques (SAT) and thinks as a doctoral student at McGill University (Philosophy and Communication). His blog is at www.quadrantcrossing.org/blog

S

STALLIO!

> **Frequently** data bending is used to generate sonic source material, rather than an entire piece: stAllio!'s twelve inch *True Data* consists of edited excerpts from random data files sequenced into noisy, abrasive techno.[3]

Mitchell Whitelaw, **Hearing Pure Data,** p.47

'after i posted my picture gallery from rr8, EM asked me to photoshop them, to create something out of them. rather than make them into a collage i decided to "databend" some of the photos instead. i opened the JPGs in photoshop, saved them to an uncompressed format (most were PSD, a couple were TIF, & you can definitely tell the difference), opened the files in soundforge, edited them, & crossed my fingers that the edits wouldn't break the files (i have some experience tinkering with this, but i still have to "eyeball" edit & PSD files can be very fragile if you edit the header or layer information accidentally). some files bent more easily (or more

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"beautifully") than others.
i would keep editing until i found
something i liked (often requiring
many attempts, as a file would
break or the image would become
so corrupted i couldn't do anything
more to it), or until it became
apparent that image wasn't going
to do anything interesting. a few
times when the latter happened,
i tried it with TIF, but i don't think
bent .tifs are really as interesting…
a couple of them really surprised
me.' stAllio! at

<http://www.animalswithinanimals.com/
stallio/2004_06_06_archive.html>.
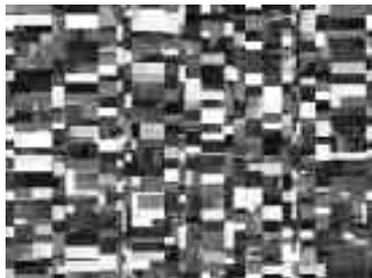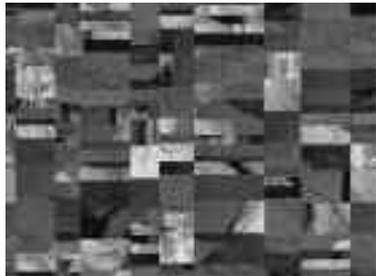
StAllio!, various databend pictures, 2004

V

TOBIAS C. VAN VEEN

The laptop performer's apparent
lack of the face, and thus performa-
tive stage presence, has been cause
for intriguing debate as to the vali-
dity (as well as value) of the 'live' in
electronic music performance.[10]

tobias C. van Veen, **The Reverb Engine,** p.106

inpartibus2.jpg
Lost in ritual: In Partibus by the <ST> Collective, Vancouver, Canada,
with Dj tobias on turntables, May 8 1999. photo: Tanya Goehring
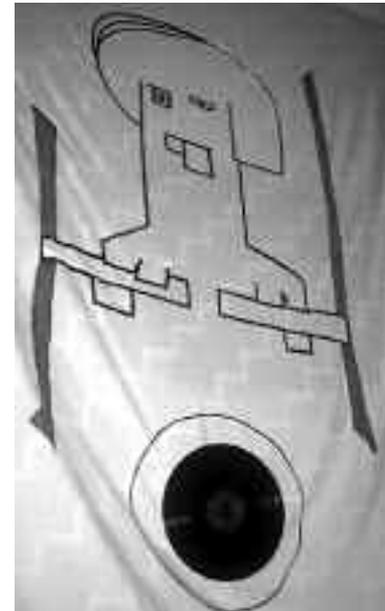
banner01.jpg
Under the height of futurist masochism: <ST> banner, somewhere in
Vancouver's mid-90s warehouse district, Canada.
photo: tobias c. van Veen

barcelona091.jpg
Cold metal and black speaker: detail of stage, Sonar 2004.
Photo: tobias c. van Veen

musicalresistance.tif
Anarchism, performance and techno: Musikal Resistance, May 6th
2000 in La Quena Coffeehouse, Mayworks, by the <ST> Collective,
Vancouver, CA. Dj Construct on turntables. photo: Tanya Goehring

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mutek-weds.15.jpg
The height of elemental modernism: Ivan Pavlov and Richard Chartier
present Chessmachine, Mutek 2004, Montreal, Canada. photo: tobias c. van Veen

mutek-weds.15.jpg
Doppelgangers of Duchamp and Cage: Ivan Pavlov and Richard Chartier
present Chessmachine, Mutek 2004, Montreal, Canada. photo: tobias c. van Veen

mutek-weds.22.jpg
The intricate beauty of hallucinated circuitry and its modern fetish:
skolz_kolgen at Mutek 2004, Montreal, Canada.
photo: tobias c. van Veen

outdoorgathering.tif
New Dawn's Summer Ascension, Sunday Seattle outdoor gathering,
Matt Corwine playing live, 31 May 1998. photo: tobias c. van Veen

Y

YELLOW
(paraphrased from Kandinsky's
Über das Geistige in der Kunst)
Will

Generally speaking, colour is a power which directly influences the

soul. Colour is the keyboard, the eyes are the hammers, the soul is the piano with many strings. The artist is the hand which plays, touching one key or another, to cause vibrations in the soul.

It is evident therefore that colour harmony must rest only on a corresponding vibration in the human soul; and this is one of the guiding principles of the inner need.

In these cases colour awakens a corresponding physical sensation, which undoubtedly works upon the soul. Warm colours have a more material quality. They horizontally approach the spectator, and spread out excentrically from the centre towards the spectator. The fundamental warm colour is yellow. It has a material parallel in that kind of human energy which assails every obstacle blindly, and bursts forth aimlessly in every direction. If steadily gazed at in any geometrical form, it has a disturbing influence, revealing an insistent and aggressive character. Intensification increases the painful shrillness of its note. Keen lemon-yellow hurts the eye in time as a prolonged and shrill trumpet-note the ear, and the gazer turns away to seek relief in blue or green.

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Definition by association of the effects of colour upon other senses than that of sight, may lead one to say that keen yellow looks sour, because it recalls the taste of a lemon. The expression 'scented colours' is frequently met with. And finally the sound of colours is so definite that it would be hard to find anyone who would try to express bright yellow in the bass notes, or dark blue in the treble.

Much theory and practice have been devoted to the question of the sound of colours. People have sought to paint in counterpoint. Also unmusical children have been successfully helped to play the piano by quoting a parallel in colour (e.g., of flowers). On these lines Frau A. Sacharjin-Unkowsky has worked for several years and has evolved a method of 'so describing sounds by natural colours, and colours by natural sounds, that colour could be heard and sound seen.' The system has proved successful for several years both in the inventor's own school and the Conservatoire at St. Petersburg. finally Scriabin, on more spiritual lines, has paralleled sound and colours in a chart not unlike that of Frau Unkowsky.

Scriabin draws a parallel between yellow and a state of joy. In *Prometheus*, Scriabin has given convincing proof of his theories. (His chart appeared in *Musik*, Moscow, 1911, No. 9)

The explanation by association will not suffice us in many, and the most important cases. Those who have heard of chromotherapy will know that coloured light can exercise very definite influences on the whole body. Attempts have been made with different colours in the treatment of various nervous ailments. They have shown that red light stimulates and excites the heart, while blue light can cause temporary paralysis. But when the experiments come to be tried on animals and even plants, the association theory falls to the ground. So one is bound to admit that the question is at present unexplored, but that colour can exercise enormous influence over the body as a physical organism.

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