Post-digital Aesthetics and the return to Modernism

What is it that constitutes (a) post-digital art, and how can it be thought in terms of aesthetic theory – or even post-aesthetic theory?

In one sense, post-digital[1] refers to works that reject the hype of the so-called digital revolution. The familiar digital tropes of purity, pristine sound and images and perfect copies are abandoned in favour of errors, glitches and artefacts. And in another sense (as in the term post-modernism) it refers to the continuation or completion of that trajectory. Post-digital music incudes a number of sub-genres: glitch, clicks & cuts, microsound, headphonics, etc. All are, more or less, concerned with the foregrounding of the flaws inherent in digital processes. This valorisation of what previously would have been seen as noise: a by-product, bearing an external relation to the work, would be one of the characterising marks of a post-digital aesthetic. An aesthetic made up of minuscule stabs of sound, clicks, glitches, buzzes, light airy drones and hisses, mangled ring-modulated tones and grainy clouds of noise/pixels.

Then, can we say that this aesthetic is preceded by a "digital aesthetic?"

If there is such an aesthetic position it surely tied to the digital technological trajectory – the idea of digital progress. This trajectory involves (in at least one of it's channels) a teleological movement toward "perfect" representation. This is both a technological movement towards "transparency" and, at the same time, a movement towards more powerful illusion.

After the initial claims of perfection were put into doubt, digital technology (at least in the realm of music production) began to emulate, as much as possible analogue sound and technologies. The analogue sound, although considered to be not as "clean" and digital, was felt to be "warmer" and "fatter" than its digital replacement.[2] So it seems, paradoxically, that digital music (as such), or music of the digital age, since it has been concerned primarily with the transparency of production, in the form of pristine sound reproduction (a quality based on an absence or negation), has developed an 'analogue aesthetic.' On the other hand, post-digital music has developed distinctly "digital" aesthetic, one that centres around sounds and timbres that could only be possible with contemporary digital equipment certainly, but also one that resists the trajectory of mainstream software marketing. Thus it can be seen how easily these terms "analogue aesthetic," "digital aesthetic," "post-digital music," offer a number of contradictory interpretations.

Neo-Modernism

This post-digital aesthetic is by no means confined to electronic/computer music production. A similar shift, at the same time, has occurred across a number of interrelated disciplines: video art, net.art, graphic design, etc. Post-digital art can be seen to be a reaction to a crisis in post-modern culture: a culture problematised by endless webs of mediatic allusion, media saturation, and a kind of abyssal irony.

This reaction often takes the form of a (naive) return to the purity of modernism. A flight away from the complex problematics of a period of crisis and toward the cosy certainties of an earlier age, or at the very least, a retreat from socio-political issues to a refuge in scientific concepts and metaphors.

One of the hallmarks of modernist art movements is the manifesto. Two such manifestoes have emerged this year (2002): Eryk Salvaggio's *Six Rules of net.ar*t,[3] and Lev Manovich's *Generation Flash* (more an essay but it reads like a manifesto).[4] Both propose the development of a new aesthetic for digital art (net.art in Salvaggio's case). Manovich even advocates a return to modernism as the first step towards the development of a new aesthetic.

Manovich theorises this shift away from post-modernism around the problem of the originality and uniqueness of content; the problem of the parasitic relation between the media artist and her/his object.

> Thirty years of media art and post-modernism have inevitably led to a reaction. We are tired of taking existing media as a starting point. We are tired of being always secondary; always reacting to what already exists.

The rejection of the recombinant media strategies of re-use, appropriation, media-critique, re-presentation, cut-up, "deconstruction," etc. (often all lumped under the umbrella term: "post-modernism") is central to both arguments. It may be that there are very good arguments for the abandonment of certain "post-modernist" practices. For example, the growing sophistication of television's own self parody, and also the alarming speed at which the advertising media reappropriate the style, and even the content, of media art, would tend to render a substantial body of work in this direction as futile. Then again there is the problem of kitsch and camp forms of critique, humour, parody and pastiche that became so prevalent in so-called postmodernist art (now at least half of Hollywood's yearly output consists of remakes of camp classics). If there was any subversion inherent in kitsch it has now been well exhausted. The return to the singularity of modernism does seem tempting, if indeed only as a first step.

In terms of aesthetics this return is, already, well under way. The manifestoes have arrived after the fact. In web-based digital art we see, as Manovich remarks, abstract geometrical forms, pixel thin lines, delicate but simple lightness, the privileging of negative space, and the distinct absence of information. In post-digital music we are often presented with, bare mathematical structures, stripped back modular repetition and long form minimalist drones. Musique concrete (the assemblage of natural, environmental and purely electronic sounds) is favoured over Cut-up (the assemblage of cultural detritus: media vox and music) and its bastard pop-culture children (mash-up etc.) . Album covers consist of minimalistic geometric designs verging to total blankness (in contrast to the digital design "Photoshop art" of related genres).

Pure Art

These currents represent, more than anything, a return to purity: the pure art which was promoted by the work of Clement Greenberg, and those who continued in his footsteps - an art which dispenses with everything that is not essential to the work, everything which lies outside the artwork's own self-definition, an art where all cultural and referential contaminants are purged. Thus a particular field of art becomes interested in, and determines itself, by its own exclusive qualities (for Greenberg the quality peculiar to painting is its flatness). The objective of this radical delimitation of the fields of activity, the defining of boundaries and limits of the medium, was for art to discover its own philosophical essence, or in other words, its ontology.

A similar reduction takes place in the quest for a 'pure' cinema carried out, in the 1960s by structural/materialist filmmakers such as Gidal, Snow, Sharits and Landow. Peter Wollen, in his essay "'Ontology' and 'Materialism' in Film," points out two tendencies here:

> First, the muting or exclusion of the non-cinematic codes – those of music, verbal language, gesture, facial expression, narrative… Second, the reduction of these codes themselves to their material – optical, photo-chemical – substrate ('material support') to the exclusion of any semantic dimension other than reference-back to the material of the signifier itself, which becomes its own unique field of signification.[5]

To some extent we see the same tendencies in post-digital sound/music: neo-minimalism, self-reflection on the media substrate, reduction of content, etc.

In his essay "Inframedia Audio" Mitchell Whitelaw examines these digital media artefacts: " glitches: clicks, pops and CD-skips… along with tape hiss, digital aliasing and the sharp clicks caused by discontinuities in a digital waveform."[6] He argues (contrary to Manovich) that this constitutes a "media art" since it is primarily concerned with self-reflection on the system and processes of its own media. However, the term "media art" seems to be inappropriate here, the primary concern of media art has been representation, or the re-presentation of representation, or the process of signification itself. Media art often achieves this aim, not so much through reflection on the media substrate, but through re-presentation of and allusion to other content. But this confusion points to a problem. The return to modernism, and the abandonment of the post-modern, cannot be thought in terms of a simple break since the self-reflexive strategies of media art are built on, or are grounded on those of modernism.

Whitelaw draws attention to the figure /ground shift in which the artefacts of production are brought forward to become new 'content.' In order to achieve this any other content (musical or cultural) is evacuated from the work. This often results in a form of minimalism. Similarly, in structural/materialist films (Gidal, LeGrice, Landow, Kubelka, Kren Wieland, and others), conventional iconic reference (of the pro-filmic event) is discarded in favour of the elements associated with the material substrate: blurs, splices flash frames, sprocket holes, grain, etc. Wollen refers to this as "foregrounding,' a term he borrows from the linguistics of the Prague School. The artefacts of the media substrate become new structuring elements. This is combined with what he calls "multiple mapping effects," where the two aspects of film, film as a recording process/

film as a material (optical/chemical) process, are combined and layered. He gives, as an example, Landow's *Film in which there appear sprocket holes, edge lettering, dirt particles, etc.* in which dust and dirt particles are not only photographed, but also appear as actual dirt particles on the film during projection. The two sets of particles refer to each other in an endless iterative ontological reduction.

The term 'materialist' in "structural/materialist film,' as Stephen Heath stresses, is not simply a reference to the materiality of film, but also refers to the presentation of its processes, "a film in its process of production of images sounds, times, meanings, the transformations effected on the basis of the specific properties of film in the relation of a viewing and listening situation."[7] In other words, a concern with film, not only in the processes of its production but also in the processes involved in its viewing, ta concern with the audiences passage through the film. For Heath, temporality and duration are important aspects of this concern with process – how time is perceived by an audience. Consider Warhol's *Couch* (1964), or Le Grice's *White Field Duration* (1973) in which duration as a material experience becomes the central 'figure' of the film.

These same processes take up an important role in post-digital music and its presentation/performance, as Whitelaw points out, the foregrounding of artefacts is never simply an end in itself – "far more important is how these structures work, in real time and space; how they translate into sensate experience."[8] Often the work is presented in quadraphonic or surround sound environments with sound systems capable of delivering a physicality to the sound. Listeners are not only able to hear the sound but also feel it. The presentation of the work requires and becomes derivative of "immersive" environments. But the passage of the audience through post-digital sound is much more subtle and also considerably less formal than its modernist predecessors (minimalism(s), structural/materialist film, Fluxus, Process art). The role of the performer/composer becomes one of structuring the temporality of the work in real time, in the presence of an audience (which is essentially a very different temporality than "studio time" in the absence of an audience).

The use of iterative processes figures strongly in post-digital aesthetics. Here post-digital art shares much in common with the Process Art of the 1960's and 70s – in particular the work of Alvin Lucier, who, in his work: *I am Sitting in a Room* (1969), recorded a sentence of his own speech over 32 generations (from microphone – to tape – to speaker – to microphone – to tape…). The result, towards the end, is raw sound, the instrumental/acoustic sound of the room itself, which bears no relation to the sound of human speech. The speech is combined with more and more of the environmental sound (room ambience) and the media artefacts (tape hiss/distortion/compression) which progressively become more dominant as the piece progresses until the material substrate/ environmental background, which cannot be disassociated from the recording process, becomes the foreground content. In the same way, in post-digital sound, processes are often combined to modify and interact with each other. This occurs in a number of ways:

1. Stock standard audio programs and players are pushed -given to much work, so that the computers processors are overloaded, resulting in errors and malfunction. Eg

giving the computer an intensive task to perform while a sound file is being played back and recorded.
2. File compression (bit reduction schemes) is used in order to modify the sound for its aesthetic effect.
3. The use of raw data – sonorised ascii text and non-audio data
4. Specialised software such as Max, PD, Supercollider, audiomulch are used to combine intricate webs of audio processes, such as granular synthesis.

Many of these processes are often combined in an ad hock manner (rarely in a formalised structure). These new techniques are often appended to older techniques of media malfunction such as CD skipping (destruction/modification of the disk's optical surface) and turntable manipulation (physically altering vinyl records by cutting grooves, cutting them up and joining back them together). This constitutes, in a sense, a post-materialist methodology – much more like the work of the *bricoleur* - the ad hock tinkering which oscillates between aleatory and determinant structures – a concern with residue rather than essence.

Minimalism

With post-digital work the glitch becomes the whole aesthetic to the expense of all other content, and as such relies on an accompanying aesthetics of minimalism, where background elements revolve around an "empty" centre. At this point these marks of technical malfunction lose their exteriority and become signifying elements in their own right. But their only reference is ultimately to their own process of generation, or back to the technology itself.
Some critics believe that this self-referentiality points to the inherent problem of minimalism in post-digital art: that it cannot transcend its own referential field. Kim Cascone in a recent interview in Ctheory, argues:

> I have always felt that the term minimalism has been misused. It is difficult to create a work which is emptied of content and refers to itself. All artwork references external reality in some way… I find minimalism to be an aesthetic dead end.[9]

Could it be said, rather that aesthetics itself is a (the) dead end, and that when the aesthetic end point is reached or transcended and something else can be allowed to happen? Absolute minimalism is a limit case, and as such can only be an end point, or an absolute boundary. But could it be that each "phase" of minimalism represents a new beginning, in which all aesthetic values of figuration are reduced to a degree zero, or stripped back to reveal a new ground? Minimalist form often indicates that "something else" is going on, something beyond the merely aesthetic. Minimalism opens up listening, the act of listening is brought to the foreground, listening is made active. The equivalent of this shift in visual art is Duchamp's use of the word non-retinal to describe the turn of painting from the aesthetic to the conceptual.
Rosalind Krauss examines the figure of the grid in modernist art (such as in the paintings of Mondrian, Albers, Reinhardt, Johns, and Agnes Martin). The grid is, for Krauss,

emblematic of modern art's "will to silence."[10] The figure of the grid is interesting here because it seems to have an intimate connection with repetitive minimalist music (Reich, Glass, Palestine), which could be reasonably described as a 'temporal grid.' Krauss argues that the grid functions in two distinct ways, for two different kinds of artists:

> For those for whom art begins in a kind of originary purity, the grid was emblematic of the sheer disinterestedness of the work of art, its absolute purposelessness, from which it derived the promise of autonomy… While for those for whom the origins of art are not to be found in the idea of pure disinterest so much as in an empirically grounded unity, the grid's power lies in its capacity to figure forth the material ground of the pictorial object… For these artists, the grid-scored surface is the image of an absolute beginning.[11]

For the artist concerned with the foregrounding of the material processes of the works construction the minimalist moment of the grid becomes the ground zero of a new beginning. In this sense minimalism has its function as a starting point rather than a teleological limit. The artist discovers the aesthetic purity of the grid, or the stripped back reduction of serial minimalism, always as a new and unique discovery and as a newfound freedom. Formal limits, as such, engender a certain freedom by limiting the appeal to expression (memory and taste –Cage), and bringing out non-intentionality, poiesis.

However, as Susan Sontag argues in "the Aesthetics of Silence," modern art's autonomy, which becomes a metaphor for spirituality, in the form of a negative theology, proceeds towards a silence beyond speech.[12] Krauss, whose argument echoes that of Sontag's, proposes that this trajectory towards a horizon of silence functions, for a certain kind of artist/critic/historian as a condition in which it becomes possible to "hear" the originary moment of art. The modernist artist, in particular the avant-garde artist, she says, is a function of the "discourse of originality." The critical practice of modernism seeks to sustain the myth of originality, and its notions of authenticity, author and origins, always valuing the original over the copy, the singular over the multiple, the unique over the reproduced, because its institutions depend on this distinction. But, as Krauss argues, from "*our*" perspective, a perspective informed by structuralism and its post-structural modifications, a perspective which rejects the historicist model of Greenbergian criticism, a perspective in which "every signifier is itself the transparent signified of an already-given decision to carve itself out as the vehicle of a sign"[13] – from this perspective the grid is always already divided and transparent, and this transparency opens up onto an abyssal system of repetition and reduplication. From this perspective the repressed negative half of the pair *originality*/*repetition* functions within a mutually sustaining "aesthetic economy."[14] This theory of the grid seems to open up the possibility, or even necessitate, a contrary way of thinking the 'return to modernism.'

Performance

The phenomenon of the laptop performance in post-digital music has generated a considerable amount of debate in the last few years. Because the digital processes often occur within the sealed off virtual space of the performer's computer, hidden from the audience and only privy to the composer/performer, the audience's engagement with these processes becomes, at times, rather limited. This problem is not confined to laptop computers but extends to any acousmatic electronic performance in which the processes are obscured by the 'black box' effect of the technology. The laptop, however, due to its combination of power and portability is probably the most logical choice for post-digital musicians. It is more or less a complete studio in a box.. But, the computer, because it has the means of simulating and performing so many different applications (synthesiser, media player, sequencer, mixer/processor), has the effect of making its role in the performance, extremely ambiguous (it could be performing any one of these functions, or perhaps all of them). It is thus be a mistake to refer to the computer itself as an instrument, since it has the possibility of both containing and simulating a great many different "instruments," none of which are immediately recognized and located by the audience. The audience generally arrive at such events equipped with a certain set of expectations, and are able to make reasonably informed guesses about the technology, but unless they gain the knowledge elsewhere (outside the work in its performance), they can generally only guess as to how the performer is 'performing.' That is, the audience are unable to grasp what ever it is that is exclusively performative about the performance. This is not to say that the audience are ever in doubt over the legitimacy of the performance – whether performative actions are in fact happening in their presence. Nor is it to say that a recording made elsewhere, in another place, presented to the audience by the composer could not also be considered to be a performance. Nor is it ever a question of a conscious decision on the part of the artist to hide their operations. The problem is that the performative, itself, is masked off from the performance: it becomes illegible.

 This ambiguity is not such a grave problem in itself; it's more a contributing factor to what might be regarded, if not as a slightly impoverished experience, at least as one which is uncanny, or constituted by some uncertainty. This is not to say that a laptop performance cannot be just as engaging and stimulating as any other musical performance. But if the performance cannot make its processes heard (in its own aurality), and, at the same time, cannot provide the audience with any clues about its processes (eg. visible manual operations, physical objects, connections and actions) in the 'here and now' context of the unique performance event, then something vital seems to be missing. We seem to be left with only pure sensuous experience.
This illegibility of the laptop performance is further complicated by the environmental and institutional context of the post-digital event. Unlike dance music, post-digital laptop performances are not bound by the utilitarian demands of the dance floor, nor do they serve as background mood ambience.[15]

The term 'processes' here should not be understood as the mundane tasks of each software application, but as a combination of the material processes discussed earlier, and 'musical processes' in the terminology of the composer Steve Reich where he writes in "Music as a Gradual Process:" "I do not mean the process of composition, but rather pieces of music that are, literally, processes."[16]

Reich's interest lies in the foregrounding of the compositional processes throughout the 'sounding music.' He wants to make the processes audible and to break down the opposition between structure and aurality: "a compositional process and a sounding music that are one and the same thing." [17] For Reich, processes, once started, can run by themselves but the composer who has initiated the process must accept the results without changes. Reich distinguishes his process music from that of John Cage, where although the compositional processes are interesting (such as Cages use of the I Ching), they cannot be *heard* in the music.

Reich's process music, in which compositional process is unified with its audible process, resonates with Hegel's theorisation in his *Introductory Lectures on Aesthetics*, of the artwork as *Idea*: the unification of concept and reality. When the concept becomes unavailable, all we are left with is the pure sensuous reality of the sound/music itself. But an objection voices itself here: is not music itself a purely sensuous experience? For Hegel, music is "feeling without thought." [18] But music, beyond its sonority, constitutes a number of interlocking schemas, each with their own particular codes. First of all, most people would agree that music is primarily evocative. It functions at an emotional level - it is mood inducing. But the emotional characteristics of music are to a large extent culturally determined. They depend on pre-established codes that link feelings to figures so that, in a sense, the emotional language of music is a culturally specific semiotic system. Another reception of music occurs at a 'physical' level: a corporeal interaction with the vibration of sound, dynamics and rhythm. Music engages the body and the unconscious via the drives and primary processes. Then again, music can be heard intellectually: with particular attention to structure, temporality – texture and timbre. Though not strictly a language, music encompasses a collection of codes, such as those that Felix Guattari refers to as a-signifying (and pre-signifying) semiologies.[19]

We might approach the problem of the laptop performance, as others have done, as a problem of aura.[20] Walter Benjamin saw the auratic as linked to the artwork's unique existence in time and space – a singularity of the original that had its reception embedded in tradition. The technology of reproductive media, since the invention of photography, has allowed a multitude of copies to usurp the singularity of the original, thus precipitating a decline of the artwork's aura. So that it can be said that the aura of the artwork "withers" in the age of mechanical reproduction. It could be argued that, in terms of music, aura is tied to the presence of the performer and the unique 'here and now' of the live performance.

But for Benjamin auratic art is never completely separated from its basis in ritual, its reception is always structured by a contemplative tradition. The work of art in the age of mechanical reproduction, on the other hand, has its receptive field characterised by distraction *Zerstreuung*,[21] which opens the work of art up to mass movements and frees art from its "parasitic" dependence on ritual.

In regard to the reception of post-digital music, which above all seems to be based on the fragment, and a dispersed field of activity, the concept of aura would seem to be retrograde hangover from previous cultural traditions (both modern and ancient). The place of the composer as author/god, as the self-present subject of romantic genius seems to be one which should be out of place in post-digital art.

This then raises the question: why should a composer of post-digital music perform at all? If indeed, the receptive focus of the performance becomes, above and beyond the pure sensuous experience of the music itself, intimately tied to the mere presence of the performer/composer (since, with the laptop, when the performative actions are illegible, no other reception seems possible), then is not the function of the composer as performer redundant? Unlike the performance of the DJ in a dance music context, where a certain use value persists, the post-digital artist has no need to respond to immediate feedback from the audience (s/he does not need to work the crowd). The photographic representation of the face, which Benjamin saw as the last residue of the ritual cult image, seems almost conspicuous in its absence from the album covers of post-digital music.[22]
So why should the emphasis on the presence of the composer-performer remain? But what of the singularity of the unique performance? Is there not some value in the presentation of a unique never been heard in the same way before – never will be heard I the same way again, work? This certainly is a quality of the laptop performance but it is a quality that is not transmissible within the work itself. The quality of the particular unique variation occurring in the 'here and now,' as an exploration of the possibilities of the piece, can of course be a quite satisfying experience for the artist, but rarely is this same experience transmissible to the audience. This is why I would like to argue for the foregrounding and elaboration of process. Rather than the composer-performer becoming the focus of the performance, I would like to argue, along with Reich, that the process should become the focus. However, Reich's argument for process seems far too austere and formal, and based ultimately on the Western tradition of written, score based music performance.

The foregrounding of process in post-digital music performance can occur in several ways: either within the work itself, in the sounding music – as in the case of Reich; or via a combination of visual (physical) clues and sound clues - by way of an assemblage of devices/instruments into a machine which indicates to the audience its own mechanisms, processes and functions; or completely outside of the work by way of text, diagram, score, introduction, etc..

  An array of physical (as opposed to virtual) devices not only has the function of indicating the processes, but also that of defining their limits. A string quartet, for example, is a machine that physically defines its own limits. Its announcement as a string quartet, or its physical manifestation as such, prescribes certain boundaries which frame the work and limit its possibilities.

Part of the problem of the illegibility of the laptop performance is that, especially in the case of the solo performer, all sounds emerge from the one device. One way of elaborating process, in post-digital music, is to separate the elements (in a Brechtian sense). One artist that achieves this successfully is Scott Horscroft. One of Horscroft's pieces, *Strumming*, in the physical space of the performance, separates the "source audio" from the processing. The source consists of several guitarists who continually strum a

single chord on electric guitars. Only the faint strumming sound is heard acoustically. The rest of the sound is routed through Horscroft's computer for processing before it is amplified. This physical demarcation reduces the ambiguity of the role of the computer, and the performer/composer, for the audience. The process becomes legible. Another reason that this piece works, is that the guitarists strum in a dead pan manner: they do not perform as such. In this way there role is reduced to that of a machine: an audio generator plugged into Horscroft's processors.

As we have seen from the analysis of the aesthetic aporia that resides within the modernist grid taken from Krauss, and the theorisation of the move from contemplation to distraction, as provided by Benjamin, the so-called return to modernism, in post-digital aesthetics, a return which so far has seemed only to be thought in terms of a simple abandonment of a certain perceived post-modern dead end, has to contend with much more than a simple reversal of values, or a simple return to purity. If such a return is to be thought in any way other than a retreat from the problematics of the (a) post-modern condition, a return to a comfortable idea of pure art existing in an autonomous relation to itself as an onto-theological pursuit, a new spirituality toward a silence beyond speech, it must contend with the problematics of the traditional opposition between originality and duplication. What is more, is that this unthought return seems to be in the service of the traditional art institutions which depend so much on the values of author, authority, original, origin, uniqueness, singularity and the contemplative tradition. In this sense such an ill considered theory cannot only be considered naive, but also quite dangerous.

---

[1] The term "post-digital," I believe, was first introduced in Kim Cascone's "The Aesthetics of Failure: "Post-Digital" Tendencies in Contemporary Computer Music," *Computer Music Journal*, 24:4, pp. 12-18, Winter 2000, Massachusetts Institute of Technology, While I follow Cascone's definition which was inspired by Negroponte, I depart from his formulation of a "post-digital" aesthetic. My definition, in this regard was gleaned, in part, from a series of posts on Cascone's *microsound* mailing list.

[2] In the area of video, multimedia, media art, animation, etc. a certain dominant aesthetic can be plainly seen: Crisp shiny 3D realism (illusionism), slow dissolves into black, soft blurs and multiple composite images and textures. But with sound and music, the introduction of digital technology seemed to stimulate, instead, a desire for an analogue aesthetics. Think back to retro analogue synthesiser fetishisation of the late 80s/early 90s.This was a reaction to digital technologies: certain synths such as the Yamaha DX7. This reaction was based on two problems associated with the digital instruments of that period: 1. The rather poor 8 bit sound quality of primitive digital audio technology (they did not have that "fat"analogue sound). And 2. (perhaps more importantly) the lack of real-time control over these instruments (they had menus instead of knobs). The resulting "analogue" reaction took on its own aesthetic which was a consequence of the novelty (at least for a new generation) of tweakability. An electronic audio aesthetic emerged that was based around the possibilities of manual control of resonant filters, portamento sweeps, round soft envelopes, etc. This retro obsession continued in the late 90s into personal computer based environments: virtual analogue soft-synths retro analogue plug-ins, etc..

[3] Eryk Salvaggio: http://salsabomb.com. Salvaggio's six rules are 1. No Flash, 2. No introduction pages, 3 no more art for the sake of error, 4. Images must be unique to the sitemaker, 5. Technology is not a subject – internet is not a subject, 6. The work stands alone.
[4] I don't intend to attach a great deal of importance to these manifestoes. Rather I see them as symptomatic of a certain culture.

[5] Peter Wollen, "Ontology and Materialismin Film," in *Readings and Writings: semiotic counter-strategies*, London, Verso, 1982, P. 197.

[6] Mitchell Whitelaw, "Inframedia Audio"
http://comserver.canberra.edu.au/~mitchellw/#writing

[7] Stephen Heath, "Repetition Time: Notes Around 'Structural/materialist Film,'" in *Questions of Cinema*, London, Macmillan, 1981, P. 165.

[8] Whitelaw, op. cit.

[9] Kim Cascone, "The Microsound Scene: An Interview with Kim Cascone" by Jeremy Turner, *Ctheory*, http://www.ctheory.net/

[10] Rosalind E. Krauss, "Grids," in *The Originality of the Avant-Garde and Other Modernist Myths*, Cambrige MA.,MIT Press, 1986, P. 9.

[11] Ibid. "The Originality of the Avant-Garde," P. 158.

[12] Susan Sontag, "The Aesthetics of Silence," in *Styles of Radical Wil*l,

[13] Krauss, op. cit. P. 161.

[14] Ibid. P. 160.

[15] In this sense comparisons to the work of the DJ (such as "but a DJ does not need to perform) become unstuck. In a dance music context the audience are able to engage physically with the music itself and in most cases the DJ's 'performance' is relegated to a secondary vocation: their role is primarily to curate and suture. I would argue that there are two types of DJ: those who's primary role is to present new music, in a style which specifies the uniqueness of their own particular taste; and those who creatively make new music out of pre-existing music. In the case of the first DJ, the performative element is for most of us illegible because they often use obscure, new and unfamiliar material. But the other type of DJ very often uses familiar material, which allows the audience to 'hear' the processes of collage and manipulation in their work.

[16] Steve Reich "Music as a Gradual Process" (1968) in *Writings about Music*, Halifax, The Press of the Nova Scotia College of Art and Design, 1974, P. 9.

[17] Ibid. P. 10.

[18] G.W.F. Hegel,, *Introductory Lectures o Aesthetics*, Trans. Bernard Bosanquet, Ed. Michael Inwood, London, Penguin, P.32

[19] Felix Guattari, Interview, *Diacritics*, Fall 1974, Vol IV No 3, Cornell University, Ithaca, NY, P 39.

[20] Cf. Kim Cascone,"Laptop Music—Counterfeiting Aura in the Age of Infinite Reproduction." *Parachute: electrosons_electrosounds*, 107, 2002. pp. 52-60, and Tobias C. van Veen, "Laptops & Loops: The Advent of New Forms of Experimentation and the Question of Technology in Experimental Music and Performance." Conference Paper. November 1st, 2002. University Art Association of Canada, Calgary.

[21] Cf. Samuel Weber, "Art,Aura and Media in the Work of Walter Benjamin," in *Mass Mediauras* , Power Publications, Sydney,1996, P 92. Weber remaks on the strong spatial connotations of this word which contains elements relating to 'strew' and 'strewn.'

[22] Cf. Jacques Derrida, *The Truth in Painting*, Trans. Geoff Bennington and Ian McLeod, Chicago, University of Chicago Press, 1987, pp.178-9