Andreas Broeckmann

Image, Process, Performance, Machine. Aspects of a Machinic Aesthetics

(lecture manuscript for the Refresh! conference, Banff/Canada, 29 Sept. 2005)

... methodological consideration: develop notions like process, performance, the machinic, as aesthetic categories which will apply not only to 'media art', but to art in general ...

For many centuries, machines have influenced the way we construct, read and understand the world. The pantograph is a simple mechanism for magnifying images, while the camera obscura allows us to project a proto-photographic image of our surrounding in real-time, waiting to be captured in paint, or on photo-sensitive surfaces. Trains riding from city to city have given us the view from the window, a continuously transforming landscape observed by an unstoppable, fleeting gaze that can only pan, not zoom.

Such mediated approaches to the world have been further dramatised by digital machines which force their signals to pass through the barely material interface of electrical current and algorithmical calculations. Digital apparatuses abstract the visible as well as the conceptual, all sensory and mental information, to a high level of ephemerality where only the reconstruction in recognisable, concrete abstractions like text, image, sound, etc., bring them into our perceptual range. Like in a text-to-speech translation programme, we are continuously made aware of the construction, sensing the break beyond analogue physicality.

There is a growing number of such digitally-fed interfaces surrounding us, constructing and driving our shared reality, from office software structuring our working days, through wireless transmission systems enabling ever more complex tele-communications and leisurely derivations, to the hyper-presence of televised images and televised truth. For want of a better word, we can call this condition digital culture, a social environment, field of action and interaction, in which meanings, pleasures and desires are increasingly dependent on their construction or transmission, and thus translation by digital devices. The necessary technical abstraction that the contents have to go through, is becoming a cultural condition which has effects far beyond the actual mechanism of extrapolated signal switching.

The German philosopher and cultural historian Martin Burckhardt suggests, in his study Der Geist der Maschine, that 'the spirit of the machine' traverses human culture in a deep furrow, tying the invention of alphabets to the discovery of the unconscious and the development of calculating machines. Burckhardt argues for a broad understanding of what constitutes machines, approaching them not so much as technical apparatuses, but as cultural dispositions which articulate and disarticulate human agency, constructing relationships and cutting ties with multiple natures and multiple cultures.

What does it mean to think through the machine in artistic practice? This question lies at the heart of an investigation into an 'aesthetics of the machinic' which the following text tries to evoke. Aesthetic experiences are shot through, perforated and articulated by the machinations of machines, apparatuses which are the exoskeletons of our perceptions and expressions. The apparent functional abstractions of digital machines, and their application and development by artists, provide the concepts for addressing the machinic also in relation to non-digital art.

There is a notion of the digital which posits a deep break of a digital aesthetics, away from the aesthetics based on analogue techniques. I will not pursue this discussion here, yet, I hope that the following will help to suggest that such an understanding of a digital aesthetics hinges on the technical aspects of artistic production. In contrast, an approach that highlights the experiential qualities of art, and the aspects of reception, is more likely to identify a continuum between analogue and digital aesthetics, and emphasises that in this respect media art should not be discussed in separation from contemporary art practice in general.

The recent re-evaluation of Concept Art as a precursor to digital media art is an indication that the concepts of media art have evolved in a broader cultural environment in which game theory, cybernetics, space travel, television, genetics and other areas of human endeavour were impacting on cultural practices. This cultural environment has impacted on art, whether it uses electronic and digital media or not. However, there is much more media art 'avant la lettre' in other historical periods which can be re-read through the paradigms of an aesthetic theory that does not take digital technology as its main cue, but the machine as a productive and transformative principle.

... what would it mean to think through Vermeer's View of Delft as a machine, as a work of art read through the lense of an aesthetics of the machinic? - and reversely, what would it mean to firmly inscribe the work of JODI into the tradition of abstract painting and computer graphics? ...

image

Media art reminds us that the disciplinary terrain covered by art history extends far beyond the purely visual. While images continue to play a dominant role in our understanding of art, recent time-based, interactive and generative artworks encourage us to revisit historical art practices and the aesthetic categories that guide their evaluation. While painting, sculpture, architecture and other art forms produce mostly stable objects that can be viewed and reviewed over extended periods of time, more immediately time-based works have posed the problem of documentation and retrospective evaluation for a long time. Original music and theatre performances, dance and ritual, festivities of all kinds, can only be 'revived' for historical evaluation to a very limited degree. This is a condition of cultural production and has a strong impact on the way in which cultural traditions evolve.

One of the oldest, and still most prevalent forms of artistic abstraction is the image. Its historical study, in a modern understanding of critical evaluation of form and content, has developed over the last four centuries, from the descriptions of the late Renaissance, through the emergence of academic Art History at the beginning of the 20th century, to the recent considerations of a 'Bildwissenschaft' (German for 'image science', best understood in the tradition of Visual Studies). It is worth reconsidering the path that Art History has taken from iconography, i.e. the study of the coded meanings of images, and iconology, i.e. the study of the semantic and - generally speaking - 'social' conditions of producing and reading images. In these two approaches, the image is taken as a given, it is read in depth and contextualised. On the basis of modern hermeneutics, the approach of iconics (German 'Ikonik') has sought to look more closely at the perceptual production of image and to study its meaning as a result of the process of reception. Thus, temporal structures within images have come into view not as mere narrative dispositions, but as 'programmes' that need to be executed and thus actualised by the viewer.

More recently, and on the basis of older philosophical, semiotic, and technical debates, 'Bildwissenschaft' / Visual Studies is asking more generally, what 'images' are - a question that arises, not accidentally, at a time when digital technologies erode the traditional understanding of the image as a limited surface covered by a visual construction. Digital images are unstable processes which, even as 'static' displays, are the results of continuous and ongoing computations. Printed computer graphics are the analogue, arrested results of such processes and are thus not digital images in a narrower sense of the word.

An artist whose work exemplifies this digital dimension of the field of images and machinic viewing, is Toronto-based David Rokeby. His long-term project 'The Giver of Names' is an interactive installation in which a table surface is observed by a camera

system. As soon as an object is placed on the table and recorded by the camera, a computer system connected to the camera analyses the observed visual structure and matches it with an existing data-base of shapes and words. The results of the analysis trigger a short, quasi-poetical text that is composed of words from the data-base, displayed on a computer screen, and read out by a text-to-speech system. Is this a simulation of how we make sense of the things we see in the world? Or is it a potentially autonomous perceptual machine system that might work as a training device for machines, trying to develop a human sense of poetic language, based on visual input? Would we say that what the machine observes in 'The Giver of Names' is an 'image'?

Rokeby's work helps us to understand that the notion of the 'image' is not a sufficient category for understanding the current, digitally-spurred expansion of the perceptual field. The aesthetics of electronic or digital artworks hinges, to a large extent, on non-visual aspects, such as narrativity, processuality, performativity, generativity, interactivity, or machinic qualities. In order to embrace these practices, we need to develop an aesthetic theory that is able to adequately approach recent works of contemporary art which deploy digital technologies and which expand the categories of art theoretical reflection.

execution

Computer software has, over the last few years, come into view as a cultural artefact in its own right. Software was, for a long time, taken as a neutral instrument. More recently, a growing critical and differentiated understanding of its constructedness, and the way in which ideological presuppositions can be coded into software, paired with the research by social historians of science and and technology. The evolution of the free and open source software movement, as well as the extensive use of - by no means fault-proof - digital systems in all walks of social and political life, have helped to build a critical understanding of 'software as culture'.

Wedded to this development is the emergence of 'software art' as a term that describes artistic practices and projects which explicitly deal with the aesthetic and social dimensions of computer software. In this context, the British cultural theorist Matthew Fuller has proposed the useful distinction between 'critical software' which reflects on the specificities and limitations of existing software programmes, 'social software' which deals with and expands the communal and social dimensions of software and software production, and 'speculative software' which explores the very 'essence' and the boundaries of what can be conceived as software.

In the 1960s and 70s the term software was still used for the 'content' stored on or displayed by technical devices - thus the 1971 'Software' exhibition in New York and the early-70s electronic art magazine 'Radical Software'. Since the proliferation of computers in the 1990s, however, 'software' has come to refer to the programmes running specific tasks on computer systems. 'Executables' are coded sets of rules which can be executed by a machine in iterative processes, executing tasks which interlock with other processes, turning the computer into a complex machine which is part black box, part tool, part display.

The continuous processing of code requires a precisely described, encoded 'software' programme that is executed by the 'hardware' technical processing units. This structure lies at the heart of digital systems, and it has been reflected by artists not only since the advent of the personal computer, but since the emergence of cybernetics and game theory in the 1950s. A recent example are the programmes developed by the Dutch 'socialfiction.org' initiative, whose '.walk' project offers descriptions for 'coded walks' through a city, instructing the human participants what to do, when to turn right, when left, and how to transform the rules controlling their behaviour. This application of the principle of computer code to human behaviour in the city offers a reflection both on the principles of technical software operations, and - in a post-Situationist manner - on the way in which we act and interact in urban environments.

Similarly open, scripted scenarios were devised by Happening and Fluxus artists of the 1960s. An interesting example is Robert Rauschenberg's 'Black Market', an installation with an assemblage of different objects, including a suitcase filled with things that the audience is invited to replace by other objects which they bring into the gallery. A small notebook documents that exchanges made. The gradual transformation of the installation is coded into the system and needs to be executed for the artwork as process to exist. Just as there is no market if nobody is trading, and no 'computer' if no process is running, there is also no artwork if the programme of the piece is not continually executed.

This is not a solely ontological, or constructivist argument in the sense that the world, or an object, only exists if it is actualised by human perception. Here the aesthetics of the work is dependent on a realisation of the programme, it is not the material objects of the fixed assemblage which make up the core of Rauschenberg's work, but the conceptualisation of the process of exchange. It should be a matter of discussion whether this principle must also be applied to paintings like Rembrandt's 'Ereignisbilder' analysed by art historian Max Imdahl, or Jan Vermeer's 'View of Delft', with its shifting viewpoint that implies a virtual movement in space and need to be recreated as a virtual movement by the viewer during the perception. Such images have a spatio-temporal structure which require a processual approach, 'Betrachtung' as an act of realisation, of execution, which is itself the very momentum of the aesthetic experience.

performance

'Performance' is the domain of 'Live Art'. As a blanket term for music, dance, theatre, and experimental variations thereof, it can be understood as the non-participatory live presentation of body movements, images and sounds. In many cases, the notion of performance implies the presence of human actors or players on a stage, or a stage-like area. - The same term is used to indicate the quality of a technical apparatus in operation: we can speak of the 'performance' of a specific computer system, or of a car.

This dual meaning is interesting in that it points to some general aspects of performance, i.e. that it is an authorial execution system, an execution system that has a main actor or author, whereas the notion of 'execution' discussed earlier is generally conceived of as non-authorial. Performance can be understood as the presentation, the making present (and perceivable) of the results of an execution.

Performativity was an important issue in the 1960s when the static paradigms of modernist art were being broken up by Situationism, Fluxus, and Intermedia, but also by the gestural and partly mechanised painting performances of artists like George Matthieu and Jackson Pollock. Performativity has again come into view of the arts through the emergence of computers, not so much as a naturalistic counter-reaction, but because of the impulse that digital systems have given to new ways of scripting live performances in dance and music. Automated or semi-automated machine-based notations have created a new relationship between composer or choreographer and performer, interjecting different machinic operators into the creative process. In this respect, the experimentations of David Tudor in music were probably equally influential as the interactive documentation of William Forsythe's principles of dance choreography.

An interesting point of discussion would be a comparison between, on the one hand, the scripted and documented walks by Land Artists like Robert Long, at times strongly authorial endurance pieces which were not meant to be repeated and copied, and on the other hand, the instructions for happenings by artists like George Maciunas, Allan Kaprow, or Dick Higgins, whose performances - or rather: executions, were meant to be realised by any number of people in order to become what they were intended to be: happenings.

In comparison, interactive or reactive installations which were so prevalent in the media arts of the 1990s, are participatory execution system. Unlike in a performance, where the execution is conducted by a main actor, in interactive systems the interacting person is mostly not executing a more or less open programme, but is included in the technical system as a secondary factor, or as a trigger, who can then observe passively the programmed results of his or her action. While the performance of interactive systems is frequently realised by physical involvement, or contiguity, of the participant, their teleology may be channeled even further by a narrative structuring of the programme.

In live performances based on digital media, a crucial factor is generally the relationship between on-stage performers, and off-stage controllers of sound and video input and of the response parameters of the technical environmental. The degrees of freedom offered to the performers is frequently competing, or in dialogue, with a programmed machine that imposes, or responds to, specific actions. Many artists exploring this field are consciously playing with this relationship, and attempting to use the dialogue for an exciting work, tense with the struggle between human and machine in an open, unstable system. The 'performance' of such a system is not immediately dependent on the involvement of an external actor, or responses from an audience, though it may be dependent on externally set parameters and conditions.

process

While the term 'process' in its most general sense implies any set of consecutive procedures sequenced in time, the notion of process-based art refers to the time-based evolution and transformation of describable, yet not fully programmed sequences of events that build on one another in a non-teleological manner. Such processes are realised in social, semantic and technical networks and are closely associated with the notions of communication, as a manner of semiotic interchange, and connectivity, as a form of temporary structure bonding non-interdependent actors.

Processuality in art is closely tied to the existence of communication tools. Of course, any communicative development in the preparation of an art work, as for instance the collaborative realisation of a theatre production or a movie, can be described as a process. However, it only makes sense to speak of process-orientation in cases where the evolving process itself is a main factor of the aesthetic experience of the work. Thus, in the formulation of an aesthetics of the machinic, it is necessary to emphasise the interlocking of machinic processuality with the social dimensions of engagement in process-based art.

The artists group Knowbotic Research (KRcF) has explored such machinic processes throughout the second half of the 1990s, especially in the project series entitled 'IO_dencies', and in the project 'Anonymous Muttering', which connected on-site visitors, music DJs, Internet users, and a computer system into a complex interactive, open and non-directional assemblage. The output, and thus the aesthetic experience, varied from one interface setting to the other, and was mutually influenced by actions performed at any one of the connected positions, whether online, on-site, or automated. Whereas 'Anonymous Muttering' created a delirious experience of being perceptually (and thus conceptually) over-whelmed, 'IO_dencies' took a more analytical approach, trying to create interfaces and online communication tools which allowed participants to interact and continuously transform a shared knowledge environment. Processuality here meant an explicit communication not only mediated by machine systems, but with these systems and the productive and transformational forces they brought to the assemblage. These works are thus exemplary for an artistic engagement with technologies in which the machinic dimensions of a system including technology and human actors, are deliberately explored, rather than being taken for granted, or ignored.

This kind of process-oriented, machinic art is, I would argue, without historical precedent. We find an interest in the aesthetics of processes, for instance, in the 'corps exquise' experiments of the Surrealists, or in the Mail Art networks of the Cold War era. However, the digital communications technologies of the last decade have created an historical situation in which communication and connectivity have taken on a new social and artistic significance, which is now not only explored through such technical media, but also in purely analogue, local and translocal artistic practices and projects. Unlike the artistic strategies of performativity, the dynamics of process-oriented art is coupled with the logic of its operational environment, be it the postal service, the Internet, or a particular segment of society. While performance seeks to eliminate the impression of such a contextual dependency, the aesthetics of process-based art crucially implies this context - it cannot be other than relational.

machinic

The notion of the 'machine' that I use refers not to machines as technological apparatuses, but as any kind of productive assemblages of forces, be they technical, biological, social, semiotic, or other. The notion of the 'machine' is an operative term that makes it possible to describe open formations which do not require systemic structures, but that hold the potential for manifold realisations. The 'machinic', then, is a quality of such formations, it describes an open, productive process arising from specific, yet non-teleological relations between the constituent parts of the machine. - The aesthetics of the machinic suggested here is a form of aesthetical experience that is effected by such machinic structures in which neither artistic intention, nor formal or controllable

generative structures, but an amalgamation of material conditions, human interaction, processual restrictions, and technical instabilities play the decisive role.

It is therefore appropriate to introduce the notion of the sublime as a crucial quality of an aesthetics of the machinic. The aesthetical experience of the sublime, as characterised by Romantic writers of the late 18th and early 19th centuries, is characterised by a confrontation with unbounded and overwhelming nature, a transgressive experience which is not based on an appreciation for the grandiose beauty of nature, but on a disturbed sense of amazement about its limitless and uncontrollable force. Of course, the notion of the natural sublime is historically associated both with, on the one hand, the experience of alpine and maritime wilderness and natural catastrophies like earthquakes, and on the other hand, with the progressive subjugation of nature under human will in the course of industrialisation. The sublime is thus a paradoxical sign of both intimidation, and the frustration about the loss of 'natural nature'. Importantly, Kant insists that the sublime experience is rooted in the viewer's feelings, not in the object itself - making the notion of the sublime a decidedly aesthetical category.

The sublime is thus a sensation realised in the event of being confronted with some external force, it is an experience emerging from the imaginary drama of an unbridgable gap between our experience, and the forces that move it. The paradigmatic Romantic artwork is German painter Caspar David Friedrich's 'Monk by the Sea' (Der Mönch am Meer), of which Friedrich's contemporary Heinrich von Kleist wrote that, looking at the painting was as though, in the face of an overwhelming spectacle of nature, one tried to close ones' eyes, yet the eye-lids had been cut off ...

Closely connected to the Romantic fear of nature is the modern fear of machines. While modernist humanism has done everything to re-enstate human perception of a contained world as the core motor of aesthetic experience, the emergence of technologically inspired art has brought the sublime back into the experience of contemporary art. Can we discuss Modernist painters like Piet Mondriaan and Barnett Newman as artists of the machinic? They clearly play at the boundary between rational pictorial structures and a surplus which seeks to transgress rationalist certainty.

A most radical gesture in this respect is the project by Maurizio Bolognini, 'Sealed Computers', for which the artist places over a dozen computers in a gallery space, networking them and having them jointly compute simple graphic structures which, however, deliberately do not get displayed: the monitor buses of all the computers are sealed with wax, and the installation offers no indication of the communication between the computers, or its results. What we can perceive are the interconnected computers, humming, maybe processing software. They are neither keeping a collective secret from us - we would need to subjectify the

computers for this -, nor are they even 'conceiving' of the results of their computations as visual structures. The worst is, that we fear they might be as alone as we are.

The aesthetics of the machinic is an experience that hinges on machine-based processes which are beyond human control. Neither leaving nature, nor switching off the machine, is an option.

I'll finish here. I hope to have shown that we can enter into a productive dialogue by applying categories of aesthetic theory beyond the confines of digital or analogue art. I believe that Prince is a musician, and that 'the art formerly know as new media' is just art, for better, or for worse. - Thank you.