

CONCEPTUAL TRANSFORMATIONS OF ART: FROM DEMATERIALISATION OF THE OBJECT TO IMMATERIALITY IN NETWORKS

Jacob Lillemose

- + Immateriality - along with its derivative notions immaterial art and immaterial aesthetics - is a prevailing notion in current discussions on art in the context of new media and information technology. The notion refers to the new conditions that the digitisation of artistic and cultural practices in general has prompted. Today the computer is a common artistic medium, both as a tool and as an artistic medium in itself. Software and digitised data are replacing the traditional physical dimensions of artworks. As such, immateriality is evidently a relevant notion, as it quite accurately designates significant and extensive changes in contemporary art.

However, I think it is important to realise and emphasise that immateriality taken at face value is just a descriptive notion, a broad formal diagnosis of art in the age of digitisation, just like materiality would be for art before this age. It is not an aesthetic by default. To make meaningful use of the diagnosis - and establish immateriality as a substantial discursive concept in relation to art and aesthetics - we need to challenge the notion by specific, elaborate but also experimental analyses that consider and explore its aesthetic qualities, theoretical implications and historical perspectives.

In this text I want to present the general outline of one such possible analysis of immateriality. Instead of placing the analysis within the conventional and some would say obvious context - that is, the tradition of computer-based arts and the

close historical interrelations between art and technology - I will make conceptual art and more specifically a rereading of the notion of dematerialisation the main frame of reference in the analysis.¹

Dematerialisation revisited

The notion of dematerialisation was coined by John Chandler and Lucy Lippard in their seminal text 'The Dematerialization of Art' published in 1968 in the magazine *Art International*. In this text they identified dematerialisation with so-called ultra-conceptual art that 'emphasizes the thinking process almost exclusively' and 'may result in the object becoming wholly obsolete' (Chandler & Lippard 1968: 46). Chandler and Lippard did not mention any specific works of art, but the works, events and texts chronologically listed in Lippard's follow-up anthology *Six Years: The dematerialization of the art object from 1966 to 1972* published five years later, show this act of identification was characterised by quite a lot of uncertainty. According to the anthology's comprehensive documentation of this short but significant period, dematerialisation refers to a wide and extremely diverse range of artistic practices and reflections. The first three listed are George Brecht's fluxus inspired 'events', Allan Kaprow's 'assemblages', 'environments' and 'happenings', and Bruce Nauman's early self-starring video works, while the last three are Gilbert and George's lithograph *A Touch of Blossom* (1971) from 'Art and Project Bulletin', Les Levine's imaginary *Museum of Mott Art* (1971) and Harold Rosenberg's critical text *On the Definition of Art* (1971). Between these extreme points we find earth works by Robert Smithson and Richard Long, writings by Joseph Kosuth and Sol Le Witt and 'instructions' by Robert Barry and Vito Acconci. From the very beginning the notion was thus informed by disparate meanings and this heterogeneity - or lack of consensus - continued in a productive and yet also confusing way, as the notion was taken up and discussed by other critics as well as artists. Today, a common - but also very vague - definition is that dematerialisation refers to art and aesthetics in which ideas and discourse - not the formal conventions of the medium - constitute the principal elements.

In her preface to *Six Years* Lippard writes that ‘it has often been pointed out to me that dematerialization is an inaccurate term’ (Lippard 1973: 5). I agree with her critics on this issue, most notably Terry Atkinson who in the text ‘Concerning the Article “The Dematerialization of Art”’ questions the ‘correctness’ of the word in relation to the artistic development and tendencies Lippard describes.² With reference to the definition of dematerialisation in *Oxford English Dictionary* - ‘to deprive of material qualities’ - he argues that the art works Lippard refers to are all still objects in some form or other and therefore not - literally speaking - dematerialised (Atkinson 1968: 52-54). Atkinson’s criticism is justified, thorough and precise, but I think he misses a basic point by analysing dematerialisation as an exact - almost scientific - term, not as an aesthetic concept that contains or rather builds on contradictions. Although I assign much importance to the philosophical and etymological discussions on the definition of dematerialisation that Atkinson raises, I will not engage in them directly here. I tend to agree with Lippard’s indirect response to Atkinson when she says: ‘for lack of a better term I have continued to refer to a process of dematerialization’ (Lippard 1973: 5).³ In other words: I use dematerialisation as a point of departure for the current discussion, both in spite of and because of the ambiguity of the term and the challenging interpretive space it opens.

Instead of trying to construct a general, non-contradictory and ultimate definition, I want to suggest a somewhat free and selective interpretation of dematerialisation in relation to a specific strand of conceptual art. More precisely, I will discuss how dematerialisation relates to materiality, partly because some of the most significant art works associated with the notion are extensively material - for instance *The New York Earth Room* by Walter de Maria and Robert Morris’ felt pieces; and partly because I believe that this approach allows for a number of interesting ways to connect dematerialisation to immateriality in an aesthetic discourse.⁴

To start this discussion I return to a phrasing by Chandler and Lippard quoted above, namely that dematerialisation ‘may result in the object becoming wholly

obsolete' (Chandler & Lippard 1968: 46). I realise that this is just a phrase within a larger argument but nevertheless I take the freedom to place their focus on the object's obsolescence - and not on the disappearance of materiality - to be emblematic of an essential transformation of art: a transformation of art from being formally constituted as an object to be working conceptually with materiality.

The understanding of conceptual art as a critique of the object is widespread among critics as well as artists. As I already mentioned, Lippard entitled her anthology *The Dematerialization of The Art Object*⁵; Douglas Huebler said that 'the world is full of object, more or less interesting, I don't want to add anymore' (Lippard 1973: 74); in 1970 Ian Burn and Mel Ramsden declared that 'the outcome of much of the 'conceptual' work of the past two years has been to carefully clear the air of objects' (Lippard 1973: 136); critics like Ursula Meyer talked about 'the abolition of the art-object' and 'de-objectification of the object' (Meyer 1972); Jack Burnham termed the new kind of works 'un-objects' (Burnham 1968), while Terry Cohn has presented a 'post-objective perspective' (Cohn 2000). However, these critics do not engage - ironically except for Atkinson - in serious discussions about the 'residual' materiality. They seem to be of the conviction that the notion of an art *ex object* in itself renders the material dimension superfluous. I do not believe it does. On the contrary, it introduces new problems and possibilities for a discussion of conceptual art as an art of material aesthetics. Instead of understanding dematerialisation as a negation or dismissal of materiality as such, it can be comprehended as an extensive and fundamental rethinking of the multiplicity of materiality beyond its connection to the entity of the object.

Following this line of thought, the 'de' in the term dematerialisation refers to a conceptual - although not in the sense of transcendental ideas - approach to materiality. In opposition to the understanding that dematerialisation implies an aesthetic, according to which the conceptual is superior to, or overdetermines, materiality, I interpret dematerialisation as an aesthetics in which the

conceptual is always already material, and vice versa.⁶ This aesthetics suggests a new interdependent and open exchange between the conceptual and material dimension of art. In setting materiality free from the object - and the philosophical discourse, power structures and aesthetic paradigm of pure visibility and media-specificity surrounding it - the notion allows us to comprehend materiality as a potential predisposed for continuous conceptual recoding, reorganisation, redistribution, recontextualisation and reinterpretation. Instead of attaching materiality to specific and finite forms, media or institutions, the conceptual places materiality in a broad and horizontal aesthetic field - multi-, inter- and post-media - where it is transformed into a virtuality that is actualised - but never realised in full - in the abstractions of the particular works. 'The abstract does not explain, it itself has to be explained', as Deleuze said, inspired by the empiric philosopher Whitehead (Deleuze 1987: vii); a role of explanation that he assigned to philosophy and critical theory.⁷ In the context of the aesthetics I refer to in this text, the abstract plays a different role that calls for a slight rephrasing of Deleuze's sentence: the abstract does not explain, it questions. In other words, conceptual art questions materiality by subjecting it to abstraction in a mental and not a visual sense; questions in the sense of opening it to new qualities and meanings.

This interpretation of dematerialisation signifies a 'return' to - or engagement with - the reality of a non-reducible material multiplicity.⁸ At the same time as conceptual art sets materiality free from the object (sphere) it is connected to the un-idealised and non-transcendental realm of the real, with its different sets of problems and possibilities for artistic workings. Rather than attempting to sublimate or transcend materiality through non-material principles, such as ideology, beauty and sign value, conceptual art emphasises its social, economical and cultural aspects and expose them to alternative conceptualisations; conceptualisations most often guided by principles and values of heterogeneity, irrationality, openness and destabilisation, and opposed to harmony, control, power and capitalistic exploitation.⁹ Thus, conceptual art acts as an imaginative and speculative mediator between the political codedness and aesthetic potency of

materiality. To substantiate and specify this interpretation of dematerialisation, I want to focus on two strands or tendencies within conceptual art, namely process art and system art. I say tendencies because neither process nor system art represent defined categories, styles, groupings or movements but express an aesthetic involvement with processes and systems; also in many cases they overlap. Even so, I still make a preliminary distinction between the two to point to significant and varied differences.

Processes and working possibilities

The exchange between the conceptual and materiality suggested above presents materiality as a possibility for conceptual involvement - not as the means for a formalistic work or object. In that regard, it seems relevant to consider how a number of artists from the 60s and 70s - sometimes referred to as post-formalists¹⁰ - gave new attention and importance to the physical process of creation - and its implied involvement with time, indeterminacy, contingency, instability, and irreversibility - by incorporating it explicitly into their works. A modernist painter like Jackson Pollock had already done something similar but his experiments remained within the framework of painting as a visual expression and as an object - a stretched and limited canvas. What the so-called post-minimalists did - many of them inspired by Pollock's gesture - was to transgress the boundaries of the medium, to work with processes more directly and diversely as ends in themselves.

In 1967 and 1968 Richard Serra made an infinite list of transitive verbs for himself: '...to roll, to crease, to fold, to store, to bend, to shorten, to twist, to twine, to dapple, to crumble...'.¹¹ That Serra made a list of *verbs* indicates that he was not interested in the form of the object as such but rather in different handlings of materiality; an approach that is clearly at work in his lead splashing and castings made around the same time. Serra threw melted lead into the corner, onto the floor and the wall, thus making the work into a question of distributed materiality.

Robert Smithson's concurrent asphalt and glue pourings expressed a similar occupation with the processes of materiality, as a way to avoid making objects in the conventional sense. Instead of throwing, Smithson poured the different materials usually down earth slopes, either directly from the can or from the back of a truck floor. Smithson filmed the production of these as well as many of his other pieces, thereby indicating that the act was as important as - if not more than - the results; furthermore, the works were often destroyed or abandoned after completion.¹² That he understood this conceptual framing of materiality as an 'attack' on the object is very literally expressed in *Partially Buried Woodshed* (1970) where he partially buried a wooden shed by shovelling and pouring earth on top of it, using a tractor.

A third example of an involvement with processes of materiality is the (an)architectural work of Gordon Matta-Clark. In *Splitting* (1974) - a work that resonates with *Partially Buried Woodshed* - Matta-Clark bisected a wooden suburban house left for demolition by cutting it right down the middle and knocking away part of the foundation to make one side of the house incline; and just like Smithson he filmed the process.¹³ With this symbolic act the artist showed - as the title of Pamela M. Lee's book on his work has it - that the 'object [had] to be destroyed' - in order to be able to work - conceptually as well as practically - with the aesthetic potential of materiality in a more profound and liberated sense (Lee 2001).

By displacing the industrial materials from their usual functionalistic and rationalistic contexts, these artists set materiality in general free from the stable object and placed into fluid, fluctuating and expressive relations.

Into the systems

This interpretation of dematerialisation as a post-object aesthetic can be extended to include an artistic involvement with systems and cybernetics that emerged in the early 1960s when a number of artists - influenced by the writings of scientists and theoreticians such as Norbert Wiener, Ludwig von Bertalanffy,

Claude Shannon and Marshall McLuhan - began work with art as information processing in an interdisciplinary and multimedia field.¹⁴ However, books were not the only source of inspiration for these artists. They were also responding to a surrounding society undergoing extensive changes in terms of communication, media and economy; not least caused by the introduction of new technologies and scientific discoveries. Jack Burnham saw this 'superscientific culture' as an indicator of a 'transition from an *object-oriented* to a *systems-oriented* culture' where 'change emanates, not from *things*, but from the *way things are done*' (Burnham 1968: 15-16). By implication this also applied to art and the *ways it conceptualised things*.

Although closely related, 'system aesthetics' differ from 'process aesthetics' on important points. Whereas process aesthetics focused on action, effect and production, system aesthetics focused on processing, circulation and development. Materiality was conceptualised through open systems working with questions of internal organisation, real time, feedback and contextual relations. Furthermore, the understanding of materiality was different. In general, soft(er) materials such as communication, data and media spaces replaced the industrial and 'heavy' materials of process aesthetics. Materiality was conceived as contextual, as connected to, integrated in and defined by a variety of - often interrelated - systems, social, linguistic, economical, situational, etc. The artists did not try to counteract this systematisation of materiality as a limitation or suppression of free autonomous materiality. On the contrary, they worked *with* conceptual possibilities of the systems in order to explore new ways of working with materialities, which were not so much related to the object of art as to the flux (i.e. non-static nature) of postmodern culture and all its contradictions and complexities.

As indicated above, technology - and to a lesser extent biology and sociology - played a significant role in the emergence of system aesthetics. As a new area of knowledge - practically as well as theoretically - technology offered new formats as well as new materials that enabled artists to go beyond an institutionalised context

and instead conceive of and work with reality - directly and comprehensively; not as a number of autonomous objects but as a field of interrelated and complex systems calling for analysis, criticism and experimentation.

However, technology was not applied as an aesthetic end in itself but as a new apt way of conceptualising a reality under the impact of a diversity of semiotic, information and scientific systems.¹⁵ Through the adoption of technology, art was able to deconstruct and reproduce such systems - their structures and motives - and generate a meta-consciousness of how they worked. The agenda was often explicitly political and expressed critiques of the ideologies of cultural and political institutions. Although not specifically high tech, Hans Haacke's *MoMA Poll* (1969) - an opinion poll of the museum visitors' support to Governor Rockefeller vis à vis his stance on Nixon's Indochina policy - serves as an illustrative example. The work consisted of a board attached to the wall, two boxes placed below the board and ballots handed out to the visitors. The board read: 'Question: Would the fact that Governor Rockefeller has not denounced President Nixon's Indochina policy be a reason for you not to vote for him in November? Answer: If 'yes' please cast your ballot in the left box, if 'no' into the right box'. The two boxes were transparent so that visitors could see what other visitors voted and follow the development of the result in real-time.¹⁶ Thus, not only did the work introduce a non-artistic format within the museum context, it also made the usually sealed off process of voting transparent. Through the contributions of the visitors the work itself became a system, at the same time as the visitors were encouraged to reflect on what role art and the art system played in the political system and vice versa. Haacke's *Visitor's Profile* made the same year also included the visitors. A Teletype terminal with a monitor and a connection to a time-sharing computer was programmed to cross-tabulate demographic information about the museum audience with their opinions on a number of controversial subjects. The statistics were exhibited in real time as the individual visitors contributed and the work thus presented the art institution as a social system in constant transformation - not as a series of timeless rooms filled with beautiful historical objects. A third but less politicised example of

Haacke's involvement with system aesthetics is *News* (1969). Local, national and international news from a number of news services around the world were printed out in the exhibition in real time via teletype machines; and as the news was printed out the paper piled up behind the machines. The work imported non-aesthetic information from the 'outside world' into the institution, showing that what informed what happened inside the institution could not be separated from what happened outside the institution. Or rather, there was no inside of the institution, as the ideology of the so-called white cube proclaimed. *News* presented the institution - as a system - that was part of, dependent on and influenced by larger multiple systems. In its sheer physicality the huge amount of paper that in principle endlessly piled up gave a strong testimony to the presence of reality inside the institution.

For Jack Burnham who was one of the leading critics on the subject at the time, the work of Haacke and many of the other artists/engineers featured in his exhibition *Software* (1970)¹⁷ - in many ways the crux of system aesthetics on the institutional level - generated an 'understanding of the growing symbiosis in man-machine relationship' that characterised 'the advanced technological culture' at large (Burnham 1968: 16). According to Burnham, technology in itself would probably not produce art 'as we know it', however it would be 'instrumental in redefining the entire area of aesthetic awareness', in terms of media, perception and subject matters (Burnham 1970: 11). Conceptual art - metaphorised by Burnham as software¹⁸ - was on the forefront of that development in its attempts to integrate technology in art as part of a profound involvement with the cultural, social, and economical reality of the time. Guided by non-specialist creativity and critical consciousness - not questions of functionality and technics - conceptual art explored the interfaces between human values and activities and technological structures and politics. Using aesthetics as a kind of mediator it created open spaces for reflexion as well as expression and performativity in these interfaces.¹⁹

As Haacke's works illustrates and Burnham's theories emphasise, system

aesthetics thus entailed a closer interaction or overlapping between art on the one hand and public space and everyday life on the other, not least through the use of technology. To quote the historian Michael Corris: ‘The artists and critics of the 1960s and 1970s used systems theory to facilitate the integration of art and the world’ (2004: 197).

Burnham, who talked about identity rather than integration between art and the world, indicated a paradigm shift: art would no longer be occupied with products - the commodified object - but with ‘producing more accurate models of social interaction’ (Burnham 1968: 15-16). He mentioned Les Levine’s Irish-Jewish *Restaurant* (1969) as an example of this shift, to which I will add Gordon Matta-Clark and Caroline Goodden’s restaurant and performance space *Food*.²⁰ *Food* was a meeting place for a number of activities, from cooking and hanging out to magazine production, performances and exhibitions. The specially designed premises interconnected these activities to form a social system - or social sculpture to use Beuys’ popular term - developing in real time and based on aesthetics of collaboration, solidarity, exchange, flexibility, curiosity and digestion.²¹

In the works mentioned, experience is generated through inclusive and interactive systems that attempt to break down the barriers between work and audience, and further between art and lived experience. They function as conceptual meta-systems that allow for a deconstructive reflection on systems, how they function and influence our (ap)perceptions of the world; and recognition that we are able to influence and change the ways of the systems - and on a more general and ideal level the course of the world - with the means of the systems themselves. They turn systems of control and over-determination into systems of engagement, empowerment and liberation.

Towards a post-object aesthetic

I should emphasise that a certain ambiguity is apparent here. As the two previous sections show, the dematerialisation of art might not formally (i.e. physically)

have destroyed the object completely - we are after all still in the process of dematerialising the object. But its conceptual workings with materiality through processes and systems pointed far beyond the object, both as an aesthetic form and as a cultural, social and economical signifier.

The material conditions of immateriality

My historical and theoretical argument is that the conceptual transformations of art from autonomous object to contextual materiality is developed further by a certain strand of contemporary computer based art, through an involvement with immateriality in digital networks such as the Internet and networks emanating from it. I am thinking here of artists collectives such as o1.org,²² Übermorgen,²³ irational,²⁴ Kingdom of Piracy,²⁵ Knowbotic Research²⁶ and Mongrel.²⁷ Once again, many more could and should be mentioned. As examples of what I will call 'network aesthetics' I suggest that the works of these and related significant artists follow in the tradition of Serra, Smithson, Haacke et al. as they - through a conceptual approach to immateriality - continue the aesthetics of dematerialisation with new urgency, agency and energy.

Before I elaborate this point and go on to talk about the works of some of these artists, let me clarify that immateriality is not another - technological - word for dematerialisation. Although they might semantically mean more or less the same, I distinguish between dematerialisation as an act, and immateriality as a condition. By that I mean that dematerialisation designates a conceptual approach to materiality, whereas immateriality designates the new material condition - or just the new materiality - that network artists taking such a conceptual approach are dealing with.

This notion of immateriality as a materiality is inspired by Jean-Francois Lyotard's term, *immaterials* (Lyotard 1996: 159-175). Although Lyotard's term - devised in the mid 1980s in connection with the exhibition *Les Immatériaux*²⁸ - does not refer exclusively to a digital context, it is quite appropriate and useful here because it helps to introduce a notion of 'new materials' and hence a new

understanding of materiality. To be specific: the term clarifies that immateriality in this context designates a (digital) materiality - with all the uncertainties that involves - that can be conceptualised by art just like the (physical) materialities discussed earlier. As a digital materiality, immateriality does not relate to physical properties; rather, it relates to human communication in the widest sense. Thus, as Lyotard also emphasises in his text, immateriality is not just another new materiality but a new *kind* of materiality, that fundamentally transforms the relationships between human beings and materiality, and generates new social, cultural and economical conditions: 'New materials, in a wide meaning of the term, are not mere materials which are new. They question the idea of Man as a being who works, who plans and who remembers: the idea of the author' (Lyotard 1985: 159).²⁹ Additionally he rhetorically asks: 'do "immaterials" leave the relationship between human beings and material unaltered or not?' (Lyotard 1985: 162). For Lyotard 'immaterials' signify a shift from identity to interaction, in the sense that materiality no longer refers to a person but to relations between subjects. Thus 'the material disappears as an independent entity. The principle on which the operational structure is based is not that of a stable "substance", but that of an unstable ensemble of interaction. The model of language replaces the model of matter' (Lyotard 1985 164). 'Immaterials' or immateriality presents a post-dualistic - i.e. post-modern - perspective where language and matter, conceptualisation and materiality, are inseparable. It forces a comprehension of materiality beyond essence, beyond autonomy, beyond the object.

Art and immateriality in digital networks

My point is that Lyotard's materialistic understanding of immateriality - as a condition of reality - is developed further and challenged by computer-based art's involvement with digital networks.³⁰

According to the comprehensive and diversified discourse on networks that has emerged in the past two decades - from Castells' encyclopedic description of the 'network society'³¹ to Tiziana Terranova's precise analysis of the politics of 'network culture'³² - networks can be understood as expanded, more dynamic

and complex systems; networks tend to have a horizontal, distributed and open-ended structure, anticipate direct and versatile interactive communication and be connected to a heterogeneous set of interdependent contextual relations that blurs established positions and boundaries.

The artists I want to include in the discussion here are all involved with the aesthetic possibilities, challenges and problems that networks - especially digital networks - present to the conceptualisations of immateriality, vis-à-vis the close integration of technology and lived experience in the globalised and information-based world.

Apart from the hardware (the underground cables and fibers, servers, and personal computers) a digital network like the Internet runs on software (codes and protocols) and distributes software (digitised data) between an indefinite number of nodes - immateriality.³³ In a digital network the immateriality is not a priori grounded in or connected to a stable and limited object or a defined and specific location; rather, it is connected to the continuous streams, flows, energies, rhythms and dynamics in and of the network. It is relational, multiple and in a phase-state by default.

A number of different art works from roughly the last ten years indicate an aesthetic interest in the immateriality in networks; not as an escape to a digital non-real of the 'cyber transcendence' but as an involvement with the realities of our technological super advanced society, as Burnham said - as another return to the real. Rather than being preoccupied with the visual beauty of data or the 'cyber sublimity' and fantasy world of the Internet, the works are concerned with how the immateriality in networks and the conceptualisations of it have a major impact on our lives in the wired world on any number of levels, from the ideas and values that inform them to the intimate spaces and the wider social field.

They emphasise a post-object - and politically charged - perspective on these issues, and as such they are prone to generate conflicts with parallel forces - often

either capitalistic or governmental - involved in the issues, with the intention to exploit immateriality in networks like any other materiality, to reconnect it to the economy and culture of the object. The art works represent a counterforce that explores the immateriality in networks as a materiality connected to and creating basically different cultural economies; economies where liberation, engagement, difference, mutation, horizontal organisation, dialogue, experimentation, collective production and social humanistic values have greater significance than control, exclusion, uniformity, predetermined limits, hierarchical chains of command, monopoly, discipline and private property. The art works participate in the construction and development of these alternative economies and cultures, with conceptualisations that originate from principles of critical consciousness as well as generosity, and compel us to recognise and get involved with the potentials as well as the restraints of the immateriality in networks; not only on an analytical level but also by participation, interaction.

A recurring theme in network aesthetics is the questioning of how data is interpreted and presented by the software. The alternative web browser *The Web Stalker* (1997) by i/o/d is an interesting example here. Its cool (some would probably say alienating) bicolored graphical mapping of browsing the web was created to counter the flashy looking web page layout of the commercial browsers.³⁴ Instead of presenting the web as an advanced but familiar and pre-packaged object, *The Web Stalker* and its special functionalities (recalling Serra's list of verbs) present it as a new dynamic and ever transforming materiality (alienation in the Brechtian sense was intended to some extent), that can be conceptualised in multiple ways through the active participation of the user. The work is very instructive in this context, as it so clearly shows a way for computer-based art to work with the immateriality in networks, beyond reductive metaphors and pragmatic understandings of interactivity - beyond any notion of the object - to an imaginative and analytical engagement.

Another significant trend in networks aesthetics is the exploration of different forms of activism as subversive and affirmative artistic practices, partly to counter

the established power structures that surrounds the immateriality in networks - from mainstream technological culture to global capitalistic corporations -which to a large extent determines its social, cultural and economical conceptualisations; to open alternative ways, directions and horizons for working with the immateriality in networks. The works of groupings such as RTMark/The Yes Men, Carbon Defense League, Knowbotic Research and etoy are examples of this trend; and so is *AntiMafia* (2002) by [epidemiC], a comparatively simple piece of software that facilitates the co-ordination of associative actions.³⁵ Through a p2p connection on the Gnutella protocol, users can list and engage in various actions; as the title indicates, *AntiMafia* subverts the criminal network-structure of pre-Internet times with a non-hierarchical community of sharing and support, based on the collective potential of the Internet. Instead of dividing the users into individual consumers - 'You Are Not Alone' as the slogan says - *AntiMafia* connects the users as a multitude of subjective energies (desires, affections and attitudes) and generates forms of interaction, organisation and collaboration that empower this multitude.

The Injunction Generator (2003)³⁶ by Übermorgen on the other hand, empowers the users as an army of single protesters: it attempts to remove content from the World Wide Web by allowing the common user to create and send close-to-real standard court-orders to the owner of the web site, the appropriate dns registrar, the press and lawyers. The work mimics a frequent practice of large corporations at the same time as it subverts this practice by turning it against the very same corporations; a cyber *détournement* with a vengeance. The tactics of the works present the user with a power of principle to act and take active part in the definition of appropriate content on the web.

Surveillance has been an issue in network aesthetics since the mid 90s. At the same time as the immateriality in networks allows 'free' communication and distribution of information, it also facilitates the surveillance or monitoring of these activities by governments and institutions. Many artists have reacted to this with works that either attempt to avoid surveillance like *TraceNoizer*

(2001) by LAN or to counter-surveil such as *Carnivore* (2001) by Radical Software Group. *life_sharing* (2001-2004) by 01.org is a remarkable work in this context, as it opposes 'data surveillance' by 'data nudity'.³⁷ For almost three years the duo turned their hard disk into a web server to give the Internet public access to everything on it, from emails to software: transparency on all levels - an expression of open source living. The radical gesture created a generous model for online communication and information economy that anyone could adopt; and for the emergence of a collective consciousness - 'privacy is stupid' as the duo proclaimed in relation to the work - of interconnectedness and interdependence.

The works mentioned above are all involved in the conceptualisation of the immateriality in networks to generate social, economical and cultural significance - through aesthetic force not beautiful objects - that allows us to imagine and participate in the construction of a technological world different from the one presented to us. Through their emphasis on the immateriality in networks as a fluctuating materiality, they compel us to leave behind any notions of the stable object - which still characterise the world we live in - and challenge the property rights, forms of production and channels of distribution traditionally associated with it; in network art as well as in network life.

Furthermore, the network aesthetics of these works counter a tendency to fetishise technology - fascination with its capabilities independently from the purposes and ideas it serves - found in much computer-based art and art theory. They show how immateriality in networks - initially through art - can and should be informed by human actions and values, human concepts, not just the rationales of machines. The works of Heath Bunting - lately done in collaboration with Kayle Brandon - are exemplary in this context. From his *Junk mail remailer* (1997), *Cctv* (1997) and *Own, Be Owned Or Remain Invisible* (1998) to *The BorderXing guide* (2001) and *The Status Project* (2004-), he has challenged the conventional perceptions of technology, forcing us to replace the prevalent blind acceptance and hysterical enthusiasm with aware skepticism and

innovative criticism.³⁸ As a media chameleon and hybrid of an anarchist, freedom pirate and avant-gardist, Bunting does not believe in authority, especially not of technology. He believes that instead of adapting our life to technology we should adapt technology to our life; his art of crossing, sharing and hacking in physical as well as virtual space presents us with the most inspiring ways of doing that.

Immateriality and contemporary aesthetics

If the discourse around computer-based art - by virtue of its media and formal characteristics - is to seriously challenge the concept of art today, it needs to enter a critical discussion with the concepts of art that history has to offer. It needs to address the past in order to have relevance for the history and the present and future as part of that history; otherwise it could very easily end up advocating an uninformed - that is ahistorical - avant-gardism in the sense Thierry de Duve uses the term (1996:36-86). Discussing computer based art as a new art form in itself is not interesting - this usually leads to conformism. I believe that the true originality of computer-based art - its possible difference - is only perceivable through discussions about its relations to - its inevitable similarities with - art in general. This goes for computer-based art, as well as for specific works. Thus I have outlined one example of an expanded historical and theoretical understanding of computer based art, within a tradition that removes the technological focus and media exclusivity and replaces it with conceptual problematisation. It is not only a matter of giving computer-based art a historical and theoretical perspective but also of re-actualising and reinterpreting conceptual art; and of realising multiple common aesthetic agendas with non-computer- based contemporary art, regarding both subject matters, tactics, production and not least concepts of art.

The dematerialisation of art is not to be understood as a historically-bound phenomenon. It prompted a non-formalistic (the medium is not the message but the means) and discursive aesthetics, that informs contemporary aesthetics and art practices on a broad scale. To end with an opening I want to mention a handful of example of non-computer-based art works that connect to the works

I have discussed above: Superflex's construction of alternative economical and media circuits, Felix Gonzales-Torres' pile of wrapped candy that invited the audience to serve themselves, Rikrit Tirivanija's stagings of social events (free of charge), and the knowledge distribution and do-it-yourself education mounted by The Free University. For the benefit of contemporary art at large future exhibitions and writings - whether computer-based or not - should not hesitate to explore these connections.

☺

NOTES:

1. My choice of analytic approach does not reflect a rejection of the vast amount of research dedicated to computer-based art and the exchange between art and technology. I acknowledge the importance of this research. However, since it is my ambition with this text to connect immaterial art and aesthetics to non-digital art and aesthetics I find it necessary to step outside its somewhat limited historical and formalistic framework. Thus, I see this text as a necessary alternative and critical supplement to the predominant discussions on contemporary digital art.
2. The text was written right after Chandler and Lippard's text was published and a shortened version of it was included in Lippard's anthology *Six Years* - see Lippard (1973).
3. For a recent discussion on the 'use value' of dematerialisation see Slater (2000).
4. By focusing on the 'material' strand in conceptual art I want to distinguish the scope of this text from the more purist strand of conceptual art represented by Sol Le Witt, Art & Language and Joseph Kosuth. These artists were/are primarily engaged in the formal qualities of art as a conceptual - i.e. philosophical and linguistic - phenomenon - as an idea - and their works certainly calls for a different interpretation of dematerialisation.
5. Interestingly, the text Lippard wrote with Chandler was 'only' entitled 'The Dematerialization of Art', which seems to indicate that her theories in the time between the two texts became more involved with the 'obsolescence' of the object.
6. I would like to point to Johanna Drucker's text (2004) for a sharp and thorough critique of the idealism of conceptual art - i.e. primarily Kosuth - of leaving materiality behind.
7. Deleuze's notion of the virtual and the actual (which informs this argument) originates from his reading of Henri Bergson. For a concise account see Rajchman (1998).
8. I distinguish this engagement with reality from Hal Foster's very popular notion of 'the return of the real', which designates a phenomenological, semiotic and not least physiological aesthetics (opposed to the formalistic aesthetics of modernist art) that connects the avant-gardistic attempt to transform art into life with the culture of postmodernism or late-capitalism. Foster's definition of the real in contemporary art is based on (images of) the (Lacanian) subject's experiences and does not as such consider the material dimension of reality. The aesthetic of dematerialisation that I suggest here on the other hand addresses reality without the interference of the subject.
9. That an important attempt of dematerialisation - to make non-commodifiable art - failed is a well-known historical fact. However, it is still instructive to analyse how conceptual artists tried to realise this ideal and the contradictions that followed the attempt.
10. See Burnham (1974).
11. For the 'complete' list see <http://www.ubu.com/concept/serra_verb.html>.
12. For the film of the making of Asphalt Rundown see <<http://www.robertsmithson.com/films/films.htm>>.
13. See Steve Jenkins (ed.) (2004).
14. Another concurrent strand of conceptual art - represented by Donald Judd and Sol LeWitt - was also involved with systems or rather systematics. In theory as well as in practice both Judd and LeWitt developed aesthetics that extended the boundaries of the limited object; Judd by introducing a gestalt of seriality - 'one thing after another' as he once described his works - and

LeWitt by basing his work on logical diagrams and structures.

15. There were parallel artistic involvements with technology that saw technology as a reality in itself, autonomous and self-defined; a separation of technological reality and reality in general that fall outside the scope of this text.

16. Haacke's engagement with 'real time' constitutes an integral part of his system aesthetics in the sense that his 'systems' all worked in real time. See Fry (1974).

17. See Burnham (1970).

18. See Shanken (1998).

19. Although not particularly involved with systems as such, the projects of the association Experiments in Art and Technology (1966-93) founded by the two artists Robert Rauschenberg and Robert Whitman, together with the two engineers Fred Waldhaur and Billy Klüver, is exemplary in this context. As Klüver wrote, he believed that he 'could change technology, and art was a vehicle for that' (Shanken 1999). However, he did not believe in the unification of art and technology but in the potential of art's 'difference' to rethink and redirect technology and its effects on society in general.

20. Food was if anything a collaborative project. Although Matta-Clark and Goodden were the founders and driving forces, the administrative structure was horizontal and dynamic: 'one day a week each person was boss' as Tina Girouard recalls (Morris 1999: 49). For a detailed description of the short history of the place see Catherine Morris (ed.) (1999).

21. A telling example of the culinary spirit at *Food* is Matta-Clark's 'Bone Meal', which consisted of a number of bone dishes, including oxtail soup, beef bones stuffed with wild rice and mushrooms and a 'bone platter'. After the meal a jeweler drilled holes in the bones and hung them on a piece of rope so people 'could wear their dinners home.' (Morris 1999: 29).

22. See <<http://0100101110101101.org/>>.

23. See <<http://www.ubermorgen.com/2005/>>.

24. See <<http://www.irational.org/cgi-bin/front/front.pl>>.

25. See <<http://kop.fact.co.uk/>>.

26. See <<http://www.krcf.org/krcfhome/>>.

27. See <<http://www.mongrelx.org/>>.

28. Lyotard organised the exhibition, which took place at Centre Georges Pompidou. It included not only contemporary art works but also cultural artifacts dating back to ancient times. The theme of the exhibition was not computing as such, but the relationship between mind and matter, man and nature, in cultural reproduction.

29. This quote and Lyotard's theory on immaterials in general reflect the post-structuralist context of his writing. Without elaborating on the point here, it seems obvious to me to read the distributed or collective authorships in computer-based art as an answer to the question of 'the death of the author' that he asks.

30. I both formally and conceptually oppose this materialistic understanding of immateriality to the various kinds of techno cults and techno transcendentalisms where immateriality represents a sort of other worldly ideal created by the great computer God. In some ways these imaginaries

are updated (or anachronistic) versions of Yves Klein's 'zones of immaterial space' rooted in spiritual mysticism. Immateriality - in the context of this text - is material, not spiritual, real, not ideal.

31. See Castells (1996).

32. See Terranova (2004).

33. Although my text focuses on the software dimension I do not dismiss the significance of the hardware dimension in digital networks. On the contrary, I find it evident to develop its analyses further in relation to that dimension.

34. See <<http://www.backspace.org/i/d/>>. *The Web Stalker* took part in the so-called browser wars, i.e. 'war' to set the standards for web browsing and web design. The Web Stalker lost the war - as did everyone else - to Microsoft but as i/o/d writes in a text accompanying the work, although '[w]ars are never won, they are never over' either (Fuller 1998: 63).

35. See <<http://www.rtmk.com/>>, <<http://www.theyesmen.org/>>, <<http://www.carbondefense.org/>>, <<http://www.krcf.org/krcfhome/>>, <<http://www.eto.com/>>. I am mainly referring to the activities of etoy prior to the TOYWAR (1999-2000) after which the corporation became more involved with physical space. See also <<http://www.epidemic.ws/antimafia/index.php>>.

36. See <<http://www.ipnic.org/>>.

37. See <<http://www.tracenoizer.org/>>, <<http://rhizome.org/carnivore/>>, <http://www.010010111010110101.org/home/life_sharing/>.

38. See <<http://www.irational.org/heath/cctv/>>, <http://www.irational.org/heath/_readme.html>, <<http://irational.org/cgi-bin/border/clients/deny.pl>>, <<http://status.irational.org/>>.

REFERENCES:

Terry Atkinson (1999 [1968]) 'Concerning the article "The dematerialization of art"', in Alberro & Stimson (eds.) *Conceptual Art: A Critical Anthology*, London: MIT Press, pp. 52-58.

Jack Burnham (1970) 'Notes on art and information processing', in Jack Burnham (ed.) *Software Information technology: its new meaning for art*, New York: The Jewish Museum, pp. 10-14.

Jack Burnham (1974 [1968]) 'System Esthetics', in Jack Burnham, *Great Western Salt Works: Essays on the Meaning of Post-Formalist Art*, New York: George Braziller, pp. 15-25.

Manuel Castells (1996) *The Rise of the Network Society*, London: Blackwell.

John Chandler & Lucy Lippard (1999 [1968]) 'The Dematerialization of Art', in Alberro & Stimson (eds.) *Conceptual Art: A Critical Anthology*, London: MIT Press, pp. 46-50.

Terry Cohn (2000) 'Conceptualizing Conceptual Art: A Post-Object Perspective', *Art Papers*, July-August, pp. 14-19.

Michael Corris (2004) 'Recoding Information, Knowledge, and Technology', in Michael Corris, (ed.) *Conceptual art: theory, myth, practice*, New York: Cambridge University Press, pp. 187-199.

Gilles Deleuze (with Claire Parnet) (1987 [1977]) *Dialogues* (trans. Tomlinson & Habberjam), London: Althone Press.

Johanna Drucker (2004) 'The Crux of Conceptualism. Conceptual Art, the Idea of Idea, and the

Information Paradigm', in Michael Corris (ed.) *Conceptual art: theory, myth, practice*, New York: Cambridge University Press, pp. 251-268.

Thierry de Duve (1996) *Clement Greenberg Between the Lines*, Paris: Éditions dis Voir.

Edward F. Fry (1974) 'Hans Haacke – Realzeitsysteme', in Edward F. Fry (ed.) *Hans Haacke. Werkmonographie*, Cologne: DuMont Schauberg, pp. 8-22.

Matthew Fuller (2003 [1998]) 'A Means of Mutation', in Matthew Fuller, *Behind the Blip: Essays on the Culture of Software*, New York: Autonomedia, pp. 51-67.

Steve Jenkins (ed.) (2004) *City Slivers and Fresh Kills: The Films of Gordon Matta-Clark*, San Francisco: San Francisco Cinematheque.

Donald Judd (1992 [1965]) 'Specific Objects', in Charles Harrison & Paul Wood (eds.) *Art in Theory 1900-1990. An Anthology of Changing Ideas*, Oxford: Blackwell, pp. 809-813.

Pamela M. Lee (2001) *Object to be destroyed: the work of Gordon Matta-Clark*, London: MIT Press.

Lucy Lippard (ed.) (1973) *Six years: the dematerialization of the art object from 1966 to 1972*, (reprinted 1997) Los Angeles: University of California Press.

Jean-Francois Lyotard (1985a) 'Les Immatériaux', in Greenberg et al. (eds.) (1996) *Thinking about exhibitions*, New York: Routledge, pp. 159-175.

Jean-Francois Lyotard (1985b) *Les Immatériaux*, Paris: Centre Georges Pompidou.

Ursula Meyer (1974) *Conceptual Art*, New York: E.P. Dutton.

Catherine Morris (ed.) (1999) *Food: an exhibition by White Columns*, Cologne: Walter König.

Bill Nichols (2003 [1989]) 'The Work of Culture in the Age of Cybernetics Systems', in Noah Wardrip-Fruin & Nick Montfort (eds.) *The New Media Reader*, London: MIT Press.

John Rajchman (1998) 'The Virtual House', in John Rajchman *Constructions*, Cambridge, Mass.: MIT Press.

Harold Rosenberg (1971) 'On the De-definition of Art', *Art News*, December.

Craig J. Saper (2001) 'Networked Futures', in Craig J. Saper *Networked Art*, London: MIT Press.

Edward D. Shanken (1998) 'The House that Jack Built: Jack Burnham's Concept of Software as a Metaphor for Art', *Leonardo Electronic Almanac*, November, <<http://www.duke.edu/~giftwrap/House.html>>.

Edward D. Shanken (1999) 'Gemini Rising, Moon in Apollo: Attitudes on the Relationship Between Art and Technology in the US, 1966-71', *Leonardo Electronic Almanac*, January <<http://www.artextra.com/Gemini.html>>.

Howard Slater (2000) *The Spoiled Ideal of Lost Situations - Some Notes on Political Conceptual Art* <<http://www.infopool.org.uk/hs.htm>>.

Tiziana Terranova (2004) *Network Culture: Politics for the Information Age*, London: Pluto Press.