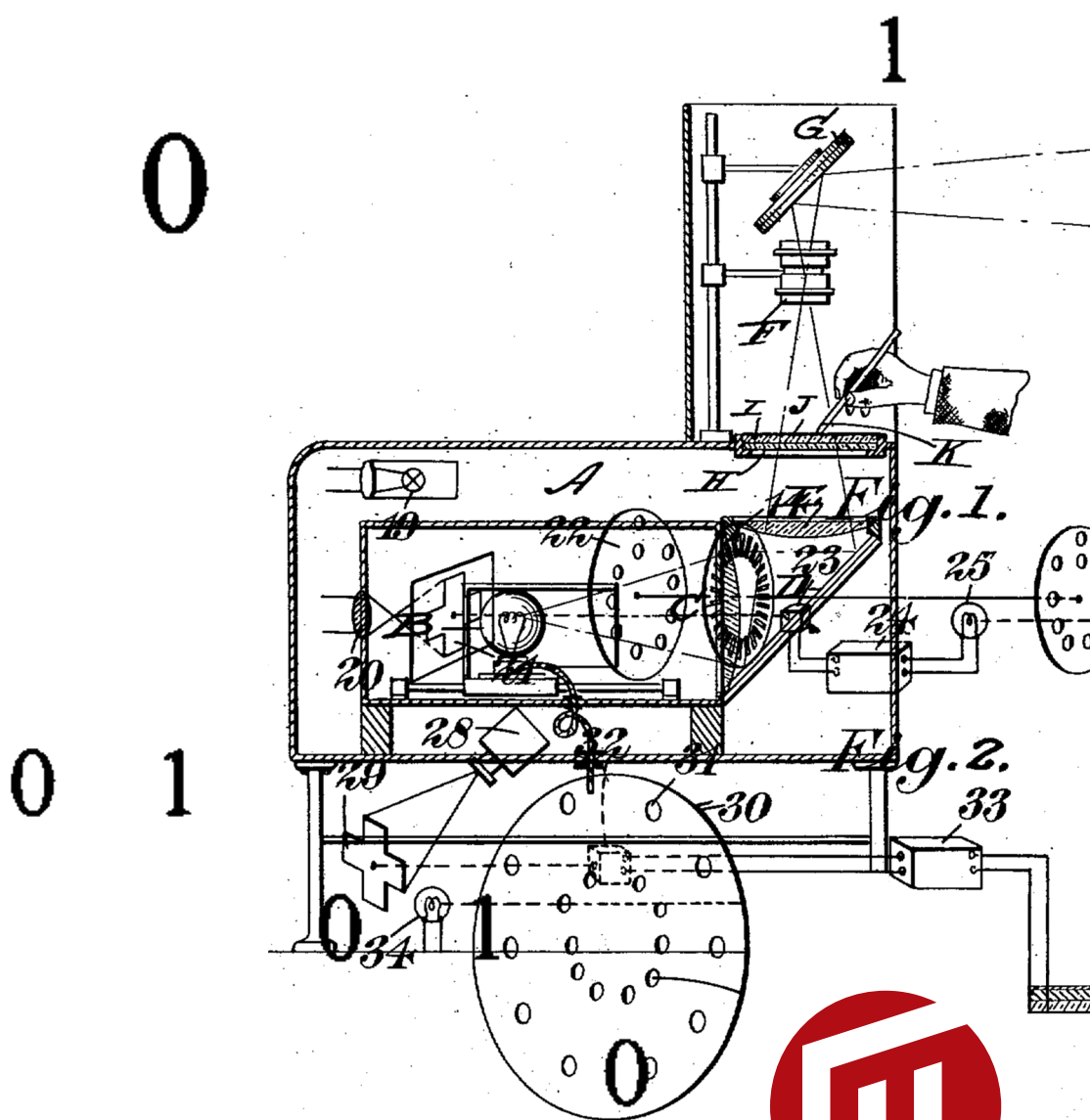


KRISTOFFER GANSING

TRANSVERSAL MEDIA PRACTICES

Media Archaeology, Art and Technological Development



TRANSVERSAL MEDIA PRACTICES

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KRISTOFFER GANSING
TRANSVERSAL MEDIA
PRACTICES

Media Archaeology, Art and Technological Development

Malmö University 2013

Till Sonia och Wilbur
(det gamla och det nya)

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Kristoffer Gansing Berlin April 2013

2005: AN INTRODUCTION

Dissertation Year 0

As a starting point for bringing the diverse theories and practices of this dissertation together, the year of 2005 seems adequate in retrospect. Around this time, my own personal trajectory of cultural production in media art converges with emerging concerns in this field. Between September 28 and October 1, 2005, *Refresh!*, the first of the “Re:” series of conferences on “the Histories of Media Art, Science and Technology” was held at the Banff New Media Institute in Alberta, Canada. A somewhat more modest event took place that same weekend in Copenhagen, as on October 1, I was one of the main organisers behind the first “festival for forgotten media”, *The Art of the Overhead*. Among the participants of the latter event was Siegfried Zielinski, a leading figure in the then not yet so well-known field of media archaeology (Two years later, Zielinski would be the keynote speaker at the follow up to Refresh!, the *Re:Place* conference taking place in Berlin). A third activity relevant to this network of activities back in 2005 was the publication of a manifesto which could be read in public spaces across Copenhagen and in online media. Personally, I received this in my mail inbox forwarded via my flatmate. The manifesto was that of tv-tv, a new local media initiative in Copenhagen that placed itself in-between art and political activism. The manifesto described the agenda of a new TV-channel and stated that due to widespread digital technologies, everyone could now become the media. Further, it characterised tv-tv as a counter-public sphere, dispelling unidirectional ideas of “publicness” as simply reflecting

what the public wants, instead opting for a confrontational aesthetics and alternative media discourse.

Different as the projects mentioned above are, they have something more in common in addition to their haphazard attachment to this writer around a specific point in time. These projects both worked as critical interventions in the field of media art, which for a considerable time had been preoccupied with the newness of technology, illustrated for example by the label “new media art”. Reacting against the tendency of only focusing on the new and hyped features such as interactivity, conferences like Refresh! presented research devoted to the long historical lineages of artistic engagement with technology. The tagline of Refresh! was the following quote from an article by Rudolf Arnheim:

The technology of the modern media has produced new possibilities of interaction... What is needed is a wider view encompassing the coming rewards in the context of the treasures left us by the past experiences, possessions, and insights. (Arnheim, 2000)

In this context, The Art of the Overhead festival can be seen as media archaeology in action, as the festival called for artistic responses that challenged the idea of media history as a linear progression towards the ever better in the form of the new. In the original “Call for Overheads”, artists and other interdisciplinary practitioners were encouraged to submit work according to categories such as “Remediation” and “Media Archaeology”. The tv-tv project did not explicitly address such historical concerns, but is an example of a contemporary art and media-activist practice that renewed artistic critique of and through the established media institution of television.

In my work with these two projects, I have been interested in the interlinked development of media technologies and media practices. This is basically a question of how we approach technological development which I see as a “problematic” that prompts us to ask: how do technologies develop over time? In this study, I want to go beyond the opposition of the analogue and digital which

seems to form the masternarrative of all thinking about technological development today. This does not mean that I am disinterested in the material technological aspects of different media. But if we for example take the first case study where I deal with how television is changing from analogue to digital infrastructures, I am also linking these changes to the transformation of the institutional frameworks of television. Reflecting on the second case study, we can for example learn that a video projector and PowerPoint type of software transforms the whole institution of conference presentation beyond simply being a digitisation of the analogue overhead projector.

Similar to what Lisa Gitelman has argued in *Always Already New* (2006), I maintain that it is not viable to try and resolve the tension between the old and the new but instead we may learn new things about technological development by analysing how these terms are being negotiated in specific cases, taking both material and discursive aspects of different media into account. Such an approach is guided by the concept of transversality which I use to move across temporal, institutional, material and cultural aspects of specific media technologies and practices.

The overarching goal of my research is to develop conceptual tools for transversal media practices. To this extent I deploy media archaeology as one possible form of transversal analysis and practice and along the way I refine the concepts of this still emerging sub-discipline of media research. The resulting “set of tools” invites the reader to pick up the questions of my research and develop them further. The conceptual tools are about the imaginary, residual and renewable characteristics of media and my hope is that they can be put to critical use in contemporary situations where a standardised and capitalist logic of technological development holds sway.

1 CONCERNS, QUESTIONS, AIMS

“It is not enough”, to formulate a motto modelled on a famous original, “to interpret the world, you also have to change it.” You have to do it every day though and for each device differently.

Günther Anders, *Die Antiquiertheit des Menschen*, 1961, p.38.¹

Much in the spirit of the quote from Günther Anders above, artists, activists and other cultural actors have for long been involved in changing the sometimes dramatic changes brought about by technological development. The main **concerns** of this dissertation are the cultural, social and technological conditions under which such critical practices are being enacted today. This leads on to **questions** about the state of technological development today and in which way it interplays with culture. An overarching **aim** is to develop concepts for transversal media practices / that contribute to our understanding of the interplay between society, culture and technology.

/ Transversality: A Meta-Theoretical Commentary

Leading up to the case-studies, chapters one to four are cut through by this meta-theoretical commentary on the concept of transversality. Whenever the transversal symbol “/” appears, it marks the presence of this parallel text space. This is a space of transversal ideas running across the main text that serves to introduce the different facets of transversality, in philosophy and in artistic/activist practice and institutional critique. These snippets provide the reader with conceptual markers through which to understand transversality while avoiding to resolve it into a unified model. Instead, this network of philosophical, etymological origins and mathematical notions of transversality invites the reader to see the openings in the main text where a transversal thinking and practice is being developed. The dissertation on the whole represents a set of transversal lines cutting across *specific* situations, finally converging around a set of tools that can be used to engender further transversal media practice.

NB: The regular footnotes in chapters one to four will appear as endnotes.

Transversality is a key word here since it will allow us to think these relations in a non-dialectic way, as always unresolved and in transformation. In the quote above, Günther Anders reformulates the famous imperative of Marx, who in the last of his eleven 1845 “Theses on Feuerbach” wrote that “The philosophers have only interpreted the world, in various ways; the point is to change it.” (Marx, 2002). This dissertation also follows such an imperative to put ideas into practice, but with the twist introduced by Anders: “for each device differently.” I take this specification as a call to take seriously the different materialities and socio-cultural contexts of media technologies and practices.

The late Anders, himself a philosopher who worked in the German post-war situation was especially alarmed by the technological development connected to Nuclear Power and for many years left writing altogether in order to become an activist (Anders, 2002 (1980), p. 11-12). For Anders, human culture had become increasingly obsolete and a rapid technological development had become the organisational logic of society. In his two main works, *Die Antiquiertheit des Menschen* volumes 1 and 2 (1961; 2002), Anders provides a critique that seeks to overcome this discrepancy between technological development and human culture. Thus, Anders’ position rests on a division between culture and nature as he tries to re-connect humans with the former.

However, as claimed by “post-humanist” thought, what if the natural, human and technological worlds are completely contingent on one another? ² With today’s ubiquitous and mobile technologies does it not increasingly seem as though we are living in heterogeneous and hybrid techno-cultural realities of what some have recently called media-ecologies or even “medianatures”? ³ If so, what are we to make of the question of technological development? Is it really something “out of control” that we should bring into accordance with some benchmark idea of a “natural state” of things? After the caesuras introduced by the “posts” of the post-modern, the post-fordist, the post-colonial and the post-human what are we to make of the idea of development at all which seems to rely on the linear logic of modernist thought with its inherent ideology of progressivism?

The question of how technological development can be conceptualised today forms the background to the two case studies that constitute the heart of this dissertation. The key issue of the dissertation is *how* cultural and artistic practices dealing with the interaction of old and new media invite us to conceptualise technological development in new ways. The emerging field of media archaeology is employed as a methodology in media studies and cultural production, comprising a theoretical and applied analysis of media history, materiality and practice. This transversal approach allows media archaeologists to deal with the relation between the old and the new in a non-linear way as well as to pay attention to the technical materiality of media.⁴ It is argued that the transversality of the media-archaeological approach should be seen in contrast to other conceptions of media history and technological development, such as progressivist, mono-medial and evolutionary ones.⁵ In this study, I try out the potential of media archaeology to reform our conception of media technologies in practice, and eventually I formulate a set of concepts for thinking and doing media archaeology as a transversal media practice.

There is in other words a speculative side to this dissertation, reflected in the experimental methodological approach to the case-studies, where I myself play an active part through various forms of interventions from the positions of being a cultural producer, occasional artist, and media researcher. Since 2005, I have been involved in activities that may be characterised as belonging to the field of media archaeology. This is a branch of media research and

⁴To go beyond

The noun transversality is a derivative of the adjective transversal used since medieval times in geometry to describe a line that cuts a system of lines. If we do some etymological research, we would find that the term combines the latin prefix “trans” meaning “beyond” or “across” in combination with the verb *vertere*, meaning “to change”, “overthrow” or “turn” – the latter which can be found in various constructions such as *avertere* (to steal, misappropriate), *devertere* (to detour, digress and branch off) or *subvertere* (overturn, subvert). Transversality as it will later be deployed in cultural theory and practice, is linked to all these meanings as it stands for a movement extending across and beyond territories or institutions and their given practices (from one place and purpose to another), as a challenging of given structures and systems through the linkage of heterogeneous elements.

References and further reading: Entries on “transversal” in Oxford Dictionary of English; Latin Dictionary (www.latin-dictionary.net) and Gerald Raunig’s introduction to the term in his article “Transversal Multitudes”, 2002.

artistic practice that has gained increasing attention in the media arts field since the turn of the millennium. The ascent of media archaeology should be seen in the context of the so called “digital revolution” of the 1990’s and the rise of new media studies. While much of the scholarship surrounding digital culture can be accused of simply following the hype cycle of the latest technology and business trends, it also includes a critical theory-influenced set of thinkers who have been keen to place new media in a historical context. Key titles in the new media and digital culture field from the late 1990’s and early 2000’s such as Janet Murray’s *Hamlet on the Holodeck* (1996), Jay David Bolter and Richard Grusin’s *Remediation – Understanding New Media* (1999), Friedrich Kittler’s *Gramophone, Film, Typewriter* (1999 (1986)), Katherine Hayles’s *How we Became Posthuman* (1999) and Lev Manovich’s *The Language of New Media* (2001) all take care to develop theories rooted in an historical awareness of what has come before. More recently, Sarah Kember and Joanna Zylińska have picked up on this thread in *Life after New Media* (2012), where the authors claim that the binary division of old and new media is a false one, instead proposing the term mediation for a process based understanding of media temporality.⁵

Media archaeology can definitely also be placed in this “historical turn” of new media theory, digital and network culture studies. It might seem contradictory that scholars in the new media field show an increasing interest in media history and generate studies of how media develop over time. In this context, media archaeology should not be understood as a field for nostalgia freaks collecting curiosities and odd artefacts but is better thought of as a theory and practice dealing with the constant and sometimes surprising and suppressed interaction between the present and the past. What is distinguishing for the still emerging field of media archaeology is its strong statement against linear and mono-medial approaches to media history. This is evident in the work of the main proponents of media archaeology. Siegfried Zielinski, for example, a German scholar strongly identified with media archaeology, positions his seminal work on *The Deep Time of the Media* (2006 (2002)) with the following catch-phrase: “do not seek the old in

the new, but find something new in the old” (p.3). Through his “an-archaeological” study we come to understand that this means to eschew the idea that media technologies always progress towards the better in line with a Hegelian teleological march of history where what came before is always nothing more than the pale predecessor of a more perfected form in the present. In the preface to Zielinski’s book, Timothy Druckrey pinpoints the anti-teleological ambition of media archaeology:

An anemic and evolutionary model has come to dominate many studies in the so-called media. Trapped in progressive trajectories, their evidence so often retrieves a technological past already incorporated into the staging of the contemporary as the mere outcome of history. Anecdotal, reflexive, idiosyncratic, synthetic, the equilibrium supported by lazy linearity has comfortably subsumed the media by cataloguing its forms, apparatuses, its predictability, its necessity. (Druckrey, Timothy in Zielinski 2006, p. vii.)

Similarly, in what is arguably the first comprehensive media archaeological text book, *What is Media Archaeology?* (2012), Jussi Parikka continuously evokes the myth of linear progress as the epistemological nemesis of the field. By now it should be clear that media archaeology extends from the “convergence culture” (Jenkins, 2006) of digital and networked media and rethinks the history of media from this position, creating new alliances between past, present and future and across different media forms.

At the same time, media archaeologists might have underestimated the scope of previous scholarship on technological development. In the present study, I therefore also attempt to position media archaeology in a broader field of theories dealing with similar issues. This said, while claiming it to be under-theorised, I do sympathise with the non-linear approach of media archaeology. The practice-based research forming the base material of this dissertation is an attempt to further refine this approach through testing it in concrete situations where linear or evolutionary perspectives enter into a dialogue with transversal media

practices that challenge technological development from within. Instead of trying to establish linear narratives of the development of specific media and their associated practices, I use the activity in my case-studies as a spring-board to deal with the old and the new as cultural categories which are constantly being re-constructed in relation to the problematic of technological development.

The two case studies that form the basis of the present study are both devoted to projects situated within the field of media art and use media archaeology as a methodology for cultural analysis and practice-based research. In the first case study, technological development is dealt with in the context of artistic and alternative practice in the institutionalised medium of television. In this case study, there is a concrete situation of technological change, from the analogue to the digital, affecting modes of production and organisation as well as material technological configurations. The study departs from the case of tv-tv, an artist-run, local TV-station in Copenhagen, and deals with this project from the point of view of how this “old media” art project dealt with technological change and the socio-cultural aspects connected to it.

In the second case study, we encounter the quite different, yet also firmly institutionalised medium of the overhead projector. The case study is on the one hand a media-archaeological excavation of this medium, and on the other it chronicles and analyses the potential artistic re-activation of this old medium into new settings, exemplified through the media art festival *The Art of the Overhead*. If the first case study deals with technological development in relation to how the new changes the conditions of production in the old, then this second case reverses the positions in that it brings the old to bear upon the new.

Both cases unfold through a plurality of different methods including historical contextualisations, close-readings of artistic works as well as artistic interventions and cultural production. In the tv-tv case, I write about *TV-Hacknight*, an artistic intervention that deconstructed the process of technological development and public discourse involved in the transition from analogue to digital television. Furthermore, the intervention used the performative aspects of the different materialities of media involved, articulating

them in a different way than that of the official “event” of the analogue to digital transition.

The intervention part of the second project relates more specifically to the field of media art and is an attempt at reformulating relationships between old and new media. Here, through the production of a festival devoted to the overhead projector, the intention was to produce an institutional critique of the media art field, challenging its preoccupation with the new and latest technology. The case study relating to this project, through historical contextualisation and analytic readings of artistic works, is an example of a poetic reconstruction of an old medium into the new, and as such is an attempt at a transversal approach that enables the articulation of impossible and unrealistic forms of media, as a practice countering instrumental or evolutionary views of technological development.

These projects and the research connected to them deal with the relationship between the old and the new, leading to questions of how new media forms, institutions and practices relate to older ones and vice versa. The relationship between old and new media is approached through media-archaeological theory and practice, employed as a *transversal* methodology that by moving across, is a going beyond linear and “mono-medial” approaches to media history and development. This approach does not try to resolve the discussion of either stipulating continuity or radical change as the driving forces of how media forms develop.⁶ Instead of talking about media history as consisting of the evolution of different single technologies that at given points “revolutionise” human culture, or about how social needs bring about the necessity of certain technological innovations, my approach stresses the creative disruption emerging from the uses and abuses of media both inside and outside their institutional contexts. Transversal Media Practices, I argue, work contingently *across* / specific

Intersections, Parallel Spaces, Combinatorial Logics

Transversality is most commonly deployed within mathematics, where it can be described as a concept for the intersection of lines, and spaces in geometry, combinatorial mathematics and differential topology respectively. As a simple geometrical figure then, transversality is commonly illustrated by a line “cutting a system of lines” (“Transversal”, 2013). For a line to be transversal, such a system should consist of parallel or coplanar lines which when traversed produce a number of

situations of technological development, critically examining and redefining the terms of production in different media by bringing heterogeneous histories, institutions, actors and materialities into play with one another. This dissertation is all about trying out and refining the methodologies of such transversal media practices.

It is important to note that this dissertation discusses technological development in media culture through *applied* media archaeology and that it does not aim to be a complete overview or an extensive guide to this field. Instead I here work with media archaeology as a transversal methodology for practice-based media and communication research and for cultural production. A part of this process is that I engage in a theoretical and critical discussion of media archaeology as a methodology in research, cultural production and artistic practice. The dissertation however is mainly focused on the analysis of how the media-archaeologically oriented projects in the case studies re-formulate conventional ideas of the relationship between old and new media. This in turn leads to the broader problematic of how we conceptualise technological development. The research is not about resolving this issue once and for all but the aim is rather to refine the concepts of transversal media practices, in the end outlining a conceptual set of tools for further development.

interior and exterior alternate angles. The term has been further deployed within the group theory of combinatorial mathematics where it is used as a way to define subsets of data consisting of parts of another group of data – where a transversal is “a set containing exactly one element from each member of the collection” (“Transversal (geometry)”, 2013), a principle most famously put forward by Leon Mirsky. Furthermore, transversality is a concept for how parts of separate spaces intersect to create new overlapping spaces. In this sense it may for example be used in cartography and so called differential topology which is occupied with the compatibility of data across different charts and maps (“Transversal (mathematics)”, 2013). For the purposes of this study, the mathematical genealogy of transversality might not seem a very relevant inquiry but it is worth keeping in mind, especially considering that it evokes the way it was taken up by leading figures of transversality in cultural analysis. In the thought of Félix Guattari, Gilles Deleuze and Michel Foucault we find a preoccupation with nomadic movement (cutting across territories, lines of flight), group subjectivities (the creation of common yet multitudinous spheres of life) and territoriality (cartographic methodology connecting and disconnecting for example politics and aesthetics) which conceptually corresponds to transversality in its geometrical meaning of lines that cuts across a system; a group systemic or a map and in this process producing new spaces, not outside but as forms of alteration of such phenomena.

References and further reading: Leon Mirsky, *Transversal Theory: An account of some aspects of combinatorial mathematics*, 1971; Eleanor Kaufman and Kevin Jon Heller, *Deleuze & Guattari: new mappings in politics, philosophy, and culture*, 1998.

Structure of the Dissertation

In this first chapter I have briefly discussed the main topic, methodology and aims of the dissertation. In chapter two, *Media Theory and Media Archaeology: History, Materiality, Practice*, I provide a theoretical contextualisation of the research questions through the perspectives of media theory. As the chapter subtitle suggests, I develop my theoretical positions through the triad of history, materiality and practice. These three notions, I argue, need to be taken into account in order to build a framework for an analytic engaging of the transversal media practices in the case-studies that move across the old and the new, different media forms as well as fields of cultural production. There is no consensus on how media theory deals with questions of history, materiality and practice and the chapter is therefore also devoted to discussing epistemological differences within media research. In this discussion I mainly stake out the long-standing strife between empirical approaches rooted in the social sciences and the more speculative theory coming from the humanities. This discussion serves the purpose of facilitating an approach that combines an empirical method inspired by practice-based research, with the analytical perspectives of media theory. Media archaeology is introduced as an emerging field which is able to contain both the practice-based and the critical theory approach. There follows a theoretical discussion of my research in relation to media archaeology, discussing its critical perspective on technological development and the implications this has for conceptualising the relation between old and new media.

Interspersed throughout chapters one to three, and starting already in this introduction, is a meta-theory of the notion of transversality. I have chosen to adopt transversality as a guiding movement of thought and practice in my work following its conceptualisation by Félix Guattari, who developed it into a trope of institutional critique in which any unitary or finally resolved model of a subject, medium or system is rejected. The transversal approach I develop here brings heterogeneous elements together, in a production of questions and positions that opens up technological development into new areas rather than resolving it into one model. This approach also follows logically from the transversal nature of the

cases themselves that include projects which contains many different actors, subjects and sub-projects. The meta-theoretical commentary on transversality traces the development of the concept from Guattari, Foucault and Deleuze as well as how it has been adopted in artistic practices and contemporary critical theory.⁷

In the third chapter, *Contexts and Methods*, I first provide brief introductions to the fields of cultural production in which the cases are situated. While both case studies deal with artistic practices, community media form the context of the first case and in the second, it is new media art. The chapter then moves on to its main issue, a discussion of methodology, both on a concrete level in terms of which methodological frameworks I have used, and on a meta-level, discussing the implications of my methodological choices in relation to media-studies on the whole. A major part of the chapter is devoted to

⁷Félix Guattari's institutional critique

"As a temporary support to set up to preserve, at least for a time, the object of our practice, I propose to replace the ambiguous idea of the institutional transference with a new concept: transversality in the group. The idea of transversality is opposed to; (a) verticality, as described in the organogramme of a pyramidal structure (leaders, assistants, etc.); (b) horizontality, as it exists in the disturbed wards of a hospital, or, even more, in the senile wards; in other words a state of affairs in which things and people fit in as best as they can with the situation in which they find themselves." (Guattari, 1984, p. 17)

Transversality, in a socio-cultural sense, was first explicitly outlined by Félix Guattari in his 1964 essay "Transversality", originally published in *Psychanalyse et transversalité. Essais d'analyse institutionnelle* and later included in the English 1984 anthology *Molecular Revolutions*. The essay deals with Guattari's experience of psychotherapy within institutional settings and begins with the lament that such settings tend to suppress the social as a sphere intimately tied to the problems of individuals and families. In fact, there's an overarching transversal ambition at the foundation of this essay: to link what goes on within the closed walls of the institution with the socio-political life which is commonly assumed to take place only outside of it. This overarching macro-perspective is reiterated at the micro-level as, more specifically, Guattari here deals with the problem of group therapy and the intersection of subjectivities in a group situation. Guattari distinguishes between "dependent" and "independent groups" where in order to reach the latter he prescribes the formation of group subjectivities not after predefined stereotypes (death-drive, oedipus-, castration complexes) but after collective interpretation of such issues and through considering their relation to external elements. Transversality is a theory and method for engendering the emergence of such critical subjectivity formations in a group situation and is meant to counter earlier more linear notions of "transference" (between doctor and patient for example) which Guattari views as being too rooted in the institutional hierarchical structure and thus prone to slip into "predetermined" and "territorialized" structures such as the psychological stereotypes. In Guattari's group therapy the "interpretation may well be given by the idiot of the ward if he is able to make his voice heard at the right time" (Guattari, 1984, p.17). By replacing the concept of transference, based on the individual, with transversality, a relational and group-centred concept, Guattari seeks to conceptualise the collective emergence of new subjectivities within institutional settings, countering both vertical top-down structures and horizontal pragmatic power structures.

Further reading: Félix Guattari, *Molecular Revolutions*, 1984; Calvin O. Schrag, *The Resources of Rationality*, 1992; Gary Genosko, *Félix Guattari: A Critical Introduction*, 2009.

discussing practice-based research approaches to media studies. The practice-based approach, in which the researcher and practitioner is the same person, does not have a strong tradition in media research. The chapter asks which methodologies in the practice-based research disciplines could be useful for media research and introduces approaches from action and artistic research. The chapter concludes by sketching out a cultural production approach, aligned with the cases and suggesting that this could be a suitable framework for practice-based work in media research. More specific methodological issues are further dealt with in the individual case study chapters.

The case study chapters, four and five, are the longest of the dissertation and both structured in a similar way: we proceed from an introduction and methodological concerns to an historical contextualisation of the medium in question, to the description and analysis of interventions such as workshops and artistic works in which I myself took part either as a cultural producer, curator, artist or researcher.

The first case study chapter, on tv-tv, revolves around a local tv-project by a collective of artists mainly based in Copenhagen, Denmark. Between 2006 and 2009, I took part in the activities of tv-tv, both as a producer, administrator and researcher.⁷ In the study, I address questions of the conditions of production for artists trying to establish a counter-public sphere within the institutionalised medium of television. In the analysis of the projects of tv-tv, I consider how the medium of television is changing from the point of view of its technological as well as its socio-cultural materiality. This discussion leads up to a description and analysis of an intervention that took the form of a workshop and event called TV-Hacknight, which is an attempt at a transversally formulated critique and “eventualisation” of the official narratives and techno-material forces involved in the transition from analogue to digital television in Denmark, in late 2009.

The second case study deals with a project in which I have been even more directly involved, i.e. the festival The Art of the Overhead, of which I was the co-director from 2005 to 2010. The chapter departs from the concept of this festival, positing the antiquated and “residual” medium of the overhead projector as a device for “projecting” alternative conceptions of contemporary media culture. The

historical contextualisation or “excavation” of the overhead itself takes a transversal route across its many different fields of application: from its standardised use in education and business to “counter-uses” within media art. These different historical uses and counter-uses then become the background for the analysis of the artistic works presented in the framework of the festival.

In the concluding chapter, I first summarise the case studies and then proceed to reconnect them to the discussion of technological development. Here I evaluate the transversal perspective, providing a breakdown of the most significant methodological and analytical concepts that have emerged through the practices considered. The key concern of this closing discussion is to formulate how the transversal approach helps us in reformulating the relationship between the old and the new, and how it invites us to conceptualise technological development in new ways. The final outline of a conceptual toolbox for transversal media analysis and practice is an attempt to render this discussion operational.

¹ My translation of German original where Anders is reformulating a famous Marx quotation: “‘Es genügt nicht’, könnte man nach berühmtem Muster ihr Motto formulieren, ‘den Leib zu interpretieren, man muß ihn auch verändern.’ Und zwar täglich neu; und für jedes Gerät anders. “

² See for example Katherine Hayles’ *How We Became Post-Human* (1999).

³ See Fuller (2005) for a rethinking of the field of media ecology; and Parikka (2011a) for the concept of media nature.

⁴ The non-linear approach to media history is stressed by Zielinski (2006) Huhtamo & Parikka (2011) and Parikka (2012); the technical materiality is especially present in the work of Ernst (2002, 2012).

⁵ In accordance with the premise of Kember and Zylińska’s work, my own use of transversality also looks at media as assemblage processes, but at the same time it does not only focus on temporality but is meant to equally address spatiality, including the institutional frameworks that construct “different” media technologies.

⁶ The radical change perspective on technological development is often present in popular books on media history such as James Parry’s *The Ascent of Media: From Gilgamesh to Google via Gutenberg* (2011). See also Kovarik, *Bill Revolutions in Communication: Media History from Gutenberg to the Digital Age* (2011). The continuity perspective is more oriented towards social perspectives, and may be found in works such as Brian Winston’s seminal *Media Technology and Society: A History: From the Telegraph to the Internet* (1998).

⁷ In spring 2006, together with artist Linda Hilfling, I contacted Jakob Jakobsen of tv-tv in order to talk about a possible cooperation with tv-tv. Although initially focussing on the participatory upload project “T-Vlog”, fusing videoblogging with Television transmission, we quickly became part of the everyday activities of tv-tv. This was parallel to the beginning of my PhD research in which I intended to carry out a mapping of local media organisations in Malmö and Copenhagen. Through the work with tv-tv, my interests shifted more towards artistic community media projects and I incorporated tv-tv as the focus of one of my dissertation case-studies later that same year. My involvement with tv-tv continued beyond 2009, as I was still part of the board and curating projects throughout 2010 but I have not used this later phase as part of my dissertation research.

2 MEDIA THEORY AND MEDIA ARCHAEOLOGY: HISTORY, MATERIALITY, PRACTICE

The theoretical frameworks of this dissertation are mainly drawn from the disciplines of media theory, media archaeology and practice-based research. The aim of this chapter is to draw on these disciplines in order to come up with an approach that can move in tune with the transversal nature of the practices considered in the case-studies. This theoretical framework is structured along three lines of inquiry that are central to the questions of this dissertation: history, materiality and practice.

The line of inquiry into *history* looks at theories that deal with the relationship between old and new media and thus concerns the main research questions of this dissertation. In this discussion, I will mainly look at technological development in the context of new media theory, discussing a body of literature that has dealt with transitions between old and new media. In his essay for *The New Media Reader* (2003) under the paragraph heading “The New Media Field: A Short Institutional History”, new media theorist Lev Manovich argues that new media art and research existed more or less as a cultural underground for many years, until it rose to the mainstream over a ten-year period in the 1990’s.¹ While Manovich’s framework is too narrow for looking at the full historical background to what in that period became identified as new media, it is the kind of critical new media theory emerging at the end of the 1990’s that my research mainly draws

on. The reason for this theoretical orientation is that new media theory, contrary to simply hyping the new, frequently offers an entry point for reflecting on the historical construction of media. The “new” in this body of theory is a gateway to thinking about the materiality, practices as well as histories of digital and computerised media culture. In this discussion, I build further and reflect upon some of the main arguments raised by new media theory on issues such as the relation between the analogue and digital, including the theories of remediation by Bolter and Grusin and the “transcoding” principle identified by Manovich. These theories serve as the background for discussing media-archaeology, which can be seen as an approach to media history and artistic practice that both extends and critically responds to new media theory.

The historical focus is complemented by a discussion of *materiality*, refining how I throughout the study employ the notions of medium and media. The question of what constitutes a medium becomes important in the framework of the artistic activities chronicled in the case-studies, as they approach singular media forms transversally, crossing different kinds of technological, cultural and political terrains connected to a specific medium.⁷ These practices raise questions concerning what we mean when we

⁷In Medias Res

What concept of “medium” is at play in transversal media practices? Instead of a neutral channel of transmission, based on the idea of linear representation, we could here follow Gerald Raunig’s tracing of another origin of the word “medium”, as not simply being the vehicle of a message travelling to its audience, but as in itself a force of making and re-making the public:

“Even in antiquity, the Latin use of medium, for instance in the formulations rem in medio ponere (publicly presenting an issue) or in medium quaerere (demanding something for all, as a common good), suggests another meaning of medium: the medium as a middle suggesting an open, vague concept of the public sphere, of public space, of the common.” (Gerald Raunig, 2008, p. 653)

Following Raunig, a transversal media practice would be a striking right through the middle of existing events, which as a practice must be thought of as an event in itself: “Eventum et medium: in the concatenation of event and medium, the middle as line of flight does not simply produce representations, but is a component of the event. Here the signs, statements and images do not function as representing or documenting objects or subjects or the world, but rather as letting the world happen.” (Raunig, 2008, p. 654) Transversal media practices deal with the practices, history and materiality of technological development in network culture, not in terms of linear shifts from the old to the new but as transdisciplinary movements that articulate “disjunctive syntheses”: practices that insert themselves in moments of transitions, breaks and junctures, playfully articulating unexpected links between subjects, politics and media systems.

Further reading: Gerald Raunig, *Art and Revolution. Transversal Activism in the Long Twentieth Century*, 2007 and, “eventum et medium. Event and Orgiastic Representation in Media Activism”, 2008; Sarah Kember and Joanna Zylinska *Life after New Media: Mediation as Vital Process*, 2012.

talk about the medium of television: the black-boxed technology, the institutional framework or its cultures of production and reception? And how to pin down any definitions in a media-landscape of almost constant change, technological as well as cultural? One way to frame this discussion is through the question of the materiality of a medium, a topic that usually divides media researchers. The paying attention to the technical materiality of media in this study naturally follows from the practices considered in the case studies which as artistic projects engage and reshape the materiality of different media forms. In my analysis of these practices, I want to show that emphasising an understanding of the technical materiality of media does not by default equal technological hype or determinism and is instead in a fruitful way possible to combine with a critical perspective on the socio-cultural and political meanings of media.

When discussing the materiality of media it is difficult to bypass the long ongoing dispute over this question between different branches of media studies. Thus, the first part of this chapter will discuss the disciplinary divide between so called “medium theory” and other approaches that are rooted in cultural studies or in the social sciences. In this discussion, I would like to stress that while much of the work coming out of the aforementioned new media studies is derivative of scholars identified with “medium theory”, I do not advocate the further use of the term “medium theory” as opposed to media theory. In this chapter, I will use the term “medium theory” only for the sake of distinguishing what is sometimes referred to as a certain school within media research, but for reasons explained more in detail below, I do not think it is a useful term in describing my own approach which is exactly to establish a transversal move across disciplinary barriers as an approach that better reflects contemporary network culture.

Finally, a concern with *practice* is ultimately what brings the perspectives of the diverse set of theories together. If the reader is wondering why the discussion of medium theory is so central as to serve as one of the theoretical points of departure for the study, it is because I believe that by developing a practice-based research approach to media studies, one needs to combine theoretical and methodological frameworks that previously have been perceived as

antagonistic. The new media scholars today associated with medium theory, are often themselves active as media practitioners either in the artistic or technical sense, something which critics of this speculative branch of media theory seem to forget when they criticise the field of being out of touch with reality (cf. Morley, 2007; Couldry, 2012). Instead I argue that the “empirical” grounding often simply comes from a direct engagement with media themselves.⁷ This experience of media practice is actually

⁷Transversal Media Practice

Le facce cattive/PUNH/ mentre i nostri buoni/indiani boy scouts/

to be happy together donne chiappe tenerezza/monstre/ed anche/

i nostri cattivi/sono cattivi però/

solo

a fin di bene.

ORA/senza chiedere/sentiamo con le antenne/ che han percepito crescere sotto la dura corazz/ della politica un fluss/ de tendresse

/Now/stracciamo questo foglio/ che abbiamo scritto, mapp/ chiara e limpida per/ chi volesse trovare/ il tesoro/ e/ AVERTIAMO (nel senso di: percepiamo)/ il passo duro dei nomadi/ del lavoro a/traverso/

frontier/ che cercano di tratternerli/ con panoplie de mesures/

pour lutter contre le faux malades/ con SuperPhenix spettrale/

ARBEITSMARKT/ in giganteschi Gulag disseminati/ e i bravi/ ragazzi

(della Città futura)/ che telefonano subito/ in Questura.

(A/Traverso, 1977)

There is definitely a history of “transversal media practice”, preceding the use of the term in this dissertation. Most prominently, a transversal media practice was a central activity of the Italian collective A/Traverso. They were active during the mid 1970’s in urban, print and radio activism, with a background in the post-Marxist so called “Autonomy” and Bologna student movement of 1977 which also had direct links to Félix Guattari (Capelli and Saviotti, 1977; Lotringer and Marazzi, 1980). In their eponymous zine, “A/Traverso”, printed from 1977 to 1981, A/Traverso enacted an explicit link between aesthetics and politics: the “/” sign in the name of the journal is striking through the word which in itself means “through” and “across”, reflecting the way that the collective worked to transform forms of expression as much as the content, indeed seeing them as inseparable entities. The way that content was presented in the zine, was organised according to the collective’s principle of “maodada”, where different statements, often in many different languages and types of discourse as well as graphical elements were not brought into harmony with each other but rather rubbing up against each other in a cut-up style. This jumbled montage was further reflecting the way that A/Traverso emphasized the freeing up of everyday desires in the fight against what they saw as the repressive institutions of the day (the state, the school, the work-place, the market etc.). An example of an A/Traverso “editorial” would thus read more like a work of text-sound poetry than a conventional linear text, forming textual assemblages of association through disjunction (see above). A similar approach was taken to A/Traverso’s radio project, Radio Alice, which became a pivotal force within the Bologna student movement of the late 1970’s (Berardi and Vitali, 2009). The radio station operated through a simple audio equivalent of the “/”: a phone-in system in which practically anyone of the listeners could participate or rather “break in” to the transmission. Since then, the phone-in show has become a normative way to stage participation within the mainstream media, but as Linda Hilling observes in her essay “Codes of Democratic Media” (2007), Radio Alice was not out to create a regulated participation but was actually operating according to their so called “Maodada” strategy of withdrawal, creating its own Utopian space of disjointed communication, in which the very possibility of representation was questioned. A/Traverso and Radio Alice seen as transversal media practices go beyond the representational

not so often articulated in an explicit way by new media theorists, but instead implicated in the overt focus on technological and aesthetic parameters in their research. In this dissertation I use my own media practice as part of the “empirical” base for media research, and as long as it is a reflective practice instigating a critical analysis of media culture, I propose it as valid as any collecting of quantitative or qualitative data by more traditional means. In this process, I therefore also reflect on the different methodological frameworks for practising media and cultural production with media as research. The present chapter consequently leads up to the methodological framework where I further discuss what a practice-based approach in media research could look like.

Chapter Overview

The chapter provides the theoretical ground for analysing the problematic of technological development in media research, concerning the relation between old and new media. The discussion will take us through different positions on history, materiality and practice in media theory and media studies. These topics are not dealt with in a consensual way within media research, and I start by pointing out the divide between media theory and other social-science or cultural studies influenced approaches. This is followed by a section that traces some of the recent developments in media theory that I believe may bridge this divide. In the discussion, I situate these theories in the wider perspective of network culture which is being proposed as a context for thinking about media materiality and contemporary cultural production. Finally, I discuss media archaeology as a special branch of media theory which transversally intervenes into the problematic of technological development in network culture. Here, media

alternative or minority media ethos of giving a voice to those that do not have a voice in that they try to challenge the very opposition between alternative and mainstream media, using media as a means to transform subjectivity and the logic of representation.

Further Reading: Franco “Bifo” Berardi, Marco Jacquement and Gianfranco Vitali, *Ethereal Shadows: Communications and Power in Contemporary Italy*, 2009; Linda Hilfling, “Codes of Democratic Media”, 2007; Sylvère Lotringer, Christian Marazzi. *Autonomia: post-political politics*, 2007.

archaeology is described as a sub-discipline of media research that looks at the relations between history, materiality and practice in new ways. Just like the discipline of media archaeology, the chapter does not proceed linearly from history and then to practice, or from materiality to history, instead the discussion of these notions are interwoven throughout.

Medium/Media Theory: A dispute over materiality?

That there are radically different positions concerning the role that the technical materiality of media should play in media studies, was evident already in Raymond Williams' 1974 book *Television – Technology and Cultural Form*. In this canonic work of media research in the tradition of British cultural studies, Williams takes a sharp stand against the technological determinism of “media theory” in the way that it, according to Williams, had been developed by Marshall McLuhan into a generalising social theory that posits technology as a social cause and thereby turns culture into a mere effect of technology (Williams, 1974, pp. 129-131). A decade later, in another influential work, *No Sense of Place* (1985), the US media ecologist and communication theorist Joshua Meyrowitz introduced the term “medium theory” that is supposed to represent a branch of media theory developed from the writings of Harold Innis and McLuhan and that (as he explains in a later article) “focuses on the particular characteristics of each individual medium or of each particular type of media.” (Meyrowitz, 1994, p. 50). In retrospect of repeated reappraisals of McLuhan's work such as Meyrowitz', it may seem as if Williams' predictive claim that the “particular rhetoric of McLuhan's theory of communication is unlikely to last long” (1974, p. 131) has been proven fatally wrong. What is long-lasting however is the persistence of Williams' critical attitude towards McLuhan in the branch of cultural-studies influenced media studies that Williams pioneered, rooted in *cultural* rather than technological materialism. It is ironic that today, the term “medium theory” is not in wide-spread use among the recent span of new media theorists focusing on the materiality of media but has rather developed into a term used by those

wishing to distance themselves from what they see as an approach based on technological determinism.²

In this dissertation, I do not aim to defend the idea of a specific school of “medium theory”, yet I do recognise the value of the work done by certain media theorists that are identified with this tradition, especially concerning the discussion of the specific materiality of different media forms. There has following McLuhan’s writings in the early 1960’s, arisen a specific branch of media scholarship which differs from sociological and cultural studies in its approach to the technical materiality of media, the cultural practices relating to media as well as to the question of how to conceptualise the history of media. This school of “medium theory” extends into the “new media theory” of the late 1990’s and into the more recent “material turn” of media theory and as we shall see, also into media archaeology. In this development, I see media archaeology as a field that provides the opportunity for medium theory to break out of its perceived ghetto and reconnect to media studies at large, using a combined practice-based and historical approach as bridges to the more empirically oriented social-science approach and the emphasis on the everyday consumption and meaning-making through media found in cultural studies.

Even though the kind of media theory now associated with the term medium theory has certainly evolved, some thirty years after Williams’ attack on media theory in *Television*, not much seems to have changed in the negative attitude towards it found in culture-studies and the social sciences. In *Media, modernity and technology: the geography of the new* (2007), British media researcher David Morley, famous for his innovative ethnographic approach to television studies in books such as *The Nationwide Audience* and *Home Territories*, takes a stand for a “non-media centric” approach. In his 2007 book, Morley comments on the field of “new media” theory that emerged in the late 1990’s, following the rise of the Internet and the proliferation of digital, networked technologies (Morley, pp. 235-271). Morley does not take the opportunity to make an in-depth engagement with the possible convergences and divergences of how the different approaches treat technology and media culture. Rather, he seems to be out to reclaim some of

the ground that his brand of media studies may have lost to the new media theorists of later years, especially concerning the consideration of the material properties of new technologies. This is evident in the following (p. 243):

An approach that insists that it is simply the physical or technical properties of a medium which are ultimately determinant is unlikely to help us. To follow that path is simply to fall into what Hall memorably described as a 'low-flying form of behaviourism'. The central issue here is that of the cultural contextualisation of technologies. As Hall argued in relation to the supposed direct effect of media messages, before messages - or, in this case, technologies - can have an 'effect' they must first interpellate people as relevant to them, in their particular circumstances; then they must be interpreted, so as to have meaning - and therefore desirability - for their potential consumers; only then can they be used, and thus be in a position to have an effect of any kind.

Morley's critique of medium theory seems to rest on an implicit ontological argument: that all media exist only through human mediation, in consumer and user contexts, in short they exist as representations, as messages, waiting to be interpreted. If this is posited as the only valid criterion through which to analyse technology, then it is easy to go on and accuse medium theory of technological determinism.³ When considering the deep entrenchment of media technologies in practically all spheres of life however, it seems increasingly absurd to cling to a solely representational framework towards how media matter.⁴

With this dissertation I attempt to show that such a characterisation of medium theory is a simplification and instead suggest that the antagonism towards it can be traced to different ontological outlooks on what media do. The field of new media theory has indeed not focused as much on the actual reception, interpretation or even use of media technologies, as it has focused on pinning down the material properties of media technologies. However, as I will demonstrate in my case-studies, this approach does not exclude the

“cultural contextualisation” of technologies. Instead it shifts the ontological level from which such a contextualisation can be undertaken, from representation and interpretation to technical conditions that “matter” also independently of human existence, but not in the way that they in any way render human agency obsolete.

When we look at the construction of the old and the new, I will advocate the position that in dealing with media technologies and their histories, it is not enough to review and compare their discursive or institutional dissemination but that we also need to understand the material character of different media forms, as part of their ways of functioning, their conditions of production and use over time. These material properties need not be thought of as existing in isolation but as already contingent with the social. The problem it seems to me is that much of the social science-tinged media and communication research has not yet been able to move beyond the idea of an old dichotomy of the real and the virtual and is thus ironically stuck in an ontology of technology that through its binarity borders on the technological determinism that it sought to criticise in the first place.¹

What we rather need is a materialist thinking open to the hybrid techno-cultural realities in which we live, and for this I would like to invoke the “post-phenomenological” and non-transcendentalist

¹ **The Unavoidability of Transversality**

In his introduction to an issue of the Australian digital media journal *Fibreculture*, Andrew Murphie discusses the excessive pluralism of names ascribed to the field of new media studies, from cyberculture, digital culture and network culture to just mention a few. This points to a mutability of the field of study that leads Murphie to formulate the idea of transversality as being the unavoidable disciplinary approach to media technologies:

“ (...) in tune with the object of study, that is media technologies that connect more and more aspects of the world to each other, transversality is the unavoidable discipline we must follow in new media studies – whatever we call it. This requires a particular kind of rigour, one that combines a range of specific disciplinary rigours with the ability to bring these into new harmonies. These usually feedback in turn to transform the disciplines involved. If anything “scares the horses”, institutionally speaking, about new media, it is perhaps this unavoidable transversality and the new rigours it requires.”

(Murphie, 2006, n.pag.)

This suggests that a transversalisation of the field of media studies itself is necessary and that crossing the different existing approaches as discussed here can be fruitful. This does not mean that we need to disband disciplinary boundaries, as transversality can be understood as akin to a process of sampling that creates its own poetic territories of at once localised and transitory knowledges and practices.

Further reading: Andrew Murphie, “editorial”, *The Fibreculture Journal*, issue 9, 2006.

approach to technology as developed by Peter-Paul Verbeek in *What Things Do* (2005), offering as the author puts it “a philosophy of technological artifacts” (p. 95). The main issue in Verbeek’s book is (formulated as a critical extension of Heidegger) that technology does not disclose reality but enables new relations to it. This is a philosophy that includes the empirical and experience based approach to media but which at the same time does not exclude the dimension of speculative thought, as Verbeek explains:

The challenge posed by empirical studies of technology to the philosophy of technology is to understand technology not only in terms of its conditions of possibility but in terms of concrete artifacts, and yet to continue to pose philosophical, and not merely empirical, questions. (Verbeek, p.9)

This approach can be seen in sharp contrast to Nick Couldry’s contribution to an anthology on *Theorising Media and Practice* where he writes that “Media theory has no independent value as theory; it is only valuable when it helps us formulate better questions for empirical research.” (2010, p. 43). Couldry is following a non-media centric approach similar to that of David Morley, which is accompanied by similar positions from other social science and culture studies influenced scholars such as Mark Hobart (2010, in the same volume) and Andreas Hepp (2010).

Does this discussion then mean that there is an unbridgeable divide between medium theory and other approaches? On the contrary, I would like to suggest that a more productive exchange between different theories and methods is needed, going beyond institutional territory-making within media studies. When it comes to the questions of history and technological development, several of the cultural studies influenced scholars stress approaches that refute linear approaches as well as old/new binaries. This is for example clear in a later paper by Morley explicating the programme for non-media-centric media studies (2009), saying that “we need to avoid the simplistic periodizations and overdrawn binary divides between the worlds of the ‘old’ and the ‘new’ media” (p. 115). In this article, Morley further claims that this

historical reflection should connect to spatial and material contexts in that “we also need to investigate the continuities, overlaps, and modes of symbiosis between old and new technologies of symbolic and material communications and the extent to which material geographies retain significance, even under changing technological conditions.” (Morley, 2009, p. 115). This position resonates with the work already done in new media theory and media archaeology in particular, hinting that there is need for more rigorous engagement with medium theory from the side of cultural-studies.

A significant contribution to the discussion of the different schools of media theory was recently made by the British media researcher Nick Couldry in the book *Media, Society, World: Social Theory and Digital Media Practice* (2012). In this book, the social theory-influenced media theory based in the study of media institutions and their representations are described as the underdog of media theory, having supposedly lost ground to the medium theory of the McLuhan and Friedrich Kittler school (Couldry, pp. 7-8). In the chapter “What kind of Media Theory?”, Couldry provides a figure of media theory, divided into four main tenets: socially oriented media theory, media studies/textual analysis, political economy of media and finally medium theory. Claiming that “representing the social is one of the main things media institutions do” (p. x, 2012), Couldry perhaps not so surprisingly rejects the kind of media theory “without people” of theorists like Friedrich Kittler and turns instead towards what he calls “socially oriented media theory”. This focus on everyday social practices surrounding media, also leads Couldry to reject what he calls the myth of the digital revolution and here he interestingly strikes up an alliance with German media-archaeologist Siegfried Zielinski (p.9). Could it be then that media archaeology’s non-linear approach to media history, including its openness towards unrealised potential uses of technology and its scepticism towards technology as progress offers a transversal bridge to the socially oriented media studies? At least Couldry seems to suggest that the non-linear approach to media history outlined by Zielinski, with its scepticism towards progress is aligned with his own:

Translate such skepticism into the sociological challenges of understanding media's present, and you get a socially oriented media theory concerned to *deconstruct* the tremendous forces that interpret media products and 'systems' as natural or seamless outcomes of economic, social and political rationalization. (Couldry, 2012, p.9)

In addition to questioning linear and binary approaches to media history and development, both Morley and Couldry also express an explicit interest in media *practices*. In a chapter devoted to arts practices that subvert ethnography, Morley (2007, p. 8) writes, "it may be that we should look far more attentively than what is usual in academic circles to what literary and artistic practices can offer us as methodologies for understanding the social and cultural worlds in which we live." And Couldry, in his 2004 article "Theorising media as practice" wants to turn practice, understood in a broad sociological sense, into the new paradigm for media research, with the aim "to decentre media research from the study of media texts or production structures (important though these are) and to redirect it onto the study of the open-ended range of practices focused directly or indirectly on media" (p.117).

In comparison, much work on new media is actually already concerned with artistic and cultural practices connected to media. Rather than being classical researchers, many of the thinkers in the so called medium theory field or in the more recent new media theory come from a background of practice in experimental film, video art, software or other forms of new media art.⁵ In this context of artistic practice, we are perhaps not situated in the same realm of practice that Couldry thinks of as he seems to be referring more to the everyday situations in which consumers engage with media.⁶ Following a practice-based approach however, there is no reason why artistic practice of engaging the "material" dimension of media should not also be included into the study of media practices. The artistic process involves the shaping of a resistant material, involving the transformation of both subject and object and in this context we should understand the "material" of media as existing in a situation of negotiation which by necessity also has

a socio-political context with which the thinker/artist engages (cf. Schön 1984; Gislén, 2003, p.47). This last point also resonates with how the perspectives of artistic and practice-based research, to be explored in the methodological section, forms an important interface between social science-based approaches and the more speculative, literary and philosophical approaches to media studies developed in the new media field.⁷

To finally also strike up a more common ground between how medium theory and media studies look at the technical materiality of media, I would like to turn to media studies scholar Sonia Livingstone and her concept of mediation (2009). Livingstone identifies the situation that in researching media culture today it seems impossible not to conceive of any societal institution as an entity whose power can be analysed only in terms of its relation *with* the media, instead stressing relations *in* the media through the concept of *mediation* as a process present in all institutions of the social. For Livingstone, to recognize the ubiquity of mediation is ultimately only a tool for approaching the more important question of the changing relations of macro- and micro-perspectives: between everyday life practices and institutional frameworks.

At stake, it seems, is not whether or not everything is mediated (for this is an interesting but relatively uncontested empirical question) but rather, whether this matters - in other words, whether the mediation of microprocesses of social interaction influences macrohistorical shifts in institutional relations of power. (Livingstone, 2009, p. 10)

In the way Livingstone employs it here, mediation is a concept that resonates with the aforementioned philosophy of artefacts of Verbeek (2005). In his work, to consider how things “matter”, also involves mediation as a key term:

Questions such as the following arise: In what way do telescopes and electron microscopes, automobiles and airplanes shape our access to the world? In what way are others present to us when we contact them via telephone or email? An analysis

of the technological mediation of our experience produces a new interpretation of hermeneutics. In place of the traditional emphasis on language and text, in this “material hermeneutics” things take center stage. (Verbeek, 2005, p. 119)

This material focus, similar to what Livingstone calls “the mediation of microprocesses” does not have to be incompatible with mapping out macro-perspectives such as the “institutional relations of power” that she also mentions. In Verbeek’s material hermeneutics that builds on the post-phenomenological approach of Don Ihde, we find a similar relation between micro- and macro-dimensions of human experience, the former relating to sensory experience and the latter to cultural contexts (Verbeek, p. 122-23). The challenge posed by computational and networked media, however, is their non-representational nature where functions unfold as real-time processes not directly accessible to human experience. This concerns how technologies, especially in a real-time network communications context, “matter” not only as carriers of symbolic content but indeed as already part of physical infrastructures. In a useful article, Nigel Thrift and Shaun French (2002) call this non-representational process the “the automatic production of space”, through which they analyse how software forms part of the transport systems of urban (or rural) environments. This material/immaterial context of what we perceive as the physical should be an argument against the relegation of the digital or the networked infrastructure to a level of the purely “virtual” or symbolic. Thus, from a point of view of new media studies, an adequate concept of media or mediation would need to accommodate more than the changes in institutional frameworks that Livingstone highlights; and it would also have to accommodate other aspects than the hermeneutic interpretational framework where things only exist to mediate human experience.⁸ In order to develop such a transversal perspective, I will in the next sections turn to network culture and the recent material turn of medium theory and media archaeology.

The Materiality of Network Culture

There is the necessity of wresting a conception of materiality away from a preoccupation with the medium that continues to haunt discussion of new/digital media. And in a sense, this is a haunting of new media by modernism and by the autonomy of art supported by modernism and modernist art histories. Materiality in the practice of so many digital/new media artists/non-artists is not medium-based but produced out of the technical and social relations of network culture. (Munster, Anna as cited in Graham and Cook, 2010, p. 64-65)

An important strand of a new type of medium theory is that which partially grew out of electronic discussion forums such as the Nettime, Rhizome and Syndicate mailing lists.⁹ Nettime, with its close connection to digital art, activism and other cultural practices, is worth singling out as it has been pivotal in advancing a critical new media theory in Europe and North America (Lovink, 2002, p.72). The list was started in 1995 by the Dutch theory activist Geert Lovink and German artist Pit Schultz as an attempt, by way of “collaborative text filtering”, to create a forum for discussion of internet culture beyond the hype of magazines such as *Wired*.¹⁰ Even though today the initial rigorous discussion climate has calmed down, the list is still an important alternative venue for publishing papers (which can almost immediately be “peer” reviewed) and posting info on events within new media culture. The Nettime list’s critical yet productive outlook on new media was early on summarised by Geert Lovink as “net criticism”, placing it closely alongside new media theory:

Net criticism, as Pit Schultz and I have defined it, does not want to take the outsider’s point of view. It positions itself within the Net, inside the software and wires. On the other hand, it isn’t a promo for any of the technologies or their visionaries. It is part of a wider movement for public access to all media and their content. Net criticism tries to formulate criteria about the politics, aesthetics, economics and architecture of multimedia and computer networks. This is necessary if we want to go beyond

the stage of hype and do not want to fall back into a state of scepticism. Most of all, we have to clarify the terms many of us use. Of course there might be some parallels with genres that deal with old media, like literary criticism, book reviews, film critique, following the developments within its own medium. (Lovink, Geert, 1996, n.pag.)

In many ways, Munster's and Lovink's statements quoted above form a good outlook to the approach found in the kind of critical new media theory I would like to discuss in the following, attentive to the materiality of different media while keen to move beyond the hype of the new and the medium specific in a modernistic sense.

One of the most ardent proponents of the material turn of new media theory, Alex Galloway, also quotes Lovink's net criticism as a source of inspiration to his book *Protocol – How Control exists after Decentralization*: “No more Vapor theory anymore. The computer is often eclipsed by that more familiar thing, information society.” (Geert Lovink quoted in Galloway, 2004, p. 17) Galloway goes on to write about his own book that it is not “about information society but about the real machines that live within that society” (ibid.) and while being based in a thorough analysis of how contemporary technology functions, this new media theory is also highly conscious of the historical legacy of earlier work within systems theory and cybernetics. By way of thinkers such as Michel Foucault, Gilles Deleuze, Félix Guattari and Friedrich Kittler, a critical approach to the cultural and political implications of technology are developed that is, unlike the systems theory of cybernetics before it, not predicated on the need to create smooth channels of communication. But perhaps as a consequence of the heritage of cybernetics and its systems approach, the focus in a work like Galloway's *Protocol* has shifted from the semiotic or cultural studies oriented investigation of representation and meaning of media content, and even from McLuhan's stressing of medium-specificity, to the issue of agency and power in networked technological environments.

This non-reductive, material turn “proper” of new media theory is very much born out of a post-digital hype environment which I will here strive to contextualise under the umbrella of “network culture”. I use the frameworks developed in recent new media theory of the “material turn” as a background to the perspective of network culture which in this dissertation serves as a term describing the ontological ground against which contemporary cultural production takes place. Following the work on network culture by Tiziana Terranova, the network culture perspective describes changing technological conditions and their relation to politics of cultural production:

A network culture can never be a unitary formation, describing a homogeneity of practices across a global communication matrix. On the contrary, if such a thing exists, it can only describe the dynamics informing the cultural and political process of re-composition and decomposition of a highly differentiated, multi-scaled and yet common global network culture. (Terranova, 2004, p.71-72)

Following Terranova, instead of a unified model, I propose that network culture can be thought of as part of a performative and processual form of capitalism that operates akin to what Nigel Thrift has called the “cultural circuit of capitalism” (Thrift, 2005, p.6). Not to be confused with the cultural studies concept of the “Circuit of Culture” (du Gay et al., 1997), Thrift advocates a non-representational theory of economically influenced culture always under construction and which according to Thrift (2008, p. 258) “is able to circulate theories at an accelerated rate”.¹¹

According to Thrift’s notion, capitalism today functions through a cultural circuit of integrated theory and practice, meaning that reflexivity is not in itself a liberating kind of revealing of the mechanisms behind the digital economy and culture. The production of reflexivity has already become a part of the process of capitalist circulation, itself now a processual, yet also material network culture increasingly intertwined with subjects. At the same time, this must not lead us to an entirely pessimistic conception of

a society without any possibilities for critical practice and socio-political transformation. Instead the cultural circuit is also a “performative notion of capitalism”, denoting a state of permanent change and instability, where capitalism becomes, “a constantly mutating entity, made up of fields or networks which are only ever partly in its control” (Thrift, 2005, p. 4). A first step on the way to mobilising the performative aspects of network culture is to better understand its instable and processual nature, as qualitatively different from the relativity of temporality, space and culture posited in theories of post-modernity. For example, Thrift (2005) discusses the ongoing activity of consumer interaction demanded by the cultural circuit which for him is connected to 1940’s systems theory and design:

Another way of considering the new commodity form is as the application of knowledges that were originally generated in the 1940s and 1950s around systems theory and allied developments (cf. Hayles, 1999; Mirowski, 2002). These knowledges allowed minimal representations of commodities to be constructed for the first time around a few simple concepts like equilibrium, entropy, open and closed systems, metasystems, homeostasis and feedback (Beer, 1972; Simon, 1981; Wilden, 1968). (Thrift, 2005, p. 8.)

Through such historical insights a difference between the scenarios of network culture and post-modernism should be clear, as we are, in the former, not entirely situated in a culture of pastiche and nostalgia that mocks teleology, but rather in a situation of cultural production of “feedback” where the past, through digitisation, is increasingly important to the production of contemporary culture. The information and systems science of cybernetics is instrumental to this development where the past is transformed into a resource for maintaining the present and imagining the future.¹²

The media theory that I associate with the notion of network culture, all deal with the heritage of cybernetics. In the timespan of 2004 and 2005 at least three key books were published that expand new media theory in a critical re-formulation of materialism, artistic

practices and the historical heritage of cybernetics: *Protocol – How Control Exists after Decentralization* by Alex Galloway, Tiziana Terranova's *Network Culture – Politics for the Information Age* (2004) and Matthew Fuller's *Media Ecologies: Materialist Energies in Art & Technoculture* (2005).¹³ I will use a theoretical framework derived from these works as a background to the perspective of transversal media practices in network culture. The goal is here to move away from thinking about materiality in the singular form as in the modernistic medium-specific sense of so called medium theory, and to instead open up this kind of technologically sensitive approach to a contemporary situation of process-based and networked media forms. This transversal approach is similar to what Anna Munster, in her book *Materializing New Media* (2006, p. 24) calls "transversal technological studies" which understands digital culture as "a series of diagrammatic lines" that intersects "code, silicon, carbon, embodiment, socialities, economies and aesthetics." Later, in the case-studies, I will explore how this transversal approach does not need to be limited to new media but is in fact useful for thinking also about the multi-layered transitions between old and new media.

Convergence and Divergence

It is useful to initially compare network culture with another, perhaps more popular, concept for talking about the conditions of cultural production, namely that of "convergence culture" as put forward by Henry Jenkins (2006). For Jenkins, new media has brought about a convergence culture which is not only a technological shift, rather he stresses the institutional frameworks and cultural practice of users (consumers) at the core of convergence:

By convergence, I mean the flow of media content across multiple media platforms, the cooperation between multiple media industries and the migratory behaviour of media audiences (...). Convergence is a word that manages to describe technological, industrial, cultural, and social changes (...). I will argue here against the idea that convergence should be understood primarily as a technological process bringing together multiple media func-

tions within the same devices. Instead, convergence represents a cultural shift as consumers are encouraged to seek out information and make connections among dispersed media content.

(Jenkins, 2006, p. 2-3)

While Jenkins' conception is useful for looking at the interaction between consumption and production in popular culture, it remains too tied to this binary logic to be entirely useful in relation to transversal practices. Where for example Terranova and Fuller have emphasised the heterogeneous assemblage of technologies and subjectivities, Jenkins operates more squarely within a form/content division, seeing how old and new media regimes converge or clash in relation to the actions of their users. While Jenkins consequently returns to a libertarian view on new media, the network culture perspective highlights non-linear processes of emergence of new subjectivities in cultural practices (of counter-control, hacking, tactical media, net art, etc.) which rather than *in spite of* are made possible *because of* contradictions in new media networks. Following the theory of critical internet culture from Geert Lovink, we need to acknowledge the *notworking* aspects of network culture, as a correlative to the idea of the smooth integration of everything.¹⁴

Media Ecologies

An example of an approach, grounded in medium specificity while acknowledging the contradictory social contexts of media, is Matthew Fuller's study *Media Ecologies – Materialist Energies in Art and Technoculture*. In what is arguably its theoretical tour-de-force, the chapter on the networks of pirate radio, "The R, the A, the D, the I, the O – The Media Ecology of Pirate Radio", Fuller talks about convergence in terms of "partial vertical integration", derived from a principle of production strongly connected to processes of technological obsolescence and incompatibility. This notion is about all the different parts that make up a media (such as radio or in this case "Pirate" radio) and how markets strive to exploit these differences:

Partial vertical integration of markets means that it would be quite possible to be listening to music on a radio made by Sony, from a record published and printed by Columbia (owned by Sony), being played on a turntable and mixer made by Sony, and requested by a listener via a text message from a phone by the same company. (Fuller, 2005, p. 39)

Yet, that such a conspirational scenario should be played out in reality is rightly deemed improbable by Fuller – media devices are only “potentially” branded by the same company. But it is according to Fuller to some extent the goal of media corporations to lessen the probability that the parts would be made by different actors or of incompatible systems. This leads to the development of standards such as “voltage rates, connector cables and sockets” (2005, p.39) The partiality of the integration comes into the picture when manufacturers deliberately change some of the more inessential parts of standardised configurations. An example of this would be the mobile phone market, where adapters apply to the standard voltage rate of the countries in which they are sold but where the actual connector to the phone varies greatly, in the end making it impossible for the customer to use the same adaptor across different telephones, maximising the commercial potential of the adaptor market. Would such a reading of partial vertical integration as a principle of network culture imply a technological determinism in the social use of technology? On the contrary, Fuller invites us to understand these material elements as parts only of a more political understanding of convergence, consisting of “discrete medial elements brought into combination by patterns of use” (p.39).

The media ecologies Fuller describes make up a network culture filled with contradictions between open and closed standards and formats. These are material qualities of digital media that have social and political implications for cultural production. One startling example of this is given by Fuller in his discussion of the MP3 format. On the surface we might take this as a result of convergence – we can now transform any music into a standard file format, easily distributed over digital networks. But this format

also has an impact on our acoustic space with political and social repercussions. By means of compression, the MP3 format obliterates the range of the audio spectrum not audible to the human ear, and thus ignores those sounds to be experienced by the body: “This is not simply a white technological cleansing of black music but the configuration of organs, a call to order for the gut, the arse, to stop vibrating and leave the serious work of signal processing to the head.” (Fuller, p. 41).¹⁵ In the first case-study chapter, we will encounter a similar political dimension in the migration of television to digital networks when it comes to the asymmetrical consumer-producer relations implicated by MPEG formats for video compression. In this analysis we will see that convergence as a metaphor for such transitions within media culture and cultural production is close to what Fuller defines as the myth of the “seamlessness” of digital media:

“Seamlessness” of a network is a term characteristic of critical writers on what the degree trade calls information and communications technology. (...) It is a vision of media typical of writers such as Paul Virilio and the stock in trade of technology copywriters. McLuhan, for instance, argues that “One of the most startling consequences of the telephone was its introduction of a ‘seamless web’ of interlaced patterns in management and decision making.” (Fuller, 2005, p. 118)

Protocols

Behind the supposed “seamlessness” of the web criticised through Fuller’s work on media ecologies for example are different technical protocols for information transfer. This topic is explored by Alex Galloway in his work on how technical communication protocols bring about new power configurations in society. In order to show “How Control exists after Decentralization”, as the subtitle of the book states, Galloway connects the development of different network technologies to different stages of societal power distribution, moving from the notions found in the works of Foucault on power as discipline and Deleuze on power as control, to Michael Hardt’s and Antonio Negri’s notion of Empire. In this

periodisation of different modern societal stages and their different technologies of control, organisational categories come to the fore. Thus societies based on sovereign power, following Foucault's analysis in *Discipline and Punish*, are regarded as built on a *centralised* form of power, being superseded by the disciplinary society with *decentralised* forms of power which in turn evolves into the society of control based on a *distributed* power, mirrored by individual subjects in the biopolitical dimension of power (Galloway, pp. 20-29). With the notion of protocol, Galloway claims to have found a technical concept that corresponds to the distributed power configuration of the control society.¹⁶

In short, protocol comprises of different standardised codes for treating digital information. The importance of protocol to networked communications is indicated by the event commonly referred to as "the day the Internet was born", Jan. 1 1983, when ARPANET switched to the TCP/IP protocol. Even though TCP/IP is the protocol that everyday Internet users will most likely have come into contact with, it is in fact part of a larger entity known as the Internet Protocol Suite. This suite has been grouped into four layers: a data link layer (sometimes also seen as comprising of a physical level of cables, modems etc.), a network/Internet layer, a transport layer and finally an application layer.

Each layer solves a set of problems involving the transmission of data, and provides a well-defined service to the upper layer protocols based on using services from some lower layers. Upper layers are logically closer to the user and deal with more abstract data, relying on lower layer protocols to translate data into forms that can eventually be physically transmitted.

("TCP/IP", 2012)

Looking at protocols provides the means of a transversal analysis, which considers both vertical and horizontal levels of interaction between the materiality of technology, cultural production and power. In protocol, by paying attention to the *layering* involved in the transmission of information as described above, digital information emerges as spatially distributed on a variety of levels, and

information sending as something which is constantly being negotiated. This is perhaps most evident in the different *horizontal* and *vertical* ways of treating data in two of the most prominent "machines" of the Internet Suite of protocols: the TCP/IP protocol and the DNS protocol.

(..) protocol is based on a contradiction between two opposing machinic technologies: One radically distributes control into autonomous locales (exemplified here by TCP and IP), and the other focuses control into rigidly defined hierarchies (exemplified here by DNS). (Galloway, 2005, p. 50)

The horizontal/vertical relationship between TCP/IP and DNS can be understood as a typical example of technological materiality where transversal contradictions underlie the production of network culture.

Heterogeneity

The multilayered architecture suggested by protocol is contradicted by the common way of imagining the net as a "grid" or a totalising "flat" database which enables instant (global) movement between local anchor points.⁷ For Terranova (2004) this kind of view is

⁷**Cartography and lines of becoming**

"(..) instead of simply displaying phenomena or statements in their vertical or horizontal dimensions, one must form a transversal or mobile diagonal line."
(Deleuze, 2006 (1986), p. 20)

"A line of becoming is not defined by points that it connects, or by points that compose it; on the contrary, it passes between points, it comes up through the middle, it runs perpendicular to the points first perceived, transversally to the localizable relation to distant or contiguous points."
(Deleuze and Guattari, 2004 (1980), p. 323)

In his book on Foucault, Deleuze challenges causal models of how discourses relate to non-discursive practices (put simply: the relation between what is said and what is done) in a way that directly builds on Guattari's conceptualisation of transversality. What Deleuze brings to the concept seems to come via Foucault: the latter's trans-historical inquiry explicated in *The Archaeology of Knowledge* (2002 (1969)) is understood as a *mapping* of the conditions of the "sayable" across different periods. In Deleuze and Guattari's investigations, cartography then rather than archaeology, increasingly becomes the methodology. Their maps of aesthetics, politics, philosophy and science are open structures of becoming, rhizomes, roots that paradoxically do not seem to have beginnings or ends, not even connections between points but that instead come alive through their activation in specific situations, as "pure becoming". The transversal line can now be understood not as a line in a system of coordinates or an already mapped out network, but as a line of practice, a movement in flight, of becoming that does not follow a linear evolution. The transversal lines of flight in Deleuze and

connected to a certain discourse on globalisation which associates the global with that of a homogenising movement and the local with that of a *static* heterogeneity. She challenges this notion and asks for a more rigorous consideration of the dynamic relationship between the global and the local:

How can we reconcile the grid-like structure of electronic space with the dynamic features of the Internet, with the movements of information? How do we explain chain mails and list serves, web logs and web rings, p2p networks and denial-of-service attacks? What about the misclutter of information, the scams and the spam, the endless petitions, the instantaneous diffusion of noise and gossip, the network as permanent instability? (Terranova, 2004, p. 49-50)

The idea of the net as one "flat" grid is regarded by Terranova as a classic metaphysical misconception: of "reducing duration to movement, confusing time with space." (p. 50). In other words, Terranova is saying that information, in transmission, is being influenced by the space that it traverses, through a movement which in turn also changes the nature of that space traversed, producing "a new idea, a new affect (even an annoyance), a modification of the overall topology." (p. 51). If we conceptualise the network as a form of real-time space through which information can simply move (as in flat space), this complexity is lost.

The critique of the idea of a flatness of information in Terranova's work, is similar to Fuller's arguments to advance the concept of media ecologies, moving away from the idea of the unified "medium" which he sees present for example in the form-content division of Stuart Hall's influential encoding-decoding model.

Guattari can be "untimely" aesthetic practices that are not confirming history or memory but that insert themselves in such punctual systems in order to create new types of reality.

"In a multilinear system, everything happens at once: the line breaks free of the point as origin; the diagonal breaks free of the vertical and the horizontal as coordinates; and the transversal breaks free of the diagonal as a localizable connection between two points." (Deleuze and Guattari, 2004, p. 297)

Further reading: Gilles Deleuze, *Foucault*, 2006 (1986); Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, 2004 (1980).

Instead Fuller invites media analysis to move towards a processual consideration of combinatorial medial practices defying such binary categorisation. An example is Fuller's aforementioned account of pirate radio where he describes a heterogeneous sphere of different technologies, institutions, cultures of production and subcultures. This media ecology is partly conditioned by technical materiality but at the same time challenges the idea of a unified medium (i.e. radio) through its constituent, divergent parts and the myriad of practices that may appear across them:

How can they be connected? The heterogeneity, the massive disconnectedness of the parts, coupled with the plain evidence of their being linked by some syntax, of writing or performative action, allows for the invention of newly transversal, imaginal, technico-aesthetic or communicative dynamics to flower.
(Fuller, 2005, p. 15)

What my discussion of Fuller's, Terranova's and Galloway's works here serve to highlight are contradictory features of network culture at play in the level of technical materiality.⁷ These contradictions, between open and closed, between protocols, standards and

⁷Disjunctive Aesthetics

"If this constitutes a system of writing, it is a writing inscribed on the very surface of the Real: a strangely polyvocal kind of writing, never a biunivocalized, linearized one; a transcurative system of writing, never a discursive one; a writing that constitutes the entire domain of the 'real inorganization' of the passive syntheses, where we would search in vain for something that might be labeled the Signifier—writing that ceaselessly composes and decomposes the chains into signs that have nothing that impels them to become signifying. The one vocation of the sign is to produce desire, engineering it in every direction." (Deleuze and Guattari, 1983 (1972), p. 39)

A transversal mode of writing, brings diverse elements together without trying to connect them seamlessly, a connecting through heterogeneity that corresponds to the idea of a "disjunctive synthesis" as outlined by Deleuze and Guattari in *Anti-Oedipus – Capitalism and Schizophrenia*. What Deleuze and Guattari are describing here is a kind of disjunctive aesthetics which corresponds to their idea of a "desiring-machine", an entity that goes beyond the reproductive functioning of a (mechanical) machine and which engages in the production of new desire rather than stratified subjectivity. The representational function of language as merely inter-subjective communication or transmission of objective information breaks down and becomes aligned to what Guattari called "a-signifying semiotics", where speech acts are poetic acts of creating rather than representing the world (cf. Holmes, 2009).

Further reading: Deleuze and Guattari, *Anti-Oedipus – Capitalism and Schizophrenia*, 1983 (1972); Brian Holmes, "Guattari's Schizoanalytic Cartographies or, the Pathic Core at the Heart of Cybernetics", 2009.

practices should lead us to think of the technological not as a strictly instrumental realm of pure functioning but also itself a realm of tensions and unresolved states. The digital may seem like the force that through the principle of numerical representation (cf. Manovich, 2001) eradicates tensions associated with the analogue world, but in fact its networked nature is depending on an incomplete aggregation of different standards always in flux, reflecting a diverse network culture and economy. Using a transversal approach to the materiality of network culture, not tied to the idea of a single unified medium, we should look at how this contradictory space is also a “differential space” (Lefebvre, 1991, p. 52), which allows for different appropriations of and interventions into technological development.

One of the transversal practices of intervention explored in this dissertation is that of media archaeology. As already mentioned, the material turn of new media theory has partly taken place as a critical and transversal re-reading of the systems-oriented approach to media and communications in the discipline of cybernetics. Simultaneously, new media theory has also been characterised by a historical turn that challenges linear histories of media evolution. The final section of this chapter will first map out some of this scholarship and then introduce media archaeology as a transversal approach to the issues of materiality, history and practices that is able to critique the cybernetic politics of time in network culture.

The Historical Turn of (New) Media Theory

In their introduction to *New Media, Old Media*, Wendy Chun and Thomas Keenan point out that “‘Make it new’ is a stock modernist phrase and it exemplifies the type of repetition enabled by the new — the transformation of something already known and familiar into something wonderful.” (2006, p. 3). Thus the relation between old and new in consumer societies seems to be haunted by a paradox: it rests on a perpetual production of the new which has to be both discontinuous and continuous at the same time. New products have to be innovative and convince customers to discard the old, but in order to be understood as replacements they also have to contain some familiarity. This process of making new can

be linked to capitalist production principles such as *planned obsolescence* (London, 1932) as well as theories of technological and socio-economic development based in the notion of *creative destruction* (Schumpeter, 1942; Harvey 1989) and innovation (Balsamo, 2011). Even if they are not the main focus of attention here, in this section, I raise questions that points to such broader discussions of technological development. First, I look at the historical turn in new media theory, moving on to map out media archaeology as a specific approach to history, materiality and practice.

Laws of Media

In reference to the earlier discussion of media/medium theory, it seems only suitable to start with McLuhan or in this case, the McLuhans. In their jointly authored *Laws of Media*, father and son, Marshall and Eric McLuhan (1988), proposed a model of media development based on four questions, forming a “tetrad” aiming to explain the logic behind the effects of media and artefacts on culture over time. The question one needs to ask in relation to each new technology, according to this model, is what it “enhances”, “retrieves”, “reverses” and “obsolesces” (McLuhan and McLuhan, p.7; cf. pp. 129-214).

The terms of the McLuhan tetrad may resonate with the language of linear theories of technological development, but the McLuhans are keen to stress that this tetrad is part of every technology from its beginning and that the four processes are simultaneous although varying in intensity.¹⁷ When the McLuhans for example use the tetrad model to say that the washing machine “obsolesced” the scrubboard and tub (p. 191), they are not saying that it simply terminated these artefacts but that it rather displaced their central function in the overall practice of clothes washing. When a linear model would assume that history is an irreversible process of constantly learning from the past in order to supersede it through innovations, the McLuhans’ laws of media state that new technologies also “retrieve” aspects of older forms and when pushed to their extreme, their functions may even “reverse” into the opposite of their intended functions. Money *enhance* transac-

tions and pricing systems and *obsolesce* barter (p. 99) but simultaneously *retrieve* the older form of potlatch through “conspicuous consumption” (p. 106). The washing machine enhances the speed of doing laundry (p. 99) but may *reverse* into a process of eternal laundry. Similarly the car enhances privacy but on the other hand it may also “reverse” into car jams (p. 148). At the same time, according to the McLuhans, the car makes the horse-and-buggy obsolete while retrieving the figure of the “knight in shining armour” (ibid.). The media or technologies that are rendered obsolete in this model in other words do not simply “die” but may appear at a later date as “retrieved” technologies or, as the McLuhans also maintain, they may take on new value as a form of “art” that plays with clichéd archetypes. “Obsolescence is not the end of anything”, they write, “it’s the beginning of aesthetics, the cradle of taste, of art, of eloquence and of slang. That is, the cultural midden-heap of cast-off clichés and obsolescent forms is the matrix of all innovation” (p. 100). For the McLuhans then, obsolete forms constitute a cultural reserve that artists and scientists frequently re-deploy in their practice of inventing the world anew: “Gutenberg technology retrieved the entire ancient world, while obsolescing the scriptoria and scholasticism of the Middle Ages” (ibid.).

In this dissertation I follow the ideas of the McLuhans in the sense that I also maintain that the question of how to think the relation between old and new media, essentially relates to the production of obsolescence. Concepts such as “reverse-remediation” will in this study be employed similarly to how the McLuhanist laws of media describes the dynamics of obsolescence and retrieval. For the McLuhans however, the relation between old and new comes off mainly as a question of the effects and functionality of single media technologies, of the functional operation of the technology or medium in question and its impact on culture. Instead of focussing on the effect of a single medium, I will analyse the material and institutional properties of media and their associated transversal practices, considering these in political and aesthetic terms rather than functional and causal. For a transversal media practice, there can be no ultimate “law” of media in the

sense of a complete analytical framework, and this is why this dissertation only presents a tentative set of conceptual tools for further development rather than a fixed structure.⁷

Transitions between the old and the new

Now, in the third decade after *The Laws of Media*, to state that old technologies were also once new has become rather commonplace, something Benjamin Peters (2009) points out in his comprehensive bibliographic overview of literature in between new media studies and media history. There is already a history to the study of the emergence of new media technologies grounded in a looking back at “old new media” that may shed light on our present conditions. One of the founding works that critically investigate the production of the technological new is Carolyn Marvin’s 1990 book *When Old Technologies Were New - Thinking about Electric Communication*

⁷Tools for transversality

“Tools for transversality not only adjust to the changing conditions they help initiate, they may be modified in and through and by the processes in which they participate.” (Genosko, 2009, p. 86).

Compared to “rhizomatic”, “archival” or “disciplinary” sociocultural structures, transversality may seem seriously undertheorized as it is mostly employed in a pragmatic manner. In fact, transversality so far seems more to be a state of practice rather than a rigorous theoretical concept in itself. In Guattari, Deleuze and Foucault, transversality appears as a recurrent figure, even though beyond Guattari’s initial work – it is not further theorised but instead one has possibly to approach the transversal exactly as a *figure of practice* (recalling the geometrical and spatial definitions), a line and mode of inquiry which can be traced through the different approaches in the works of these thinkers.

In this dissertation, I similarly adopt transversality as a figure of thought and practice which attempts to articulate a form of resistance, not in the form of a social movement, but as an articulation of different artistic and media related practices that divert linear and evolutionary models and practices of technological development. In the Foucauldian sense of analysing power through its margins, we may say that in the case studies, “old media” become the means through which to learn about the power of “new media” and the wider context of technological development in network culture. The notion of transversality works as a characteristic of the movement between theory and practice in my case studies and as a framework for how they relate to the problematic of technological development. Transversality should be understood as both an aspect of the media practices considered in the case-studies, and as a methodological approach. Technological development and the production of old and new media today is, as I argue in the first chapters, dealing with the problematics of linearity, evolution, creative destruction and planned obsolescence. Within this “negative ontology” (Anders, 1980), cultural production acts upon the past in the manner of a cybernetic feedback system, only superficially discarding it while optimising its objects for new consumption. Proposing a transversal approach to this “informationalist” system does not try to resolve it but rather tries to articulate some of its properties at singular points and events where different routes may be taken, as a cultural production increasing the potential for encounters less predefined by the generative grid of network capitalism, and rather cutting across it.

Further Reading: Gary Genosko *Félix Guattari: A Critical Introduction*, 2009, Bryan Reynolds, *Transversal Subjects: From Montaigne to Deleuze after Derrida*, 2009.

in the Late Nineteenth Century, an illuminating account of the mythic properties ascribed to technologies that were once new such as electricity and telegraphy. Arguing that, “The history of media is never more or less than the history of their uses” (1990, p.8) ¹⁸, Marvin study looks at how “new” media never exist in isolation from what comes before them. It would seem then that Marvin puts the stress on continuity rather than radical change as the main factor in media history. What Marvin advocates however is neither of these absolutes, instead she emphasizes a negotiation approach, where the use of technology exists in a tension between the old and the new:

New media, broadly understood to include the use of new communications technology for old or new purposes, new ways of using old technologies, and, in principle, all other possibilities for the exchange of social meaning, are always introduced into a pattern of tension created by the coexistence of old and new, which is far richer than any single medium that becomes a focus of interest because it is novel. (Marvin, 1990, p.8)

Evident from Marvin’s and later studies in the same vein (Bolter and Grusin, 1999; Gitelman, 2006) is the value of looking to the past for debunking mythic qualities ascribed to contemporary new media technologies and at the same time, to reassess how they make “anew”.¹⁹ This dissertation follows this line of inquiry, posing the problematic of technological development not as one of establishing once and for all the old and the new but precisely as a “Marvinesque tension” looking at the different “stratifications” of the social, cultural and political spaces of media culture that are articulated within it. For the purposes here, investigating the historical turn of new media theory, I will focus on two influential books (at least in the Anglophone world) that appeared around the year 2000, Jay David Bolter’s and Richard Grusin’s *Remediation – Understanding New Media* (1999) and Lev Manovich’s *The Language of New Media* (2001).

At the height of the hype of “new media” Jay David Bolter and Richard Grusin published a book with which they clearly nodded to McLuhan’s 1964 classic *Understanding Media* by calling it

Remediation - Understanding New Media. Arguably, Bolter's and Grusin's discussion of how new media remediates old media is in itself a kind of remediation of the ideas contained in *The Laws of Media*, although this work is surprisingly not mentioned in *Remediation*. In Bolter's and Grusin's study, new media are laid out as standing in a continuous relationship of negotiation with older media forms, in the dynamic process the authors label *remediation*, where new media constantly refashion older ones. "What is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media" (p. 15), goes Bolter and Grusin's key argument that resonates with McLuhan's earlier statement that "the 'content' of any medium is always another medium" (1964, p.10).

Bolter and Grusin offer a systematic and historically grounded approach to how different media inform each other, as well as an update of this McLuhanist theory to digital media, defining processes that operate according to "the double logic" of remediation: immediacy and hypermediacy. Immediacy, the authors say, defines one side of the development of how new media comes to build on old media, being inherent to the efforts of interaction designers to present media as intuitive and building on recognisable cultural forms. Hypermediacy, on the other hand, is inherent to the creation of new combinations, to the embedding of different media into hyperlinked or convergent new media forms.

History is also important for Lev Manovich in his study *The Language of New Media* (2001) where he traces the emergence of new media as the result of the gradual convergence of representational media such as cinema and television with computational and communications technologies during the 20th century.²⁰ Arguably one of the most influential books for developing a theory of new media uniting material, practice-based and historical aspects, Manovich calls his work a "theory of the present", as he tries to distance himself from the often futurology-oriented research on new media such as the discourse of technological hype surrounding virtual reality and cyberspace in the 1990's. The book was published in the MIT Press book series *Leonardo*, inaugurated in the

mid 1990's as an extension of the journal going by the same name, devoted to intersections of art, science and technology.²¹

Manovich writes that he is exploring “the parallels between cinema history and the history of new media” as well as the “relations between the language of multimedia and nineteenth century pro-cinematic cultural forms” (p. 9).²² The study plays out as a parable of film and new media and sets the historically grounded tone by opening with a visual analysis of Dziga Vertov's seminal 1929 documentary film *Man with a Moviecamera*, acting as a “visual index” to the book's theory of new media. The mobile camera which acts like the protagonist of that film is here likened to the virtuality of computer-generated spaces, the superimposition techniques to digital compositing, collage to cut-and-paste commands and perhaps most significantly, the spatial montage is likened to computer programming and Vertov's film is seen as a proto-type for the database form (Manovich, 2001, pp. xv – xxxvi).

Out of the five “principles” that Manovich constructs for the “language of new media”, the one he calls “transcoding” seems to be very close to the theory of remediation. Transcoding is according to Manovich “the most substantial consequence of the computerization of media” (p. 45), and similar to the double logic of remediation it is about how new media on the one hand borrows from well-known domains of culture and at the same time how it is it following “the established conventions of the computer's organization of data” (ibid.). The main argument here being that new media should be studied in the context of how they are being influenced by old media but that one at the same time should be aware of how the technical materiality of new media, which Manovich calls their programmability (p. 47), is fundamentally altering the nature of media.

Being canonised works in the field of new media theory, both *Remediation* and *The Language of New Media* place new media in the larger historical framework of the development of visual culture in the arts, photography and cinema as well as relating these media to the emergence of technologies for computation and telecommunications in the 19th and 20th century. Even though the

authors mostly argue for an understanding of media in the medium theory sense, mapping out the specific properties of a single medium, they also point us in useful directions for a more transversal approach that moves with the constantly shifting materiality of network culture. This is especially the case when they deal with technological development, not as a linear progression but rather as a process where old and new media forms co-exist and continuously re-shape each other.

Media archaeology

Plenty of wild wired promises are already being made for all the infant media. What we need is a somber, thoughtful, thorough, hype-free, even lugubrious book that honors the dead and re-suscitates the spiritual ancestors of today's mediated frenzy. A book to give its readership a deeper, paleontological perspective right in the dizzy midst of the digital revolution. We need a book about the failures of media, the collapses of media, the supercessions of media, the strangulations of media, a book detailing all the freakish and hideous media mistakes that we should know enough now not to repeat, a book about media that have died on the barbed wire of technological advance, media that didn't make it, martyred media, dead media. *THE HANDBOOK OF DEAD MEDIA*. A naturalist's field guide for the communications paleontologist.

(Sterling, Bruce, 1995)

The New, the Old and the Dead

If the 1990's was the era of hype of digital technologies (Heim, 1993; Kelly 1994; Negroponte 1995²³), then at the turn of the millennium, titles already discussed such as *Remediation* and *The Language of New Media* set the ground for further historically oriented new media research that combined the speculative approach of McLuhan with with more rigorous critical theory.²⁴ This historical turn in new media theory was preceded by science-fiction writer and Wired columnist Bruce Sterling's clever "intervention" into the digital technology hype: The Dead Media Project. Through "A Modest Proposal and a Public Appeal" published in

1995, and through a subsequent mailing list and web-site, The Dead Media Project was devised as a “crowdsourced” project avant la lettre, calling Internet users to contribute to the creation of The Handbook of Dead Media. This handbook never actually saw the light of day in published form, but the site, now itself near dead in terms of activity, became an online archive of all things extinct in the long history of media, chronicling the histories of everything from pneumatic mail systems to obsolete Internet routers.²⁵

An explosion of historically oriented media theory followed throughout the “naughties” decade, as a growing historical turn is observable just by name-dropping a handful of books from recognised scholars in the field: *New Media, 1740-1915* (Gitelman and Pingree, 2004); *Rethinking Media Change: The Aesthetics of Transition* (Jenkins and Thorburn, 2004); *Always Already New: Media, History, and the Data of Culture* (Gitelman, 2006); *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means* (Zielinski, 2006); *New Media, Old Media: A History and Theory Reader* (Chun and Keenan, 2006); *MediaArtHistories* (Grau, 2007).

Deep Time and Topoi of Media

It was also in the first decade of the twentyfirst century that the concept of media archaeology rose to the fore internationally. It was first popularised in Anglo-American media theory through the 1996 article “Media Archaeology” by German media scholar Siegfried Zielinski, and which was published in the Internet journal C-Theory, years before books and research seminars would more frequently feature “Media archaeology” in their titles. The essay mainly revolves around the topic of artistic subjectivity at the end of the 20th century, and how it is affected by the context of new technologies such as the net. For Zielinski, the media archaeological approach is one that through opening up heterogeneous media histories works against processes of standardisation, and more specifically “means to dig out secret paths in history, which might help us to find our way into the future” (1996, n.pag.). Around the same time as Zielinski’s C-Theory article was published, Erkki Huhtamo, another pioneer protagonist of media archaeology,

published the article “From Kaleidoscomaniac to Cybernerd: Notes Towards an Archaeology the Media” (1997). Huhtamo here suggests to shift media historical study from the mode of “predominantly chronological and positivistic ordering of things centered on the artifact” (p. 221) to one of “treating history as a multi-layered construct, a dynamic system of relationships” (ibid.).

There are some significant differences in the approaches of Zielinski and Huhtamo in these articles but if we start with the commonalities it is clear that both accounts stress media archaeology as a challenge to linear media history as well as a foregrounding of the practices and uses connected to media rather than the effects of media.

Concerning the non-linear approach, in Zielinski’s article, different key persons from the heterogeneous history of exchange between art, science and technology are chronicled and their often surprising media experiments are offered as “deep time” contrasts to our contemporary media culture. Among the persons reanimated in his visionary history of the media are Giovanni Battista Della Porta, a 16th century natural scientist and polymath who created multimedia theatre-like experiments. There is also Athanasius Kircher, a 17th century Jesuit who in his book *Ars magna lucis et umbrae* presented both real and imaginary devices for the production of various optical illusions. Further, we encounter 20th-century transdisciplinary artistic figures ranging from Georges Bataille and Pierre Klossowski to Peter Weibel.²⁶ These figures and their practices are not introduced as simple forerunners of today’s media landscape but are rather presented as engaged in activities that do not seem to fit in with our present-day knowledge of the media technologies of their respective times. Through his unconventional set of case-studies, Zielinski suggests that we should turn to the marginal media practices of today, local and particular, in order to see if they may help us in thinking and practising the future development of media differently than by merely following the paths set out by standardised media scholarship.

Huhtamo is also out to criticise the concept of linear media history, beginning his 1997 text with a critique of C.W. Ceram’s classic study *Archaeology of the Cinema* (1965). In this book Ceram

dismissed that pre-cinema artefacts such as peepshows or magic lanterns belong to the study of the history of cinema, which for him had to be grounded only in the real technological innovations that directly, in a linear fashion, can be traced to the development of cinema as a particular projection technology. Huhtamo on the contrary is interested in the discourses surrounding the emergence of new technologies, regardless of their “real” effects. Discourses of the new, such as the stories of audiences panicking at “Phantasmagoria” ghost shows or at the Lumière brothers’ early film screenings, imbue technology in cultural and ideological contexts. These discourses, Huhtamo suggests, return as “topoi”, cyclical motifs appearing time and time again in the course of history (p. 222).

While united in their scorn for linear approaches to history, Zielinski and Huhtamo differ in their conception of media archaeology as either performing cuts in “deep time” histories or as the study of recurring historical motifs. Both are however, interested in media practices, theorising apparatuses along with what people do and have done with media as opposed to engaging in information theory discussions or focusing on media effects. For Zielinski, media archaeology is an activity which in nomadic fashion is linked to artistic practice and the heterogeneous history of the interrelations between art, science and technology. Huhtamo does not talk about artistic practice per se but focuses on the use and reception of media technologies over time with a special attention to the use of the recurring discursive motifs. Already with these two articles, we can trace some of the major tropes of media archaeology as an approach to media history and technological development: it is concerned with media *practice* such as media art and its concept of *history* is *non-linear*, going against progressivism and instead using the past in order to intervene and re-envision the present and future use of media technology.

From Dead to Undead

In 2010, roughly fourteen years after Zielinski’s and Huhtamo’s essays, a second entry on media archaeology in C-theory was published, the same site where Zielinski’s article originally appeared. The interview “Archaeologies of Media Art” conducted by

artist-researcher Garnet Hertz with media theorist Jussi Parikka, is a good starting point to consider where the field stands today, representing as it does a new generation of media-archaeologists talking about the current state of media archaeology. The basic outlook of media archaeology is here still the same as there is a strong emphasis on artistic practice and the non-linear approach to history. Hertz and Parikka in a useful way spell out that the non-linear approach is connected to Foucault's archaeology of knowledge, new historicism and film studies. For the artistic dimension of media archaeology however, they stress the rising importance of approaches less grounded in narrative and representation, pointing to the artistic practice of Paul De Marinis and the techno-materialist perspectives of theorists like Friedrich Kittler and Wolfgang Ernst. In this context, Parikka says: "History is the form of narratives, while media archaeology is a non-linear engagement with devices and concrete apparatuses that physically carry the past into the present." (2010, n.pag.).

In a subsequent article on "Zombie Media" (2012) the same authors deanthropomorphise the non-linear treatment of media history, explicitly focusing on technical processes that echo Wolfgang Ernst's theory of time-critical processes in computational media (Ernst 2006; 2008; 2009; 2012). At the same time, the authors do not abandon practice, and see media-archaeology also as a political artistic practice that challenges the production of obsolescence taking place in the capitalist consumer society.

In Ernst's take on media archaeology the focus is on the micro-temporal computational processes inside technical devices rather than on the recuperation of lost media artefacts or associated cultural practices. If Huhtamo is centred on discourses of the old and the new, while Zielinski recognises both a broader cultural materialism à la Raymond Williams as well as the more techno-materialist approach of Kittler (Zielinski, 1999, p. 21), Ernst seems keen to follow only the latter. Some authors (Chun 2006; Parikka 2011b) have discussed a possible division inside media archaeology between the techno-materialist approach, focusing on cybernetic processes inside technology, and the discursive one that writes alternative cultural histories of media. This divide seems to be

confirmed through the writings of Ernst, who reframes it to the broader level of the debate between culture studies and media theory.

Media archaeology is not only about re-discovering the losers in media history for a kind of Benjaminian messianic redemption. Media archaeology is driven by something like a certain German obsession with approaching media in terms of their logical structure (informatics) on the one hand and their hardware (physics) on the other, as opposed to British and U.S. cultural studies, which analyze the subjective effects of media (...). (Ernst, 2006, p. 106)

The way that this divide appears is indeed reminiscent of my earlier discussion of the differences between medium theory and cultural studies-influenced media research. But to argue for a complete divide in this case seems to me contradictory when looking at media archaeology as a relatively small and specialised field in which the same theoretical references and sets of ideas are often shared. All the figures connected to media archaeology discussed on these pages so far set out with the agenda to challenge our common assumptions about the origins and logics of media development, even when, like in Ernst's case, in the end displacing the discussion about the relation between the old and the new in favour of discussing the importance of real-time computational archives operating in the present. As pointed out by Parikka (2012) in his concise *What is Media Archaeology?*, the polarisation was inherited from Friedrich Kittler's critique of cultural studies (p. 67). Instead of furthering this polarisation, I consider media archaeology as a transversal discipline²⁷, which, as we will see in the next section, can be demonstrated through the different approaches it offers to think about and work with media archives.

Archives: Discursive and Technical

Archaeology is not only a discipline for the objective study of the past, it is also an active intervention from the present into the past, mediated by different forms of archives and archival practices,

whether physical or digital. In Michel Foucault's groundbreaking works (1969, 1974), archaeology was a method whose raw materials included the modern bureaucratic archive as its main site of excavation, used to transversally intervene across different historical discursive configurations. Complementing Foucault, Michel de Certeau, in *The Writing of History* (1988 (1975)) pointed out that the work of history and the archive as a specific spatial and material site was itself transformed by the advent of the computerised archive, transforming the way we do history. As a historian, de Certeau saw all knowledge as situated in a specific "place". In the writing of history, he maintains, this place is always connected to some present concerns which both allow and forbid different interpretations of the past. The role of the historian in de Certeau's theory is to work at the margins of these places, tracing the contours and exposing boundaries and ruptures that can become springboards for new sites of meaning and practice – bringing fresh ideas back to institutionalised places (de Certeau, 1988).

The idea of a historian working at the margins resonates strongly with Zielinski's later notion of media archaeology or "an-archaeology". Additionally, de Certeau was also one of the first to recognise the writing of history as a highly *mediated* practice when he discusses the consequences of the new technologies that archive and analyse data. Thus, de Certeau compares the changing apparatuses of history making: the knowledge "machinery" of the 17th and 18th centuries to the computerisation of knowledge in our times. In the same way that de Certeau complemented Foucault's analysis of the disciplinary society with a micro-political perspective through the myriad of tactics explored in *The Practice of Everyday Life* (1984), we find that, in *The Writing of History*, he brings a special attentiveness to the technical materiality of the archive.

These two conceptions of the archive inform the field of media archaeology today: on the one hand we have a discursive understanding of the archive, as the site from which things can be said, and on the other we have a material understanding of the archive, which sees it as a site whose technical parameters conditions *how* things can be said at all. Researchers identified with "German media theory" such as Friedrich Kittler, Wolfgang Ernst and

Bernhard Siegert later developed this thread further in line with McLuhan's media theory, arguing that the archive should not be understood only discursively, but that its specific technical materiality needs to be the first thing addressed. The archive in this sense is foremost a technical ordering device, which in the computerised age is being governed not by humans but by programmed protocols. *Media* archaeology, I argue, has developed as a bastard discipline in between Foucault's focus on the discourses arising from the archive, i.e. the archive understood as a discursive site, and the German media theory tradition of emphasizing the technically determined and operational, or even actively *intervening* aspects of archives as material entities.

Media Archaeology and Technological Development

Media archaeology sees media-cultures as sedimented and layered, a fold of time and materiality where the past might be suddenly discovered anew, and the new technologies grow obsolete increasingly fast. (Parikka, 2012, p. 3)

Non-linear histories and microtemporalities

In the introduction to this study, I suggested that the question of how media grow old and how new media are constructed through practice, discursively as well as materially, is related to the broader issue of technological development. Although media archaeology is not a unified discipline, I claim that it does present us with specific directions towards conceptualising technological development. Even when media-archaeologists differ on whether the emphasis should be on narrative and discursive approaches or perspectives rooted more exclusively in the materiality of media technologies, a common resistance towards progressivist, teleological history presides. Media-archaeologists evoke non-linear, cyclical and micro-temporal approaches that all stress a heterogeneous, particular and unpredictable temporality, never a stable and universal one. In this way it connects with the transversal perspective on media culture that I earlier defined as network culture, and in this context it refines the transversal approach to the relation between the old and the new as a key question of technological development.

As mentioned above, Siegfried Zielinski's work represents one such non-linear approach, formulated as the searching for the "new in the old" (2006, p. 3). In this approach, the non-linearity of media archaeology emerges as an *an*-archaeology or "variantology" of the "fortuitous find" (Zielinski, 2006, 28) where lost artefacts, discourses and personage of media-historical (in-)significance are (re-)discovered and re-used in new ways. Media archaeology in this sense seems to rhyme well with an idea of archaeology as a practice of discovery, of "digging up new knowledge" (Snickars, 2006, p. 132). While following Foucault's archaeological and genealogical methodologies, Zielinski recovers histories of repressed media situations from a "deep time" perspective (with a perhaps unacknowledged hint to Adorno's cultural critique), in the looking for the new in the old:

(...) we shall encounter past situations where things and situations were still in a state of flux, where the options for development in various directions were still wide open, where the future was conceivable as holding multifarious possibilities of technical and cultural solutions for constructing media worlds. (Zielinski, 2006, p. 10)

Zielinski offers us groundbreaking cases (or "cuts" as he more aptly calls them) of forgotten apparatuses and their inventors. The question is whether this approach fulfils the critical position towards contemporary media culture that Zielinski is striving for, that is to "enter into a relationship of tension with various present-day moments, relativize them, and render them more decisive" (2006, p.11)? As Zielinski argues in the introduction to *Deep Time of the Media* (2006, pp. 9-10), standardisation and processes of unification (read convergence) have indeed become key to contemporary media culture. However, far from being hostile to heterogeneity, studies such as Tiziana Terranova's *Network Culture* (2004) and Thrift's earlier discussed concept of the cultural circuit of capitalism have shown that network architectures and their associated business models thrive on a new type of compartmentalised difference, found in phenomena such as data-mining

and user-generated content. These new avenues for dynamic particularisation within cybernetic systems present a challenge to the idea of media archaeology as a discipline of cultural critique and construction of alternative media worlds. This is a problematic to which I will later return in chapter six, “The Media archaeological generic”, a discussion chapter immediately following the two case-study chapters.⁷

In contrast to Zielinski’s approach, Ernst’s post-Foucauldian and post-Kittlerian media archaeology does not depart from stories about old and forgotten media and their relation to the new but from what he calls the “time-critical” materiality of media technologies: media operate according to a micro-temporality which is processual and event-based rather than historical and discursive (Ernst 2008; 2009; 2012). In this view, media archaeology is a descendant of cybernetics; its non-linearity derives from the digital and networked archive which is caught up in a constant circular feedback of stored data operating in the present. Here, non-linearity is produced not through telling the history of media evolution from the margins, but through a different epistemological starting point emphasising the archive itself as being non-linear. “Whereas historiography is founded on teleology and narrative closure, the archive is discontinuous, ruptured”, Ernst writes, adding that “Archaeology, as used by Foucault in a somewhat playful, delusory way, is a term that does not imply the search for

⁷Non-philosophy, the generic and transversality

In the “non-philosophy” of Francois Laruelle, transversality is seen as a critical force that paradoxically enables a universality beyond absolutes. Laruelle’s conceptualisation of the generic (2011) is such a transversal figure, that makes possible a weak form of intervention, which is not founded in any idea of a by default “radical” nature of transversal practice. The generic is rather to be considered as a unilateral base from which it is possible to *also* generate critical transversal modalities.

“We shall suggest that genericity, without destroying the market and capitalist structure of exchange and equivalence which is necessary to it as the element in which it intervenes and which is of another order, no longer simply reproduces it even with differe(a)nce, but contributes to transforming it through its operation which is of the order of idempotence, as we shall make clear later on. This is a transformation that takes place according to a subject of-the-last-instance and as its defence as Stranger against capitalist-and-epistemological sufficiency.” (Laruelle, 2011, p. 242)

Further Reading: Francois Laruelle, *Philosophies of Difference: A Critical Introduction to Non-Philosophy*, 2010 and “The Generic as Predicate and Constant: Non-Philosophy and Materialism”, 2011.

a beginning; it does not relate analysis to a kind of geological excavation.” (2006, p. 105).

In Ernst’s conception, archaeology depends on the non-linear “anarchive”, synonymous with the supposedly non-discursive sites of data increasingly prevalent in the mathematical medium of the Internet. While pointing us to consider how the archive “matters” outside of its use and interpretation by human agents, might there not also be a risk of overstatement at play here, where Ernst, as did arguably Kittler before him in *Gramophone, Film, Typewriter* (1999), posits digital convergence as the end station of all media, now united in an ultimate mathematical form that seems magically imbued with a transcendental telos conquering all time? This would be a neo-conservative position that recalls Francis Fukuyama and his infamous *Fin de siècle* Essay, “The End of History” (1989).

The Problematic of Technological Development

All the positions described so far state linear and evolutionary history as the nemesis, but almost no strong examples of actually existing linear, progressivist or evolutionary historiographies of media are given. In contrast, important precursors to media archaeology are frequently invoked, such as Walter Benjamin, Michel Foucault, Aby Warburg, Jonathan Crary, Friedrich Kittler, Carolyn Marvin; diverse scholars who at different times challenged what it means to do history and who became important for post-modernist research in visual culture and in science and technology studies. But where did the counter-examples go, derived from the theories of the apparently mainstreamed evolutionary and linear narratives of media culture? It is alarming that almost no differentiation is actually made between the much loathed linear, progressivist and evolutionary approaches. Can their unity be taken for granted? In order to better specify what contributions media archaeology can make to the discussion of old and new media it seems to me that it is necessary to place media archaeology in the broader context of the different research schools that look at technological development.

The question of how media grow old and how new media are constructed through practice, discursively as well as materially, is

related to the broader issue of technological development. In the following, when referring to technological development, I see it as a *problematic*²⁸: when we speak of technological development we are formulating principles of how technologies develop over time. This sounds simple but it is a problematic that reverberates into the larger discussions on the relationship between society and technology, including the debates over the technological or social determination of technology.²⁹ This problematic may help us to consider how media archaeology enters into the debate about the temporal dimension of technology. We should ask if media archaeology is really a novel approach to the problematic of technological development and if it is possible to regard media archaeology as a media studies intervention into this problematic and if it offers fresh critical perspectives on practices dealing with media temporality.

Commenting on media archaeology as a specific approach to technological development, Erkki Huhtamo writes:

This kind of approach emphasizes cyclical rather than chronological development and recurrence rather than unique innovation. In doing so, it runs counter to the customary way of thinking about technoculture in terms of a constant progress proceeding from one technology to another and making earlier machines and applications obsolete along the way. The aim of the media archaeological approach is not to negate the ‘reality’ of technological development, but rather to balance it by placing it within a wider and more multifaceted social and cultural frame of reference. (Huhtamo, 1997, p. 223)

But is this approach not already shared by most other approaches in the history of technology? For example, as John Nerone (2006) writes, the history of technology is a field that has since the 1970’s been dominated by “the social construction of technology” approach. In this canon we could place works such as the aforementioned work of Carolyn Marvin, frequently quoted in media archaeology as well. Nerone comments that the “work in the history of technology has come to share a common overt message. It always sets itself up as a corrective to presentist utopian and

dystopian fantasies about media forms working Trojan horse-like. It tells us that ‘new media’ are really old media, or at least not so different” (p. 256).

In the light of these considerations, we may ask how media archaeology really makes a difference to the critical notions of technological development already developed in the social construction of technology approach to the history of technology, in “technoscience” and STS (Science, Technology and Society) approaches.³⁰ A comparison of media archaeology with the important work on technological development already carried out in these disciplines is not within the scope of this dissertation. My assumption is that media-archaeology shares many of the perspectives with the history of technology according to STS and technoscience but that it places specific emphasis on the evolution of media and media practices within technological development. With this in mind, we should look at the approaches to media history in media studies and also at what other approaches from other disciplines would actually oppose media archaeology.

Linear and Mono-Medial Approaches

Seen in the narrower context of media research, in the domain of media history, a specific branch that arguably has been dominated by a linear temporal approach is press and mass media and communication histories. In a Swedish anthology advocating a broad cultural history approach to media history, Anders Ekström, Solveig Jülich and Pelle Snickars relate this to the fact that media history in the 20th century came to rest on a “formal” definition of the media. They write that the concept of media was consolidated concurrently with the rise of television and consequently came to signify technical apparatuses for the transmission of text, sound and image, “in short, technologically produced base-level media such as press, photo, film, TV and radio.” (Ekström, Jülich, Snickars, 2006, p. 16, my trans. ; cf. Snickars, 2006).³¹

When we speak of media and communication history in general, it is easy to see how this technically formal definition of media can be taken for granted and become the base from which to approach the problematic of technological development. This move is evident

in media history works that constitute “classics” in the field such as Harold Innis’ *The Bias of Communication* (1991 (1951)), up to recent publications such as Bill Kovarik’s *Revolutions in Communication: Media History from Gutenberg to the Digital Age* (2011), or popular accounts such as Marshall T. Poe’s *A History of Communications: Media and Society from the Evolution of Speech to the Internet* (2012). Following the concepts developed in new media theory such as the McLuhans’ laws of media, Bolter’s and Grusin’s remediation or Manovich’s transcoding, media archaeology works not only with these tools for “deep time” and micro-temporal media analysis but also interrogates how such temporal movements are enacted in practice as well as how they relate to the technical materiality of different media.

Evolutionary Approaches

Another discipline in the different approaches to technological development where media archaeology could be said to make an interesting difference is the economic history of technology. This field holds the most wide-spread and hegemonic works on the subject of technological development, expanding over a vast field from Marxist and Schumpeterian theories of creative destruction, evolutionary economics to latter-day theories of innovation and diffusion in capitalist societies. In this set of literature, there is little respect for the humanities approach of looking for the new in the old or meditating on the new epistemological technics of media. In regard to the former, economic technology historian Joel Mokyr’s remark in the introduction to his *Twenty-five Centuries of Technological Change: An Historical Survey* is revealing, saying that “inventions that were not implemented remain little more than curiosa, of interest only to intellectual but not economic historians.” (2007, p.3). At the same time, the economic approaches to technological development are interesting counter-parts to media archaeology, precisely because media archaeology is a discipline that seems to have evolved in a critical response to many of the frameworks of the economical theories, evident in media archaeologists’ critical dialogue with planned obsolescence, evolution and cybernetics.

A significant strand of the economic theory approach to technological development is the so called evolutionary model, often involving some periodisation according to “long-wave theory”, also known as “Kondratiev waves”, so named after Russian economist Nikolai Kondratiev who founded a view on history, economics and technology as evolving in long cycles (Freeman and Louca, 2001, p. 65). This theory entails a conception of history and development that is not, as Hegel would have it, a spiritual teleological progress towards higher states of civilisation, but a process driven by technological changes that are contingent with economic institutions (Perez 2003; Freeman and Louca 2001, p. VII). The evolutionary theory of economics and technology was developed by economists such as Joseph Schumpeter (1943) who through the principle of “creative destruction” posited that radical innovation leads to the continuous obsolescence of technology, a “natural” determining factor for socio-economic evolution.

The opening up of new markets, foreign or domestic, and the organizational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation—if I may use that biological term—that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in. (Schumpeter, 1943, p. 83)

Derived from such an economic perspective on the capitalistic creation and destruction of value, the evolutionary theory of technological development posits that technological development takes place in great surges (revolutions) that overtake each other according to processes of diffusion and assimilation. The influential evolutionary economist Carlotta Perez calls this the “techno-economic paradigm in which “The changing rhythms of growth and the processes of structural change and increasing productivity in the economy can now be understood as driven by identifiable technical change and as shaped by the diffusion of successive

technological revolutions.” (Perez, 2010, p. 200) Such a view frames technology solely in terms of its instrumental function within the capitalist system, and in turn economical growth is taken as a naturalised state of development, engendered by technology. This leaves little room for alternative conceptualisations of change outside the paradigm of innovation, and this lack of an outside can in turn be related to how Althusser and Balibar described the questions of a problematic as always internal, that is, they are immanent to the field of study (Althusser and Balibar, 1970, p. 27-29)³², disallowing alternative conceptualisations.

Even though the evolutionary approach stems from theories of economic development, the supposed evolutionary aspect of technology development is often called upon as an example of a kind of socio-economic survival of the fittest. Metcalfe for example, in *Evolutionary Economics and Creative Destruction* (1998) builds on Schumpeter’s idea of how capitalism by default evolves through creating disequilibria and describes the evolutionary model in terms of linear (yet unpredictable) processes of innovation and selection, coordinated by the market (seemingly standing in for nature) where new technologies symmetrically “displace” older ones:

The automobile displaces horse transport, electricity replaces gas lighting, satellite and cable channels vie with terrestrial transmission in the markets for television services, new drugs displace old in the treatment of heart disease, genetic methods transform the nature of farming the major world crops and information technologies displace a myriad of practices in the banking and retail sectors. (Metcalfe, 1998, p.3)

Thus, we may say that on the macro-level, the evolutionary theory of technological development is built on the principle of the production of obsolescence as a primary mode of capitalist production: each new technological system in this techno-economic paradigm, through concepts such as long-wave development, creative destruction and technological revolutions are bound to eventually bring about the displacement of earlier systems in the survival of the fittest innovations.

Planned Obsolescence

The logic of displacement at the heart of the evolutionary approach may be compared to planned obsolescence which is a principle of production in the consumer society, operating in parallel to creative destruction. Planned obsolescence is a term allegedly coined by Bernard London in a 1932 pamphlet where he calls for an intervention into the economic depression based on urging consumers to buy new products and discard old cars and other obsolete products, even suggesting a tax for those failing to do so (London 1932, p.2-3; cf. Hertz and Parikka 2012, p.2). The aging of technology is here presented as a kind of natural law: “People everywhere are today disobeying the law of obsolescence. They are using their old cars, their old tires, their old radios and their old clothing much longer than statisticians had expected on the basis of earlier experience.” (London, p. 2).

In relation to media culture, we can observe how the general production of obsolescence as development is replicated on micro-levels, for example in the development of media technologies and products built on the perpetual discarding of the old and consumption of the new. Such a logic was intimately inscribed into the development of computer technologies with the formulation of “Moore’s Law” (Moore, 1965, cf. “Moore’s Law”, 2013) stating that the number of micro-processors that can be fitted on an integrated circuit doubles in short (1-2 year) intervals, while production costs become exponentially lower. When this is made into an industry paradigm, all digital devices are also bound to be more or less obsolete within the span of a few years and with them software, which has to keep up with the latest hardware possibilities. Thus, the economic evolutionary model of technological development is more than a theory, it is also inscribed into the material production of technological developments. In the next section we shall see how this process was criticised by the German philosopher Gunther Anders already in the 1960’s as a form of “negative ontology” in which products are born to die. This discussion will serve as the background for launching media archaeology as a form of transversal critical intervention into such production structures of technological development in network culture.

From Negative to Transversal Ontology

An interesting precursor to the critique of development that we find in media archaeology, is *Die Antiquiertheit des Menschen* (I: 1961 & II: 1980; “The Obsolescence of Man”) in which German philosopher Günther Anders evaluates the production of obsolescence from a symmetrically opposite point of view to that of an evolutionary model of technological development. Comparable to how the evolutionary model posits technological change at the centre of social and economical change, Anders observes that in the modern consumer society, technology has replaced man as the subject of history. For Anders however, the production of obsolescence in which new technologies continuously displace older ones, is not the primary result of obsolescence, it is the displacing and rendering obsolete of humanity itself, in what he called “the third industrial age” (2002, p.19). The defining technology of this age in Anders’ view is nuclear technology, a technology humans know how to set up and operate but not how to control, and which for him can only lead to the final destruction of human civilisation (cf. Anders 1961, p. 235 ff). This uncontrollable element makes humanity “apocalypse-blind”, and from this Anders draws the conclusion that in presenting itself as goal-less and necessary, technological development has made humanity loose any kind of “eidōs” (wisdom/knowledge) of the ultimate “telos” of technological development (destruction).

Anders also worked with a similar model for the micro-level of consumer and media technologies, in which the destruction at the heart of technological development is rendered invisible to the individual consumer, installing in its place secondary goals. For example, Anders argued that the relation between supply and demand in the modern consumer society had undergone a “perversion”: rather than demand producing supply it was now the other way around, that supply was made to produce demand (Anders, 1961, p. 48).³³ This demand, as the “second product” of consumer society, for Anders, installs secondary goals for the consumer that have little to do with the supposedly primary functions of the products themselves.

We said: It was the ‘secret oath’ of medial man, ‘not to see or not to know what he is doing’; that is that the inherent Eidos or Telos of actions remain out of sight, shortly: (in analogy with our previously used expression “Apocalypse-blind”) to remain “Goal-blind”. (Anders, 1961, p. 292, my trans.)

Consumer products here form part of a “negative ontology” (Anders, 2002, p.46), in which objects are born to die and traditionally “positive” values such as longevity and sustainability become undesirable. In the 1958 essay “The Obsolescence of Products” (reprinted in Anders, 2002), Anders proclaimed that, “Every advert is a call to destruction” (2002, p. 41, my trans.), and thus his critique of technological culture may be read as building on the creative destruction logic Schumpeter identified but drawing radically different conclusions from it than the evolutionist ideas of creative destruction as the basis of innovation. Anders points us instead to some unresolved problems of the evolutionary view of technological development, primarily concerning its rendering invisible the inherent politics of development involved in the epistemological shift from man to technology as a prime motor of social change.

While the evolutionary model of technological development, similarly to cybernetics, is built on a naturalised narrative of equal and free market competition without the burden of any teleological aims, it does not address the problem that teleological aims, and with them certain forms of social organisation, including processes of inclusion and exclusion, always seem to re-inscribe themselves. Such reinscription is, if we follow Anders, part of the very materiality of certain technologies such as in the example of nuclear power and the process in which secondary, immaterial goals are created as part of the continuous value creation/destruction process of the negative ontology of planned obsolescence.

For a humanist critic of “technocracy” like Anders, the answer to this problematic is to intervene with political practice, following his famous reformulation of Marx that it is not enough for the philosopher to change the world, as it will change anyway, but that it is also necessary to *interpret* the changes and then to ultimately

engage in activism that change the changes themselves.⁷ Media archaeology picks up the stick from this imperative in that it is involved in questioning the logic of linear and evolutionary technological development while also, as an artistic method, practically intervening into it, not only through a human-centred activism, but also by engaging the materiality of media technologies. This activist and artistic direction of media-archaeology will be further explored in the case studies' transversal excavations, interventions and reverse-remediations of institutionalised media situations.

Returning to the earlier discussion of network culture, the transversal approach of media archaeology as artistic method is in line with what Thrift calls the performance of the cultural circuit in contemporary capitalism. Thrift directed our attention to the fact that the circuit between theory and practice is, even if the goals might be instrumental and governed by cybernetics, never a complete process. Is it possible that we can think of media archaeology in this circuit not only as a non-linear but perhaps more importantly as a *non-evolutionary* approach? Is media archaeology, by "cutting across", increasing the potential for performative encounters in the cultural circuit of network culture? This would be in the sense that it intervenes into the structures of the "naturalised" media evolution, providing network culture with heretic counter-practices and strategies that are interacting with but ultimately not predicated on the processes of media technology convergence, displacement or creative destruction. According to

⁷Transversal Struggles

In Foucault's work on the location of power relations there appears the concept of "transversal struggles" (1982, p. 780), that concerns practices which directly oppose different forms of subjectification, but which at the same time are "not confined to a particular political or economic form of government." (ibid.). This means those kinds of struggles which are essentially directed towards translocal forms or production modes of power rather than specific local institutions (even though such institutions may be the platform from which the resistance must emerge). Implicitly referring back to his previous works, Foucault (ibid.) argues that "to find out what our society means by sanity, perhaps we should investigate what is happening in the field of insanity" and goes on to state illegality as a field through which we can understand legality. Thus the study of processes of marginalisation as sites for the emergence of oppositional identities becomes the terrain through which one may come to know power, not as an absolute, authoritarian entity, but as a mode of subjectification and stratification of existence through which, nevertheless, new positions may be negotiated.

Further reading: Michel Foucault, "The Subject and Power", 1982.

Ann Balsamo, technological development (what she calls “technocultural innovation”) takes place through the performative production of a “technological imagination” in combination with a historically grounded work of “cultural reproduction” (2011, p.6).³⁴ Following this understanding, media archaeology is a work of producing technological imagination as well, but one not predicated solely on the language of innovation but that instead produces technological developments that critically intervene into the negative ontology of obsolescence, bringing the heterogeneous temporality and materiality of media in network culture into play. In the concluding chapter of this dissertation, I will return to the task of mapping out the specific vocabularies of technological development inherent to this transversal media practice.

The old and the new, the analogue and digital are not taken as exclusive phenomena but rather as operating in a techno-cultural network which can be opened up or traversed in order to ultimately point beyond, beside, behind or next to it. This is no longer a negative but a transversal ontology of the relation between technological development and media practice, the methodological implications of which will be explored in the next chapter.

¹ While I agree to some extent that this is true of the kind of art practices that uses computer technologies, I would disagree that this applies to the whole of the art and technology field as it seriously overlooks what came before the term “new media” which as such hadn’t been in widespread use much longer before the 10-year hype period which Manovich refers to. The whole New Media Reader as such is a testimony to the far-reaching interdisciplinary character of this field, going beyond new media art and into cybernetics and HCI (Human Computer Interaction) as instrumental and commercial research contexts on the one hand and experimental artistic practices such as William Burrough’s and Brion Gysin’s “Cut-Ups” on the other.

² None of the authors, such as Matthew Fuller or Tiziana Terranova, which I later in this chapter identify with a “material turn” in media theory employ the term medium theory. The term can be found instead in recent British cultural studies and social science influenced books such as Nick Couldry’s *Media, Society, World: Social Theory and Digital Media Practice* (2012). The term was also present as a chapter heading in *Canonic Texts in Media Research* (Katz; Peters, et. al., 2002) where it is identified with the “Toronto school”. In the introduction to another recent publication, the anthology *Communication Matters. Materialist Approaches to Media, Mobility and Networks* (Packer and Crofts Wiley, 2012), the editors use the term “medium theory”, perhaps hinting at that the term is more common in North American media studies.

³ See also Potts, John (2008) “Who’s Afraid of Technological Determinism? Another Look at Medium Theory” in the journal *Fibreculture* for a more recent discussion of the schism within media research concerning technological and social determinism. Here Potts argues for a model incorporating both the social and technical, retaining the attention to specific technologies also within a converging medialandscape: “The phonograph did not initially answer a pressing social need: there was no pressing societal demand for the reproduction of audio and music. Indeed, the enormous cultural ramifications of sound recording technology were not apparent to its inventor: intention was not a factor in the inception of this technology. Enormous cultural effects emerged as a

consequence of the unique intrinsic properties – the recording, reproduction and transmission of music – of the technology itself. This pattern has been similar in the case of many other inventions, including the internet: the intended applications of the technology are quickly usurped by unintended uses, as voiced in the cyberpunk maxim, ‘the street finds its own use for things.’ The medium theory model would add the observation that those uses flow from the character and potential of the technology itself.” (Potts, 2008, n.pag.)

⁴ An interesting turn of perspective on this discussion is provided by Gary Genosko in his article “Regaining Weaver and Shannon” (2008) in which he discusses information theory, often posited as the origins of a linear and deterministic model of communication. By a process of transversal meta-modeling, Genosko shows how even this model was dependent on a socio-cultural pretext, that of the “telegraph operator girl” acting as a discrete intermediate decoder and encoder of messages. What this analysis shows however, is not that even information theory can be seen as grounded in a process of human interpretation but that the telegraph girl formed part of “socio-technical entanglements” where it becomes impossible to separate mathematics and culture.

⁵ The German media theorist Friedrich Kittler, was himself adept at programming and an ardent user of the Linux open-source operating system; Janet H. Murray, herself involved in media design, discusses multimedia narratives in her 1996 book *Hamlet on the Holodeck*; Lev Manovich, originally trained as a programmer, looks at the interplay of cinematic and database aesthetics in *The Language of New Media* (2001) and Alex Galloway, a pioneer net artist, looks at subversive digital art practices in the concluding chapter of his book *Protocol – How Control Exists after Decentralization* (2004).

⁶ A related position has been put forward by David Gauntlett who in a 2007 online article called for a “Media Studies 2.0”, where he wants media studies to better acknowledge that a paradigm shift has taken place in the relation between consumption and production responding to new practices coming about through digital and networked technologies (Gauntlett, 2009).

⁷ Interestingly, this is also hinted at by David Morley in his 2006 book, reflecting on artistic production as knowledge production and referring to the theoretical frameworks of Bruno Latour and ANT theory as multidimensional approaches to the relationships between humans and artefacts.

⁸ Arguably, Kember and Zylinska (2012) puts forward exactly such a concept of mediation, describing vital entanglements of technology and culture. Although, I propose here the notion of the transversality of media practices rather than mediation for various reasons. See also chapter one, note 5. Other recent useful perspectives through which one can go deeper into the ontological arguments about media, nature and culture rather briefly sketched out here can be found in so called “new materialism”. See Bennett, Jane *Vibrant Matter: A Political Ecology of Things* (2010) and Dolphijn, Rick and Iris van der Tuin *New Materialism: Interviews & Cartographies* (2012).

⁹ For example, Lev Manovich’s work was posted by himself in these mailing lists and online prior to publishing, and in the introduction to *The Language of New Media* (2001), the author acknowledges that the work grew out of a direct dialogue with the Nettime community.

¹⁰ The automated signature of nettime messages for many years contained the following description: “<nettime> is a moderated mailing list for net criticism, collaborative text filtering and cultural politics of the nets”. See the list archives at: www.nettime.org. For a thorough account of the history of nettime from its beginnings to 2001, see the article “The Moderation Question: Nettime and the Boundaries of Mailing List Culture” in Lovink (2002).

¹¹ For Thrift, this development is mainly associated with the post-1960’s period of capitalism. In this period, Thrift claims (2005, p.5), that capitalism as “a theoretical enterprise” took hold through a cultural circuit of “business schools, management consultants, management gurus and the media,” that “has produced a process of continual critique of capitalism, a feedback loop which is intended to keep capitalism surfing along the edge of its own contradictions” (ibid.). This is a different view of the relationship between theory and practice in contemporary culture than that previously offered by the post-modern view on reflexive modernity (Beck and Giddens 1994; Lash and Urry 1994). In *Economies of Signs and Space* (1994), for example, Scott Lash and John Urry developed their theory of disorganised capitalism, discussing how a new post-fordist political economy had led to an increasingly global and high-speed circulation of capitalist objects and subjects – indeed more than any one actor or organisation seems to be able to cope with (Lash and Urry, 1994, p. 4-5). Lash and Urry’s hopeful answer towards a way out of this situation was based in the notion of “reflexive

accumulation" (p.5), a form of cognitive and aesthetic self-monitoring that emerged out of an intensified knowledge economy.

¹² I return to this discussion of cybernetics and network culture in chapter 6.

¹³ My selection of these books are more of a pragmatic rather than exhaustive nature. Identifying them as the epitome of a "material turn" is not my wish. Another selection is for example made by Andreas Kitzman in his 2005 review essay "The Material Turn: Making Digital Media Real (Again)" where he groups together Katherine Hayles's *Writing Machines* (2002), Galloway's *Protocol* and Mark Hansen's *Embodying Technesis: Technology Beyond Writing* (2000). There is however an internal coherence between my choices of Fuller, Galloway and Terranova in the way that all three of their books include a critical rethinking of cybernetic theories. At the same time they reflect on the disruptive potential of aesthetics and artistic practices within cybernetic networks. Terranova's political theory of network culture draws on Italian post-autonomist philosophy and is concerned with the conditions of cultural production in network culture on a broad level, discussing new forms of "work" and subjectivity. Galloway's *Protocol* has a more overt technical and macro-theoretical orientation, however it is also concerned with artistic practices such as net art. Fuller eschews any broad temporal categorisation in his media ecologies, instead looking at micro-political situations where subversions of power appear as an interaction between technical and social processes.

¹⁴ See Lovink's 2005 booklet *The Principle of Notworking: Concepts in Critical Internet Culture*.

¹⁵ This analysis of MP3 needs to be understood in the context of its first period of standardisation when Internet bandwidth was lower and the standard compression rate was usually starting at 56 kbit/s and peaking at 128 kbit/s as compared to today's 320 kbit/s, 512 kbit/s and lossless formats. Nevertheless, however high the bitrate, MP3 will always entail some compression.

¹⁶ Kitzman (2005, p. 685) writes: "It should be made clear that Galloway does not equate protocol with institutional, governmental, and corporate power but rather as a force that 'gains its authority from another place, from technology itself and how people use it' (p. 122). This is an important observation because it draws further attention to technology's co-determinate role in the continued evolution of our life world - a world that includes not only the biological and social strata of human beings but also the much larger (i.e., infinite) structures of the world and the universe itself."

¹⁷ "This tetrad of the effects of technologies and artefacts presents not a sequential process, but rather four simultaneous ones. All four aspects are inherent in each artefact from the start." McLuhan and McLuhan (1988), p. 99.

¹⁸ Kember and Zylinska (2012, p. 11; 102) argues that Marvin remains too rooted in the cultural studies tradition, privileging the social uses and effects of media while underestimating their materiality.

¹⁹ Lisa Gitelman's *Always Already New* (2006) argues similarly to Marvin, that it is not viable to try and resolve this tension but one should rather try to articulate its negotiation within specific case-studies, while also stressing the importance of taking the materiality of different media into account.

²⁰ In fact, much of this story is already present in a lot of earlier, predominantly German work on the history of media, most notably Siegfried Zielinski's *Audiovisions – Cinema and Television as Entr'acts in History* (1999), which was published in German language already in the late 1980's.

²¹ Especially active from the mid- and late-nineties onwards, the Leonardo publications rode on the wave of hype around the Internet and "multimedia" but were at the same time attempts to move beyond the hype and reformulate media theory in relation to technological change, especially relating to ongoing debates on convergence of once analogue media in digital technology. See <http://www.leonardo.info/isast/leobooks.html>

²² With "pro-cinematic" I am assuming that Manovich actually means proto- or pre- cinematic, as in preceding the institution of cinema.

²³ For a critical account see Richard Barbrook's and Andy Cameron's 1996 biting article "The Californian Ideology".

²⁴ It should be noted that these two titles are chosen for their popular impact in academia at the time and that they certainly were preceded by a sleigh of important research into media history. A relevant body of non-Anglophone work, is the both materially and historically oriented German media theory developed in the 1980's and 1990's by scholars such as Friedrich Kittler, Bernhard Siegert, Wolfgang Ernst and Norbert Bolz.

²⁵ See <http://www.deadmedia.org>. In 2009 the artist Garnet Hertz published *A Collection of Many Problems (In Memory of the Dead Media Handbook)* which paid tribute to the original idea of the project. See <http://www.conceptlab.com/problems/>.

²⁶ The study of Kircher and della Porta was later carried out by Zielinski with great detail in the 2002 book *Archäologie der Medien: Zur Tiefenzeit des technischen Hörens und Sehens*, translated into English as *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means* in 2006.

²⁷ In his textbook on the subject, *What is Media Archaeology?* (2012), Jussi Parikka precisely stresses this aspect when he calls it “a travelling discipline, based on a mobile set of concepts.” (p. 15).

²⁸ The notion of problematic, I borrow in a modified form from the post-Marxist structuralism of Louis Althusser (1968, 1970, with Balibar). Initially, Althusser adopted this term in *For Marx* (1968) in order to discuss an “epistemological break” (p.32) in the theories of Marx. In order to spot the shift between points of focus in Marx’s earlier and later theories, Althusser introduces the “problematic” as a term that deals with “the particular unity of a theoretical formation” (ibid.). For Althusser a problematic only allows certain questions to be posed. As Callinicos (1976, p. 34-35) explains, “the concept of a theory’s problematic becomes that of the underlying structure which renders possible the raising of certain questions in a particular form, while ruling out the raising of others.” In the framework of the plurality of approaches to technological development, the notion of the problematic directs us to look at the underlying assumptions of different theoretical approaches.

²⁹ For a critical account that refutes both positions, see the discussion of technological determinism and the “view of symptomatic technology” in Williams, 1974, p. 5-6. Manuel Castells’ discussion on the interaction between society, history and technology in *The Rise of the Network Society* (2000) also provides a useful reference point. For a more recent entry see Potts, 2008.

³⁰ Important works in the social construction approach include *The Social Construction of Technological Systems. New Directions in the Sociology and History of Technology* by Bijker, Hughes et al., 1987 (reprinted in 2012); *The Social Shaping of Technology: How the Refrigerator Got Its Hum* by Donald MacKenzie, Donald and Judy Wajcman (eds.) published in 1999. The term technoscience has most prominently been advanced by Bruno Latour, in books such as *Science in Action* (1987), where the term bears similarities to Latour’s Actor Network Theory in that it discusses the interrelations between humans and technology. A materialist approach to science and technology studies can be found in the anthology edited by Don Ihde and Evan Selinger, *Chasing Technoscience: Matrix for Materiality* (2003), which contains perspectives further developed by Verbeek (2005, dealt with in the first part of this chapter). An important facet of the philosophy of science and STS is also the feminist epistemology developed by among others Sandra Harding (1986) and in Donna Haraway’s articles “A Cyborg Manifesto” (1985) and “Situated Knowledges” (1988).

³¹ The book I am referring to here is *1897 - Mediehistorier kring Stockholmsutställningen*, which traces different media histories connected to the “Stockholm Fair” in 1897. This title was published in the series *Mediehistoriskt Arkiv* in which a number of titles such as Jülich, Lundell and Snickars (2009) and Harvard and Lundell (2010) are highly relevant to the discussion of writing media history differently.

³² In Ben Brewster’s “Glossary” included as part of his translation of *Reading Capital* (1970, p. 316), he defines the term followingly: “Problematic (problématique). A word or concept cannot be considered in isolation; it only exists in the theoretical or ideological framework in which it is used: its problematic. A related concept can clearly be seen at work in Foucault’s *Madness and Civilization* (but see Althusser’s Letter to the Translator). It should be stressed that the problematic is not a world-view. It is not the essence of the thought of an individual or epoch which can be deduced from a body of texts by an empirical, generalizing reading; it is centred on the absence of problems and concepts within the problematic as much as their presence; it can therefore only be reached by a symptomatic reading (lecture symptomale) on the model of the Freudian analyst’s reading of his patient’s utterances.”

³³ My English translation of Anders (untranslated work) does not entirely do justice to all the nuances of the argument, as Supply and Demand in German is “Nachfrage und Angebot” – the latter term also meaning “offering” and as such it may also be used in relation to advertising.

³⁴ In fact when Balsamo argues that innovation follows the “Dual Logic of Technological Reproduction” (2011, p. 10), in which technological innovation simultaneously replicates old elements and bring new ones into play, her argument comes close to Bolter’s and Grusin’s idea of the

double logic of remediation. Balsamo does not use Bolter and Grusin as a reference but instead points us to a more fundamental theory, that of Marilyn Strathern, an anthropologist who discusses reproduction as always involving the processes “of *replication*, when original material is duplicated; and *expression*, when the combination of original material takes a shape within a new context.” (Balsamo, 2011, p. 10).

3 CONTEXTS AND METHODS

The two case studies of this dissertation converge and diverge in a number of ways. In the first part of this chapter, I briefly introduce the different contexts of cultural production in which the projects described in the case studies take place. I then move on to discuss the cultural analysis and practice-based research approaches that both case studies have in common. Finally, I introduce my perspective on cultural-production as a form of practice-based research and its implications for media research.

The Alternative Media Context

The first case study chapter, entitled *The World's Last Television Studio*, is about tv-tv, a project that takes place in the context of “alternative” television production and distribution. More specifically it is a contemporary example of artist driven television, which is an activity that has a prehistory in the underground and film activist movements of the 1960's, 1970's video and TV collectives as well as in the so called “tactical media” projects of the 1990's.

These two directions, of activist and community media on the one hand, and the artistic experimentation with “new media” (such as television and video also once were) on the other, converge in contemporary practices, like tv-tv, ambivalently positioned in between art and activism. The notion of counter-publics, as it has been developed by David Warner will in this case serve as a theoretical framework for tv-tv's transversal form of organisation. In the tv-tv case, different Utopian tropes connected to DIY media production of the 1960's and 1970's are combined with an artistic

approach to the television medium, resisting its conventional representational politics and aesthetics. As we will later see in the analysis of programs, this artistic approach sometimes stems from an experience of new media like the Internet informed by media convergence, interactivity and social networking. In other cases, the avant-garde strategy of critically reflecting about the medium through the medium itself is on the agenda, as well as utilising anti-representational aesthetics in the tradition of video art. These approaches are not always compatible, and through the analysis of tv-tv we will become aware of specific contradictions of cultural production in network culture.

Alternative Media Rhizomes

Community and citizen's initiated, activist forms of media production is a field which media and communication scholars have long struggled to define. There is for example the problem generated by the frequent labelling of community or citizen's media as "alternative" which raises the question of what it is alternative to. As has been called to attention by community media researcher Ellie Rennie (2006), historical studies of alternative media have often been biased towards giving an almost exclusive attention to projects and practices explicitly connected to radical and revolutionary politics.¹ Critics of this politically mostly left-wing tradition, not only point out that such histories tend to omit those projects coming out of other political milieus, but also that they delimit the understanding of alternative media to that of "advocacy media". For example, Clemencia Rodriguez (2001) points out that many community-based media initiatives do not necessarily contain any radical political positions, but simply exist as ordinary expressions of "civil culture", and from this viewpoint may be seen as enhancing processes of participation and deliberation in democratic citizenship (cf. Bailey, Cammaerts, Carpentier, 2008, pp. 24-25). Community media according to the civil culture perspective becomes a part of citizens' making sense of their daily life-world, and is foremost directed by pragmatic and everyday-life issues within whatever is perceived as a bounded community, whether it

is constituted through geographical coordinates, ethnicity, class, gender or any special interest groups.²

In the anthology, *Understanding Alternative Media* (2007), Olga Guedes Bailey, Bart Cammaerts and Nico Carpentier try to bring some clarity to the many definitions of alternative media by introducing four ways of dealing with “alternative media” in which the community aspect is but one of the facets. In this book, the authors discuss alternative media in terms of the alternative-mainstream dialectic, the civil society debate and finally formulate a synthesizing approach they dub “Alternative media as rhizome” (p. 25) accounting for “their role at the crossroads of civil society, their elusiveness, and their interconnections and linkages with market and state.” (p. 27).³

Taking its point of departure in Deleuze & Guattari’s well-known adoption of the “rhizome” (2004 (1980) as a structure in which any point “can be connected to anything other” (2004, p. 7), this perspective is especially pertinent to the contradictions and in-between elusive status of alternative and community media. This

³ **Transversal Politics**

“It answers to a need to conceptualise a democratic practice of a particular kind, a process can on the one hand look for commonalities without being arrogantly universalist, and on the other affirm difference without being transfixed by it. Transversal politics is the practice of creatively crossing (and re-drawing) the borders that mark significant politicised differences. It means empathy without sameness, shifting without tearing up your roots.”

(Cynthia Cockburn and Lynette Hunter in “Transversal Politics and Translating Practices”, 1999)

The idea of the transversal as a figure connected to the negotiation of oppositional identities, marginality and difference, which we saw in the work of Foucault, was taken up in the British cultural studies of the 1990’s. Most significantly, an issue of the journal *Soundings* (regular editors included Stuart Hall and Doreen Massey) published in summer 1999, bore the title “Transversal Politics” and was guest-edited by Cynthia Cockburn and Lynette Hunter. For them, coming out of a feminist political practice, transversality was especially useful in the context of new transcultural realities and across different layers of society. The starting point is how the term had been used in Italian womens’ peace movement as a term of networking which recognised the need for common topics without the annihilation or fear of difference. (It should be noted that ‘trasversalismo’ in Italian has come to mean an aggregation of members or groups of different ideologies) Transversal politics in this sense can be seen as a reaction against the “anything goes” of post-modernism: transversal politics retain post-modernism’s openness to difference but refutes its idea of an always fluid identity. Instead, transversal politics acknowledge that differences of language, class, gender etc. do matter and can be utilised as positive starting points for political practices that reject modernism’s ideology of universality in favour of transversal, particular situations of temporary crossings and translations.

Further reading: Nira Yuval-Davis, “What is ‘transversal’ politics?”, in *soundings*, issue 12, 1999. ; Anja Kanngieser, “. . . And . . . and . . . and . . . The Transversal Politics of Performative Encounters”, 2012.

understanding of alternative media informs my reading of tv-tv as being a transversal media practice, in that it is a project situated ambivalently in between the civil and advocacy aspects of community media, artistic media critique, and a translocal “artist” scene.

The Media Art Context

The second case study chapter, entitled *The Art of the Overhead*, revolves around the festival of the same name, and is more explicitly situated in the field of media art. It has, like tv-tv, an intervention character, both in terms how it intervened into technological development through the interrogation of a medium’s institutional and material frameworks and in terms of how it intervened into the specific form of the media art festival.

The kind of double-movement present in *The Art of the Overhead*, of reflection on the conditions of production in a medium through a critical engagement with the medium in question, is arguably one of the main characteristics of media art. But what is the need for a separate category of “media art”? Does not all art take place through some kind of medium and isn’t the critical engagement with this medium rather a typical ingredient in much of contemporary art in general? Such questions are increasingly discussed in and outside media art (Arns and Lillemose, 2005; Lovink 2008; Quaranta 2010; Bishop 2012). What Geert Lovink and also Inke Arns have called a “ghettoisation” of new media art has also been an increasing topic of discussion at the actual festivals and conferences devoted to this, supposedly specific, art form. For example, the transmediale festival in Berlin changed its name in 2005 from “international media art festival” to “festival for art and digital culture” with the following remark: “This name is supposed to demonstrate the step away from the niche of ‘media art’, yet still points to the field of tension between culture and digital technologies, which continues to form the main driving force of the festival.” (transmediale, 2007)

In line with the name-change, at the 2007 edition of the transmediale festival, the panel “Media Art Undone” discussed if it was “time to let go of the label ‘media art’ altogether, and to strive for

a re-inscription of media-based art practices into broader art discourses?” (Broeckmann and Bühner, 2007³) In response to the panel discussion, media researcher Florian Cramer called for a tactical solution to the dilemma of media art being positively or negatively discriminated as a separate field. While on the one hand, claiming the category to be epistemologically unnecessary in that all “good art” involves a reflection on its medium of expression anyway, he on the other hand observed that media art festivals and institutions have been important venues for recognizing work that falls outside of the contemporary art market and which explicitly engages issues of the politics of the net and “free culture”.

(...) the entire copyright art, if I think e.g. of Mongrel/IOD, who started at the festivals of plagiarism in the late 1980s, if I think of the Zero One's, who started on the Luther Blissett projects - they all come from practices that weren't media but they found the media art system a receptive platform for doing an art that is not working with the old notion of intellectual property and that seems to be an important issue for me. (Cramer in Broeckmann and Bühner, 2007, n.pag.)

This statement highlights the strategic position of media art as a specific field that provides an outlet for practices inbetween art, hacking and activism. In this respect, a useful framework for thinking media art as a disciplinary field might be the notion of “regional ontologies”. In reference to a framework originally developed by Finnish philosopher Juha Varto; Hannula, Suoranta and Vadén (2005, p. 102) describe this notion as denoting how scientific or artistic fields of practice tend to constitute themselves as independently working spheres of specific knowledge and methods. Given the transdisciplinary nature of the media art sphere, media art as a closed off regional ontology is perhaps a contradiction as it seems to be constantly pointing beyond itself, overlapping with, combining and sampling different areas of concern. If we follow Cramer's argument above however, media art is useful to recognise as a regional ontology for strategic reasons, although we should also recognise that it is imbued with

transversality, and keep in mind that this is a field in constant flux, always struggling to keep up with the fast-changing nature of contemporary media culture.

If, as noted above, Cramer identified the anti-copyright dictums of “net culture” as being one of the main issues that has been catered to in media art; today with the proliferation of bandwidth and phenomena such as filesharing, must one not ask if anti-proprietary ethics have already entered culture and art practices at large? A certain disillusionment seemed to spread across what was once called “critical internet culture” (cf. Lovink, 2002; 2008) as social media turned into big business with the advent of Web 2.0 and its embracing of user-generated content. At the same time however, a new kind of “expanded field” of media art have perhaps emerged from this disillusionment, pointing productively beyond the analogue-digital divide. Following this reasoning, The Art of the Overhead case study unfolds as one possible idea of such an expanded field for media art that utilises both old and new media, while keeping the strength of media art’s tradition of transdisciplinary concerns across art, activism and everyday life.

A Practice-based Approach

A practice-based approach to media and communication studies is at the heart of the methodology behind the case studies. In fact, one of my secondary goals with this dissertation is to rethink the relation between theory and practice in media and communications studies. Like in many other disciplines there exists in media studies, a discrepancy between the scientific status of “contexts of discovery” and “contexts of justification”. These terms stem from a long-standing philosophical debate on objectivity that was initiated by Hans Reichenbach in 1938 (Aufrecht, 2011, p. 373). When mentioning them here, I am inspired by Ylva Gislén’s discussion in her dissertation *Space for action: Collaborative narrative in digital media*, where she describes why this discrepancy matters to her own practice-based research approach inspired by feminist philosophies of science : “that the sphere where problems are identified and key concepts formulated is excluded from the scientific

methodology is a considerable weakness in the conventional theory of science.” (2003, p.51).

For Gislén, who in her dissertation discusses a practice-based approach in the field of interaction-design, one way to breach this discrepancy is to turn to the social construction of knowledge as theorised within science- and technology studies and feminist epistemologies of partial and situated knowledge. Adopting such an interdisciplinary perspective from different philosophies of science is suitable in the context of a fairly young research field such as interaction design, which by default is explicitly connected to practice. The situation in media and communications studies is not so clear-cut, because practice-based research, in the form of direct researcher invention and intervention in the researched situation, does not have a strong tradition in this field. Are we talking about media consumption as a form of practice? Or perhaps we are more concerned with the practices of communications and media professionals within journalism, television, film and the new media? Maybe we are looking rather somewhere in between, given the shifting relations of production in a media-scape some have called “convergence culture”?⁴ And even if we do acknowledge this new media-scape of supposedly blurred production and consumption, does it naturally call for a reconsideration of the role of the media researcher?⁵ How can the critical approaches developed in media studies, of cultural materialism, media history, medium theory, audience studies, media institutions and their discursive formations benefit from an engaging in practice on behalf of the researcher? In an increasingly instrumentalised media landscape where the creative industries tinged demands of innovation seem to take hold everywhere, why the need for even more active engagement in the producing of media culture rather than the keeping on of researching from a safe distance? Or maybe that idea of a safe and critical distance does not hold up under present conditions? These kind of questions are addressed by Jonas Löwgren and Bo Reimer (in press) in their recent conceptualisation of “Collaborative Media”, as a transdisciplinary practice-based research field. Combining interaction design and media studies, Löwgren and Reimer question the traditional

role of the academic towards society, situating their practice-based approach in the context of a new kind of media culture, in which more and more people produce and modify the infrastructures of media rather than simply consume media. This media culture requires a researcher that is not afraid to intervene and develop experiments with the producers of this new kind of collaborative media everyday:

In short, we propose a research approach to collaborative media whereby social sciences and humanities join forces with practice-based research to conduct real-life experiments "in the wild" together with non-academic actors. (Löwgren and Reimer, in press)

The methodologies employed in my case-studies also open up for such a discussion of the possibilities of practice-based and experimental approaches to knowledge building in media research. This approach follows in the footsteps of artistic-research as a kind of "methodological abundance" promoting a "democracy of experiences", to adopt the two intertwined phrases used by Hannula et al. (2005) when they describe the emerging pluralistic methodologies in this field. While still acknowledging, especially in my first case study, the empirical and sociological base traditionally part of the media studies discipline, I aim to expand it through a combination of practice-based and artistic research approaches. This process goes by way of a travelling interplay between objects and concepts in a transdisciplinary way (cf. Bal 2002; Parikka 2012). Although it should be added that the "objects" under study are not necessarily finished artistic works, as I equally regard the process of developing a critical cultural production of "framing" (cf. Bal 2002, p. 140) and curating as a processual open-ended "object" through which one can apply and develop the outlines of a practice-based media research.

Practice-based and Artistic-Research

It is possible to see practice-based research as a widening of the field of science to activities that were, at least from the modern era

onwards, previously excluded from it. This widening started already in the early social sciences that questioned the methods of natural science and in this process also questioned ideas of rational progress. It is not within the scope of this dissertation to give a detailed account of the philosophies of praxis that has led us to the practice-based research of today. But before going through concrete methodological frameworks, and because of the lack of engagement with practice-based research in media studies (cf. Kember and Zylinska, 2012; Löwgren and Reimer, in press) it does seem necessary to look at least briefly at how practice-based research implies a transformation of the role of the scientist.

Practice-based Research

Rather than a person working in a distant lab away from practice, the practitioner/researcher in action- and practice- based research is studying his or her own practice as it develops and the question of methodology is thus shifted into new contexts of knowledge production. As action-researcher Richard Winter explains:

It is research conceived and carried out mainly by ‘insiders’, by those engaged in and committed to the situation, not by outsiders, not by ‘spectators’ (although outside ‘facilitators’ may also, indeed, have rather an important role to play). One important point follows from this definition: if we are inquiring into a practice that we are engaged with and committed to, it follows that action research will always have a ‘reflexive’ dimension. In some way, to some extent, at some stage, we will be inquiring into (amongst other things) our own practice. Action research thus undermines the simple distinction between the researcher and the researched which seems to be presupposed by defining the theorist as spectator.

(Winter, 2002, p. 27-28)

A critical question in the shifting roles of the researcher and theorist described by Winter above also concerns what forms of knowledge are supposed to come out of these new research situations? Within the action-research context it is quite common

that the goal of the research is to in some way improve upon practice, as in the professions of the reflective practitioners that Donald Schön (1983) describes (cf. Noffke, 2002). Connecting to Michael Polanyi's influential idea of "tacit knowledge" and expanding it into more systematic models for how we "do" things, Schön's theories of reflective practice were developed in the early nineteen-eighties. A pioneer work for contemporary practice-based science methodologies, especially within design research (cf. Ehn and Löwgren, 2004; Hillgren, 2006), Donald Schön's *The Reflective Practitioner* (1983) is situated in the wider background of the post-industrial knowledge society rather than the crumbling industrial modernism of earlier practice thinkers like John Dewey or Alfred Schütz. These thinkers were sceptical to rationalist claims of a totally objective science and occupied themselves with establishing criteria for scientific knowledge production within the social sciences, which in their view had to start coping with the practical or common-sense dimensions of life. Schön is instead writing out of an experience of wide public distrust of the kind of "expert" culture that partially was the result of such efforts. One senses a post-1968 critical perspective in Schön's description of a society in which people are increasingly disillusioned by the failure of professionals, citing examples such as bad city planning, misjudged wars and medical mistreatments (Schön, p. 77 ff.). For Schön, the professionalised modern society has actually led to a kind of "deprofessionalization" in which professions and competences have entered into mass-production. Nonetheless, professional practice also involves the kind of tacit knowledge that Polanyi discussed and which Schön likens to a form of "art":

If it is true that there is an irreducible element of art in professional practice, it is also true that gifted engineers, teachers, scientists, architects and managers sometimes display artistry in their day-to-day practice. If the art is not invariant, known, and teachable, it appears nonetheless, at least for some individuals to be learnable. (Schön, 1983, p. 80)

The problem for Schön is that, “We are bound to an epistemology of practice which leaves us at a loss to explain, or even to describe, the competences to which we now give overriding importance” (ibid.), and thereby we need to learn how to articulate the artistry of practice. This means making explicit the theory inherent to practical know-how and integrating it back into a reflective practice. Thus, Schön, through his understanding of different forms of reflective practice, is more concerned with the question of improving on (professionalised) practice itself than with the difference between everyday or common-sense and scientific practice.

With his instrumental approach to improving on practice, Schön has been an influential thinker for the field of action-research, not the least in pedagogics research and its study of different forms of teaching situations (Day, 2002). Building on Polanyi, Schön’s famous characterisation of design as “a reflective conversation with the situation” (1983, p. 76), being an articulatory process involving the shaping of resistant materialities, has also had a significant influence on the more recent emergence of practice-based research, as a term mostly associated with research in and through design and artistic practices.⁶

Artistic Research

The long ongoing relation between art and science notwithstanding, the debate on artistic-research as a specific branch of practice-based research is a more or less recent phenomenon, initiated in the past two decades (cf. Biggs and Karlsson, 2010). The debates to define what artistic research is (and even if it exists), have been wideranging, involving different institutional, disciplinary and political agendas (Nowotny, 2010). Take Michael Biggs for example, an influential British theoretician of practice-based research mostly focused on the relation between artefacts and knowledge (2004, 2005). For him, art and design practices seem to be consisting mainly of producing some form of artefact, while research is about the production of knowledge. How then, asks Biggs, can we build a bridge between these two forms of production? The answer in Biggs’ work is to focus on the “experiential”

part of art production and how this may be verbalised in order to bring out its embodied knowledge (Biggs, 2004).

The focus on the experience and the mediating function of (verbalised) reflection between artefacts and knowledge is a construct which lends itself to the hermeneutic frameworks of interpretation such as the hermeneutic circle of Hans-Georg Gadamer. This framework is adopted in a very concrete way by the Finnish artist Mariit Mäkelä who used a hermeneutic circle or spiral of interpretation as the structure for her PhD work, dividing it into three stages of production/reflection (Mäkelä, 2006, p. 161). What remains unanswered in Biggs' idea of the dialogue between artefacts and knowledge and the literal three stage approach adopted by Mäkelä is how to deal with contemporary art and cultural production which is less concerned with the production of objects and more with the reflective and critical engaging in performative cultural processes, even taking the transformatory character of knowledge production as such as its topic?

The hermeneutic approach of putting experience as central to artistic knowledge production is repeated in one of the first attempts at making an artistic research "textbook": *Artistic Research – Theories, Methods and Practices* (2005) by Mika Hannula, Tere Vadén and Juha Suoranta. Here, the authors are not as focused on the production of artefacts, discussing also different practices such as interventions and relational art practices and in this process opening up to a less rigidly structured research. Hannula et al. follow two metaphors as guidelines for artistic research: "methodological abundance" and "democracy of experiences" (p.28) in which methodologies may be adapted according to the characteristics of each project and where the experiential "objects" of the research take on a plurality of forms.

In writing that "It is not very productive to carry out artistic research in such a way that the person is first the artist who does the art and then becomes the researcher in order to study that artist." (2005, p.27), Hannula et al. do not follow a completely systematised verbalisation or three-step hermeneutic circle as we saw in the previous examples. In what they call the "experiential continuum" of artistic research there is no strict division between

the experiencing and the studying subject and they seem therefore to have a more integrated view on theory and practice. As for Hannula et al., "Artistic research is part of its object and alters it", art, practice and research exists in the same world and the way of dealing with this complexity is for them mainly a question of self-reflective practice where the connection between artistic work and theorisation is articulated.

The methodological aim of research based on the democracy of experience is specifically to show **how the artistic experience and scientific theorisation interact with one another**, guide one another and influence one another, and how this creates critically reflective research. A part of the research must be concerned with how experientiality in this very specific case and moment guides the theoretical formation of knowledge, and vice versa, and how the theory born from reading, thinking and debate gives direction to artistic experience. Otherwise, the scientific and artistic experiences remain either detached or completely mute to one another. (Hannula et. al., 2005, p. 27)

Some of the more specific methodological paths staked out by Hannula et al. include the five-point list they call "Methodological Faces of Artistic Research", which in the spirit of the aforementioned "methodological abundance" comprises of such diverse fields as "conversation and dialogue, analysis of media representations and media objects, collaborative case studies, ethnography and interventions, and design-based research." (Hannula et al., p.32). In the process of my own work, I've found that a similar diversity of methods has been a necessary approach in order to deal with the transversal character of my case studies. Consequently, I deal with some of these more specific methodological aspects in the individual methodological sections of the case study chapters. It should be noted here though, that I do not entirely regard my case studies as examples of Practice-Based or Artistic Research in which the experience of the "artist" has to be filtered through theorisation. My own research is rather an adoption of

some aspects of action- , practice-based and artistic research to the domain of media and communication studies, including the specific perspectives of media archaeology and cultural production. In the following section of this chapter, I would like to discuss both what I see as the problems and the possibilities of this adoption, in order to define my own methodological position.

Media- and Communications Research at the Crossroads

Recent developments in artistic research have started to challenge the methodologies of classical humanities research by proposing experimental practices in the form of artistic production in partly non-linguistic form as legitimate forms of research. This could easily be seen as an “unscientific” approach in the context of media research but perhaps also as an opportunity to expand this field to the practice-based approach. This would be an expansion where the researcher works directly with the media as a material that can be researched also through practical experimentation. In such cases the goal does not necessarily have to be instrumental in the sense of action-research’s imperative to improve practice but instead strive for a refining of our knowing and reflecting about media culture. The current drive towards practice-based research in the humanities and art has not yet been widely discussed in relation to “traditional” media and communication studies which is dominated by social science methodologies in dealing with practice. Is there a place for the seemingly “unscientific” praxes opened up by artistically informed research within media and communication studies? How and why should one envision such a practice-based media research? The reconsideration of history and materiality in the theory chapter should have a bearing on how we redefine practice in media studies as well.

In a study about the emergence of practice-based research, Lisbeth Elkjær has pointed out that artistic and research practices may be seen as forms of knowledge production that with time have become to be regarded as separate and that in practice-based research they are allowed to meet again (Elkjær, 2006, p. 19; cf. Nowotny, 2010). We also find that some of the thinkers that have been the most influential for practice-based research such as Schön

refer to everyday as well as professional practices as involving some kind of “art”. Here, they seem to be closer to the antique notion of “ars”, as the practice of a skill rather than the fine arts or what we today would associate with modern or contemporary art. In this sense, I think that considering the historical conditions for the science / art divide may become an interface for rethinking the ground for practice-based research, as this divide points to a tension in the very concept of practice or praxis. This tension might eventually point us in new directions, “against” the art / science or the praxis / theoria divide, towards a more historically grounded and ultimately more integrated idea of transformative praxis or poeisis that is inclusive of theory (cf. Zielinski, 2010).

An approach which refutes the dichotomies of art/art/science and theory/practice is being developed in this dissertation through the methods of media-archaeology, which explores how artists and researchers (sometimes in one and the same person) working transversally across media and different institutional contexts are engaging in experimental practices not easily categorized as simply art or research. For example, Zielinski (2005) shows that the 15th and 16th centuries in particular are full of examples of research practice where boundaries between disciplines such as art, alchemy, natural science and mathematics are still blurred. Building on such experimental art/science fields, the projects of the case studies in this dissertation demonstrate the possibility of a practice-based media research. The idea of practice being developed here is not one of a completely controllable process, but as one of an active transformative force capable of producing new forms of knowledge.

This discussion, reaching back to the question of the science and art divide, relates directly to the problem of the concept of medium and media. The contemporary concept of media is, in the words of Silvia M. Wagnermeier and Siegfried Zielinski, “either underdetermined to the point of complete triviality or, from a historical perspective, much too narrow” (2005, p.10). Swedish media researcher Ulla Carlsson (2003) hints at the same problem in the introduction to a publication commemorating on the 25th anniversary of the Association for Swedish Media- and Communication Research. Here Carlsson writes that a common criticism of the

field is a lack of historical perspectives, meaning that the “wheel is invented over and over again” (p. 8-9). Where historical media research has taken place, media have often been equated with 20th century media meaning mass media such as the press, film and radio. As Solveig Jülich writes in an essay on the historical aspects of media research, these are “Perspectives that in a one-sided manner have emphasized media’s specific properties or chronological lines of development (...)” (my trans. p. 230, 2006), going on to assert that it is mostly through research in new media that historical investigations of the relations between pre-1900 technologies have started to be undertaken.

Another problem of media and communications research that Carlsson (2003) singles out is how to relate to the fact that media and communications are in fact being studied in many other disciplines. This entails risking a too narrow definition of media when working only with the internal methodologies. The history of science is full of examples of how representational, mediating, material as well as immaterial devices and techniques, have played an active role in research. Considering this heritage, reaching far beyond the age of mass media, media and communications research could play a greater role in analysing the way that technologies have, apart from having advanced empirical knowledge about the world, also been inscribed with particular ways of telling about, showing and even re-making the world. This combined historical and material scope has consequences for the question of a practice oriented media research.

Traditionally, we might say that media researchers are afraid to get their hands dirty in the sense that they seldom carry out experiments with the studied media material itself. Instead media research is seen as a mixture of classical humanities research and social sciences methodologies in which the option is either between so called qualitative or quantitative methods. Empirical work is thus restricted ontologically and direct experiments with media production is not considered as an option for proper research.

The marginalisation of practice-based approaches in the humanities can probably be related to the way that such methodologies of direct experimentation seems aligned with the natural

science approach or, in the specific context of media studies, also with the media effects research during the 20th century that led to unattractive behaviouristic theories of reception. I will not argue here for a version of humanities research that re-incorporates experimental work with clearly defined goals using natural science as a model. I'm not talking about the old dichotomy of the "two cultures" that has to be reconciled with a middle ground of mutual exchange. Instead I want to point out that if the historical analysis of scientific discoveries and their representations shows that the boundaries between the arts, science and technology are not as clear as 20th century thought have made them up to be, then this could be used as a point of inspiration for a practice-based and experimental media research. This would mean embracing unorthodox methodologies where the work with media and their surrounding cultures as material, facilitating processes of and producing media artefacts, would not only be used to represent results but as research in itself, in constant dialogue with a theoretical practice. Such an approach could be seen as trying to reach beyond concepts of "tacit" knowledge or reflective practice often used in connection with practice-based research. Instead theory and practice is seen as always articulating each other throughout an integrated research and production process.

As Deleuze wrote in his essay "Having an Idea in Cinema" (1998), filmmakers do not need philosophers in order to reflect cinematically through sound-images (cf. Deleuze and Guattari, 1994). In the same way, why should we say that young people growing up in the hyper-mediatized world today will necessarily need the tools of media and communication science in order to produce themselves reflectively in the integrated audiovisual communication networks? Will this not only lead us to a post-modern version of cultural conservatism?

Instead of the point of view of media reflection as purely theoretical, I would like to consider the possibility of media research coming to practice, not as an expert reflectively advising and commenting on it, but actively engaging in a cultural production, hopefully bringing about unexpected results in fields such as media

production or media art. For the concluding part of this section, I will sketch out such an approach, which takes both cultural production and theory seriously, as equally valid practices in a research process. This implicitly entails using that third category of Aristotle, of “poiesis”, which for me entails thinking about research as a production of knowledge through different means, a world-making of sorts. For Cornelis Castoriadis (1987 (1975)), poiesis is the primary category of knowledge, leading on from the ontological mapping out of conditions for knowledge to a kind of “ontogenetical” approach to knowledge as always in the making, shattering the dream of a pure theory or practice.

Cultural Production and Practice-based Research

The Aristotelian division into *theoria*, *praxis* and *poiesis* is derivative and secondary. History is essentially *poiesis*, not imitative poetry, but creation and ontological genesis in and through individuals’ doing and representing/saying. This doing and this representing/saying are also instituted historically, at a given moment, as thoughtful doing or as thought in the making. (Cornelis Castoriadis, *The Imaginary Institution of Society*, 1987, preface)

This concluding section is an attempt at synthesizing my exposé of the relationship between *praxis* and *theoria* and media research into a methodological framework for the present dissertation. In the previous sections I discussed theory and practice through their relation to different forms of research, describing the positions of action-, practice-based and finally artistic research. This was followed by a discussion of knowledge production within media and communication science, where I tried to establish a historically grounded argument for a direct engagement in media practices as part of an expansion of the methodological frameworks in this discipline. At the same time, I’ve been alluding to an integrated approach which acknowledges *poiesis*, the aesthetic act of knowledge and cultural production involved in all forms of doing, practical as well as theoretical. The concrete practice-based methodologies as well as the theoretical methodologies which I

engage in the case-studies are situated in this poetical, integrated approach rather than being linear cases of “theory first, practice later” or the other way around. The specific methodologies will be dealt with in each case study but I also see fit that I provide the reader with a general outline here which also reflects back on the different perspectives discussed so far in this chapter.

A Practice of Cultural Production

The cases in this dissertation involve practice-based research in the sense that I’ve actively taken part in them as a cultural producer, including curating and artistic work. This is of course not the only way that media research may be considered as practice-based. A more traditional understanding would be that simply engaging in the reception and use of media by different forms of audiences and users is grounded in practice (cf. Couldry, 2008). More in line with my use of the term is the emerging work by researchers such as Sarah Kember and Joanna Zylinska who include their own artistic practice in their research on new media (2012) or Ann Balsamo who uses her design practice as basis for her research into “designing culture” (2011). The difference to the traditional approaches to practice here is in other words one of agency, as my research is one where the agency of the producer(s) forms the experiential empirical data, including my own involvement as a curator and occasional artist. Consequently, the form of practice which is predominant throughout this dissertation can be broadly categorised as “cultural production”. I employ this term in three ways, first in a highly pragmatic way, mainly as the practice of conceptualisation and organisation of projects or platforms for cultural expressions. Secondly, cultural production also takes the concrete form of cultural expressions such as exhibitions, works of art, films, texts etc. Finally, cultural production can also be seen from a perspective of political economy, as a form of production contingent with contemporary situations such as the network culture context. In this broad manner, I regard “cultural production” to be a suitable form of practice to experiment with in the context of media and communication research. Media archaeology is the most

significant subset of cultural production that will be deployed within this approach.

The cultural production approach of this dissertation is influenced by the performative dimension in Thrift's notion of the cultural circuit (2005), for example when thinking about cultural production also as a set of relations between theories and practices. The practices of cultural production that I describe in this dissertation, I regard similarly as contingent with concurrent relations of production rather than comprising of any autonomous critical character.⁷ This gives the projects described in the case study chapters a necessary historical dimension, which is made explicit in my attempts at contextualising the projects. The practical dimension of these cases, through curating and artistic interventions, are ways of expanding upon that historical reflection in the present, as attempts at critically performing the problematic of technological development. In this process, the form of the research, as cultural production, seems close to the practice-based methodologies of action-research (cf. Winter, 2002) in that it takes place mostly

⁷Transversality as a critical research paradigm

"(...) the praxis of speculative thought, by which I mean the praxis of devising techniques for thought concerned with building unrealistic or otherwise called hyperstitional – or also fabulation-conditions, able to insert cuts, gaps, break downs in the smooth operational flow of info-knowledge of cybernetic capitalism."

(Parisi, Luciana, "AtHQ: transversality", 2008, n.pag.)

For researcher Luciana Parisi, in an essay on transversality and the critique of cultural studies institutions, transversality can be a key to construct critical academic disciplines when deployed as a "praxis of speculative thought" (2008). Parisi's starting point is similar to Nigel Thrift's notion of the cultural circuit of contemporary capitalism. She discusses how in the present knowledge economy "cultural and creative capital" have become pre-emptive forces that disable critique by incorporating everything. The kind of practice needed to escape this process of capture, for Parisi, is a "minotarian praxis" that does not try to create its own independent, protected and particularised spaces within institutions, but which enacts critique by camouflage and viral logics in existing disciplines. These are transversal practices that do not seek unity but exists only in specific contexts: "one could call them revolutions meaning changing the evolutions of things (...) and the break down or irreversible dis-function of a causal chain of effects." (2008). The idea of working within chains of development and evolution, changing them by lateral critique that relativises linear causal chains and inserts "unrealistic conditions of thought" can be likened to how media-archaeology is employed as a transversal approach in media studies, cultural production and technological development in this dissertation. What we can learn from Parisi's essay is to remember to ask the question that she also poses, that of how to evaluate transversal practices and to sense their finitude, their built-in expiry date that logically stems from their specificity and intervention-based character.

References and further reading: Luciana Parisi, "AtHQ: transversality", 2008; Thrift, *Knowing Capitalism*, 2005.

through collective, organisational processes. The goals of my research however comes closer to artistic research as there is no instrumental aim of “improving practice” but rather an engaging in a common poetic making that transversally folds back onto the initial research premises. For Gislén (2004, p.49), discussing design research, practice-based research should not only strive to be reflective practice with the intention of improving upon one’s own practice, but also seek to influence the practice of others and, perhaps most importantly, contribute to a critical discussion on the discourse as such. In my own research, I see both my own practice and the practice of others as valid “objects” of the research, doing media archaeology by drawing on the practice-based methodologies of artistic research as well as inter-disciplinary close-readings of cultural objects; together forming what I propose as practice-based research through cultural production. In this research approach, two methodological concepts stand out: case studies and cultural analysis. In the way that I am deploying them, both these methods should be seen as integrating theory and practice.

Case Studies and Cultural Analysis

Media, it should be clear, are very particular sites for very particular, importantly social as well as historically and culturally specific experiences of meaning. For this reason, the primary mode of this book is the case study. (Gitelman, 2005, p. 8)

Just as in Gitelman’s book, the main part of this dissertation is made up of case studies. If we view cultural production as a term denoting the process of production, the “texts” and the cultural circuit, there is the possibility (and necessity) of applying a host of different methods. For me, cultural analysis in the form of close readings of “texts” or rather objects such as art installations and TV-programs has constituted one way of developing the cases further. Cultural analysis in the manner proposed by Mieke Bal (2002, 2003) is suitable to my exploration of the concept of transversality in relation to the cases at hand and to my aim of integrating theory and practice. In the cultural analysis of Bal,

theory itself is acknowledged as a kind of practice which is thoroughly enmeshed with the doings of culture.

In describing cultural analysis as "a sensitivity to the provisional nature of concepts", Bal strives to direct culture studies away from the idea that culture studies proceeds through stages of ever more elaborate theories of cultural objects, emphasising instead the more pragmatic interdisciplinary testing of concepts that on the one hand are programmatic and delimit a field of study but on the other hand are attentive to how the objects "speak back", thus re-defining our initial concepts. For Bal, the discussion of concepts is even "an alternative methodological base for 'cultural studies' or 'analysis'" (Bal, 2002, p. 28). This may be comparable to how Gilles Deleuze conceived of having an idea in philosophy, not as a reflection on the pre-given, but as a doing, a making of concepts, serving as active agents in the shaping of the world. (Deleuze in Kaufman 1998, cf. Deleuze and Guattari, 1994). In her understanding of cultural analysis, Bal reminds us that knowledge itself has a crucial performative dimension as it does not exist only as something "out there", waiting to be appropriated" but as a "learning from the practice of interdisciplinary cultural analysis" (2003, p.39).

As a methodological framework for this kind of knowledge building, Bal proposes the "case study" as a process-based cultural analysis which does not offer systematic explanations but instead unfolds as an exploration of "the possible relations between concept and object" (2002, p.10). This is a highly situated approach in that it demonstrates the usefulness of a concept in situ rather than through a final result with claims to objectivity. Two such case studies are explored in this dissertation, in the manner of how cultural analysis works with relational "objects" speaking back to the researcher (Bal, 2003), employing transversality as a lead concept, followed by a number of new concepts that I develop along the way such as "reverse-remediation".

It must be noted, that I modify Bal's notion of cultural analysis here, as I bring in the fields of practice-based and artistic research, actively influencing the "objects" under analysis and intervening in the research field, letting practices as well as texts work as active

and reflective agents, applying and refining transversal concepts of cultural production in and through old and new media. Thus in the case studies, as dealing with different forms of cultural production, I apply an integrated approach to theory and practice. These projects are constructing specific worlds and action spaces within the overall topic of the dissertation and as such they constitute transversal media practices that unfold through research and cultural production.

¹ John Downing's classic book *Radical Media* (1984) in its first editions would be a case in point. (He later revised his positions to a more nuanced reading with the 2001 edition) Chris Atton's *Alternative Media* (2002) acknowledges the problem but his empirical material in the form of Fanzines is a history of anarchist and left-wing movement media. Even though Atton also discusses the complexity of the politics behind his examples, claiming they do not succumb to any clear-cut party political lines.

² One could of course argue that such projects also have a highly political function in representative democracies, I'm just going along with the view here that not all community or local media initiatives should be defined as staking out specific political projects.

³ The reference here is to the conference description and transcript edited by Valeska Bühner and Andreas Broeckmann (2006).

⁴ This is the approach taken by David Gauntlett and Will Merrin in their calls for a Media Studies 2.0 (2007; 2008). Following an article on media practice by Nick Couldry (2004) there has also indeed been a turn towards practice in media studies, albeit not in the sense of practice-based research. For Couldry, practice serves as the key term to reorient media studies towards the social sciences, studying what people do with media. This is a distancing of media studies from literary criticism which is continued in the anthology edited by Birgit Bräuchler and John Postill, *Theorising Media and Practice* (2010), beginning with an extended version of Couldry's article and followed by contributions from a rich number of media researchers. The only researcher among these to discuss practice-based research, in which the researcher is also involved in the practice, is Cathy Greenhalgh with the contribution "Cinematography and Camera Crew: Practice, Process and Procedure". This is the very last entry, placed in the chapter on "New Media Production Practices" and seems to represent a very different, insider's take on the relationship between theory and practice than the rest of the book which is concerned with theorising practice from the outside. Greenhalgh instead adopts a transversal and interventionist view of media practice: "Media practices insert themselves within other practices, entering without permission, incorporating new information, technology and forms at speed." (p. 309).

⁵ Here I should add that I'm not referring to media research already formulated within the context of the computational sciences, architecture and design, where the MIT Media Lab would be a well-known example.

⁶ Andrew Pickering's *The Mangle of Practice* (1998) is a later work that takes this kind of conversational epistemology of practice further and relates it to materiality and performativity. For Pickering, practices, scientific ones included, always involve a performative dimension, likening practice as a performative process to a "dance between human and material agency" (p.51).



4 THE WORLD'S LAST TELEVISION STUDIO

“In a very literal sense, video’s medium is community.”

- David Joselit, *Feedback*, 2007, p. 105.

Picture 4.1. “Bye bye Analogue Television!” Still from Reclaim Sort Skaerm/TV-Hacknight video, tv-tv, 2009. The image is a retransmitted picture of the Danish National Television switching off their analogue transmission. The hostess is waving goodbye to the viewers as a technician gets ready to press the button.

Introduction to Case Study I

In 2004, an indefinite number of artists and alternative media practitioners in Copenhagen received an e-mail with a Word-document attached that sported the headline “TV-Station offered to good purpose”. The invitation was signed by two persons connected to TV-STOP, a left-wing local-TV station based in the Nørrebro area of Copenhagen, and that had been in operation since the early 1990’s. As the invitation text made clear, by the mid 2000’s, TV-Stop had run into a production hiatus, lacking fresh ideas and mostly transmitting re-runs. Signed by “Stine and Maria” the invitation elaborated:

One of our good ideas, by our own account, is to refashion the station into a broader artistic project, where the TV-part is perhaps only a segment of something bigger, as we have the perception that there are many artists who work with the computer, Internet etc., and who clearly could be located in the same place, where TV is being produced etc. (Eriksen, 2004, my trans.)

The project under consideration in this case study chapter is already through the above invitation framed in a landscape of shifting conditions for media production. The old TV-Stop people had the idea that “artists would be the bearers of a new revolution” (Hvejsel, 2008), signifying a move from a clear-cut leftist activist context of advocacy-media to a position stating the connection between aesthetics and politics. The ambition was also to expand the scope of activities from TV to new media platforms such as the Internet. The result of the invitation was a project that, as the poetic title of this chapter suggests, questioned the whole production logic of the institution of television. In this sense, *The World’s Last Television Studio*, as a title denoting both the tv-tv project and this chapter, suggests that we will here look at how television’s monotheistic position as a mass-medium is being transformed into the convergent and divergent media flows of network culture. In this study I map the activities between 2005 and 2009 of tv-tv, an artist run television station in Copenhagen,

Denmark.¹ I will argue that this was a project of cultural production situated in a border-zone between new and old media, the local and the global, art and activism. Through the case study, I aim to explore on the one hand, the specific practices tv-tv tactically used in a transversal “new-media” approach to the old medium of television and on the other, how on a strategic level, the whole institution of television is mutating into a network culture entity. This leads us to a recurring problematic throughout the dissertation: what are the conditions of production for such artistic projects today, which resonate with media archaeology, media activism and in this case also community media which are fields undergoing transformation through the cultural circuit of network culture?²

A project in this case study that takes a speculative approach to this problematic, is the practice-based “intervention” into the context of tv-tv: TV-Hacknight, a project I carried out together with my collaborator Linda Hilfling. The TV-Hacknight project “eventualises” the transition from analogue to digital television transmission in Denmark and further reflects on tv-tv’s hybrid context of production as situated in between the institutionalised forms of analogue alternative/community media and the more fluid contexts of digital production models. Through the TV-Hacknight, this chapter also offers a connection to the subsequent case of The Art of the Overhead and ultimately explores the overarching dissertation concern of how old and new media forms influence one-another beyond the binary definitions of analogue/digital and other linear evolutionary conceptions of technological development in media culture.

¹ At the time I’m writing tv-tv still exists, but shifted in late 2009 from being a local, analogue channel to a nation-wide digital one. It is mainly the first local-TV period that this study focuses on as well as the actual moment of transition to the digital net. The chapter title, *The World’s Last Television Studio*, referencing the 1970’s “classic” TV-documentary *The World’s Largest Television Studio* (see later in this chapter) is meant as a commentary on this transition, involving as we will see a significant change in the conditions of Television production and consumption.

² This is further discussed in chapter six, a discussion chapter following the two case-studies where I consider the implications of how media archaeology is becoming a generic cultural force in network culture.

Structure of the case-study chapter

After a brief clarification of the case study methodology and my own involvement in tv-tv, I move on to the case “excavation”, that establishes the context through an outline of the history of local media in Denmark, the field in which tv-tv is most concretely situated. The section traces the first steps of local broadcast media to the present politics of media production in Denmark, where forms of self-organised and DIY media expressions are situated in shifting medial, economic and regulatory systems. This will be a brief analytical history of local media in Denmark, seen as part of the politics of particularised civil culture and as a kind “institutionalised dissent” existing in the tensions between state-regulations and an oppositional public or counter-public sphere. As will be made increasingly clear, tv-tv existed within this ambiguous territory, as it was simultaneously a regular non-commercial local-TV channel transmitting through the airwaves *and* a DIY art project with a clearly stated intent to form a kind of media counter-public. This means tv-tv was subject to all the juridical baggage and regulations of the Danish state for local media associations at the same time as it was organised in a decentralised manner by a network of producers, coming mostly out of a contemporary arts background, with the explicit intent of creating an alternative voice in the Danish media through self-organising, collective and DIY modes of production.

The tensions between different organisational logics in the tv-tv project resonates with the notion of *counter-publics* developed by Michael Warner (2002a; 2002b). For Warner, counter-publics are precarious forms of organisation built on the same discursive powers as that of hegemonic publics, and which while queering these powers in different ways, are always prone to appropriation by the social mainstream. The counter-publics perspective is used for the section following the initial historical contextualisation, and entails an initial analysis of the tv-tv manifesto as a founding document of tv-tv, and as a text which attempts to call tv-tv as a form of counter-public into action. The analysis of how the manifesto is part of a counter-public discourse will serve as an entry-point to a close-reading of *Alle kan lave tv (Om Bush)/Everyone can Make TV (About Bush)* (tv-tv, 2005), one of

the first, and arguably only, tv-tv programs explicitly produced in the spirit of the tv-tv manifesto text.

The analysis of *Everyone can Make TV (About Bush)* is also a comparative one, considering that I bring in the context of 1970's TV-activist projects in the form of the "historical tv-tv", namely the North American cable access organisation TVTV and their production *Four More Years* (TVTV, 1972). Through this comparative analysis I wish to discuss the tension in the organisation and production of tv-tv as on the one hand being a project that tried to constitute a kind of mass-media counter-public by echoing earlier forms of activist television in the style of *Guerilla Television* (Shamberg, 1971), and on the other hand, being an art project working in the tradition of institutional critique. Rounding off this analysis of tv-tv as a form of counter-public, I discuss some of the observations that I've made during the research period of the tv-tv working structure, especially concerning the stations' recruitment process and how that again relates back to its ambivalent status in between art and activism. Some of the different tv-tv strategies of participative production as well as interventions into the television institution are discussed through my further analysis of a number of programs and tv-tv projects.

Finally, the "Intervention" section will talk about a specific project that I organised within the tv-tv framework. The main and concluding focus of this section will be the *TV-Hacknight* intervention which explicitly addresses the analogue/digital switch-over in Denmark and also marks the end of tv-tv as a local TV-channel.

On the whole, the case study chapter follows a timeline which, despite some detours and bifurcations along the way, is mostly chronological, starting with the birth of tv-tv as a local TV station in 2005 and concluding with the restructuring of the station for the national digital net at the end of 2009.

Apart from the direct heritage of the predecessor of tv-tv, the left-wing advocacy and community channel TV-Stop, the practice of artistic media-activism as critical interventions into television has in itself many historical precedents (cf. Joselit, 2008). This case study deals with some of the TV-Stop context, providing comparative readings wherever it is beneficial for the main concern of

situating tv-tv's transversal position in the contemporary media-scape. A disclaimer is suitable though: my goal is not here to write a history of community media and artistic projects within television on a whole, but I have tried to accommodate these contexts through references made to earlier practices in the actual analysis of tv-tv projects such as the close reading of *Everyone can Make TV (About Bush)* contra *Four More Years*.

Case methodology

Following my exposition in the methodological chapter, this case study involves equally my own practice and the practice of others as “objects” of the research, drawing both on the practice-based methodologies of artistic-research and cultural analysis in the form of close-readings of cultural objects and processes such as in this case, TV-programs and production flows.

As my personal involvement in tv-tv spans a five-year period, the empirical material for the study primarily departs from a participant's perspective akin to the earlier discussed practice- or -artistic research based models. The field of artistic research as described by various actors such as Hannula et al. (2005) or Mäkelä and Routarinne (2006) involves a cyclical, hermeneutic methodology which is clearly inherited from earlier action- and practice-based research agendas (cf. Elliot, 1991; Winter 2002). Discussing the relationship between the notions of action and research in critical hermeneutics, Kevin Kelly (2000, p. 1) writes that “The kinds of projects where these arguments are most applicable fall under the rubric of ‘participatory action research’, where there is a strong accent on the communicative processes leading to formulation of interventions and evaluation thereof.” My research work in this case study has taken place along a similar logic as it is based in my long-term engagement in tv-tv as a form of participant-observant, to the development of small (often collaborative) projects and workshops. These have then lead to further questions and reflections which in turn lead to the development of more coherent projects along with a deepened analysis according to the main themes of the research. In the tv-tv case, these activities have also been complemented by a limited set of interviews with the other

main practitioners.³ The function of these interviews has mainly been one of contextualisation of the history of tv-tv as an art project, the collaborative organisation of production and to a more limited extent, the individual experiences arising out of specific tv-tv productions.

Taken together, my various activities within tv-tv, while also incorporating close and comparative readings of “texts”, could on the whole be described as fitting into what Hannula et al. (2005) have characterised as a “Collaborative case study”: “*Collaborative case studies* is a name for such approaches in which one tries in one way or another to influence the research object and include people other than researchers in the research.” (p. 88). In this context, the authors stress the long-term engagement of collaborative case-studies and the permanent interaction with a given community.

In a collaborative case study the interaction between the researcher and the community being researched is not clearly defined temporally or thematically, but is permanent or at least long term. Essential in the permanence is the active interaction between the researcher and those being researched, as well as a commitment to certain commonly agreed goals. The researcher acts within the practice she researches, not alone but with others, together searching for solutions. The collaborative case study enables simultaneously both the scientific and practical approaches. (Hannula et al., p. 43)

As the quote above belies, the goal of action-research oriented work is often stated as being the “improvement” of practice in some way – the common searching for solutions. In engaging tv-tv as a researcher, my goal is not to develop a specific tool or design but rather to set in motion critical reflections on this kind of media production at the interface of art and activism. Rather than positing myself as a researcher intervening *into* tv-tv, my work with tv-tv has

³ The interviews were carried out in 2008 and 2009 and the interviewees were both active and former members of tv-tv. The interviewees were: Morten Goll, Joachim Hamou, Kent Hansen, Ulla Hvejsel, Jakob Jakobsen and Signe Skovmand. Kirsten Dufour and Jo Zahn also provided their insights through more informal conversations.

always been an organic collaboration which is used as a springboard for projects departing from tv-tv as an institution intervening in the television and media landscape at large. Thus the collaborative case study in itself is not the goal but a consequence of the action-based nature of the research. My focus is rather on the practice-based and artistic/aesthetic working through of specific problems of media culture than on functional changes of practice. With the tv-tv case study, I wish not so much to reflect on the process and experience of collaboration as such but on how the specific projects and results coming out of the collaborations speak back to the questions and concepts of the research. Through cultural analysis connected to the practice and through theoretical concepts, I make the projects as objects speak back in the dissertation, developing the initial concepts and taking them in new directions.

In such a context of highly “situated knowledge” (Haraway, 1988), it could be argued that knowledge will always be biased and thus non-scientific. Here, I wish to again stress that the goals of the research is not to evaluate the projects of the case study on the basis of their instrumental success or failure but rather that the dissertation must be thought of as at the same time less and more than the projects themselves – it is a tool for advancing the development of new critical concepts for analysing, thinking about and instigating transversal media practices across old and new media.

Excavation

Community media is local television in Denmark, microradio and public access television in the United States (...), local newsletters produced by women in Bengal, and the web-based Indy-media that operates in cities around the world (...) (Ellie Rennie, *Community Media – A Global Introduction*, 2006. p. 3)

Context is key for alternative media production, argues alternative media scholar Chris Atton (2002). Research on alternative and community media also frequently seems more preoccupied with the contexts of particular processes of communication and citizens’ knowledge transfer than on content-analysis or theorising the aesthetics of the projects considered (cf. Howley, 2005; Rennie,

2006). In this case study I will try to accommodate both the contextual and the content-based analysis, following the assumption that, especially given the status of tv-tv as a project partially situated in an art context, one cannot separate the politics from the aesthetics. As for the wider contextualisation of tv-tv in the community media context, I first turn to the local media field, which as Rennie points out in the quote above is the main setting for alternative media practices in Denmark. In this background section, I will also focus on TV-Stop, not only the predecessor to tv-tv, but also a local media station that has become inseparable from the development and history of alternative media in Denmark.

My intention in this section is to explore that history as well as to ask questions about the transition to a new media context: that of how networked digital media impacts the modes of production at play in a project like tv-tv. Because of its particular story and “interstitial” position, I will argue that tv-tv cannot simply be reduced to a retro-art-activism project and because of the converging media cultures of today we cannot think of it as outside of digital and networked contexts.⁴

Even though they might seem antithetical, the development of privatised and alternative DIY media have frequently been operating in tandem, pushing new forms of production and distribution as well as sharing a common opposition towards state regulated media. Without commercial forces pushing for the expansion of cable based TV-networks in the USA, the first experiments in Public Access television might not have seen the light of day. In the 1970’s, laws were passed in the United States dictating that the new commercial cable networks had to provide a certain percentage of funding for the establishment of non-commercial public interest channels, paving the way for so called Public Access and Cable Access TV (Ellie, 2006, p.53).

⁴ At the same time as tv-tv was founded, the Italian Telestreet movement was active, fusing the production methodologies of the Internet with local television. See for example Matteo Pasquinelli’s article “Manifesto for Urban Televisions” (2003). See also Fredrik Svensk (2005) for a good critical account of the Italian Telestreet movement and its influence on contemporary art practice. The idea of the net forming a vanishing point for TV has also been further developed in an Italian anthology (Pecchioli, 2005) appropriating Umberto Eco’s concept of Neotelevisione, originally devised in the 1980’s as a concept to describe the emerging Berlusconi mediascape.

A similar story applies to the European model of “Open Channels” which, as David Garcia and Lennaart van Oldenborgh describes (2007, p. 99), were started as an illegal activity by Dutch media activists who pirated Amsterdam’s first cable-networks in the mid-seventies. This activist/entrepreneurial approach has been present also in Scandinavia, where the first challenges to the State media monopolies of both Sweden and Denmark came from pirate radio stations, transmitting the pop-culture sounds of the commercial music industry from ships in the surrounding oceans (Ahm, 1972; Nørgaard, 2003).⁵ This description of the juridical trickstery of the first Danish “pirate ship”, hosting the commercial Radio Mercur, shows how early media entrepreneurs were using activist methods that exploited gaps in the local-global contexts of media production:

The ship is officially rented at the London-based BALTIC PANAMA SHIPPING COMPANY by the Zürich-lawyer dr. Jan Flachmann’s Swiss INTERNATIONALE RADIO MERCUR ANSTALT, set-up with the same purpose, and which equipped it with transmitter and transmission-pole, prior to when the Danish RADIO MERCUR company rented it! (Ahm, Leif, 1972, p. 154)

Being one of the very first Danish chroniclers of this story, Leif Ahm also reports on similar attempts going on in television piracy, now taking to the airwaves quite literally: the Radio Mercur people planned to have a plane rented in Germany, equip it with a television transmitter, and let it circle over Denmark (Ahm, p. 154). Thus prior to the existence of the Internet, other nets where frequently mobilised by reterritorialising media producers.

In the Danish as well as the Swedish case, this pirate activity softened the state radio’s approach to popular culture and in the nineteen fifties forced it to also include popular music (Nørgaard 2002; Kotschack, 2009). Later, in the sixties there was pressure to democratise also the access to the actual production and distribution of media. This pressure came mainly from two different directions;

⁵ See also Ljunggren, Bohman, and Karlsson (2002) on the Swedish pirate activities which led to the establishment of the first “workers radio” stations paving the way for commercial music in radio.

liberal forces wanted to break the monopoly in order to open up media production to the private market; while left-wing parties and grass-roots groups were interested in the possibility of democratising citizen and special interest groups' access to media. The Danish state however was reluctant to break the monopoly of the Danish Broadcasting Company (DR). When an experimental scheme for local-radio and TV was eventually tried out in the beginning of the nineteenseventies it was modelled exclusively on the concept of creating mini versions of the DR stations around the country. The initial inspiration came mainly from the Canadian and American experiments with Cable-TV but due to the lack of sustainable models the original idea of strengthening democracy through direct contact between citizens and local governments was not realized.⁶

The differences between the Scandinavian and North American media landscapes are worth considering as possible contributing factors to this initial failure. The Danish state was sceptical towards the liberalisation of access to media production and distribution, meaning that there were no sponsors from the commercial sector to support the project. This meant that it was up to the state alone to devise the scheme, failing in sufficiently addressing the grass roots, instead adopting a top-down organisation structure regarding the issuing of broadcasting licenses.

A second scheme for local media was devised by the Danish social-democratic government at the end of the 1970's and put into action in the early eighties. The focus was still on non-commercial media but this time a more systematic subsidy system was built in as well as a consideration of the grass-roots more in style of the European Open Channels (Jauert and Prehn, 1995). Consequently, wireless broadcasting was also included in the licensing system and according to Jauert and Prehn (1995), as many as 150 licenses were issued for local radio and television during the first years. The criteria for obtaining a license was set by the ministry of culture and stressed the

⁶ For this historical outline, I have relied on the extensive work of Per Jauert and Ole Prehn (1985, 1995, 2002, 2003), leading researchers on local-media in Denmark. I also build the story on a lecture by and discussion with Preben Poulsen, a veteran activist of Danish local-radio who gave a practitioner's view on the subject of the Danish media political development of non-commercial local-media from the beginning of the 1980's until today at a seminar of the association SAML in Avedøre, Denmark October 20, 2006. Data are from my own notes and Thomsen, Gitte et al. 2006.

importance of “advocacy”-media, meaning that local media should foster citizen’s involvement and promote debate in local democracies in stark contrast to the national television’s orientation towards broad public interests. This practically meant that the new framework for local media in Denmark would be twofold: accommodating both community (local) and advocacy (special interest, political) media. Different groups who were active in establishing the first channels were organisations with roots in the worker’s movement, religious and immigrant communities (Poulsen, 2006).

However, the goal of creating advocacy media catering to a kind of alternative political sphere in local communities was quickly undermined by a number of factors. According to the Danish radio activist Preben Poulsen, politicians were early on waning in their support, fearing the outbreak of renegade broadcasters who would influence the Danish public (Poulsen, 2006). A reason for this change in attitude could also be attributed to the fact that there was a change in government: the local-media scheme was planned by a social-democratic government but actually implemented under the rule of the conservative party.

Another undermining of the advocacy approach was the process by which the grassroot stations themselves, fearing they would get too few listeners, also increasingly commercialised their broadcasting, by for example playing music off the hit charts. This led in many cases to the complete erosion of the initial committed and advocacy media ideals and that many local-radios became professionalised competitors to DR’s national and regional broadcasters. In 1983, some of these now very popular stations let political parties buy ad time for their upcoming elections. This meant that even if in theory the founding nature of Danish local-media was non-commercial, in practice it was now opened up for commercial exploitation as well.

A consequence of the opening towards commercialisation by the local media was increasing liberalisation of the Danish media landscape, culminating in the establishment of the first nation-wide commercial channel, TV2, by the mid 1980’s. Ironically, it was the non-commercial and supposedly grass roots media themselves that had taken a significant step towards this change. This also led to concrete changes in the local-media policies which by the mid-

nineties came to recognize both a commercial and non-commercial layer (Jauert and Prehn, 2003, p. 5). The result was an increasing polarisation, where the remaining non-commercial stations would be the ones to carry on the original ideology of advocacy-media, evident for example in the forming of the organisation SLRTV for promoting the rights of non-commercial community media in Denmark.

Throughout the 1990's, the non-commercial local media were supported by the State through a subsidy pool covering the production of programs and administrative costs. Similar to the model of public access television in the United States, the criteria for support were often formulated according to ideas of alternative public spheres stressing both citizens involvement in local communities and giving a voice to minority or under-privileged and special interest groups. The different Danish associations for non-commercial local-media such as SAML or SLRTV also stress this mix of access and plurality as founding principles of their existence (SAML, 2012; SLRTV, 2012).

TV-Stop

One of the most notable TV stations that appeared on the Danish non-commercial local media scene was the predecessor of tv-tv, TV-Stop. For about a twelve year period, the channel enjoyed a mix of state-support for local media as well as support from various private funds for its left-wing political advocacy reporting (Henriksen and Mazanti, 1997, p. 18). The TV-Stop project was an initiative of people from the Danish squatting movement, having its centre in the Nørrebro area of Copenhagen and other alternative-milieus such as the Christiania community (Foreningen Støt Stop, 2012). Over a course of a few years in the early to mid-nineties, TV-STOP became the most well known local TV station in Denmark and is generally regarded as having had a significant impact on media politics as well as on the style and contents of reporting in Danish TV journalism.⁷

⁷ As is the case with almost all local TV projects in Denmark, it should be noted that a "station" does not necessarily refer to an independent channel but rather constitutes an association which has been granted a broadcasting license from the state. The broadcasting license specifies how many hours per week that the station is allowed to transmit and on which frequency. In Copenhagen, all non-commercial stations were from the mid-eighties collected on UHF 23, a common channel also

The TV-Stop station was especially notable as an alternative voice in the Danish media during its first five years of transmissions in 1990-1995. In this period, TV-Stop gained recognition for its dedicated street-style reporting and fighting for the rights of alternative media in Denmark. Most famously, TV-Stop was a key player in uncovering the truth behind the tumultuous events of May 18 in 1993, where masses of people in Copenhagen took to protesting in the streets, opposing the state's ignoring of the outcome of a vote related to the Danish exceptions to the EU related Maastricht deal. During the protests, the panicking Danish police used their guns (unheard of since the Nazi occupation), accidentally killing one protester. As the mainstream media usually showed short, sensationalist clips of burning cars and violent protesters and usually shooting from the point of view of the police, TV-Stop were moving around in the crowd of protesters, shooting long sequences following the whole length of the events (Mathiasen, Nordkap and Rugaard et al., 1998).

As TV-Stop sold their footage of the demonstrations of May 18 to the major public service stations in Denmark, the investigation of what happened that day was completely turned on its head. (Schwartz-Nielsen, 2012). Initially, the event did not gain much media attention as the mainstream media basically followed the police authorities' own silencing of the incident through blaming it on a single panicking cop. The TV-Stop recordings on the contrary, showed that the police had acted on a deliberate strategy, shouting "aim for the legs!" (TV-Stop, 1993). Following the TV-Stop documentation the Danish state had to instigate a public investigation into the police handling of the situation (Mathiasen, Nordkap and Rugaard et al., 1998). The intervention of the TV-Stop footage was a classical example of how an alternative media outlet can impact

later known as "Kanal København" (Foreningen Støt Stop 2012; Mediehuset København, 2009). In the beginning of its activity, TV-Stop was transmitting ten hours per week in total on this channel, spread out over the course of four week-days (Tue-Thu from 23-14, Fri 23-05) and reaching about 1,5 million potential viewers (Press, p. 22, 1990). The physical location of TV-Stop however, did resemble a TV station, as it was one of few such channels with full live studio facilities, operating out of the 3rd floor of "Folkets Hus", Copenhagen's oldest squat located by Folkets Park in the heart of the Nørrebro area.

the mainstream media and even turn around the whole public and state interpretation of the reality behind a specific news “event”.⁸

Another significant example of how TV-Stop had a felt impact on the Danish media landscape concerns the legislation of alternative and citizens journalism. A common problem for this grey area of journalistic activity is the lack of press accreditation meaning that channels such as TV-Stop could be refused access, for example to areas sealed off by the police. After a long process initiated by TV-Stop in 1991, the official Journalist association of Denmark in 1996 finally decided to allow that press cards could also be issued to non-salaried staff and from 1997 this has been a permanent legislation (Helle Hansen/Mediehuset København, 2009).

Some of the problems that TV-Stop increasingly faced might be regarded as symptomatic for the development of the citizens and community media landscape in general. As pointed out by the authors of the study “TV-Stop as an employment project” (Henriksen and Mazanti, 1997), there were significant primary and secondary goals in the activity of TV-Stop. The primary goal being the establishment of an alternative non-commercial TV-Station focusing on local issues as well as critical investigative reporting falling outside the scope of the mainstream; while the secondary goal concerned the educational role of TV-Stop as a training ground for new talent who would be able to go further into the media businesses. As an uptake for new talent, TV-Stop almost never paid any salaries but mainly functioned through interns on unemployment benefits. Many of the people involved in TV-Stop actually went on to work within the media businesses, forming independent film and TV production companies or working for the DR, Danish National Television (cf. Henriksen and Mazanti, 1997, p. 8).⁹

By the early 2000’s, the media landscape had dramatically changed as the conditions for citizen media were increasingly tied to new

⁸ The responsibilities behind the shootings however remained unresolved, according to Mathiasen, Nordkap and Rugaard et al. (1998) largely because the video recordings were finally not used by the commission in a consistent way.

⁹ Henriksen’s and Mazanti’s 1997 study found that 39% of TV-Stop’s previous members had found employment and that 37% were in education (p.8). In total, two thirds of those who found employment were working in the media-business or in media-education.

media such as the net and cheaply available hardware such as digital camcorders. The people behind TV-Stop found themselves increasingly lacking the kind of new influx of talent which the station had previously enjoyed and officially closed down in 2004, even though it had become dysfunctional and mostly transmitting reruns already a few years before. (Helle Hansen/Mediehuset København, 2009). One of the reasons for this could be that, while the primary goal of being an alternative media voice was probably still valid, the secondary one of being a training ground for new talent was no longer as attractive for young people already in possession of digital tools for their own media production. The fact that the later tv-tv project never took on any interns or managed (or even aspired) to function as a training ground at all, is in this context telling.

Institutionalised and Dissolutionised Dissent

The perspective on alternative media as a form of “institutionalised dissent” seems especially pertinent to the particular field of local media in Denmark and the successes and failures of a project like TV-Stop. A term originally proposed by alternative media scholar Chris Atton (2002), it refers to how state regulated local media forms a regularised environment for alternative culture. Since, as Atton discusses, alternative media production has always been as much about the modes of production as about the content (content and context are seen as inseparable), radical community media in this state-subsidised and regularised format seems unlikely to ever effectively achieve goals such as establishing alternative public spheres. New constellations of production have also appeared as the media landscape is undergoing a major digitisation and restructuring which also deeply affects the non-commercial local media. In the context of alternative media, the net is obviously the most important example of a digital medium offering new possibilities for small media operations. Yet other conditions of production apply to the net, and one should be attentive to the hidden regularisation of this sphere – what we may think of as a transformation from institutionalised to “dissolutionised” forms of dissent where

the regulations are less transparent and connected to neo-liberal cultural politics.

In 2002, after the shift in Denmark to a new right-wing government, subsidies to the non-commercial local media were severely cut and local media associations were starting to talk about “Berlusconi-times” (Thomsen et. al., 2006). After many complaints, a new support system with more subsidies was implemented in 2006, even though support was significantly lower than recommended by a report commissioned by the ministry of culture itself (Kulturministeriet, 2006). At the same time, new regulations also sprung into action that imposed new rules on the non-commercial local-stations, stating that they would have to explain more in depth than before how they were rooted in their local community, geographically speaking. Some organisations raised concerns that this could be interpreted as a way to actually diminish the more opinionated radio and TV-stations catering not so much to geographically delimited localities as to special interest groups within political subcultures and minority groups. It would also become increasingly evident that this was also a scheme to further erode the existence of the non-commercial branch of local-media in favour of commercial interests. The proposal for a new national media policy released in the summer of 2006 seemed to confirm these fears since, the non-commercial local media were now literally written out as constituting an autonomous sector. Gone was the paragraph specially catering to the non-commercial local-media, which were instead consistently grouped together with local media in general, including commercial license holders (Kulturministeriet, 2006).

The new media policies bore signs of a political agenda of catering to the liberalisation of the media market in new ways. The non-commercial sector was now still able to obtain a special financial support but it would not enjoy the same privileging from the state when it came to license issuing. This development seems to fit perfectly with the description from David Harvey (2006) of the politics of neoliberal restructuring. Under the mantle of decentralisation and democratic ideals, the Danish cultural ministry was carrying out de-regulations leading to market friendly re-

regulations such as: closing down all local-TV boards who previously issued the local licenses, reducing the financial support to almost nothing in order to be able to raise it marginally under parolés of “generosity” the following years, opening up the financial support to other actors than media broadcasters, bureaucratising even more the conditions for obtaining a license and at the same directing the regulations surrounding the license issuing in favour of commercial actors (Kulturministeriet, 2006).

In 2007, the Danish ministry of culture also pioneered a new kind of “media-license” fee which replaced the traditional radio- and television-license for ordinary citizens. The fee was thereby expanded to include all PC’s, certain mobile phones as well as other new media devices based on the convergence of media. The argument behind this expanded media-license was that you could access the content of the Danish public service stations not only by the traditional media such as television and radio but increasingly also through net-based technologies. By implementing the new media-license fee system, the Danish state was actually the first in the world to have introduced a taxation that also impacted Internet users.¹⁰ Maybe this new form of financing of the state media would be a logical development if the Danish state had also been implementing a progressive politics on the development of the new media infrastructure. The proposal for the media policy 2007-10 however only got into such topics concerning the digitisation of analogue media, which will be the topic of the final part of this case-study.

It is in the shifting contexts for television and media production that the tv-tv project becomes interesting as an object of study, with a transversal approach that on the one hand points back to historical examples of the ties between artistic media activism and local media and on the other hand to the new types of networked cultural production emerging in between analogue and digital technologies and associated modalities of organisation and production.

¹⁰ The license aimed to be “neutral” towards technology (Kulturministeriet, 2006, p.7). This model is now a more common practice in the European Union with countries like Germany and Sweden having adopted similar media licenses.

“Everyone can make tv- tv”
– a manifesto and its (counter-) publics

“tv-tv / FreeUtvResearch

Within the last eight months we have been part of a group working on taking over a local tv-station in Copenhagen. It is now on air as tv-tv and is based on a decentralised network of producers producing content for the channel.

At the Copenhagen Free University we have established FreeUtvResearch that is an unit engaging in the investigation of and experimentation with television as a public sphere. FreeUtvResearch is a node in the tv-tv network.

tv-tv will be sending regularly on Channel Copenhagen Tuesdays from 11pm to 1am, Wednesdays from 11pm to 0:30am and Thursdays from 11pm to 1am.

tv-tv consists of Kristina Ask, Stine Eriksen, Joachim Hamou, Kent Hansen, Henriette Heise, Christian Hillesøe, Ulla Hvejsel, Jakob Jakobsen, Marie Reynolds, Katya Sander, Simon Sheikh and Lukas Swenninger.

We will keep you posted on the CFU website/blog. FreeUtvResearch programs will soon be available for download via p2p.

All the best

Henriette Heise og Jakob Jakobsen / March 4 2005”

(Heise and Jakobsen as quoted in Fuller, 2005)

Almost one year after the open e-mail invitation mentioned in the introduction to this chapter, the English media artist and theorist Matthew Fuller forwarded a message about tv-tv to the e-mail list Nettime (see previous page). The message was originally from Jakob Jakobsen and Henriette Heise, two artists who had responded to the TV-Stop call for taking over the TV-station. This message made it clear that there was now a new local-TV station replacing TV-Stop and run by a group of twelve people. As Jakobsen explained in an interview that I conducted as part of this research (2008), one of the first meetings explicitly dealing with the artistic take-over of tv-tv was held in a left-wing collective in Ravnsborggade, situated, like the previous TV-Stop studio and production facilities, in the Nørrebro area of Copenhagen.

There were about 10 or so who came to that meeting. As we learned that we could take over TV-Stop as artists, I thought it was a quite outstanding offer to be part of building a whole TV-station from scratch. (...) After a long discussion, we agreed to make a rather open invitation to the artist milieu and the activist milieu. That was the background for the first open invitation which was distributed widely in the artist-milieu, the activist artist milieu. (Jakobsen, 2008)

The following section will focus on the period leading from this meeting, via the open invitation and the e-mail on Nettime signaling an initial formation, to the publication of the tv-tv manifesto and the instituting of some common threads for tv-tv as a decentralised production unit. This introductory analysis and discussion of the early tv-tv activities will draw on the influential theory of publics and counter-publics developed by Michael Warner. This earliest period of tv-tv activity is one in which my own involvement in the TV-station was almost non-existent, extending only to receiving the invitation e-mail in 2004 and participating in what was the first "official" meeting following it.¹¹ The investigation of this period

¹¹ After the first invitation e-mail and meetings in the summer of 2004, a Yahoogroups e-mail list called Stop Kunst was established. In the winter, a message was sent by the newly established "Steering Group" who asked possible future contributors to send in proposals by December 20th that year. The mail ended with the line, "The steering group mainly consists of visual artists who are interested in producing TV-art and not art on TV." Followed by the names Kristina Ask, Ulla

instead mainly takes its point of departure from interviews with the founding members of tv-tv as well as an analysis of the relation between historical precedents in television activism and one of the first productions in which tv-tv worked as a collective. That particular production was trying to set in motion the promise of the tv-tv manifesto which was published in 2005 and that stated “Alle kan lave tv” - “Everyone can make TV”.

The tv-tv manifesto, distributed as a poster in public space, on the tv-tv website and on various electronic mailing lists in the spring/early summer of 2005 was, as stated by several of its authors, a heavy compromise of many different agendas in which some got more control in the end than others (Hamou 2008; Hansen 2008; Hvejsel 2009). This however, does not mean that it is uninteresting to turn to in order to start looking at tv-tv as a production entity, as this text is as valid a collective production of tv-tv as any of its actual TV-programs. Michael Warner (2002a) has discussed how texts calls publics into action, and in this respect the discourse of a manifesto like the above is particularly interesting for the way that it positions the relationship between tv-tv as a television channel and as a “we” (a collective), and its audience, in the imaginary of a kind of “counter-public sphere”.

Hvejsel, Henriette Heise, Katya Sander, Stine Eriksen, Marie Reynolds, Lukas Swenninger, Joachim Hamou, Kent Hansen, Christian Hillesø, Simon Sheikh, Jakob Jakobsen. (Author's own e-mail archives)

tv-tv manifest

tv-tv er alles tv. I dag er det blevet let at producere tv, den teknologiske udvikling har betydet at mange selv kan producere tv med deres hjemmeudstyr. Vi vil bruge og misbruge alle forhåndenværende apparater til at lave tv. tv-tv er kvalitet på vores måde. Alle kan lave tv.

tv-tv er selvorganiseret tv, ikke statens tv eller markedets tv. tv-tv er et netværk af uafhængige redaktioner og producenter, der brænder for at lave tv. tv-tv vil bryde med den traditionelle monopolisering af produktionsmidlerne og retten til æteren.

tv-tv er offentlighed. Vi betragter tv som en aktiv del af det offentlige og fælles rum som samfundet udfolder sig inden for. tv-tv er et bud på hvad offentlighed også kan være.

tv-tv er undersøgende tv. Vi vil eksperimentere med tv, give os tid til at undersøge mediets muligheder og bryde rytmerne som tilbydes på de fleste andre kanaler. Vi vil gøre op med den seertalsbaserede generalisering over hvad det kan forventes at folk vil have. Vi vil undersøge tv som en kommunikativ situation og droppe den monotoni som præger medielandskabet i dag.

tv-tv er hverdagens tv. Vi vil med tv-tv skabe offentlighed med udspring i dagliglivet i København og rundt omkring på kloden. tv-tv skal være en station, hvor der er kort afstand mellem gade og æter. Vi søger et direkte og mangfoldigt udtryk med udgangspunkt i de passioner vi møder og de evner vi besidder.

tv-tv er kritisk tv. Vi ønsker ikke at skabe tv som afspejler samfundet. Vi vil afskaffe 'seeren' som passiv forbruger. Vi vil ikke bare lave tv, vi vil lave tv-tv.

www.tv-tv.dk

tv-tv har sendetid på Kanal København
tirsdag kl 23.00-01.00, onsdag kl. 23.00-00.30 og torsdag kl 23.00-01.00

Picture 4.2 The tv-tv manifesto, Danish version, published in 2005 by Kristina Ask, Stine Eriksen, Joachim Hamou, Kent Hansen, Henriette Heise, Christian Hillesøe, Ulla Hvejsel, Jakob Jakobsen, Marie Reynolds, Katya Sander, Simon Sheikh and Lukas Swenminger. Image: tv-tv.

tv-tv manifesto

tv-tv is everyone's television. Today it has become easy to produce tv. Technical innovation has it made possible to produce television with your own equipment. We will use and misuse all possible tools to make tv. tv-tv is broadcast quality on our terms: everyone can make tv.

tv-tv is self-organized tv, neither the state's apparatus nor the market's tv. tv-tv is a network of independent producers who all are longing to make tv. tv-tv wants to break the traditional monopoly of the means of production and the right to broadcast.

tv-tv is publicness. We see tv as an active part of the public sphere in which society is mediated. tv-tv is an effort to produce another public sphere.

tv-tv is investigating tv. we want to experiment with tv, make time for an investigation of tv's possibilities and break with the rhythms offered by most tv channels. We will refuse ratings based generalizations of what people want, and rather investigate tv as a setting for communication. We want to break the monotony that characterizes tv today.

tv-tv is tv of the everyday. With tv-tv we will create a public based on everyday experience in Copenhagen and around the world. tv-tv will be a station with a short distance between being on the street and being on the air. We shall attempt a direct and diverse mode of address, taking its point of view in the passions we encounter and the abilities we establish.

tv-tv is critical tv. We do not aim to reflect society, and we will try to abolish the 'viewer' as a passive consumer. We will not just produce tv: we will produce tv-tv.

www.tv-tv.dk

Picture 4.3. The tv-tv manifesto, English version, published in 2005 by Kristina Ask, Stine Eriksen, Joachim Hamou, Kent Hansen, Henriette Heise, Christian Hillesøe, Ulla Hvejsel, Jakob Jakobsen, Marie Reynolds, Katya Sander, Simon Sheikh and Lukas Swenninger. Image: tv-tv.

Publics and Counter-Publics

In delineating his concept of “counter-publics”, Warner does not attempt to define it as located completely outside of the public sphere but rather follows Jürgen Habermas seminal 1962 work *The Structural Transformation of the Public Sphere* which looks at the historical conditions for the emergence of public opinion as distinct from state authority, and how it comes to expression through various media. In Habermas’ vision, the 18th and 19th century emergence of a public sphere in the European context was connected to a certain privileged social (upper, male) class in which a dynamic for exchange between private and public discourses became possible through the aid of literary movements and the development of a free press. The foundation of Habermas’ version of *the* public sphere relies on an equal access to means of communication, where rationally formulated critical opinions interact with each other. Following Nancy Fraser’s 1990 critique of how this model excludes certain social groups, Warner tries to establish a dialectical counter-part to the notion that the public is exclusively based on the notion of universal access, and in doing so he goes from the model of one public-sphere to a pluralist projection of many publics. Warner develops his model from the proposition by Fraser where counter-publics is based in confrontational and oppositional stances to the “dominant” deliberative formations of public opinion such as those predicated on gender or race.

In contrast to Fraser however, Warner does not regard that grounding discourse in an oppositional position, for example connected to a subjugated group, is a sufficient condition for constituting a counter-public. For Warner, publics of “subaltern” advocacy may come to be incorporated within any political orientation and may be more correctly described as belonging to “subpublics” (2002a, p. 85) rather than constituting public-spheres in their own right. The crucial constitutional logic of counter-public spheres according to Warner is the double-movement of discourse as simultaneously setting the limits of a public, defining its topics and actors, and as a direct participatory and performative practice through which the public is constituted. That is, a double-movement

of talking and constituting oneself through this talking as well as reading and responding as a form of private-public interpellation.

In describing the “projection of a public” as “a new, creative, and distinctively modern mode of power.” (2002b, p. 75), Warner thus rejects models based on binary oppositions and tries to direct our attention to the presuppositions of power regulating the constitution of all forms of publics. Thus Warner’s idea of the public is different from the Habermasian idea of the rationalist-actions that are based on the universal access to the public-sphere; and instead publics as well as counter-publics come into existence through a performative poesis, that is they do not simply exist beforehand as empirical subjects which one can choose to join or not. Instead, publics exist in a paradoxical situation of being addressed to an unknown quantity of strangers, coming together as a community: “A public is a relation among strangers.” (Warner, 2002a, p. 55).

The specific relation among strangers which forms the basis of any public is for Warner grounded in the simple observation that the members of a public cannot all know each-other on beforehand, as that would reduce the public to the level of the group. A public is formed through a discourse that is “both personal and impersonal” (p. 57), addressing an indefinite “we” which will supposedly identify with the specific arguments laid out in its discourse – from which follows Warner’s idea that publics are “self-organizing”. This self-organising, as Warner points out, becomes a question of poetic-world-making, and in this making he stresses the importance of style (p. 77). A counter-public is a public in which discourse actively relates to the stylistic conditions and self-organising presuppositions involved in the formation of a dominant-public and which does so from a performative vantage point, queering and subverting the dominant public’s conditions of access.

In a public, indefinite address and self-organized discourse disclose a lived world whose arbitrary closure both enables that discourse and is contradicted by it. Public discourse, in the nature of its address, abandons the security of its positive, given audience. It promises to address anybody. It commits itself in principle to the possible participation of any stranger. It there-

fore puts at risk the concrete world that is its given condition of possibility. This is its fruitful perversity. Public discourse postulates a circulatory field of estrangement that it must then struggle to capture as an addressable entity. No form with such a structure could be very stable. The projective nature of public discourse - which requires that every characterization of the circulatory path become material for new estrangements and re-characterizations - is an engine for (not necessarily progressive) social mutation. (Warner, 2002a, p. 81)

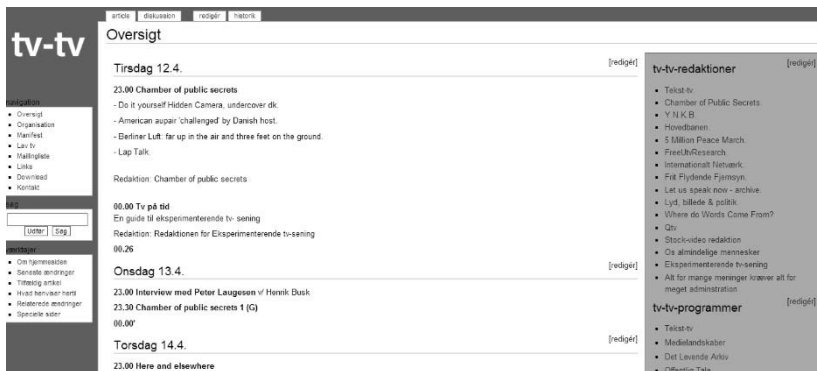
While recognizing then, that counter-publics function like publics, this notion can still be a useful way to work out the specific way that an “alternative” media entity such as tv-tv relates to the mediascape at large. tv-tv clearly worked with a critical reflection about the assumptions through which an imagined “public” of mass media functions. Crucially, tv-tv operated via a different context of producer-viewer feedback than that of the dominant mass-medial situation, instead situated against that of vernacular network culture. A network culture specific context of consumer turned producer feedback is hinted at in the sentences of the tv-tv manifesto such as “We will refuse ratings based generalizations of what people want, and rather investigate tv as a setting for communication.”(tv-tv, 2005a, n. pag.). Such statements can be seen as reactions both against commercial television and the public-service ethos of simply “mirroring” the people’s best interests. Hence, the manifesto statement that “tv-tv is self-organized tv, neither the state’s apparatus nor the market’s tv. “. The ultimate foundation for this type of television as “another public sphere” seems to be the technical production conditions, as the sentence “everyone can make tv” in the manifesto is connected to technical innovation, making reference to the increasing ubiquity of audiovisual recording technology and distribution channels in the digital and networked consumer or “prosumer” environment. Through this kind of technocratic view, there’s a connection between the tv-tv project and earlier Utopian artist-activist movements within experimental 16mm film in the 1960’s as well as video/tv-collectives of the 1970’s to which I will later turn for a comparative analysis.

Tensions between open and closed

The tv-tv manifesto further contains several of the tensions of public discourse that Warner discusses. Most significantly, this concerns the way that the performative addressing of a public is executed through both personal and impersonal speech. As one of the writers, artist Ulla Hvejsel stated, "The aesthetic expression of the manifesto was very much a form of 'so and so and so' but at the same time it says that everything is open... That manifesto is still confusing to me." (Hvejsel, 2009, n. pag, my trans.). In the tv-tv manifesto there is the explicit statement of the project as "publicness" and the stressing that everyone can make TV, which assumes that there really are passive viewers out there who desire to be something else - to be singled out from the crowd and be a part of the "we" of this counter-public manifesto. This seemingly addressing of the whole of the TV-viewership however is contradicted by the connection of the manifesto to a group of artists in the form of the tv-tv "Steering Group" (referenced in mails and online). In interviews, one of the manifesto writers explicitly stated that it was important for him that the manifesto did not actually mention art as such, as the main goal was the DIY media approach and spreading the means of communication. Yet, the relation between the manifesto and the formation of a specific tv-tv collective of artists establishes a completely different context, where the indefinite "we" moves from the status of a (counter-) public to that of an identifiable group.¹²

The group of artists now calling themselves tv-tv, in the act of naming themselves as a group in connection to publishing the manifesto and other documents seemed to be working in the long-running tradition of "institutional critique", employing a self-reflexive and tactical critique of the medium through the medium itself.

¹² Like all publics, a counterpublic comes into being through addressing an indefinite sphere of strangers: "This is one significant difference between the notion of a counterpublic and the notion of a bounded community or group." But counterpublic discourse also addresses those strangers as being not just anybody. " (Warner, 2002a, p.86)



Picture 4:4. The tv-tv Wiki in 2005 with transmission schedule and editorial groups.

tv-tv is investigating tv. We want to experiment with tv, make time for an investigation of tv's possibilities and break with the rhythms offered by most tv channels. We will refuse ratings based generalizations of what people want, and rather investigate tv as a setting for communication. We want to break the monotony that characterizes tv today. (tv-tv, 2005a, n. pag.)

In a way, this contradiction between being an open-ended, “invitational” public media project and a critical TV-art group part of a longer tradition resonates with much of tv-tv's activity on a whole. With Warner, one could argue that this dilemma lies at the heart of any project's attempt to construct a public which, especially in the case of counter-publics, is always a precarious balancing act between the open and the closed: “Reaching strangers is public discourse's primary orientation, but to be a public these unknowns must also be locatable as a social entity, even a social agent.” (Warner, 2002a, p.76). This dilemma of public discourse being simultaneously open and closed, situated between the known and the unknown of the group/public is posited by Warner as leading to the need to standardise forms of circulation, for example

through regular temporalisation, a factor which seems to be especially pertinent to the scheduled regularity of TV-transmissions.

The “constraints of circulation” discussed by Warner (2002a, pp. 54-55), such as the social conditions of access are evident already in the tensions between the aspirations to “publicness” in the tv-tv manifesto and the almost hidden context of tv-tv as an art project, revealed by the signing of names connected to persons who identified themselves as artists. But beyond the textual domain of the manifesto we need also to look at the televisual output of tv-tv and how production was practically mobilised to meet the demands of the manifesto. For this purpose, I will turn to one of the first attempts at collective production within tv-tv, the program *Everyone Can Make TV (About Bush)*.

From The World’s Last to the World’s Largest:

Everyone Can Make TV (About Bush) and Four More Years

Probably the very first production (and even one of the only) in which tv-tv tried to collectively produce with explicit reference to its manifesto was a production formed as a reaction to the visit of US President George Bush in Copenhagen on July 5-6, 2005. By this time, tv-tv had found an organisational structure in the form of independently working “editorial groups” formed on an ad-hoc basis by individuals and networks (sometimes overlapping in several groups) who got together around a common thematic concern. At one point there was at least 15 such groups announced on the tv-tv web-site, among them *text-tv*, *workshop-tv*, *queer-tv*, *living archive-tv*, *young stockshot-tv*, *fff-tv* (short for *more people mediate-tv*), *FreeUtv* and others. The Bush program was mainly an initiative of the editorial groups *fff-tv* (Joachim Hamou and Morten Goll) and *FreeUtv* (Jakob Jakobsen and Henriette Heise of *The Copenhagen Free University*), but involved several other tv-tv members as well. One of the production strategies of the program was to expand beyond the tv-tv editorial groups and mobilise the potential counter-public out there, armed with camcorders, mobile phones and digital cameras.

It is tv-tv at its best, when it becomes this kind of collective decentralised production, creating an almost cubist image of an event where people have been invited to film according to their own preferences and then to collate these images in order to show them as a coherent program without any overarching editorial or any other focus than this theme which we have proposed. (Jakobsen, 2008, my trans.)

tv-tv invites everyone to take part in covering George Bush's visit to Denmark on the 5th and 6th of July, 2005. At the beginning of July, we will all be able to experience a visit of the American president George W. Bush in Copenhagen at close hand.

We will see the way that the Danish prime minister and co. will bow and suck up to the leader of the world's last super-power. But of course they also got together to take us into a hopeless and bloody war in Iraq.

We can be sure that the media's coverage of this event mainly will show us celebratory banquets with the Queen, official congregations and speeches. And we can be sure of that the media will not show us the whole paranoid power-machinery that surrounds this person and what it means for life in Copenhagen on the 5th and 6th of July. Just as they will as far as possible seek to avoid giving word to the resistance to the visit.

For these reasons, we invite everyone to take part in covering the visit on the street level. Get a video-camera ready, borrow one, rent one, and send a mail to mailhamou@yahoo.com and you will get more info on how you can participate.

All tapes will be edited and screened on tv-tv Wednesday July 6 and Thursday July 7 from 23.00 at Kanal København (TV-STOP).

Editorial: FFF and FreeUtvResearch

(tv-tv, 2005b, n. pag, my trans.)

An open invitation to contribute to the coverage of George Bush's visit to Denmark was distributed on the tv-tv website, in the transmissions as well as through e-mail lists. The intention of this distributed production form had a concrete function: to create a portrait of the state-visit from the street point of view, showing the massive security and paranoia supposedly not conveyed through the traditional media. This concept would, perhaps unintentionally, ultimately give the sloganistic *Everyone Can Make TV (About Bush)* title an ironic edge, as truly not everyone could actually make TV about Bush in this heavily controlled public space that became Copenhagen during those two days.

Following the idea of the invitation, as reproduced on the previous page, the program itself is a kaleidoscopic portrait of the characters and events surrounding the state-visit: anti- and pro-Bush demonstrations, casual bystanders, the myriad of journalists, the abundant police forces. Almost all sequences are presented as silent documentation without additional commenting, although in a few instances the tv-tv "reporters" pose questions to people on the street in vox-pop style. Some sequences are direct mash-ups of what was shown on the other television channels as when we get treated to recurring short loops of blurry footage of Bush leaving Air Force One. In one such sequence, a news-cast voice-over comments: "Here, I'm simply positive that we are seeing the neck of the American president." This is looped four times in a row until we get the stunning conclusion: "We are". tv-tv member Joachim Hamou, who was one of the main forces behind this program, commented:

A kind of Berlusconi condition reigned. Fogh (the prime minister – ed.) had complete control over the medium. It was as if there was nothing to criticise regarding that visit, it was simply only good. In spite of quite large demonstrations. So there was the idea that we could deliver another view of this day. That's why it became important that we could produce during the day and show the program in the same evening.
(Hamou, 2008)

While not being transmitted live, the production was extremely rushed, edited together “live” by Jakobsen and Hamou and transmitted already in the evening of the same day as Bush had visited Copenhagen. In this way the program went to some extent to fulfill the goal of tv-tv of being a kind of virus inserted in the midst of the mass-media flow and that casual “zappers” would not be able to miss (Goll, 2008). It was produced under the tv-tv program category of “tv-tv: Aktuelt” (Current affairs), shown as a logo in the top left-hand corner during the transmission, and as such the program producers tried to claim an alternative place within the real-time overflow of media produced during these two days. This kind of program-categorisation strategy had been developed concurrently with the decentralised editorial groups. Jakobsen (2008) explained that the always visible categorisation of a program in labels such as “Aktuelt”, “Live” and simply “Program” was an attempt to exert a subtle “institutional critique” on the television medium, with the intention of making strange its recognisable program formats. In this way standards of television would be opened up and their execution presented as fields of possibility of many different ways of producing television, by simply demonstrating that this and this can constitute a “Program” as well.

In line with such a meta-approach and reflection on the TV mediality, in *Everyone Can Make TV (About Bush)* it is not so much the contents of the visit of Bush himself that comes into focus as this collaborative “street-view” foremost is a documentation of the desperate need of “actuality” in the TV coverage. A good example of this is the opening sequence, filmed at the small “planespotting” hangout and Burger-bar Flyvergrillen (“The Airplane Grill”). This cult grill-bar is strategically located just outside the fence of the main Copenhagen Airport runway, giving a good view of planes landing and taking off. In the sequence shot at this location, we meet an odd collection of flightspotters, pro-Bush supporters and journalists waiting in windy weather for the landing of Air Force One. “What channel should I be on?” asks a TV2 reporter who is adjusting his headset for the right sound, going on to joke about the bad weather and how they’ll soon be standing around getting “soaking wet”. Later, the chief inspector

of police, Per Larsen, is getting ready to talk about the security measures, which are among the largest ever undertaken in the state of Denmark. He's obviously a bit nervous to go on camera, joking about the wind messing up the few hairs he's got left on his head. When he is later on air he proclaims everything to be under control and describes the different demonstrations they are expecting over the next two days. Bush is arriving in the evening of the 5th of July and leaving early afternoon on the 6th, on what is coincidentally his birthday (cf. TV2, 2005).

Each segment of the two hour long tv-tv program on the Bush visit is intercut with a handmade title screen proclaiming the next segment, using a homemade stylistics that also underscores the rushed and "Current Affairs" nature of the production. In total there are ten different segments with titles such as "BURN BURN BURN" focusing on flag burning and "Give a Face to Bush" which is a cinema-verité style reportage where people on the streets are asked to express their feelings towards Bush through adopting a facial expression of choice. In several of the segments, more than one submitted contribution seems to have been involved; for example the TV-mashups mentioned earlier regularly occurs throughout the whole program.

Among the few segments in which subjects are interviewed is the "Pro-Bush" one, where Joachim Hamou asks young Bush supporters about their reasons for meeting up that particular day. In this segment we also see the interventionist news coverage deployed by tv-tv member Morten Goll, who specialises in "news-painting". Painting as a medium may seem diametrically opposed to the liveness of the TV medium's flow, yet Goll produces paintings depicting scenes typical of mass-events and in this case works on a study of a police-man, Danish flags and a TV-team. In yet another section, on a secretly planned activist sit-down, " 'Reclaim the streets' Kgs. Nytorv", Hamou and Jakobsen synced their cameras and present the events in a dual split-screen view, occasionally also showing each other in the process of documenting the event.

Taken as a whole, the Bush program is quite a mixed bag, assembled as it is from 5-6 main contributors, each with their own networks of additional participants. Still, there are at least two

main themes that can be singled out. On the one hand, the program is dominated by a focus on the official mediation of the state-visit and on the other hand there's a focus on what the "man on the street" was doing that day, especially concerning political protest. Most of the time, these two approaches meet as during demonstrations we see the abundant presence of journalists, documenting even the smallest congregations of crowds.

While not always the case, the choice of angles and use of long-takes to some extent prevents the tv-tv footage to enter into the sensationalist category of TV-journalism that it supposedly should form a counter-part to. At the Reclaim the Streets demo for example, we repeatedly see a couple of other journalists taking photographs each time red smoke is blown into a small dancing crowd from a mobile stage and sound system assembled for the protest. These photographs would most likely shroud their subjects in some mystery as to how many protesters are actually present, while the tv-tv footage shows the events from slightly further away, exposing the actual dancing crowd to only consist of between fifteen and twenty persons. While interviewing people on the street, the tv-tv program also sometimes cuts to a long-shot of the interview setting, breaking the convention of the intense interpersonal style of TV-interviews as usually shot in close-up.

The "Other" tv-tv (TVTV)

In analysing the Bush program however, one should be careful not to ascribe too much innovation to the tv-tv approaches to event-coverage outlined above. With this in mind, I will now carry out a comparative analysis with a historical counter-part to the Bush program which already in 1972 broke new ground in terms of informal news and event reporting. This is the American 1972 TV-documentary *Four More Years*, produced by another artist-activist collective, also called tv-tv, or more correctly TVTV (short for Top Value Television; Boyle, 1997, p. 36). Their program was produced for the then emergent US cable networks and has come to attain a seminal status in the histories of alternative and mainstream television alike. As chronicled by Deirdre Boyle in *Subject to Change: Guerilla Television Revisited*, TVTV was an experimental operator

on the then new cable access (CATV) television circuits and came out of the early 1970's video and media-activist collectives in the US, most notably Raindance, Videofreex and Ant Farm.

In 1972, TVTV produced two, one hour-long documentaries on the American electoral politics; the first, *The World's Largest TV Studio* followed the Democratic convention and the second, *Four More Years*, the Republican party convention, both taking place in Miami. Both these films (or video-tapes more correctly) are known to have pioneered a new kind of informal, hand-held style of reportage which built on the stylistics and modes of production of the 1960's cinema verité and newsreel movements rather than the heavy studio-set ups of most TV-broadcasters of the time. (Boyle 1997; Joselit, 2009). As David Joselit writes in his study of art and television, *Feedback* (2007), one of the most significant tropes of TVTV was the "policy of turning its cameras on the conventions of network coverage"(p.99). Through the adoption of new video technology, the Sony Portapak cameras which allowed for mobility and the relative cheapness of video compared to film, TVTV took the opportunity to move around the convention floor in hitherto unseen ways and to concurrently document the ongoing activities in Miami such as supporters clubs, high-society cocktail-parties and anti-war protests. Through their informal and direct approach they confronted the other media actors in place at the convention about their views on the convention and their reporting.

In *Four More Years*, some of the footage passes by, like the Bush footage many years later, totally without any comment while in other sequences the crew takes a more active, role interviewing their subjects. Interviews seem to often be conducted from a slightly deliberately naive viewpoint in order for the interviewees to spontaneously speak their opinion on topics of the day such as Nixon, the Vietnam war, the media etc. Joselit likens this light intervention mode of interview conduct in tv-tv to a form of feedback principle: "This informal ecology – or feedback – was further acknowledged by the informal nature of TVTV interviews themselves, in which no effort was made to hide the interviewer or the intrusiveness of the interview, shattering both the neutrality of the questioner and the questioned."(p. 99). At one revealing point, one of the TVTV people, the

Videofreex activist Skip Blumberg, asks CBS anchor Mike Wallace (later of *60 Minutes* fame) if he thinks that the networks should do more “Advocacy reporting”. Wallace replies that he’s not a very big fan of advocacy reporting at all, emphasizing instead the journalistic ethos of neutrality and the ideal of objectivity, as in the exposing of what’s hidden under the surface of events.

Another reporter is asked to give a general definition of “news”, and the answer is “Things that happen”. One of the CBS reporters refuses outright to say anything at all to Skip Blumberg from TVTV. This results in one of the more anarchistic moments of *Four More Years* as Skip, a “low-tech hippie” sporting a big beard and long hair tied in a back-knot, stages a harmonica-playing and dance number for the camera on the middle of the convention floor. A guard then approaches him and asks for his press card and upon seeing this, does no longer mind Skip’s playing - “I’m no music critic” he says in a deadpan manner and walks away.

Jakob Jakobsen said in his interview: “From a historical point of view, there was the American video-activists as some of the first who used hand-held video-cameras and this is also a parallel to how we tried to go one step further and use all the wireless technologies now at one’s disposal, the mobile phone, digital cameras etc.” In *The World’s Largest TV Studio* and *Four More Years*, about 15 persons were roaming the conventions and streets, drawing advantage from the newly gained mobility of the first video cameras available on a consumer-basis. In *Everyone Can Make TV (About Bush)*, even more lightweight digital camcorders are used by roughly the same number of contributors. Furthermore, the mobile technology of tv-tv is less dependent on good lighting conditions as well as on electricity, meaning that the TV studio is in their case even larger, moving from a confined space such as the convention floor into public space.

Especially *Four More Years* and *Everyone Can Make TV (About Bush)* resonate which each other as in both programs one cannot help feel an underlying sense of strong antagonism to the politics behind the events covered. The style of reporting is often uncommented and when the producers are asking questions they are simple and naive, yet, especially in the TVTV case, about sensitive

political issues. By this strategy, interviewees are often caught off-guard, expressing their opinions in a frank, straightforward manner. In the TVTV program, all three of Nixon's children are interviewed in this manner and while all three start out very enthusiastically they all end up abruptly cutting off the interview when feeling uncomfortable or simply lacking an answer. They do not seem accustomed at all to this kind of direct off the "street" and "floor" reporting. No other journalists than TVTV seem to be present in the social get-togethers connected to the party convention or the demonstrations – instead they are apparently all covering the events from the inside of the convention hall, locked to their various reporting booths. In the tv-tv program on the other hand, there seems to be no access at all for a community station to events or people close to the organisation of the state-visit; the only public person we see up-close is the chief inspector of police acting as head of security, being interviewed by Danish TV2. The few interviews by tv-tv are in a Vox-style street reportage form, as earlier pioneered by TVTV but here featured in a more abbreviated form. Like TVTV before them, the tv-tv reporters seem mostly interested in getting the extreme view of "the other side", following Pro-Bush supporters and documenting the police striking down hard on the Anti-Bush demos, which is reminiscent also of the left-wing heritage of the previous TV-Stop.

Different Tele-visions

It should be obvious by now, that despite strategic and tactical similarities, the contexts of the media environments in which these two documentaries have been produced are very different. For TVTV, the innovative approach was that of intervening directly into the standardised feedback mechanisms of television as a mass-medium in a media-landscape where very few except the major networks had access. Through their innovative mobile and informal approach they were able to tap into "current affairs" and news from a skewed angle which served as an implicitly critical reflection on the staged mediality of big news items and also exposed the connected socio-political aspects which were usually excluded through this staging. Media were shown to operate under a veil of

journalistic distance when in fact journalists were highly embedded into institutional frameworks, for example making Mike Wallace's rejection of "advocacy reporting" seem rather absurd.

In the media-scape of tv-tv, there is a completely different context of access to the production of media where the television medium, due to the rise of digital and network media, seems unsuitable for creating a critical media discourse. The statement of tv-tv, that "Everyone Can Make TV" has to be seen against the background of multimedia in the mid 1990's, dot-com culture as well as the Web 2.0 "participatory" culture of the "noughties". In this media-scape, TV seems to represent a relatively closed feedback loop, with only limited and highly institutionalised forms of viewer feedback or distribution channels of citizen media available. So tv-tv acted on an impetus to once again activate TV and bring it into a new context of converging media forms. In *Everyone...* they extended their theoretical manifesto to a working principle of production by organising it as an open invitation, mobilising an aggregation of distributed producers.

The result of this experiment in distributive television however is not so much that they actually innovated the TV-medium in the way of TVTV before them. As we saw, many of the same strategies were re-deployed. What is significant is rather the invitational mode of production *in combination* with the actual contemporary conditions for producing within this dictum of everyone being able to make TV. The Bush program puts into practice the idea that everyone can in theory make TV about Bush's visit, yet this does not mean that this "anyone" will have access to any of the important going-ons during the visit or have an important perspective to boot. At first, it may seem as if tv-tv's statement of "Everyone can make tv" is anachronistic given the long historical legacy of such artist-activist projects of democratising television, with for example TVTV founder Michael Shamberg's seminal 1970 manifesto-like publication *Guerilla Television* standing as a direct forerunner to the tv-tv manifesto. Yet in a contemporary networked media-scape, television does appear rather closed and thus attractive for subversive artistic intervention. Any supposed innovation in a tv-tv program such as *Everyone...* should not be predicated so much on

its ad-hoc documentary stylistics, which were not only a standard of earlier guerilla television programs such as *Four More Years* but which have also subsequently become standards in different forms of commercial reality-tv and not the least in the video vernacular of the Internet. It is instead the poetic-world-making of the *Everyone Can Make TV (About Bush)* statement itself which, in the manner earlier discussed in relation to Warner's notion of the counter-public, calls a specific media world into action. According to Warner: "all discourse or performance addressed to a public must characterize the world in which it attempts to circulate, projecting for that world a concrete and livable shape, and attempting to realize that world through address." (2002a, p. 32).

If TVTV operated in a context of total access to an event, tv-tv operated in a no-access context. Almost no access at least, as left is only the access to the tools and the infrastructure of TV transmission itself which here becomes the subversive act, through the fact that this program is actually transmitted in the midst of the rest of the media flow. What is shown is that, yes everyone *can* in theory make TV about Bush but at the same time almost no-one can, as even the mass-media strive desperately to get images of the mythic visit shrouded in so tight security measures that, unlike Clinton before him, the president would not make any public appearances (TV2, 2005). As the resulting program becomes a testimony to this paranoia and the rest of the media acting desperately on top of this paranoia in search of "actuality", the program perhaps inadvertently also functions as a parodic counter-public portrait of the Utopian spirit inherent to its own title and means of production. Perhaps as a perfect conclusion to this ironic touch, the program ends with the "fulfillment" of the goal of most media operators that day: getting a glimpse of the president.

In the final sequence of *Everyone Can Make TV (About Bush)*, "der var han sgú – marienborg" ("I'll be darned if that wasn't him – marienborg"), Joachim Hamou and Jakob Jakobsen are waiting by the bend of a road where the president's cortège of cars are expected to pass by on their way to the Danish prime-minister's mansion. As the long row of motorcycles, vans and limousines finally approach we see the shadowy figure of George

Bush Jr. through the bullet-proof glasses of a black limo, happily waiving to the bystanders. Nobody seems to notice him however, as the Pro-Bush supporters who are present obviously waive their flags without being able to single out the president. Only the tv-tv camera seems in retrospect to have caught this as a rare moment of capture in the excess of media attention.

With this comparative analysis of *Everyone can Make TV (About Bush)* and *Four More Years*, we can begin to see the different contexts of doing television in an activist-art spirit today and that of some thirty-five years ago.¹³ While there are significant similarities concerning modes of address and production methods, interpreted here as different ways of calling counter-publics into action around a given topic, the meaning of this kind of critical media feedback is not the same in the two examples. In the first program we are dealing with the wonder of video activists getting access to and subverting “The World’s Largest TV Studio”, while in the second, the access to the tools of the TV studio itself is not spectacular but the media event as such proves elusive. Critique of the media system only seems to enter when viewing *Everyone...* on the whole as an ironic statement on the hollowness of that media environment in which everyone indeed can mediate reality as “things that happen”, as news, to whatever small effect. In the next section I will start to discuss projects in the tv-tv framework that in a more direct way departs from the changing conditions of instigating counter-publics and alternative cultural production in the context of network culture.

What is to be done? Dilemmas of a TV Station

For *Documenta 12* in 2007, Danish contemporary art magazine Øjeblikket was one of a number magazines and art collectives who responded to the question: “What is to be done? (Education)”. As one of Øjeblikket’s invited responders within the magazine, tv-tv simply supplied the magazine with a “To Do List” filled up with the many tasks associated with the everyday administration and concerns of the TV-station. This list included requests for a

¹³ Here I’ve not discussed the different cultural contexts of the one example being set in the US, the other in Denmark. The next section will go more in-depth about the Danish public-service system in relation to more commercialised media markets.

cleaning service, to rewrite the manifesto, to locate missing tripods, to be more present on the Internet, to bring out the trash, to write better program descriptions and for attending meetings with the local media associations (Øjeblikket, 2007).

The tv-tv To Do List exposed some of the structural as well as banal dilemmas of running a TV station collectively. The following section initially deals with the conditions of production of tv-tv based in observations as seen from mostly a practical, organisational point of view. Following Latour's terminology, I will deal with these conditions both from the perspective of the "sociogram" and the "technogram" of production, (Latour, 1987; 1996) meaning that the organisation of people as well as of technologies are taken into account. Further, these observations are connected to the content of actual tv-tv productions and activities as well as various projects that I've personally been involved in. The timeframe for the observations and interventions into tv-tv is April 2006 – November 2009, with the observation part mostly concerning the period leading up to late 2007 and the intervention part mostly situated in the latter half of the timeframe. Taken together, these observations and discussions set the stage for the final TV-Hacknight intervention and form the basis for a concluding discussion of tv-tv and its possibilities as a platform enacting institutional critique across old and new media forms and modes of production in a networked culture context.

The Tuesday Meeting and its Discontents

In the tv-tv working structure, a weekly "Tuesday" meeting formed the basis of all administrative as well as editorial work. The tv-tv scenario of organisational downscaling through distributing its production into independent editorial groups was always the ideal of the original project group although not realised in any consistently functional way.¹⁴ These meetings tended always to become bogged down by administrative tasks of the "to do list" kind and very seldom there seemed to be time left for discussing actual productions

¹⁴ There is as one member told it an "informal centre" which gets increasingly more centralised as it needs to take care of all the administrative tasks of running a space, while all others get "independent" or drop off.

or projects. Interestingly enough, the TV-Stop producers also started with a similar decentralised working structure but eventually found it to be unsustainable due to administrative reasons. This meant that TV-Stop re-organised into a more hierarchical model with a steering board delegating tasks to clearly defined work-groups of both administrative and content-producing nature (Henriksen and Mazanti, 1997). In line with the tv-tv wish to work with both collective, de-hierarchised and networked modes of production, going against the conventions of serialised TV production, tv-tv kept its initial structure for at least three years.¹⁵

During this period, the Tuesday meeting was the organisational centre-point, where all the editorial groups active in tv-tv were encouraged to participate.

Typically there were between 5-10 people showing up at the Tuesday meetings out of about 12 active editorial groups. Usually, most of the participants were also part of the steering group and shared different responsibilities in economic and technological issues, daily maintenance, introducing new members among other tasks. If one wanted to start producing at tv-tv, you had to show up at one of the Tuesday meetings and propose a new editorial group. The meetings took the decisions about the daily administration and all minutes were put on a tv-tv wiki¹⁶ where it was also possible to in advance list the things one wanted to bring up on the meeting. Each meeting lasted around two hours and was almost always held at a large round table in the tv-tv studio in the tv-tv premises at Folkets Hus. This table became a symbolic placeholder

¹⁵ When tv-tv in 2008 reformed it entailed the institution of a more formal board taking more responsibility for the daily administration and supposedly allowing content producers more time for actually producing new programmes.

¹⁶ The wiki was located at wiki.tv.tv.dk but is now non-existent due to a server breakdown.



*Picture 4.5. Snapshot from a tv-tv meeting in the Folkets Hus studio.
Image: Kristoffer Gansing.*

for the daily administration, as one member of the group stated, the feeling was that this round table “is tv-tv”, even saying that without this daily administration taking place at the Tuesday meetings, tv-tv would surely fall apart.

A common issue at the Tuesday meetings was the question of how to deal with new tv-tv producers, both in terms of how to bring more people in and how to deal with the incoming requests. Typically, the station would get an e-mail from someone who had responded to the tv-tv website and manifesto with its statement that everyone can make TV. But at the Tuesday meetings, the limitations inherent to any such counter-public project, the “constraints of circulation” to speak with Warner, specific to tv-tv, also became apparent. Not all people who turned to tv-tv with the wish to produce programs necessarily adhered to the same principles of artistic self-reflection and medium criticality stated in the manifesto and as, at least ideally, practised by the core group. The philosophy was that no-one should be turned down and that all newcomers should be given a chance to screen their programmes

but this was to be proved difficult in practice due to the contextual constraints connected to being an artist-run television station.

If we consider this problematic of bringing new producers and the “everyone can make tv” statement, we can observe at least four different scenarios of people contacting tv-tv on a regular basis. The most common scenario involved someone who wanted to broadcast an already finished programme. Next to this group came people who, as aspiring or low-budget filmmakers were mostly looking for a place to borrow free equipment and editing facilities. A third group were groups or individuals looking for media coverage of an event or political action such as a demonstration, thus approaching tv-tv as a left-wing advocacy media. The fourth, most rare group, consisted of those who wished to establish a new editorial group and start producing programmes for tv-tv, in the ideal case also according to its manifesto of critical counter-public sphere or artistic television. One could then start differentiating between different kinds of levels of engagement and expectations but this is the basic structure that I observed regarding the nature of the incoming external requests. From an administrative point of view, the first group may look unproblematic on the surface but considering that tv-tv worked with a decentralised structure of independent editorial groups and that there was no single responsible programmer, decisions on what to air were not that easy to take. It seems that the resolution was to deal with these requests in an ad-hoc manner, sometimes based on individual decisions and sometimes based on the democratic decision structure of the Tuesday meetings. One might say that real responsibility taking for this issue remained undefined, but at the same time highly flexible.

An example of the challenges of the first category, of people approaching tv-tv with their already finished program, involved the issue of intellectual property: a group of art students from the art Academy of Funen produced a series of programmes appropriating the news from the Danish National Television, the public service channel DR. At the first Tuesday meeting where they showed up, it was still unclear if intellectual property laws would be broken by transmitting this program and it was collectively decided that the students must clear this issue before transmission. However, some

months later one of the tv-tv editorial groups wished to screen a Swedish documentary about the crackdown on the infamous file-sharing service The Pirate Bay. The film, called *Steal This Film* contains a large amount of footage from Hollywood blockbusters and transmitting it would obviously be violating copyright laws. A mail is sent out to the tv-tv members asking if they think it is ok to go ahead with the screening anyway. There is only one response (from myself, a supportive one) and the film is screened some days later. Behind this inconsistency is actually a local-global context. The *Steal This Film* video did not appear to involve copyright holders who were close at home. The DR programme could have been risky for tv-tv to transmit as the station had actually got in trouble with DR previously, in its very first transmission.

The background to the incident above was the “DR Rundvisning” program consisting of tv-tv visiting DR, playing the role of “TV tourists”. In the programme, members of the steering group of tv-tv has simply booked and paid for the regular tour of the DR main building, offered by the broadcasting organisation to groups and companies as a kind of combined PR and side-business. Of course, little did the DR tour administration know that the group to be guided around the different studio sets of at the time popular Danish crime series such as *Örnen*, were in fact belonging to a small local station who would later broadcast their ironic turning of their own cameras on the big media. In this program, tv-tv were literally inserting themselves as a virus into the mainstream in a way that would prove too much for its infected host. After all, tv-tv were artistically appropriating the content of the DR tour but this was not recognised by the public institution who immediately after the transmission threatened tv-tv with a law-suit for copyright infringement.¹⁷ Behind the denial to screen the program of the art students’ appropriation of DR news footage there lay, in other words, a pragmatic decision deriving from the local media political context,

¹⁷ The argument being that tv-tv was exposing the tour and thus the content of the proprietary product of the tour itself. Hamou (2008): “They meant that we had revealed their ‘property’, as that tour costs a thousand bucks, and there we are simply exposing it. So, they demanded a public excuse and that was a jackpot for us. On our web-page it now said ‘Apologies to DR for having shown...’. Nothing happened but we later heard that the employees at DR had received a memo saying that they should ignore this statement... We kept displaying it for a quite long time.”

while the *Steal This Film* more easily conformed to the video art strategy of mocking global mainstream media content without any major local player likely to interfere. This indicates an inconsistency in tv-tv's production strategies arising out of the local-global differentiated scales of the politics of media production in network culture.

An example from the third group of incoming requests concerned an activist group that wanted tv-tv to cover a demonstration they were organising. This approaching of tv-tv as a political news medium giving room to left wing groups and alternative culture stems from the fact that it was connected to the history of the activist channel TV-Stop. Dealing with this heritage was ambivalent for tv-tv. Some people at the station worked under the conviction that there was an informal contract to continue to cater to some of the target groups of TV-Stop. It was clear however that the way of producing TV had changed, both because of tv-tv as an artistic project and as a consequence of a more fragmented media-landscape, and therefore to some extent also due to a change in its underlying politics. While TV-Stop preferred all their new participants to undergo a rigorous training program of preferably 6-months according to the highly specialised functions of TV Production (Henriksen and Mazanti, 1997), tv-tv operated under a "become the media" ethos in a slightly more anarchistic manner, stemming from DIY art practices and Internet culture. Instead of working, as TV-Stop did, with very heavy TV-camera set-ups in the studio, tv-tv scaled down to small portable cameras and the same scaling down applied to editing and other technical equipment.

We were introduced to the TV-Stop way of doing things, they were very much occupied with explaining how they did it. It probably corresponded to how they made TV at DR in the 1990's. We had already realised that we couldn't make TV in this way. We were not a coherent group with an interest in working in that mode. I think it was clear to us early on that we would decentralise and not go on working in that hierarchic manner. To take as our starting point instead the fact that people could film with their telephones, video-cameras and edit on their computers and to create a decentralised form of production.

(Jakobsen, 2008)

The idea was in other words, not to mimic the big broadcast players but through downscaling to allow for flexibility and spontaneous production. This meant that anyone approaching tv-tv would by principle be able to form their own editorial group, working independently in their chosen approach or thematic. Consequently, one question raised back from one member of tv-tv about the request to cover the aforementioned demonstration went along the lines of, “ok, we can give coverage to this group, but what will they give back?”. Asking what the group approaching tv-tv will give back should not be seen as a selfish or arrogant act in this instance but as an invitation. If the slogan is “everyone can make tv” then why should not the group be able to produce the representation of their action themselves, using tv-tv as an infrastructure both on a technological as well as a conceptual level of media criticism from within?

The rejection of the “coverage” model is deeply connected to tv-tv as working within an invitational aesthetics, based in the counter-public poetics as discussed earlier, which is supposed to constantly engender new producers. Not having enough daily producers was however also a concrete problem in relation to running the station, both in terms of the administration and production of programs. Even though everyone in principle was welcome, it was still seen as important to keep the conceptual framework of tv-tv intact and here we can observe a tension between tv-tv fully unfolding as a counter-public and remaining at the level of the (art) group. There seemed to be an agreement that the intent was twofold: the station should be democratising access to media production but at the same time it should have a criticising function. So the ideal situation seemed to be one where new program makers were coached into the simultaneous artistic reflecting about the medium integrated with the topics they chose. But again, since the station was based on decentralised production, the common points of departure were hard to define. What was the connection between its artistic and political angle and how was tv-tv as a collective project to implement these different angles in practice?

A program that went to some extent in solving this dilemma of critical representation and organisation was *Videoletters to Ungdomshuset* initiated by the editorial of the Copenhagen Free

University project. During the eviction of Ungdomshuset in early 2007, which was a squatted building serving as a subcultural youth house located in the same area as tv-tv, the tv-tv studio was opened up for activists who wished to send video messages to all their (ca. 800) friends who had been taken into custody during the ensuing demonstrations. As the initiator of this program, Jakob Jakobsen explained (2008), there was already a letter-writing station outside the prisons, but all letters were being censored. Together with a group of activists he then came up with the idea of using tv-tv, because its hosting channel, Kanal København, was available uncensored inside the prisons.

At a first glance, *Videoletters to Ungdomshuset* can be regarded as a classical community TV-project where local people are temporarily invited to present themselves in the professional TV-studio. But here we have to note that the nature of this assembled group of activists was in itself temporary, consisting of a translocal network in which many had gathered specifically for the sake of defending Ungdomshuset. Rather than thinking this assemblage of people and media as a bounded community (even though a core group of it might have been) it might be productive to think of it as part of what Geert Lovink and Ned Rossiter has called “organized networks” (Lovink and Rossiter, 2005; Rossiter, 2006), that is a term denoting multitudes of people in dissensus with the state or other interests of power yet lacking any clear representational politics.

This network would over the next couple of years (until the city “gave” a new youthhouse to the activist scene) branch off into many different activities such as the regular “Thursday demo”, squatting potential new youth houses, and media activism in the form of pirate radio transmissions. After the *Videoletters....* project at tv-tv there was also a small group of Youthhouse affiliated activists who went on to form the tv-tv editorial group “Prison-tv” with the aim of continuing the tradition of transmitting to those activists still in police custody. In this way, an initially temporary media intervention into a more or less informal network was assimilated by parts of the intervened network and acquired a new status of sustained action. At least for a moment it seemed like this network acquired, through the combination of activists, artists, airborne television

transmissions and prisoners, the kind of transversality imagined by Rossiter in the notion of the organised network:

An organized network is one that instantiates the political in the moment of transversal engagement with seemingly antithetical institutional forms: the state, the firm, the nongovernmental organization, the union, the university. It is through such confrontations that the temporal rhythms and spatial coordinates of a network are made most clear. The tensions that ensue in this transversal encounter constitute new subjectivities. (Rossiter, 2009, p. 139)

However, what initially seemed as a rare example of a tactical media intervention “scaling up” was not able to sustain the momentum and the editorial was shut down after only a few transmissions. The next section will discuss the observations of the organisational dilemmas and logics that I have explored here. This then leads up to an intervention in which the idea of tv-tv, as in one sense “The World’s Last Television Studio” is performed.

Discussion: The Vanishing Point of tv-tv

It would be difficult to pinpoint any definitive reason for the increasing failure of tv-tv to accommodate new participants but partly to blame in the specific example above was probably what Rossiter already has defined as a key problem for the organised network as “a network of networks” (Rossiter, 2009, p. 139): translation between different networks - and a lack of this translation as leading to tensions. In this case it was also a lack of translation between the different contexts of media production, contemporary art and activism. There was a lack of sustainability in the organisation of tv-tv itself, with nobody taking the main responsibility for seeing new producers through, making the learning curves very steep for those not already coming from a media practitioner or artistic background. As one of the tv-tv members put it, the (art-) critical discourse in itself became a principle of exclusion that worked against the participative aspects of the project (Hamou, 2008).

If the artistic discourse of tv-tv worked against the participatory aims of the project, it was because tv-tv suffered from a lack of

transparency concerning the conditions of participation. The gap earlier identified between the counter-public called into action through the manifesto and the implicit signing of it by an art “group” was actually reiterated in the everyday practice of tv-tv as well. This tension however, should not be interpreted as a necessary contradiction between the critical artistic strategies or tactics and the participatory ideals, as it is important to understand how the members behind tv-tv, despite organisational shortcomings, sought to artistically modify the nature of representation and access in and through broadcast media.

This critical attitude was already evident in the turnover from TV-Stop to tv-tv which in a very concrete way suggests how tv-tv related to television as an institution differently from TV-Stop, given that this turnover entailed both an organisational, technical and ultimately conceptual re-forming of the TV-Stop transmission facilities. If TV-Stop was clearly formulated as a left-wing activist advocacy media, tv-tv can be regarded in the more general context of the revitalisation of “critical activism in contemporary art” which Okwui Enwezor writes about in his essay “The Artist as Producer in Times of Crisis”, characterising it as a transition from collectively organised political activism to work that is not activism per se, but “driven by the spirit of activism” (2004, n.pag.).

In regards to artists working “only” in the spirit of activism, the earlier example of the publishing of the tv-tv “To Do List” in a contemporary arts magazine is a telling one since it exhibits the TV work-process itself as an aesthetic practice. By this simple gesture the tv-tv members were turning a virtual camera on their own institutional framework and reflected on its everyday conditions rather than focusing on a specific content of “reality” as possibly mediated by tv-tv. This self-reflexive mode through critical aesthetics derived from gazing inwards is in stark contrast to TV-Stop whose producers usually worked with the completely different critical sensibility of left-wing advocacy reporting, not concerned explicitly with exposing their own conditions of production.

The relation between TV-Stop and tv-tv may be understood as corresponding to different ways of calling a counter-public into action, where TV-Stop mostly conformed to an ideal of what Gerald

Raunig, in his essay on media activism “eventum and medium” (2008), has called “organic representation”. In this model, the relation between the medium and an event is mostly seen as linear, akin to the transmission model of communication, evident in how the alternative media scene is full of activist videos simply following a documentation format, in a straightforward manner depicting political events such as demonstrations and other actions. As Raunig also discusses in his essay, such videos may still have the desired political impact, and here one could say that a good example would be the TV-Stop documentation of the 1993 EU demonstrations in Copenhagen. However, that particular case succeeded because it operated on the same terms as classical investigative journalism, revealing what had hitherto been hidden from the public. Thus, TV-Stop here functioned according to the common idea of the media as a form of fourth power in representational democracy. The ideal of TV-Stop was clearly to function as a kind of counter-public in the mould pictured by Fraser, as a subaltern left-wing media platform, giving a voice to the unheard or in their own words “showing the different reality, which is not present in the big media” (Folke and Gry as quoted in Press, 1990, p. 22)

The “organic” approach to representation aside, TV-Stop did actually also contain an overarching project of what can be regarded as form of (TV) institutional critique. The name of the station referred to the ultimate goal of the project, as it was originally formulated by the founders: to make people stop watching TV. In the words of TV-Stop co-worker Karsten Radulovic Mustarfa Nielsen:

The station’s name comes out of initial ideas of making anti-TV. One wanted to stop the medium and its path towards a spiritual wasteland. The best thing would be, if people turned off the television completely and occupied themselves with something more important than becoming TV-junkies. This goal was later clarified in that one wanted to produce television through which the viewers should discover that they may have an influence over the course of their own lives. (Mustarfa Nielsen, 2002, p. 19)

In spite of its roots as an anti-TV project, TV-Stop rarely worked on changing the conventions of production and aesthetics of television as such, but on the contrary was devoted to producing TV in as a professional way as possible. Engagement in society should come from representing it according to activist agendas, and the medium of television is in this process seen as a necessary evil, as part of an ecology where media are utilised as more or less neutral, albeit still possibly harmful, tools through which to achieve socio-political goals. In contrast, tv-tv would from its beginning work in the spirit, not of organic but what Raunig has called orgiastic representation, that stands for the kind of media activism that is “thwarting the organic logic of action and representation” (Raunig, 2008, p. 653) and which in this process “(...) does not limit its function to documenting political movements, but instead happens in the medium becoming activism.” (ibid.).

This tradition of the medium becoming activist in itself can be regarded as extending from a pluralistic heritage of experimental art practices ranging from the historical avant-garde of the early 20th century, Brechtian dramaturgy, Jean Rouch’s cinema vérité, 1960’s personal and nouvelle vague cinema, video art as well as the media interventions of 1970’s US collectives such as Ant Farm or TVTV. Central to such practices is a constant questioning of how any tool of communication entails specific aesthetics and politics that changes both the process and contents of communication and as such they are connected to the media theory advanced by thinkers like Marshall McLuhan in the 1960’s. Yet, connecting to the theory chapter’s discussion of media theory from a transversal material perspective, rejecting mono-medial approaches, such media activist practices frequently also engage the materiality of media in a way that involves a modification of the technological, temporal, social and institutional contexts of communication and as such are modifying and reconfiguring the aesthetics and politics of the media forms involved. This mainly takes place in projects not of organic representation but of the “orgiastic” approach:

In this kind of orgiastic concatenation through the middle, it is no longer a matter of supplying the constituted power of mass

media with new contents but rather of constant attempts to re-compose, to change and to reinvent the production apparatuses, to create a constituent power in media activism as well. (...) Unlike the paradigm of organic representation, an orgiastic medium appears not only as a pure means of information, of mediating an event, but instead concatenates with the event, ultimately becoming an event itself. *Eventum et medium*: in the concatenation of event and medium, the middle as line of flight does not simply produce representations, but is a component of the event. Here the signs, statements and images do not function as representing or documenting objects or subjects or the world, but rather as letting the world happen. (Raunig, p. 653-54)

This is a Deleuzo-Guattarian media activism where the medium is not only a mediator of an action but also constituting an event in itself. The differences between the organic and this transversal “orgiastic” approach to media events can be observed in tensions that arose between TV-Stop and tv-tv early on. The founding tv-tv members felt that those TV-Stop members who were still around at the beginning of tv-tv were mostly occupied with describing how they had been producing television from a technical point of view. During the first transmission week, tv-tv actually tried to produce in cooperation with TV-Stop and in line with its self-reflexive style, tv-tv turned the camera on the production process itself. In the first program, we see the TV-Stop producers struggling to explain the technical do’s and don’ts of production to the tv-tv newbies. The TV-Stop people are not very comfortable to be on camera while doing this as for TV-Stop the technical equipment were a non-modifiable “part of the conditions” (Hamou, 2008) and thus also intimately tied to the contents of their production. It is perhaps not surprising then, that the tv-tv people felt that TV-Stop reacted quite strongly against the first tv-tv programs (Hamou 2008; Skovmand, 2009).

In distinction from TV-Stop, the goal of tv-tv was no longer the macro-political utopia of finally abolishing the “corrupt” world of media, but rather the enactment of many micro-political utopias as abuses and misuses, subversions and other forms in a never-ending immanent critique of television as a medium in mutation. Even

though the tv-tv manifesto contains the wish to abolish “the viewer as a passive consumer”, the chosen micro-political tactics for achieving this has to be seen as different from TV-Stop. Along with these tactics, the whole constitution of tv-tv as a counter-public changes from the rationalist deliberative model of Habermas, as well as the oppositional model of Fraser to one more in line with Warner’s idea of the counter-public as one which recognizes its strange role within always imagined and negotiated dominant publics and tries to act on the transformational critical potentials of that strangeness.¹⁸

However, as follows from some of the observations described previously, tv-tv did also face significant challenges such as the lack of new producers and of transparency concerning the rules of participation. Even if tv-tv set-up a new structure, downscaling the old studio television style of TV-Stop, one could also ask if the technical modifications of tv-tv to the TV-Stop structure were radical enough. If artistic TV projects should form part of the alternative media of the networked age do they not also need to integrate into their practice an understanding of the actual changing materialities of production in these different frameworks? The new web 2.0 services like YouTube and countless others had a certain freshness to them at the time of tv-tv’s formation. They did away with the bureaucracy surrounding citizen media and allowed for instant, distributed publishing. In bringing more spontaneous production methods to community media, tv-tv mimicked some aspects of the Web 2.0 culture but probably not in a way that was radical enough to support the participative ambitions of the project.

¹⁸ There are of course a number of other significant concepts for discussing critical public spheres that could be relevant to this discussion. See for example Hans Magnus Enzensberger’s classic essay “Constituents of a Theory of the Media”(1970) for a Marxist understanding of media as self-organised and action-based (and Baudrillard’s critique thereof, “Requiem for the Media”, 1974 (1981); or Alexander Kluge and Oskar Negt’s 1972 *Public Sphere and Experience* (Kluge and Negt, 1993), a critical response to Habermas work where they outline the possibilities of a proletarian public sphere as a counterconcept to the Bourgeois public sphere. The work of Ernesto Laclau and Chantal Mouffe on radical democracy and agonistic politics (Laclau and Mouffe, 1985; Mouffe, 2005) also propose models of publics that move beyond consensus based representational models, as does Jacques Ranciere in his linking of politics and aesthetics (2004). I have chosen to work with Michael Warner’s concept here because it falls close to media activism in its emphasis on a performative and disruptive form of public which is “queering” established modes of practice from within.

In its technical downscaling from TV-Stop, tv-tv adapted to the digital production environment which has become more and more a part of everyday life in Denmark, utilising laptops for editing, small camcorders or even mobile phones for filming etc. What was perhaps missing however was the reflection on the web as the common outlet for such disperse citizen's media production through then emerging platforms such as YouTube.¹⁹ This again resonates ironically with the *Everyone Can Make TV (About Bush)* programme, as it showed that it was possible for many possible voices to mediate one and the same event at the same time, all the while this access did not prevent the usual marginal position of this kind of citizens' media production. In tv-tv, moving from the context of institutionalised dissent (ie. TV-Stop and local advocacy media) to dissolutionised dissent (of network culture and local/global media), it does not seem as if the politics of the latter networked situation was fully taken into account. The lack of transparency surrounding the conditions of participation is an important factor where tv-tv could have made a critical difference, as such a lack can be observed in the online distribution platforms as well, concerning for example intellectual property rights, terms of use and privacy issues.

To use a phrase of Zielinski (1999, p. 183), "the vanishing point of television" should be observed against the field of digital and networked media which television is converging into. Thus a project like tv-tv cannot be thought of as outside to this process. Artists reinventing the language of television are not simply repeating the concepts of alternative media movements of the past but their projects exist in a state of tension between the representational models of traditional broadcast media and that of the new networked configurations demanding other organisational and technical structures. As an intervention into tv-tv and the television/network culture at large, the concluding section will discuss "TV-Hacknight - Reclaim the White Noise", a media-activist and

¹⁹ It should be noted that as of 2012, YouTube has been setting up new "Creator Spaces" in select cities worldwide. According to YouTube's promotional videos, these spaces boast high-tech setups with HD cameras, green screens, professional editing suites and control rooms. This seems to be a new strategy to professionalise web-based content and might be a sign that old amateur/professional borders are migrating into the production logic of the platform.

media-archaeological project which aimed at utilising the ambivalence of the constitution of tv-tv as situated between art and activism for a transversal analysis of the politics of a media everyday life where old and new technologies co-exist.

Intervention: TV-Hacknight - Eventualising analogue Switch-Offs and Digital Turn-Ons

Not unlike Turing's correspondents, everyone is deserting analogue machines in favor of discrete ones.

(Friedrich Kittler, *Gramophone, Film, Typewriter*, 1999 (1986))

Throughout 2008-2009, Danish citizens were targeted by "The New TV-Signal", a public campaign informing about the immanent end of analogue television transmissions and providing advice to consumers on how to get ready for the now completely digital TV-age. "What Can I Do?" asks the title of one of the campaign's eight infomercials, and as a calm and articulated white middle-aged man explains to us, "If you are watching TV through your own antenna, then you should get yourself ready for the new TV signal. Otherwise, you risk ending up with a blank screen after October 31, 2009." (Det Nye TV-Signal, 2009) OR, you could, as the TV-Hacknight intervention described later in this section suggested, use your old analogue antenna to continue analogue transmissions as a micro- or proxy-vision media-presence in your local neighborhood, pirating the airwaves during that mythological night of technological transition.

The intervention of the TV-Hacknight project was staged as a micropolitical and counter-public campaign, mimicking the official one through pirating its flyer design, thus announcing the "New TV-Signal" not as the digital one but rather as the DIY re-appropriation of the old. The actual event of the hacknight was conceived by artist Linda Hilfling and myself as a workshop and a night of pirate transmission at tv-tv's studio in Folkets Hus. The transmission was simply of a workshop where the participants learned how to set up their own TV-transmission using simple and common, yet soon obsolete, home-consumer gadgets such as an analogue TV-antenna and a regular VCR: building on the principle

that almost all devices made for receiving can be reverse-engineered into transmission devices as well.

Of course, these kinds of reverse engineerings of broadcasting technologies are not in themselves new. Matthew Fuller demonstrated in his media ecology of British pirate radio (Fuller, 2005; also see my comments in Chapter 2), that one could even imagine rewriting the whole history of broadcasting as a heterogeneous flow of subjectivities and technologies which instigate the deterritorialisations and reterritorialisations of piracy and regulation. In the Scandinavian television context, we saw that pirate transmissions as a counter- institutional practice in itself dates back to at least the 1960's, when early pioneers in illegal commercial radio, operating from ships on international waters sought to expand their activities with TV transmission. What the TV-Hacknight set forth to do then, was not so much to simply reiterate the general notion of a reclaiming of the airwaves through illegal transmission, but to do this in the specific context of the analogue-digital switchover, as a site (and time) -specific event marked by specific stratifications of the old and the new.

The following section will deal with the different contexts touched upon by a transversal "eventualisation" of the analogue-digital TV transition in Denmark, from the discourse of smooth technological convergence presented by the official campaign on "The New TV-Signal" to the lineage of a "convergence from below" connected to the workshop and its "Telestreet"-style transmission.

The combined top-down and bottom-up take on the convergence phenomena is also the theoretical foundation of Henry Jenkins's influential conceptualisation of "convergence culture" which he describes as "both a top-down corporate-driven process and a bottom-up consumer-driven process." (Jenkins, 2006, p.18). But even if Jenkins does define convergence as not only a technological but also a cultural and social process, he mostly discusses the way consumers/producers are able to appropriate this process on a content-level and not on an infrastructural level (see my comments in Chapter 2).

Being an attempt at working directly on the "encoding" level of a media-technological event (cf. Hall, 2000 (1980)), this TV "hack" was not only an example of users appropriating or remixing content,

but rather a hacking of the changing production setting of TV - forming a transversal movement across the network of relations between the institution of TV and its consumers and producers as brought into play through the analogue-digital transition. Further, this intervention aims to bring out the *divergent* properties of this transition and thus also the conflictual politics relating to convergence culture at large. An oft overlooked fact of convergence culture is for example the myriad of competing formats and standards and processes of technological obsolescence inherent to them.²⁰ Jenkins downplays this material aspect when maintaining that media are cultural systems while delivery systems are “only technologies” (Jenkins, 2006, p. 14). As the discussion of the contextual parameters of the TV-Hacknight aims to put forward, such material incompatibilities of media can be acted upon from both a media-archaeological analysis and a cultural production point of view, allowing for the articulation of counter-publics as subjectivities not easily captured by consensus-based media politics or evolutionary masternarratives of technological development.

Smart encoders and dumb decoders

The analogue TV signal was shut-down at midnight October 31, 2009 in Denmark, as is successively happening all-over Europe (and the rest of the world) and as previously accomplished already in for example Luxembourg (2006), Sweden (2007), Germany (2008) and in the USA (2009).²¹ The full transition to digital terrestrial (airborn), so called DVB-T TV, on November 1, 2009, as regulated by the Danish Ministry of Culture (2007) was, in the convergence discourse of the media business and legislation a necessary move in order to utilise the airwave frequency space more effectively. The main actors in the transition was the Danish Media Secretariat, a state organ regulating among other things the allocation of frequencies, the state DR and TV2 public service

²⁰ In the introduction to *Gramophone, Film, Typewriter* (1999, p. 2), Kittler points to the fact that “links are separated by incompatible data channels and differing data formats.” In this he is referring to the division between the large media networks of the mass media age but it is increasingly evident that digital technologies are fraught with incompatibilities as well.

²¹ The European Commission set the date 2012 as the deadline for all European countries to make the transition (Iosifidis, 2012).

channels, operating through their daughter-company Digi-TV, and the Danish branch of the Swedish digital-TV company Boxer, the latter taking responsibility for the commercial channels.

The analogue turn-off was accompanied by the Media Secretariat's public information campaign, "Det Nye TV-Signal" (The New TV-Signal) which was to date the largest public information campaign undertaken in Denmark if measured by its 42 million DKK budget (Vejlgaard, 2010, p. 10). The transition also gave rise to a nationwide light-sculpture on the eve of the transition, financed by Boxer, and which commemorated the end of analogue television by using the nationwide transmission antennas as light-towers. As the light-artist Jesper Kongshaug explains on his website, this work marked "the greatest transition towards the digital society." (Kongshaug, n.d., n.pag.).

In the public campaign and news coverage, the analogue-digital transition was implicated as an event in itself, celebrated not only as a technological transition but implicating a social change as well. This is an interesting take on the "media event" as theorised by Daniel Dayan and Elihu Katz (1994) in that the happenings here (mass-)mediated, concern a material event in a medium itself. The claim made by Dayan (2013, n.pag.), that "media events have a disruptive quality" is enacted literally as the analogue-digital transition actually involves a technical rupture, a gap in the transmission and a changing in its materiality, the story of which is presented as if one antiquated technology is buried while another is born - all the while the medium of television somehow magically persists. The transition contains a narrative of funeral and rebirth that corresponds to the ceremonial character of media events (Dayan and Katz 1994, p. 25). These are ceremonial events that are "consciously integrative and deliberately constructed with a view of orchestrating a consensus" (Dayan, 2004, n.pag.), hence the necessity and in-avoidability by which events like the analogue-digital transition present themselves.

"We are all going to be able to watch TV after the 31st of October, 2009" (Det Nye TV-Signal, 2009) - this was the tagline of the Danish public campaign for the digital TV switchover and it was repeated like a mantra at the end of eight different "infomercial"

clips that were distributed on national TV and the campaign website.²² The statement contains two aspects that were integral to the analogue-digital transition discourse: the establishing of a “weness” addressing the imaginary community of the nation²³ and the idea of TV staying coherent also in the digital, simultaneously unaffected and enhanced by the transition. The campaign videos and texts reiterate this position: they implicate that the transition to digital TV is a common nationwide endeavour in technological progression which will leave television just as it is, only better. After years of industry speculation and hype of interactivity and convergence, this campaign focuses on the notion that good old television will persist also in the digital world. The project-manager of the campaign, Henrik Vejlggaard wrote in his evaluation report:

With the name, The New Tv-Signal, the campaign team chose to underplay the technological. The team did not wish that the word “digital” should be a part of the name as it could seem “off-putting” to some citizens. The name should on the contrary signify that something new was happening and that it was about TV. “The new” should convey that this would be the standard. It is not a new option, but simply *the* new TV-Signal. The name carried a deliberate dry, concrete and authoritative tone. (Vejlggaard, 2010, p. 29, my trans.)

Technological change in other words had to be staged to seem as “natural” as possible which even meant reducing the actual talk about the technological change in the campaign discourse. If the citizens could possibly perceive the switchover for what it was, a prioritisation of one technology over another, they could possibly also misunderstand or reflect on the supposedly given nature of this change, and perhaps as a consequence they would risk ending up with the thing that the campaign and Danish state and commercial actors wanted to avoid the most - a black screen on November 1st 2009.

²² The video-clips are all kept very short (about 1min) and come with rethorical headlines. The website of the campaign does not exist anylonger but can be accessed through The Way Back Machine of The Internet Archive, see www.archive.org. The original web-site was located at: www.detnyetv-signal.dk and the videos were also available on a now defunct YouTube channel.

²³ On the community building aspects of television see Charlotte Brunsdon & David Morley (1980) and Benedict Anderson (1983).



Picture 4.6. "Torben" explaining the difference between analogue and digital in the campaign video "Hvad betyder analog og digital?"

© DetNyeTvSignal, 2009.

"Undgå Sort-Skærm!" (Avoid a Black-Screen!), the campaign leaflets kept repeating. In order to accomplish a smooth transition then, it was perhaps only inevitable that some of the more "techie" aspects of the shift had to be downplayed. As one of the infomercials of the campaign, bearing the title *Hvad sker der* / "What is Happening" (DetNyeTvSignal, 2009) stated, the transition involved "sharper image", "better audio", "more channels" while interactivity is reduced to the statement that "You can decide yourself if you want to have subtitles or not."

Finally, one is also informed that it is the Danish government (Folketinget) that has taken the decision on this switchover. This, as are all the clips, is hosted by the same middle-aged white man, in fact he is also the initial director of the campaign Torben Dan Pedersen (although this last information is not provided, only the name "Torben" is given at the YouTube channel). In the eight videos, Torben appears in a casual suit, giving an at the same time authoritative and common-man like impression. There is an aesthetics of seamlessness at play in these videos which can be further connected to the overarching convergence politics at play in the analogue-digital transition. In all the clips, "Torben" is composited into a digitally cleansed white background in which

info-texts and animations fade and move in and out of the picture to illustrate his explanations of the videos that bear the titles: “*I own a flat-screen, What shall I do?*”, “*Shall I do anything?*”, “*What does analogue and digital mean?*”, “*Before you buy equipment*”, “*How do I choose equipment?*”, “*How can I help others?*”.²⁴

The smooth transitions taking place in the digital studio of the spots play out like a convergence era update of what John Corner (1999, p. 32) has described as the TV-Studio convention of “figuration” where images seem to come and go without editing. This “digital figuration” is a testimony to a changing “ecology of the television image” (Corner, p. 36) in the way that the flow of images seem take on all the attributes sketched out by convergence television theorists like Caldwell who early on defined the aesthetic categories of the painterly, plastic, transparent and the intermedial as characteristics of a new kind of “videographic” television (1995, p. 139). Further, this seamless convergence aesthetic and technique allows an integrated version of the television conventions of “voiced-over direct address speech” and “in-vision direct address” (Corner, p. 40-41). This can be seen as an optimisation of the propagandistic, instructional nature of these videos: images can be smoothly shown next to the person speaking in direct illustration of what is being said. Such a convergence aesthetics seems to attempt to overcome what Corner identified as the difficulty of achieving “self-identification” in the mode of “in-vision direct address” (ibid.), as this is a merging of speaking directly to the viewer and showing the viewer what is happening.

In another significant video of the campaign, “*What does analogue and Digital Mean?*” (Pic. 4.6), Torben explains us why we at all need a new TV-Signal. The explanation is based in the difference between analogue and digital where the viewer is again informed that the new technology does the same only better. The old TV-Signal has been around for 50 years, Torben states, and while there is nothing really wrong with it, the new one will bring

²⁴ In the Danish original: “Jeg har fladskærm, Hvad skal jeg gøre?”, “Skal jeg Gøre Noget?”, “Hvad betyder analog og digital?”, “Inden du køber udstyr”, “Hvordan vælger jeg udstyr?”, “Hvordan kan jeg hjælpe andre?”.

an improved infrastructure allowing for higher audiovisual quality and more channels through the multiplexed transmission of discrete units of ones and zeros rather than the fuzzy continuous flows of radio waves. The animations illustrating this transition seem to suggest that the analogue airwaves will simply be transformed into the digital. This way of presenting the advent of digital television conforms to the first two points of what convergence television scholars previously have defined as the main “selling” points in the analogue-digital transition being a “long-term enforced transition” (Boddy, 2004, p. 89; cf. Iosifidis, 2006):

- improved image quality
- multiple standard-definition channels
- enhanced interactivity

When William Boddy elaborates on these points in his study of how digital technologies affect Broadcasting in the USA, *New Media and Popular Imagination*, he identifies the link between such arguments and new types of commercial exploitation, translating the three points above into industry terms:

- the prospect of selling new TV’s (hardware)
 - “tonnage” of TV-programmes (reruns, archive, licenses, IP)
 - new types of content and services (software, non traditional TV industries, convergence)
- (Boddy, 2004, p. 89)

In the Danish case, the public campaign for the digital switchover re-iterated the first two selling points, for example through further videos like *How do I choose the equipment?*, indicating the link between the switchover and the digital TV and set-top box market. What was missing from the discourse connected to the digital Switchover in Denmark was the focus on new types of content and interactivity, by which “(...) digital television inspired many observers to proclaim the overturning of the prevailing and long-established models of television viewing” (Boddy, p. 79).

In the Danish campaign, we are not presented with a radical break as the analogue TV is transformed into the digital. There is no talk about a new institution but instead good old TV is rendered digital – in other words an evolutionary view stressing continuity in technological development. This is perhaps the “sober” post dot-com era of digital television, where surveys in recent years have shown, that TV viewing is not becoming obsolete due to new media but is actually on the rise, with Denmark and other European countries producing ratings of more than six hours per day and person. (Wieland et al. , 2012, p.8; Eurodata, 2013). This is an indication that instead of assuming that digital television entails a radical change in the institution of TV as such, we should look to its contextual situatedness in the broader framework of network culture, with a diversified view on convergence/divergence, encompassing old and new media flows through and beyond television, across different media and institutional contexts. However, in this process, material aspects also have to be taken into account, in line with my earlier points about how the materiality of the delivery systems are part of the politics of a medium like television in the context of network culture. It may very well be, that on some level, television stays the same, but the technology through which it is able to do so also in the convergent mediascape is changing and thereby perhaps also some of its politics. The next section will go further into how the analogue-digital switch-over is not a simple process of converging old media into new media, but involves recontextualising shifts and displacements that are present already at the technological materiality of the media involved.

“Adieu monde analogue, et Bonjour Monde Digitale!”²⁵

In the age of analogue black and white television, a key technological function was the synchronisation of the relationship between the sender and the receiver, both on a technical and organisational level. This synchronisation was for example a part of how the viewer could easily overview and get in tune with the regularised scheduling of pre-24 hour and state-monopoly television. But this synchronisation extended to the technical level as well, analogue

²⁵ Said by DR2 host on the eve of the digital transition.

television being based in a so called “symmetrical” system: audio and video are sent according to specific frequencies, the encoding of which has to correspond with the technical receivers way of decoding, that is a scanning process aided by syncpulses for the horizontal and vertical planes (Gupta, 2006; Bellander, 1969). As Bellander writes about this symmetrical ecology of analogue television back in 1969:

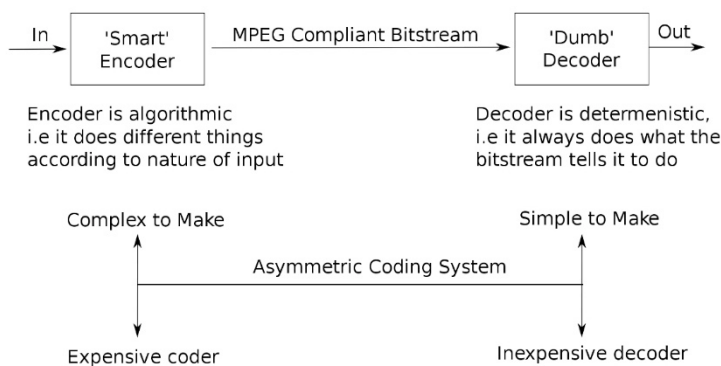
The heart of the studio <<image department>> is the synchronisation-generator or the syncgenerator as one usually calls it. In it, the sync-pulses are formed, needed for the synchronisation of the scanning process of cameras and other apparatus of the transmitter image-scanning with the corresponding scanning of the tube in the receiver-system. (Bellander, 1969, p. 22, my trans.)

This symmetrical relationship between the transmitter and receiver on the technical side also contributes to the possibility seized upon by low-tech analogue pirate-TV projects²⁶, that, similar to what Brecht (1926) already proposed in relation to the medium of radio, every receiver is potentially also a transmitter. This is different from the technological foundation of the digital broadcasting era where the sending and receiving of images and sounds no longer need to be so linearly synchronised. We can see this shift directly affecting also the level of use, as in the shift from broadcasting to so called “narrow-casting” where the viewer can choose to download podcasts or other media content to be viewed at other times (and on different convergent platforms) than that of their “original” transmission.

When analog television was developed, no affordable technology for storing any video signals existed; the luminance signal has to be generated and transmitted at the same time at which it is displayed on the CRT. It is therefore essential to keep the raster scanning in the camera (or other device for producing the signal) in exact synchronization with the scanning in the television.
(Analog television, 2013)

²⁶ Such as the “Micro-TV” movement initiated by Japanese artist Tetsuo Kogawa in the 1980s (Kogawa, n.d.).

The asymmetrical relationship between transmission and reception of DVB-T digital (television) broadcasting and other associated digital transmission systems such as DTT is built on a process which in industry terms goes under the name of “smart encoding / dumb decoding” (Pic. 4.7). The heart of this process is not the sync-pulse generator of the analogue TV-Studio, but the International standard for digital video known as MPEG. Developed by the Motion Pictures Expert Group (MPEG), this is a technology that allows for the standardised compression and transmission of sounds and images, hence the common reference to standards such as these as “codecs”, denoting their double function of compression and decompression (Mackenzie, 2008; Cubitt 2008) or in other terms: en-coding and decoding. MPEG, as the standard most widely adopted in the transition to digital television broadcasting around the globe, allows through digital compression for the above discussed function of “multiplexing”. This is the transmission of several compressed channels of audio and video within the same (digital) airborne signal, significantly increasing the possible number of TV-channels and/or the image/sound quality of transmissions.



Picture 4.7. Smart Encoding/Dumb Decoding. Overview of MPEG compression process. Image: Wikimedia Commons.

In the process of compression, the most decisive aspects of audio-visual transmission have been shifted from a hardware to a software level, as codecs are in essence programs with algorithms shifting audiovisual data around (cf. Mackenzie, 2010). Instead of only having the right hardware, the viewer/user of this data now primarily has to have the right codec installed on his receiver-system in order to receive/decode transmitted content. This also means that the relationship between the consumer-level television hardware and the transmission system has been rendered asymmetric: it is no longer possible to reverse-engineer your equipment in order to transmit when it comes to the hardware level. One might argue then, that this possibility persists on the software level, yet one then has to turn to the specifics of the MPEG-codec which is a proprietary software, to which the user by default is not meant to have any access.

The principle of smart encoding - dumb decoding in practice means that commercial developers are free to develop the encoding side while consumers are left with so called “compliant” devices. The standardisation of the decoding side means that there are a great choice of reception systems available for the consumer. In the case of DVB-T this can mean the multiplicity of different set-top boxes, Digital TV-Tuner cards or LCD televisions with built-in decoders. Needless to say, none of these systems are devised such as to be modifiable by the user but operate according to the telecom industry practices of partial vertical integration and planned obsolescence.²⁷ On the encoding side, developers may customise the way that transmissions are being encoded without in principle having to worry about the already standardised decoding processes of the “dumb” decoders.²⁸ Different ways of customising

²⁷ See the discussions of materiality, network culture and technological development in chapter two.

²⁸ This however, does not apply if the entire standard gets replaced as was the case in Denmark where it was decided that MPEG-4 would be the future standard of DVB-T transmissions. This means that many of the MPEG-2 only set-top boxes and TV's had to be replaced. Thus the logic of planned obsolescence is able to persist in the digital broadcasting as well, perhaps even more intensified as it becomes subject to the ever-changing world of algorithms. Video on the net is of course, a quite different thing, as apart from a fairly new computer or other device able to run a general purpose operating system, it is only a matter of downloading new codecs instead of constantly investing in totally new hardware. This can be attributed to the different kind of thinking that has historically separated the home-computing market as a tech nerd oriented, open technology culture from the Black-Box mentality of the Broadcasting industries. Even though digital convergence

the MPEG codec is developed further with each version; the MPEG-4 codec for example includes the possibility of encoding DRM - Digital Rights Management into the audiovisual streams, meaning that Intellectual Property laws become materially inscribed into the medium (Ming, 2005). This process may be seen as an unintentionally ironic technological disclosure of Stuart Hall's canonical encoding-decoding model of communication, and also as the response of the Broadcasting industries to the convergence era, updating television to the networked age in a way that tries to retain and even intensify the one-way status of the medium.

In his article "Every Thing Thinks: Sub-representative Differences in Digital Video Codecs" (2010), Adrian Mackenzie characterises codecs as belonging to a new heterogeneous media environment, radically different to how "Analogue television broadcasting solved the logistics problem in a Fordist fashion: images produced in studios passed through electromagnetic waves transmitted from central stations to many identical receivers." (p. 142). Following Mackenzie, we can understand codecs as standing for an asymmetric media ecology, as they take images apart and put them back together again (Mackenzie, 2008). In this complex ecology, Mackenzie traces codecs as technological instances of a Deleuzian interplay of difference and repetition, seen in how a codec like MPEG more than just being an algorithm for the digitisation of images and sounds, is based in compression that "senses" what is different and what is repeatable information from one instance to the next. Mackenzie outlines that these operations are part of a new economy of the audiovisual that stems from two crucial lineages of patents filed in the early to mid 1970's: one of fast Fourier transformation for the compact compression of images and one for "motion estimation" understood as the translating of information in a past or present image into the formation of a future image (2010, pp. 139-240). Thus, codecs allow for time-saving operations, as more content can be stored and transmitted more quickly, in an intensification of the ways that the broadcasting

also means that these two worlds are frequently intermingling, with for example Linux-systems running the popular TiVO digital recording system in the United States or sites such as YouTube or Hulu.com increasingly becoming archival outlets for "traditional" Broadcast media content.

industries always sought to scale down costs spent on technical infrastructure and the development of new content while maximising content delivery (cf. de Kloet and Teurlings, 2008, p. 348). In negotiating the trade-off between economy of delivery and what Mackenzie calls “media-historical habits” (2010, p. 143) of what the viewer’s eyes and ears will take in as an acceptable quality, codecs function like instrumental micro-media-archaeologists in action: “Their composite character reflects a constant and dynamic negotiation between the political economy of telecommunications and the media-historical perceptual habits of visual cultures.” (Mackenzie, 2010, p.145).

For Mackenzie this negotiation is not only a question of trade-off between economy and historically determined perceptions of quality, but following Deleuze, this “asymmetrical synthesis of the sensible” (Deleuze, 2004, p. 222) produces a system of difference across what appears to be the same. Hence, a video file of a certain feature film may seem the same to the casual viewer as that VHS tape of the movie he or she watched years back, but at the same time it is also now being inscribed into a whole set of differences in terms of its circulation and materiality, such as for example processes of digital monetisation or surveillance through data-mining and proprietary formats - hence codecs creates instances of divergence within processes of media convergence.

Given that they intensify an economising principle already operating throughout what Zielinski dubs the “deep time” of media, compression media such as codecs are not without their precedents. In his treatment of *Optical Media* (2010, (1999)), Friedrich Kittler described how the *Laterna Magica* with its storing of images on glass slides came into existence only after a hundred years of the widespread application of the camera obscura. The *Laterna Magica* allowed for “a representation of the representation” (Kittler, 2010, p. 76) as the slides standing in for the real objects are in turn transformed by being projected onto a surface. This projection can be thought of as the manual and analogue equivalent of digital compression of nature and its things. Codecs, in the Deleuzian and Mackenzie take, bring this compression of reality to another level, as the representations serving as base are

pulled apart and then put together again in an asymmetrical way, by way of algorithms interpreting the initial deconstruction and thus synthesizing a new, paradoxically different image of the same.

This asymmetry of sender, receiver and representations in the digital broad/narrowcasting has, as Kittler has shown, its background in the historical need of nation states to escape the symmetric synchronisation inherent to analogue signals. In *Grammophone, Film, Typewriter* (1999, p. 251) Kittler points out that for the early radio pioneers, like Marconi of fascist Italy, radio as a medium was hampered by the fact that its transmissions could be intercepted by others. This later came to be the base for the mass appeal of this medium but for purposes relating to secrets of the state and war-times, a “secret typewriter”, namely the mechanical computer, was devised which transmitted encoded nonsense, to be decoded by an asymmetrical decoder (Kittler, p. 251-52). Eventually, these needs led to “the war of typewriters”, where Alan Turing famously decoded the ENIGMA machine of Nazi Germany, turning “Tape-salad” into text again as Kittler poetically puts it.

The codings and decodings of the typewriter, in Kittler’s media history, is the point where communication convergence begins: the turning of letters into numbers that will later connect cinematic means of imagining (imaging) with radiophonic transmission.

Such combinations became possible no later than the First World War, when media technologies, reaching far beyond information storage, began to affect the very transmission of information. Sound film combined the storage of acoustics and optics; shortly thereafter, television combined their transmission. Meanwhile, the text storage apparatus of the typewriter remained an invisible presence, that is to say, in the bureaucratic background. (Kittler, 1999, p. 170)

This account of the relation between storage, transmission and processing of optical media can be read as a story of initial synchronisation being replaced by desynchronisation, serving the state/industry needs of encryption and economising. Television introduced only a partial asymmetry, based in the scanning of

frequencies as described above, causing a delay but retaining the reversibility of the transmission process. Unlike radio, optical data flows had been generally too complex and contained too much information for real-time processing. Analogue television only presented a partial solution to this problem, and was in Kittlerian terms still closer to cinema which he describes as a medium of “the cut”, while describing radio as one of “the fade out” as aesthetic and psychological principles corresponding to their different capabilities of real-time data manipulation.

As has already been discussed in relation to the convergence aesthetics of the campaign for the new TV-Signal, with its smooth transitions and composite images, we are now witnessing the age of fully computable audiovisual flows. One part of the material base for this are codecs which allow multiplexing, compression and image estimation and thus do away with the obstacle of the linear synchronisation of audiovisual content. The case of DVB-T however, also conforms to the heightened levels of control inherent to such now computable flows, and does not give away many “typewriting” abilities not already controlled by the encrypter, being a smart encoding, dumb decoding process, where any interactivity is predefined. The TV-Hacknight, as connecting to movements of convergence from below, seeks to act on this process through a transversal approach to the introduction of DVB-T, connecting the night of transition and digital transmissions to the undead or residual medium of analogue television, as a performative acting out and subversion of the divergent properties of media convergence.

Convergence from Below: From *The* to *Your* New TV-Signal

The broadcasting of the analogue-digital transition in Denmark, with its naturalised convergence discourse going along with the public campaign is also a fragile media event. As previously discussed, Dayan and Katz (1994) notes the ceremonial aspect of a certain kind of media event such as coronations where ritualised outcomes are presented as emerging out of historical necessity (cf. Dayan, 2004, n.pag.). The broadcasting of such events tends to try and suppress any kind of conflictual positions in relation to the

given ceremony, focussing on the result rather than the process. However, one of Dayan's points is also that TV's specific "diasporic ceremoniality" leads to a situation where "A monumental but distant celebration triggers a multitude of micro-celebrations." (Dayan, 2004 n.pag.; cf. Dayan and Katz, 1994, p. 145). These could for example come to the fore in the media event category which Dayan and Katz describes as the "Conquest" which "call on their audiences to be 'conquered' by the paradigm change that the ceremonial actor is trying to implement; to suspend skepticism." (Dayan, 2004, n.pag.; cf. Dayan and Katz, 1994) This involves a "charismatic authority" (1994, p. 44) which in this case could be the public campaign on the analogue-digital transition in Denmark which was a multi-modal effort to turn this "digital coronation" into as smooth a process as possible. But as Dayan argues, it is also by way of this charismatic aspect that such redefinitions of norms become "subversive", in that the change implied in a narrative of "conquest" is not as easily cast as determined by historical necessity and continuity as the "coronation".

With Thrift's notion of the cultural circuit (see chapter 2), we may say that here, a *performative* dimension opens itself up in the process of technological development, as a gap between the theory, understood as the supposed necessity of the change, and practice, understood as the material fragility of this media event. The potential for subversion is in the case of the analogue-digital transition not only to be located in the convergence discourse as a digital "conquest" narrative surrounding the event, but rather this aspect has to be seen in conjunction with the performative materiality of the event as an event *within* the media itself – where the TV-Hacknight tried to act as a transversal eventualisation, performing with this materiality.

Writing simultaneously of the analogue-digital transition as a broadcasted media event and as a material event in the television technology, Vejlgård's earlier quoted report notes:

The analogue shut-down will go down in TV-history, and this is why DR1 made the shut-down into an event on DR1, Saturday, October 31, 2009. Two of DR1's well-known hosts featured in live segments in between the other programs, the whole evening until midnight. One minute prior to midnight, the transmission shifted to the control-room, where the viewers could see that the analogue signal was being shut-down just seconds before midnight. Both the viewers who were ready for receiving the new tv-signal, as well as those who weren't, got a "black screen". But the first group could watch television again after a few hours – and many could even watch the three new TV-channels from DR: DR Ramasjang, DR K and DR HD. (Vejlgaard, 2010, p.62)

When looking at the DR transmission referred to in Vejlgards report, we find that the hosts describe the evening as a live "writing of TV History" (DR, 2009). Only, it should also be noted that there is a peculiar aspect to this piece of TV history: there is nothing to be seen or heard. The celebration is that of the end of a certain kind of broadcasting and as such it is non-representable, consisting instead of a literal cut in the material flow of the medium. The way that the DR program handles this is also suggestive of this materiality as the hosts are seated not in the traditional TV studio but in a technical control-room. The male host, who's the technician, is interviewed by the female host and he somewhat downplays the shutdown, claiming that the truly exciting stuff is happening when they launch the new channels on the new digital net.

The DR broadcast downplaying of the technical nature of the analogue to digital transition resonates with the technical event in itself as difficult for traditional broadcast TV to actually represent in a comprehensible way to the viewers. As the moment of the turn-off approaches, the program presents a split-image between the control-room and a basement room where a technician, invisible save for his hand, will turn off the signal. The female host bids "Farewell analogue!" as we see the technician's hand wave

and pull the plug. Now awaits six hours of black screen or white noise on all airborne transmissions, as the networks have to re-organise the technical infrastructure so that it allows for the transition to the digital only “multiplexed” signal, including the three new DR channels. Combined with the counter-acting of the charismatics of the “The New TV-Signal” campaign it was the performative possibilities of this material gap in the transmission that the TV-Hacknight sought to exploit as an event in itself.

Reclaiming the Black Screen

Throughout the night of Oct 31 / Nov 1, “short frequency” transmissions were made directly from a workshop at the tv-tv studio, reaching the immediate neighbourhood (within a few hundred meters) as well as the crowded Folkets Hus café where a television set had been installed for receiving the pirate transmission. The material was then edited into a 30min program, as a documentation of the workshop and taking the form of an instructional video on how to set up your own analogue pirate-TV station. This program was aired nationwide on the evening of November 3, 2009 when tv-tv had its first transmission on the new digital channel for non-commercial TV.

As a meta-event reflecting on the transition, the TV-Hacknight is related to similar events that were staged when the digital switch-over was made in other countries. In one of the most publicised of such events, the American sci-fi writer and Wired journalist Bruce Sterling and Stanford University futurologist Paul Saffo were the main speakers at a “Funeral for analogue TV” held at the Berkeley Art Museum on February 17, 2009. In his “Rememberance” delivery, Saffo (BAMFPA, 2009) notes that since TV has been digital already for a long time, maybe it is not really analogue TV which is being missed but rather the prospects of “listening back” which are lost in the world of digital encryption and TV set-top boxes with proprietary standards and formats. Of course, one could add that all these can be hacked as well, yet they are not simply “out there” to be received by anyone with a radio or TV-set, which serves to marginalise any DIY, pirate transmissions as

well. In this context of increased producer-user asymmetry, the TV-Hacknight was meant only as a temporary “hack”, not only of the technology, but of the institutional frameworks of analogue and digital TV during the actual transition night.

The TV-Hacknight sought to engage with hacking in the spirit of what Otto Von Busch (2009) has called “the abstract machine of hacktivism” where hacking is transposed from the exclusive software context to the larger domain of DIY culture. The aim of this hack then, was to deconstruct the discourse of convergence associated with the transition, mimicking the official campaign and re-educating the participants, departing from the fact that the analogue spectrum does not magically disappear with this digital “switchover” but is still residing in the ether and – still available for DIY culture appropriations.

The basic principles of the workshop, turning devices for receiving into devices for transmitting and of connecting the new with the old, extends back in DIY media histories of which a few examples will here briefly be touched upon as direct sources of inspiration. The first comes from the territory of radio production which in its infancy, before rigid state regulation, was seized upon by artists and social movements as a medium connected to Utopian fantasies of a democratic media. An example was the Weimar Republic’s Workers Radio Movement which through associations such as the Freie Radiobund (FRB) were engaging in both legal and pirate transmissions, the goal of which were to educate the working-class not only in the reception but also in the production of the medium of radio (Lacey, 1996, p. 37). Katy Lacey (1996) observes that until it was cut short by the Nazis in 1933, one significant part of this movement was the focus on the technical resource-building as well as the program contents. As commercial sets were far too expensive for the working class at the time, the movement sought to teach workers how to build their own radio transmitters. It was under the influence of this movement that Brecht wrote his famous 1926 text, *The Radio as an Apparatus for Communication*, in which he also emphasised the potentials of the two-way aspect of the medium (cf. Zielinski, 1999, pp. 127-28). The TV-Hacknight

project followed a similar educational and economical DIY mode as found in the German Workers Radio, yet the context of the technology has changed as commercial technologies are now more widely affordable, shifting the focus from building technology from scratch to the rewiring of consumer-gadgets designed for receiving into tools of transmission.

Significant precursors to the reverse-engineering approach of audiovisual consumer technologies can be found in the Japanese “MiniFM” and “Micro TV” movements of the early and mid 1980’s. One of its main perpetrators, Tetsuo Kogawa, describes the MiniFM movement as being initially inspired by the 1970’s Free Radio experiments in France and Italy (Kogawa, 1993) but with the important modification of being even more short-range, a specific form of “narrowcasting” which came out of a combined regulatory and technological framework:

I stumbled upon Article 4 in the Radio Regulations Book. It permits transmitting without a license if the power is very weak and is intended to accommodate wireless microphones and remote-control toys, for example. Under this regulation, quite a few wireless transmitters were sold in toy stores and electronic markets. Also, several audio-parts makers sold the wireless stereo transmitters to link amplifiers to speakers without wires. My idea was to use this type of tiny unit for radio transmitting. (Kogawa, 1990, n.pag.)

What was initially an underground, left-wing movement inspired by micro-political thinkers such as Felix Guattari, MiniFM enjoyed an astounding success in Japan, reaching at least a hundred-thousand transmitters at its peak (*ibid.*). Some years later, Kogawa moved on to the medium of television, with the Micro TV movement operating under the slogan that “every VCR could become a micro TV station” (Kogawa, n.d., n.pag). The explanation for this is the basic component from which low-range TV stations can be set up: the RF - Radio Frequency - modulator. Found in any VCR and any other device which relays the signal from a TV-antenna to

a television set, such as computer games consoles, the RF modulator simulates a TV antenna usually operating both on the UHF as well as VHF frequency ranges. Put very simply, in a VCR, this device allows you to watch television and record TV-programs at the same time: the TV-antenna cable goes through the RF modulator which then passes the signal on to the TV, and thereby the modulator is acting as a virtual antenna. Thus the RF modulator is a transmitter and by simply reversing the inputs and outputs, which means connecting an antenna to the modulator's output instead of to a television set and a video/audio source to its input you will have a basic transmitter. As VHS VCR's are now out of fashion, RF modulators can be cheaply ripped from junked technology, but they are also available as standalone units at practically any DIY electronics store.

The technological set-up of the TV-Hacknight workshop followed the basic principles of the Micro-TV set-ups: RF modulators set to unused VHF frequencies were connected to input devices such as VHS and DVD players, computers and live cameras, which combined with antennas could transmit to the immediate neighbourhood. The antennas used were also originally meant for receiving but were transformed into senders through a kind of transexual operation, revealing of how gender-roles replicate throughout technology hardware (cf. Chun, 2006). Through some cutting of cables, the "male" output connectors could easily be changed into "female" connectors and thus the antenna could receive the inputs from the RF-modulated sources and pass them on in the ether. The set-up itself was quite simple yet the result was a complex media-ecology with many different inputs contributing to the contents of the transmission flow.



Picture 4.8. A Media Ecology of Pirate TV: RF modulator, video mixer, signal amplifier, antenna, cables, hands. Still from Reclaim Sort Skaerm/TV-Hacknight video, tv-tv, 2009. Image: tv-tv.

As seen on picture 4.8, the temporary Micro-TV station of TV-Hacknight was operating through a mix of analogue and digital, even networked inputs, making this a station with a transversal approach to technological development, utilising residual media forms as well as reverse-remediating the new into the old.

A specific precursor to this “reverse-remediation” approach that is also more pertinent to the convergence politics of the network culture context in the TV-Hacknight intervention can be found in the Italian “Telestreet” movement. Referred to as “convergence from Below” (Berardi, Jacquemet and Vitali, 2009, p. 124), this was a network of Micro TV producers that arose in 2002 as a challenge to the “Videocracy” of the Berlusconi media regime. Since, already in the 1980’s cultural critics in Italy such as Umberto Eco had dubbed the hyper-commercialised and monopoly-like Berlusconi television culture, “Neo-Televisione” (Eco 1984; cf. Pecchioli, 2005), it perhaps seems curious that Micro TV resistance would appear this late. As Michael Goddard has commented on the phenomenon:

This experience which, coming as it did when the internet was already quite developed, has something anachronistic about it, as if it was the delayed media experience that the shocked society of the 1980s should have come up with but didn't; an anachronism that perhaps accounts for its short duration. (Godard, 2009, n.pag.)

The TV medium was already dead according to some of the main people behind the pioneer Telestreet channel, "Orfeo TV", which started transmitting in a radius of 300m in Bologna, 2002 (Berardi et al. 2003, p. 22). The idea of Telestreet was not to mimic local-TV which usually transmits to a whole city or region but to engage in "proxyvision" (Ardizzoni and Ferrari, 2006, p. 176), a TV for neighbours and friends, using "shadow frequencies" in between the big networks. The wider connectivity came instead through the Internet as the Telestreets' spread information on how to set up such stations and shared content through online networks.

Probably, it is the function of being a transversal net-television project that can be seen as the key for understanding the "anachronistic" approach of Telestreet, as TV was chosen as a medium harboring a certain kind of live socialisation which could be combined with the local-global aspects of the net. The Italian media activist and theorist Matteo Pasquinelli described this hybrid configuration in his "Manifesto for Urban Televisions":

Television must be considered a new prosthesis and an extension of the net: but to avoid another alternative 'ghetto', the horizontality of the net must meet the "socializing" power of television.

(Pasquinelli, 2003, n.pag.)

Telestreet can be considered a transversal project precisely because its subjects did not lock themselves to one medium: the Telestreet practitioners performed a convergence that was not technocratic but social, pragmatically sampling different forms of media and temporalities of network culture and creating for themselves

Utopian yet temporary spaces of communication, exploiting the gap between television and the net.

Even though numerous sources (Berardi, Jacquemet and Vitali, 2003; 2009; Narduzzo and Ordorici, 2006) states that the Telestreet network expanded to more than a hundred stations, from political activists to Catholic churches, their short lived nature suggests that not many of these were really actively transmitting. In a lecture at a video art festival in Copenhagen 2006, one of the main theorists of Telestreet, Franco “Bifo” Berardi already declared Telestreet as a practically dead phenomenon (Bifo, 2006; cf. Bazzichelli, 2008, pp. 234-235).

In 2005, Telestreet even made it big in the contemporary art world, as then Hugo Boss Prize winner Rirkrit Tiravanija set up a low-powered TV-station at the Guggenheim museum in NY, referencing Telestreet (Guggenheim, 2005). The same year a major exhibition on Telestreet and other “hacktivist” practices was held in Berlin, “Hack.itArt” curated by Tatiana Bazzichelli and Alexandra Welter as a partner event of the transmediale festival, and which featured workshops and presentations from some of the main proponents of Telestreet such as DiscoVolante and CandidaTV. It was at one such workshop that a representative of DiscoVolante, a Telestreet station in Senegalia, made a statement that resonates with many of the Telestreet projects, even when they were only temporary - that it was not the contents of the transmissions that were necessarily political but the acts of communication themselves (cf. Bazzichelli, 2008, p. 233). In this respect, the “brand” value of Telestreet might be seen as a success in itself, despite failures of building sustainable models in the specific Italian context. As discussed in a paper by Narduzzo and Ordorici (2006), Telestreet is a story “where technology points out the limitations of the institutional context” in the sense that the hybridisation of the net and television was at the time used in a critique where: “Institutional regulations were not ready to manage the people use (sic) of the broadcasting medium and in fact the new technologies that have been chosen to be implemented (i.e. digital terrestrial television service) are meant to keep the television close and regulated.” (ibid. p. 3). In other words, Telestreet itself has to be seen as a

temporary hack, exploiting that moment when broadband Internet was not common enough to facilitate the current massification of online video and instead calling upon the micro-politics of low-range TV, which could be further relayed through online local-global communication flows.

The TV-Hacknight picked up this “hacktivist” thread of Teletreet and for one night “compressed” its essence of being an institutional critique and temporary intervention, now in relation to the Danish context of the analogue-digital transition. The context of course was different, in Denmark it was possible to obtain a license for broadcasting local television, which as previously discussed had even become a form of institutionalised dissent. The incentive to set up a Teletreet station would seem further lessened by the proliferation of broadband Internet, Denmark being one of the world’s leading “IT-Nations” and thus supposedly enabling people to publish their own content online.

However, the “dissolutionised” character of such practices as discussed earlier and in this case of the “nationwide” technological transition, staged as a media event, it made sense to intervene through the medium of television itself. Instead of propagating for “The New TV-Signal” then, the live transmitted hacknight tactically set itself up as a counter-public campaign of “YOUR New TV-Signal” where the word for “your” in Danish, “DIT”, also came to signify the abbreviation for Do It Together, a modification of DIY - Do It Yourself that accommodates collective production. This was embodied not only through the demonstration of how to set up your own TV-station but also through workshop guests who were invited to show their own TV “hacks”, be they technical or conceptual.

In the workshop programme of TV-Hacknight, media researcher and open hardware pioneer David Cuartielles was demonstrating small self-made text generators which could be directly connected to screens and the TV-transmissions. The TV-Hacknight co-organiser Linda Hilfling put her critical intervention into participatory media, “Remote Control”, at the participants disposal through which one could upload videos on the net that were relayed to the television transmission, only to be modified by codes

reconfiguring the playback of the videos according to different models of democratic participation (cf. Hilfling, 2008).

On a less technical level, a group of German artists used the live television broadcast to propagate the concept of the “Art Strike”. In yet another segment, a Telestreet documentary was shown and discussed as a source of inspiration. The campaign video for The New TV Signal dealing with the difference of analogue and digital (see above) was also screened and simultaneously filmed live so that the resulting transmission was one of the video “feedbacking” over its own image, reflecting on the remediation of this digital convergence discourse into the analogue pirate transmission.

Through such small tactical interventions, the TV-Hacknight perhaps managed to represent or rather perform what the national and commercial networks could not: the eventualisation of the transition itself. Instead of emphasising the radical break with the past, the Hacknight hoped to at least awaken a critical reflection on the naturalised discourse with which the transition was marketed. In this temporary “hacking” it would be all too easy to succumb to self-glorifying accounts of how passive consumers were transformed into active producers. The point of this eventualisation, both theoretical and practical, of the analogue-digital transition should instead be read back against the background of tv-tv and its in between institutional status. The earlier discussion of how alternative practices, commercial forces and the state operate dialectically through processes of co-optation should be remembered here. In this context, a counter-public campaign and intervention such as the TV-Hacknight only constitutes a meaningful space when creating a temporary transversal set of lines.

Whereas manipulation by the industry is often perceived to be the flipside of cultural appropriation, in practice they feed on one another. The vicious circle of commodification and appropriation propels both creativity and the flow of capital. It is possible to point to moments of subversion, but it is equally possible to trace moments of compliance. (de Kloet & Teurlings, 2009, pp. 356-57)

This chapter ends then, with the perception of transversal media practices as site- and time-specific in the way that they instigate temporary counter-publics and exploit performative gaps in the technological development of network culture – and by doing so they heed the approach of perpetual self-reflexivity, avoiding rigid old media institutionalisation or new media “dissolutionalisation”. What knowledge of sustainable quality can come out of such precarious cultural production?

The end of television? Or simply the latest turn in a long history of assimilated technologies in search of ways to deliver a particular set of experiences? The answer turns on our frame of reference and the strategies we wish to deploy, either to select a particular twenty- to thirty-year period as the embodiment of the medium, or to define a looser set of anticipations and practices as coherent and embrace television as a medium in near-constant transition. (Urrichio, 2009, p. 72)

As opposed to the structuring of media development as one of absolute ruptures, continuously establishing the dichotomy of the old and the new, we may, in line with Urrichio’s view of television as being in “near-constant transition”, adopt a polymorphous view of the media. Although turning points should not be ignored but through transversal analysis and practice their micro-temporal politics may be opened up, revealing counter material flows, narratives and practices. This is hopefully a sustainable effort in the sense that, however temporary, the artistic and DIY methods discussed are part of a wider media-archaeological challenging of dominant conceptualisations of network culture, traversing relational possibilities of critical cultural practice rather than disclosing it in the linearity of teleological assumptions.

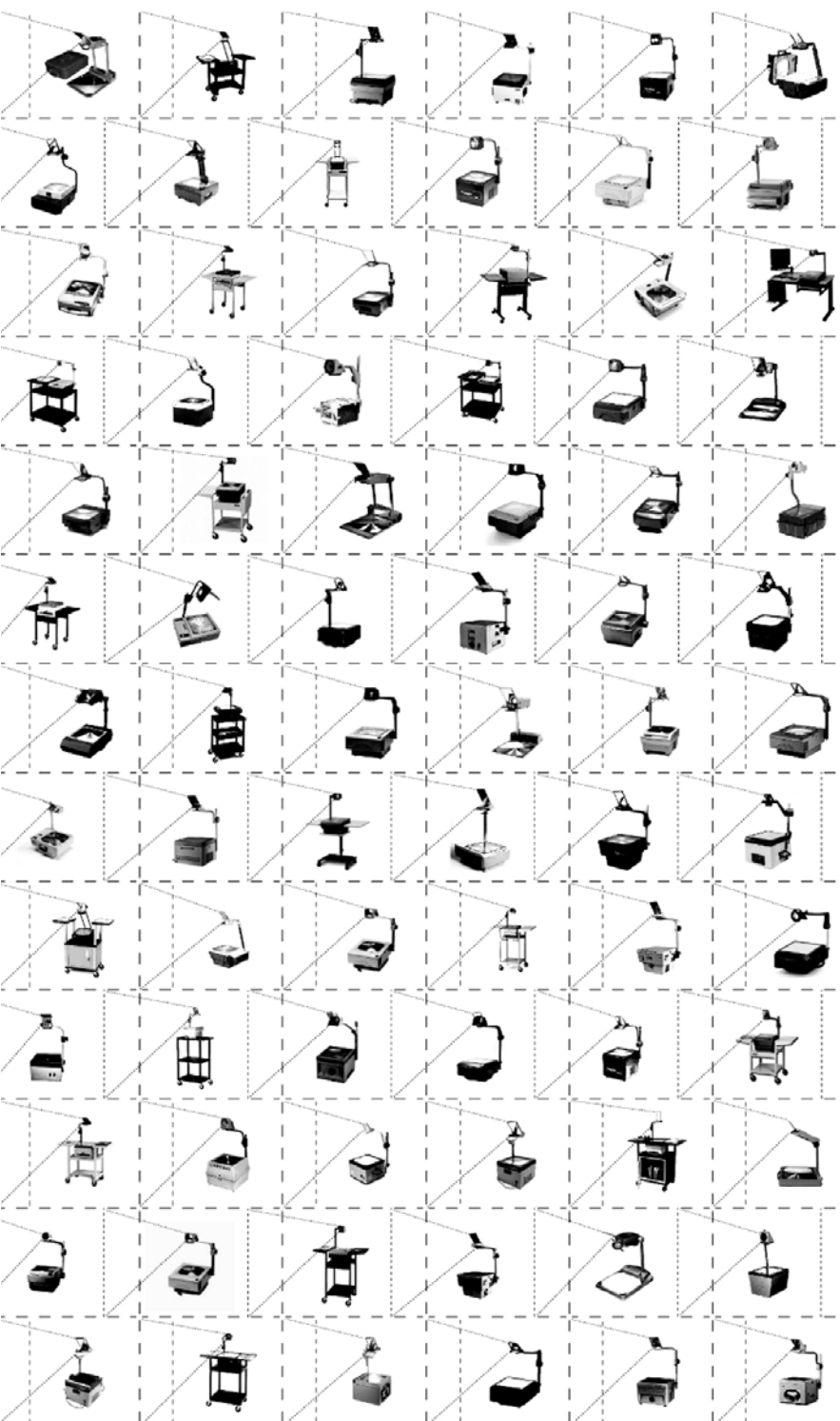
In the analogue to digital transition example, the old conception of broadcast TV as a one-way mass-media form of communication can actually be thought of as a “new” distribution of power because it is being brought into a digitised and networked media environment, supposedly functioning in a different, open and participatory way - here revealed to also contain material assym-

metrical qualities which are scaled up to a new institutional level. This process happens while other “symmetrical” functions of the analogue media are suppressed, functions which in hindsight might have more to do with the democratising qualities often connected to new media than actual “new media” forms themselves.

In the context of this transversal media-archaeological analysis and practice I propose the concepts of “eventualisation” and “reverse-remediation”, denoting how such projects as tv-tv and the TV-Hacknight are opening up processes of technological development through specific and temporary interventions into established institutional and material frameworks. tv-tv was interpreted as a counter-public project, performing an institutional critique of the old medium of television. The changes in this medium were further analysed through the eventualisation of the digital switchover where tv-tv as “The World’s Last Television Studio” was used to reverse-remediate the new into the old, redefining our understanding of a specific moment of technological development.

The Art of the Overhead 2009 + May 17 - 31 + + + + + PROGRAMME

OVERHEAD SURFACE



5 THE ART OF THE OVERHEAD

“Now you are dead media, looked up on Wikipedia. Not even Danish E-Bay nerds do care (...) Is there a chance to get you back again tonight to shed your light?”

- Johannes Grenzfurthner & Oliver Hangl, *Farewell to the Overhead*, 2005.

*Picture 5.1. The Art of the Overhead 2009 festival design.
Image: The Art of the Overhead/Linda Hilfling.*

Do's and Don'ts : An Introduction to Case Study II

Do's

If you are nervous, find a quiet place and take a few deep breaths. Concentrate on feeling your feet on the solid ground and remember that thousands of other students have been in the same situation and have survived. (...) Tell the tutorial group - they will understand. Remember, your audiences consist of your colleagues and friends. They all want you to succeed, so try to relax.

Don't:

use too many lines per page, forget to focus projector, use complete sentences, use overly busy slides, fiddle with separate notes, mismatch slide and verbal message, shift slide while pointing at it...

The endless lists of do's and don'ts relating to the art of presentation at a conference, business-meeting or in the classroom are not phenomena particular to our current situation of "PowerPoint culture". Before the combination of computers and video projectors enabled this presentation software and its derivatives to conquer the world, variations of these kinds of rhetorical tropes circulated in reference to slide projectors, episcopes and magic lanterns, just to name a few of the most well-known optical instruction devices. Given the long heritage of different projection technologies, some presentation "don'ts" are more specific than others in their addressing of properties inherent to a particular apparatus.

Don't: leave slide in protective jacket, search a long time to find a particular slide, use A4 slides on smaller projectors, look down at projector, use faded pens, correct with spit, forget to bring a spare bulb...

If you have not guessed already, the above list of presentation don'ts concerns the Overhead Projector. Considering that this

dusty piece of technology may be most largely associated with educational and instructional settings, it is perhaps an unlikely contender for media art stardom, yet this chapter is a case study involving a festival that sought to appropriate the overhead as a tool for “alternative projections of our contemporary networked media culture.” (Gansing & Hilfling, 2007).

Taking its cue from *The Art of the Overhead* project, in this chapter I contextualise this project through the different histories of media practice in which the overhead projector has been put to use. This will be an alternative projection of media development that is both driven by a theoretical and historical research as well being operational in its cultural production mode. The use of the term projection here is more than a metaphor and rather follows Ted S. Nelson’s description of the use of projection in the art history lecture: “The projected image is thus less a sign and more a simulacrum of the art object, an entity that in some way is that object itself, or, rather, a thing in itself, a past made present” (Nelson, 1998, p. 418). If we think of projections in this way, as both representing and creating something a new, then technological development, as an object of study seen through the light of the overhead projector is what is expanded and renewed in this chapter.

Like the previous chapter, this chapter is also a description and analysis of an event or rather a series of events and artistic works extending across the analogue and the digital. In the tv-tv case and the TV-Hacknight intervention, I was dealing with how we in network culture may observe changes in the medium of television. In this process, we looked at artists exploring this medium in transition and eventually looked at a critique of convergence through a transversal opening up rather than resolution of the old and the new. Returning to the “Do’s” and “Don’ts” above, they also relate to this discussion of how the new and the old relate to the material and discursive power of media and forms of production and may thus also serve as reference points for subversive interventions. Some of those “Don’ts” given in the second list above may seem funny today as they are so strangely out of place in environments where digital presentation technology has become ubiquitous: “Don’t correct with spit” and “Don’t use faded pens” would be two obvious examples.

Read from another perspective though, these statements tell of a high degree of direct interaction with the medium and relate to the overhead projector as a device imbued with qualities increasingly sought after in digital media, as found in visions of interactivity or tangible and ubiquitous computing.

Instructions not to “use too many lines per page” and not to “use complete sentences” may be situated in what Edward Tufte famously critiqued as “The Cognitive Style of Powerpoint” (2003), a text in which he lamented how this well-known presentation software brings about the hierarchical compression of complex knowledge into easily digestible “bullet-lists”. But rather than, as Tufte also did in a 2003 Wired article, simply pointing out that “Powerpoint is Evil”, we need to reject such one-way and media-effects based approaches and adopt a contingent perspective that traces the wider cultural and technological discursive practices in which this software is historically inscribed.²⁹ For example, the instructions of how to increase your presentation efficiency are not only related to PowerPoint (or before it, the overhead projector) but also seem to be direct descendants of the economical information management inherent to cybernetics. As the science of the most effective transmission of communication, the instructions tell of the trade-off between entropy (disorder and unpredictability of information) and compression: do not cram your slides with too much information but at the same time do not assume that the compressed message contains the whole picture, hence the imperative not to “mismatch slide and verbal message”.

Typically, when a technology is first introduced, its developers are often afraid to confuse their users with too much information, meaning that they have to invent ways of restricting what is supposedly radically new, as we saw in the earlier case of the analogue-digital TV transition. In the case of PowerPoint remediating both the overhead projector (OHP) and the slide projector, this becomes obvious in the function known as the “AutoContent Wizard”. This function enables users to generate their presenta-

²⁹ This is the approach to the PowerPoint phenomenon also taken by Wolfgang Coy and Claus Pias in their groundbreaking anthology *PowerPoint - Macht und Einfluss eines Präsentationsprogramms* (2009).

tions according to standardised formulas, aiding you for example in the tasks of when to introduce and when to round-up your main arguments. Thus, this function not only guides users along in the confusing world of infinitely customizable software, it also somewhat contradictory ends up restricting what was previously an open process in PowerPoint's old media predecessor, the OHP, which as a device in between the blackboard and the slide-projector allowed for a high degree of non-linear and live manipulation of your presentation formats.³⁰

In the analogue-digital transition from OHP to PowerPoint there are some parallels to the process of transition from analogue to digital television as both examples involve a foreclosing or rather a new stratification of some aspects of interaction within a specific use of media. As a challenging of evolutionary and linear technological development, common to both cases is also the tracing of a minor history of contemporary artistic practices, appropriating their respective media and associated institutional frameworks and technological materiality, especially as it is articulated through analogue-digital transitions and stratifications. In the following I will outline the institutional as well as lesser known areas in which the OHP was put to use. Through this mapping, I want to suggest that the almost obsolete technology of the OHP fits the notion of "residual media" (Acland, 2007), always sitting there in the back of the class- or conference-room, perhaps reminding us of where the templates of our PowerPoint presentations "originally" come from.

Case Methodology

This case study follows in the footsteps of the transversal approach laid down in the methodology section as well as demonstrated by the previous chapter. Structurally, the case is introduced similarly to the previous one, with an "excavation" that includes historical and theoretical contexts. This is followed by an interpretation of two contemporary artistic works which exemplify how the manifold history of practices and contexts connected the OHP can be put to use in artistic practice. This then leads on to an exploration

³⁰ On the paradoxes of customisation in the content wizard function of PowerPoint, see Christoph Bieber (2009).

of the The Art of the Overhead which is a project that builds further on these two approaches. The festival on a whole is further analysed as an intervention into media art, challenging the institutionalisation of the new media art field. In the spirit of the transversal line as a movement cutting across and beyond territories, temporalities and institutional practices, the festival forms a challenge to the given structures of media art through its linkage of media archaeology to contemporary problems of network culture.

There is a crucial methodological difference between this case study and the previous one, in that The Art of the Overhead chapter relies less on “classic” research data such as interviews and participant observation. Instead, this case study is more akin to artistic research if understood as a form of intervention within a given field of more or less institutionalised practice and theory. In art theory and artistic research, interventions have come to be almost synonymous with projects that insert themselves into given social contexts in order to instigate a change and critique from within.³¹ In this case study, I will relate interventions to the notion of institutional critique. This term has come to stand as an historical label for Western politicised art practices, predominantly of the 1970’s, that challenged the taken for granted boundaries of the “art world” through works that employed methods of self-reflexive critique of their own position within that world. More recently, this term has been revived when discussing relational and post 9/11 socially and politically engaged art, as examples of practices which are not content with restricting themselves to a critique of the art world but which engage a broader range of social institutions (Raunig, 2009; Welchman, 2006).

In the case of The Art of the Overhead, the project can be seen both as an intervention into the institution of media art and as a more general investigation into the problematic of technological development. Rather than being one specific art work of institutional critique however, this case combines practice-based and

³¹ For example von Busch (2008) compares interventions in design and artistic practice to action research but emphasises their more direct experimental character (p.249). While Hannula et. al. (2005) include interventions in their list of different methodological faces of artistic research. Löwgren and Reimer (2013) also name interventions as one of the main methods for research in and through collaborative media.

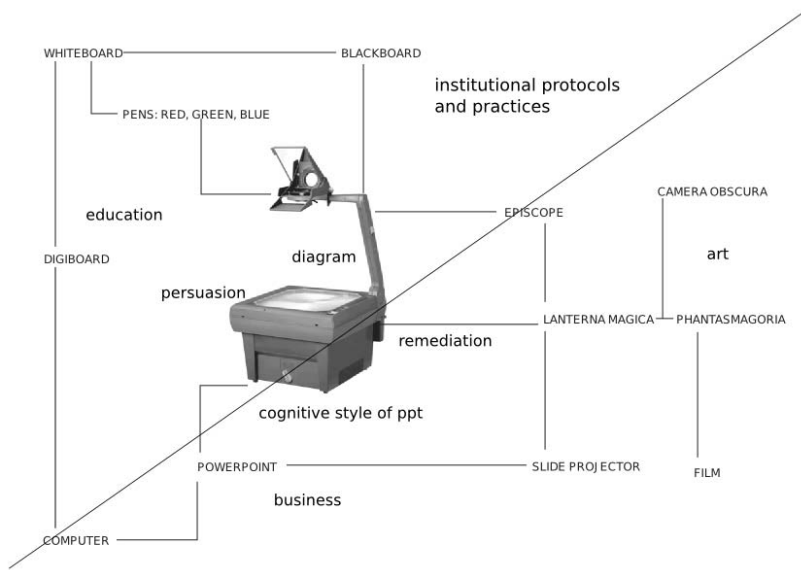
artistic-research methods with those of cultural production and curating as forms of “embodied criticality” (Rogoff, 2006, p.1). This approach is inspired by curator and theorist Irit Rogoff’s investigation into criticality through the notion of “smuggling” as the conceptual marker for a project that combines curatorial activities with research. She literally takes a concept (which is also a practice) and lets it act as simultaneously subject and methodology, ultimately pointing towards a new understanding of both and a critical incentive for further theory/practice.

The research aspect of the cultural production activity in this case is the knowledge production that comes out of doing media archaeology, complemented by cultural analysis in the form of close readings of the relational “objects” produced by this practice. Thus the analysis of different activities connected with the project serve the same purpose here as the program analysis of the tv-tv chapter. Yet it is a (collective) cultural production, not an empirical work in the sense of the collaborative case study, and my research here builds on and reflects on that experience of curating and cultural production, supplemented by historical research and theory.³²

Excavation: Uses and Counter-Uses - A Genealogy of The Overhead Projector

Is it about a machine? The question is not easy to answer, but correctly posed. The question should not certainly be: What is a machine? Or even: Who is a machine? It is not a question of the essence, but of the event, not about **is**, but about **and**, about concatenations and connections, compositions and movements that constitute a machine. (Raunig, 2010, p. 19.)

³² Sean Cubitt, in a post to the e-mail list New Media Curating, eloquently reminds us of how curating is itself a transversal discipline that by putting separate elements together can be employed also as a methodology for media research (typos in the message was cleaned up by the author): “Media are both more hybrid and specific now than ever before: this is why it is worth looking in detail at what they are made of, both as objects (eg. where the paper for the digital print comes from) and as practices tying together Boolean indigenes and Old Street hackers, protocols and recycling villages. Curation – from the root for ‘care’ can be a beautiful discipline for caring for the whole process of art-making.” Posted on March 7, 2011 in the thread “Analogue/Digital Art”.



Picture 5.2. *A Genealogy of the Overhead Projector. Slide From the lecture "OHistory!" by Gansing and Hilfling, 2007.*

There is no definitive history of the overhead projector, a device which on the one hand is a standardised medium within education and business and which on the other hand extends across a hybrid context of uses from bowling to intermedial art.³³ In terms of tracing the origins of the OHP, I will adopt Zielinski's *an-*archaeological approach, who writes of the history of projection: "When the knowledge that flows into an invention has been developed over centuries, the question of who actually invented it first becomes rather pointless." (Zielinski, 2005, p. 91). Instead of a hierarchically ordered tree-like genealogy, one has to trace the history of the overhead projector in a network of relations between technologies and practices, traversing the diverse areas in which it has been put to use across education, science, business, entertainment and art. Except for its association to institutional and corporate settings within education and business, the OHP has

³³ There is virtually no previous history of the OHP that tells this manifold story. The main work in this area so far has been done by Linda Hilfling and Kristoffer Gansing in their lecture "O-History! A genealogy of the Overhead Projector" (first presented at TENT Gallery Rotterdam, 15.02 2007). Another important source is Claus Pias with his article "Electronic Overheads" in Coy and Pias (2009).

always lacked a clear identity of its own, appearing in the beginning of the 20th century as an anonymous mass-manufactured “standard object”.

As a standardised technology, the OHP can be seen as a combination of different projection technologies such as the magic lantern with its transparent glass slides, and the opaque projector (later episcopes) with its table-top set up through which it is possible to reflect the light off horizontally positioned objects like books and printed images.

A distinctive feature of the overhead projector in this history is its tactile, interactive aspect, which in this device is privileged over the high resolution image quality offered by the slide projector. From the writings of Friedrich Kittler on *Optical Media* (2010), we can learn that this trade-off between quality of imagery and degree of interactivity is a long-established trait of media history. Kittler deals with the relationship between the camera obscura and the magic lantern from the point of view of Shannon’s mathematical theory of information. As Kittler explains (p.72), in the camera obscura, there was always the problem of scale where filtering light through a small aperture will yield a sharp but also small image while using a larger aperture will lead to a larger but blurred image. Increasing the flow of information thus increases the level of entropy, at least if we interpret entropy as distorting some ideal of how reality should be projected in a truthful way. Following the work of scientists such as the Dutch Christian Huygens in the mid-17th century, the magic lantern was developed as a device for countering some of the camera obscura’s scaling problems. With the lantern, it was now possible to project much larger images with retained sharpness. At the same time however, there was a trade-off in terms of movement - the lantern could only depict static pre-made slides and was not capable of the real-time capturing of the outside flow of nature which was the basis of the attraction of the camera obscura.

The OHP can be regarded as a technology that is situated in between the static and real-time domains of projection represented by the camera obscura and the magic lantern. It was developed as an intermediary solution to new problems of (re-)presentation

arising at the turn of the 19th century: the increasing need to work with images and texts in live, group oratory settings such as in military planning, the class room, or in product demonstration. In this nexus, the OHP holds a curious intermittent position in the relationship between the earlier presentation regimes of the camera obscura with its live shadowplay and the magic lantern with its painterly image compressions, and anticipates the present-day digital presentation formats which are based on software that both remediates and hypermediates these regimes.

With phenomena like “PowerPoint Karaoke” or David Byrne’s “I Love PowerPoint” lecture, however unlikely it may seem, even PowerPoint has to a limited extent made it as a tool for artistic and popular culture expressions.³⁴ These projects play on the idea of limitations to creativity as leading to innovative works, i.e. departing from a modernistic idea grounded in the reductive properties of the “medium” of PowerPoint, as Byrne for example performs with ready-made, pre-organised and clip-art style aesthetics.

The extension of the institutional frameworks of a medium into unforeseen settings, also has a long tradition in the history of projection. In the example of the OHP, we’ll see how it was put to use in many of the different contexts in which the earlier presentation devices were also unexpectedly put to creative use, well beyond their originally intended functioning as scientific tools. This process of adaptation is similar to Kittler’s description of the dynamic potentials arising from the qualitative differences of the camera obscura and the magic lantern: “It was no wonder, therefore, that both these optical devices were applied on a massive scale following the development of lens systems, and they soon surfaced in such different areas as science, art, and religion, as well as in magic and folk entertainment.” (2010, p. 72). The contexts of use mentioned by Kittler, also largely corresponds to the OHP contexts explored in the following.

³⁴ PowerPoint Karaoke is an improvisatory presentation game that was developed by the Berlin group Zentrale Intelligenz Agentur in early 2006: <http://www.zentrale-intelligenz-agentur.de/powerpointkaraoke.html>

Byrne’s project, initiated in 2001, is called “E.E.E.I. Envisioning Emotional Epistemological Information” and included exhibitions as well as the lecture “I[heart] PowerPoint” (2003). <http://www.davidbyrne.com/art/eeei/index.php>

Uses: From Standardisation to Institutionalisation

New forms of demonstration began to appear at the end of the 16th century and these became increasingly popular within the century that followed as science joined the ranks of orators, proclamators, actors, buffoons and circus players, directly involving spectators in the experiment or performance. According to surviving historical records, the first demonstration of the *laterna magica* was held with the aim of educating the public. (Paternak, 2005, p.6)

According to Miklos Paternak (2006, p. 112) it is possible that the founder of modern pedagogics himself, Jan Amos Comenius, depicted some of the first class-room uses of projection in his seminal mid-17th century visual textbook *Orbis Pictus*. In this book we find an image of the shadowy contours of a man outlined on a sheet (Pic. 5.3), and Paternak suggests that with some imagination this could even be made out to be a magic lantern projection. In any case, such a use of projection in education would at the time not be standard practice and of course we are here far removed from the context of mass-produced educational technologies.³⁵ By the late 19th century on the contrary, Kittler writes, “we find ourselves in an empire of standards” (2010, p.36). One important unit in this empire of standards is the patent, which Kittler also suggests needs to be included into media history. In the following, I also draw on patents as starting points for mapping the network of technologies and inventors around the OHP.

³⁵ In their 1995 book *Instruments and their Imagination*, Thomas L. Hankins and Robert J. Silverman (p.49) writes that the development of the instructional “demonstration lecture” was concurrent with the popularisation of the magic lantern during the 17th and 18th century. In this time period the meaning of demonstration also shifted from denoting the demonstration of laws of nature such as Newtonian optics through the act of projection to one of “manipulation of apparatus to instruct and edify an audience.” (ibid. p. 59).

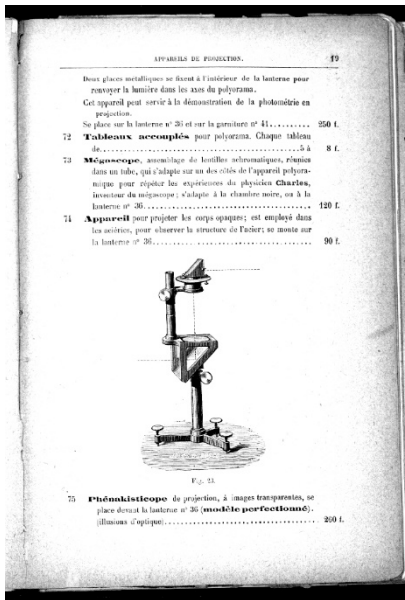


Picture 5.3. Comenius: *Orbis sensualium pictus*. 1658.
Image: Wikimedia Commons.

Proto-overheads

Following the idea that no single inventor can be tied to the overhead projector but rather a network of ideas, devices and uses, it might be fruitful to identify a number of prototypical overhead projectors and situations of use. I will call these *proto-overheads* only for the sake of clarity here, well knowing that this may sound reductive in the sense that it reduces singular points in history to being precursors to what came after. But if we instead place the prototypical in a Foucauldian genealogy, we are not just stating a linear ancestry but tracing the contingent conditions of existence of a specific configuration of projection technology and its mutation over time.

What then are we looking for as examples of proto-overheads? A good place to start is the “Appareil pour projeter les corps opaques” listed at the price of ninety Francs in the 1885 catalogue from the French optical scientist Jules Duboscq (Duboscq, 1885, p. 19). This device was used in combination with a Magic Lantern and already included the basic constituents of overhead projection: a convex lense and a double mirroring system in order to have a vertical projection surface. But it was most likely devised before the use of transparents, hence the referral to “opaque”



Picture 5.4. “Appareil pour projeter les corps opaques.”
Duboscq Catalogue, 1885.

bodies which makes this projector into a modified version of the Episcopo (see below). Nevertheless the look and operation of Duboscq’s projector comes closer to the 20th century overhead projector than any of the other opaque projectors of the 19th century.

The existence of the Duboscq projector seems to verify claims that prototypes of the OHP were developed out of modified magic-lanterns at the end of the 19th century (Petroski, 2006, p. 26). The diagrams and descriptions reproduced in Philip Steadman’s *Vermeer’s Camera* (2007, p. 7-9) also suggest affinities between the OHP and the way that the box type camera obscura was used in the 17th century onwards as a drawing aid. One of the earliest patents for an OHP-like apparatus in the modern sense, moves out of the realm of projecting opaque objects and instead focuses on the projector as a possible drawing aid.

Be it known that I, David J. Williams, citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Methods of Making Pictures for Projection Upon Screens (...). My

invention relates to a method of making pictures, sketches or delineations for projection upon a screen by means of a lantern (...). Such object is accomplished in the present process by the placing in a suitable projecting apparatus between the source of light and the projecting lens, of a previously prepared design or drawing upon a transparent medium (...) (Williams, 1919, p.1)

In his application for a “Method of Making Pictures for Projection Upon Screens”, filed and patented in the US in 1919, David J. Williams proposes a modification to a device which reads intriguingly close to the standard OHP. Its basic constituent is what Williams labels a “lantern”, but this is modified in order to facilitate live drawing. So to the basic components of a lamp, a set of lenses and a reflector/mirror, he adds “an adjustable mirror or reflector” (p. 2) which projects the slide/drawing onto a screen, positioned *behind* the person drawing the image. It remains unclear from his patent, whether Williams is building on a previous well-known design or if he has come up with these modifications himself, as he seems mainly preoccupied with live drawing, and particularly the partial live uncovering of a drawing that is copied directly from an original, producing a fade-in effect to be utilised in theatres by people otherwise unskilled in the art of drawing. In a curious way, Williams’ patent combines in one device what later become the intertwined, yet technically separate, processes of copying and transparency projection - unknowingly predicting copying as one of the founding practices behind the 1960’s and 1970’s success of the OHP (cf. Pias, 2009, p.25-26).

Williams’ patent is also devoted to the “unskilled”, amateur artist who by way of this device can reproduce ready-mades into his projections, *as if he himself had created them*. Thus with this example we are confronted with an analogue version of the contemporary vernacular creative domain of digital clip-art and the “personal” selection, customisation and remix of preformatted templates.

Apart from the early modified magic-lantern projectors as found in Williams’ patent, an important relative of the OHP is the Epidiriascope also known as the Episcope. This projector some-

times shared the “overhead” principle of projecting behind, and at the same time literally over-head of its operator, but rather than working with transparencies, it was capable of displaying opaque objects such as pages of a book or postcards. It seems to have been developed before or at least concurrently with the standardised OHP and was also used in schools and universities throughout the 20th century.

In the range of Episcopes, the “Balopticon” projector holds a special significance. Developed by the US company, Bausch and Lomb, this projector has been described as the missing link between the magic lantern, the Episcopes and the Overhead Projector (balopticon.com, n.d.). In its more advanced models, the Balopticon allowed for the projection, in daylight settings, of both glass lantern slides as well as opaque objects such as photographs, book pages and illustrations. The famous American illustrator and painter Norman Rockwell used a balopticon as an aid in the drawing of his “photorealistic” depictions of American everyday life (Howe, 2007, p.8). Rockwell’s alleged self-ironic statement that “The balopticon is an evil” (Rockwell, 1979, p. 117) predates the critique of PowerPoint that made Thomas Tufte famous some thirty years later. From the early 1930’s on, the Balopticon came fitted with an overhead projection attachment which allowed for the presenter to insert his slides the right side up while still facing his students. The 1930 newsletter, “From the Industries”, describes this innovation in the following:

As a further aid to visual instruction, Bausch and Lomb now produces the overhead projector (figure 2). Every user of the balopticon has undoubtedly, at some time or other, wished that he could face his class or audience and at the same time operate his own projector. This would eliminate annoying waits while slides are being changed by an assistant. He has also, no doubt, wished that the screen could be placed so that each person in the room could see it clearly and easily.

This new overhead projector, now offered for use on Bausch and Lomb balopticons, has several definite advantages:

1. The lecturer can face his audience and at the same time operate his own machine.
2. Changing slides is extremely simple and can be done while talking.
3. Slides are inserted right side up so that the lecturer sees them exactly as does his audience.
4. Features in the picture to be stressed can be pointed out with a pencil on the slide, instead of using a pointer on the screen.
5. The screen, being overhead, is easily visible to every one in the room.

This new attachment for balopticons is being accepted as a welcome means of facilitating the projection of lantern slides.

(Bausch and Lomb Optical Company, 1930)

This form of Balopticon is not formally the overhead projector in the form we know it today but rather a Dubosq style magic-lantern projector with an overhead “attachment”. However, the modified balopticon is one of the earliest projection devices referred to as an “Overhead Projector” that this author has come across. As the press-release makes clear, this type of early overhead projector is part of a rationalisation of instructional culture, an automation product doing away with the need of additional assistants. The product was sold also as an empowerment device that leaves the presenter, as a variant of the “homo economicus”, in command of his “own” machine. This rationalisation and economising can also be tied to the intensification of a modern society increasingly dependent on the dissemination of information in a variety of contexts from the classroom of rising mass-education, the military briefing, the job-training course, the product-demonstration; in

short situations where visual aids were enabling a massification of what previously took place through expert dialogues in smaller groups.

Leisure Overheads

Overhead projection also entered into popular culture, for example as a visual aid to the recording and projection of scores in bowling alleys. An early instance of this type of OHP is the American inventor James E. Bancroft's "Projector" (1941, filed in 1939). This projector aimed at reducing the confusion that could arise when bowlers had to flock around a single score-keeper, seated at the end of the alley, manually noting down scores on a "score-pad". Bancroft's "Projector" instead allowed the score-keeper to project what he had noted down (on transparencies) on a large screen above the alley so that players could also follow the scores during their actual playing. This enabled a real-time media feedback system between the players, the score-keeper, the score data and its projection. A statement quoted in George Landow's influential work on Hypertext is a testimony to the impact of this kind of OHP on the popular imagination, at least on that of American culture:

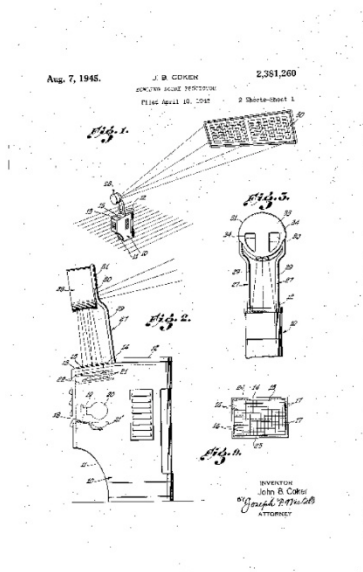
(...) as one of those attending a 1988 conference on educational hypermedia at Dartmouth commented: *"It took only twenty-five years for the overhead projector to make it from the bowling alley to the classroom. I'm optimistic about academic computing; I've begun to see computers in bowling alleys."* (Landow, 2006, p. 314, my italics)

Even if Bancroft can be credited for the invention of the Bowling overhead projector and thus also as a pioneer of the OHP, the bowling alley projector actually came to be more closely associated with a certain John B. Coker who perfected the technology a couple of years later. Coker was posthumously inducted, for "Meritorious Service", to the United States Bowling Congress hall of fame in 1980. The reason for induction were his two innovations in bowling technology, the automatic foul detector in 1937

and the “Bowling Score Projector” filed in 1942, which came to be known under the more flashy name of the “Tel-E-Score” (United States Bowling Congress, n.d.). The main differences between Bancroft’s and Coker’s inventions, were that the Coker’s had a dual optical system that allowed for a customisable split-screen view of the scores of simultaneously competing teams. Further, Coker’s system reduced the screen-size needed for the projection and thereby the Tel-E-Score was not only suitable for large bowling-halls with high ceilings but could be more widely distributed to fit bowling alleys of all sizes (Coker, 1945; Pic. 5.5). Thus Coker’s Tel-E-Score came to be identified as the generic bowling score projector and it can be spotted for example in 1940’s Hollywood films such as *Tom, Dick, Harry* where Ginger Rogers can be seen at a Tel-E-Score as well as in 1960’s photos of the iconic White House Bowling Hall.

Educational Overheads

Even if the migration from bowling alleys to classrooms might have seemed slow (see earlier quote from the George Landow book), the development of the OHP as an educational device did actually occur more or less concurrently with its bowling adventures. An important difference being that the bowling OHP had its mirror and lens system fitted so that the projections were visible in front of the operator as well as the audience, in this case the bowlers. In contrast, the educational or business presentation setting of course requires the overhead projection to take place *behind* the speaker in order to be seen by the audience. By the late 1940’s, the OHP in this latter form had more or less taken the form as we know it today. This was largely thanks to the inventor Harold G. Fitzgerald who filed a number of important patent applications, starting with “Projector for Handling Transparent Plates” in 1951 (filed in 1947; Pic. 5.6) and ending in 1958 with “Overhead Projector Apparatus”. Significantly, Fitzgerald cites several of the already mentioned innovations such as Williams’ 1919 drawing-aid projector and both Bancroft’s and Coker’s bowling-score projectors (Fitzgerald, 1951, 1958). As pointed out by Pias (2009), already Bancroft (1941) hints that his



*Picture 5.5. J.B. Coker's
"Bowling Score Projector",
1945 Patent.*

bowling-score projector could be of use in many other settings as does Williams (1919) before him. Judging from the overhead related patents however, it seems that it is Fitzgerald (1951) who fully conceptualises the overhead projector into a general purpose device:

This invention has to do with a projector for handling transparent plates, it being a general object of the invention to provide a simple, practical, effective device for handling transparent plates or slides and having a wide range of use. There are many situations where it is desirable to project material or images onto a screen or board. This type of projection is particularly desirable in connection with lectures, speeches, educational work, sales promotional work etc. (Fitzgerald, 1951)

In this period, we also see the patent of Fitzgerald's collapsible portable overhead projector (1956) which, along with his 1951 projector, can be seen as the blueprint for 3M's famous product line of OHPs. The Minnesota Mining and Manufacturing Com-

pany (3M) is often erroneously credited for inventing the OHP.³⁶ The reason for this mistake is that the company secured the mass-migration of the OHP and the accompanying transparencies into class-rooms and other institutional settings in the early 1960's. In 3M's own words, this development was led by a team of "renegade" scientists, most prominently the engineer Roger H. Appeldorn (Appeldorn, 1997; 3M, 2002a; 3M 2002b). According to the company legend as told in the 3M 100-anniversary publication *A Century of Innovation - The 3M Story* (3M, 2002a), Appeldorn was working in the copy technology, so-called Thermo-Fax department, when he was asked to find a use for the transparency sheets which at the time were just waste-products needed as intermediate media in the copying process of a 3M Thermo-Fax copying machine. In trying to find a use for the transparencies which could transform them from waste to commercial products, Appeldorn attempted to use them for projections through an overhead projector but allegedly got a very weak image out of it.

"3M was marketing a Thermo-Fax copier that reproduced colored images on white paper," said Appeldorn, but it was a two-step process and the intermediate step involved a transparency with no other use. We tried to project an image from the transparency on a screen using an old Bessler Vu-Graph machine, but the image was dim and brown. (3M, 2002a, p.65)

After some time, however, Appeldorn came up with a new method for impressing graphics upon the transparencies involving plastic film, liquids and heat radiation (cf. Appeldorn, 1963), yielding a result where any imprinted graphics would stand out as black against a clear white background and hence, the OHP transparency as we know it today was born. The invention quickly caught on commercially and the aforementioned 3M promotional history quotes Appeldorn telling about the military being one of the first big customers, " 'One of our early, large customers was the

³⁶ See for example the German Wikipedia entry on the overhead projector. See also ask.com <http://www.ask.com/questions-about/Who-Invented-the-Overhead-Projector>, where 3M's Roger Appeldorn is credited as the inventor. Both websites accessed July 16, 2012.

mostly one of exclusively US innovations but it should be emphasised that the proliferation of the OHP was a more or less global phenomenon.³⁷ Second to the USA, Germany counts as the most significant OHP manufacturer with companies such as Liesegang and Familux and not the least, the Polylux, which was a DDR brand whose name is sometimes used in German language instead of the standard word for overhead projector, “Tageslichtsprojektor”. In Scandinavia, the OHP was represented not only by a strong presence of 3M but also the Swedish brand “Classic”, in production from the 1960’s until 2008.³⁸

Even if the OHP is always recognisable as a standardised technology in all these different cultural settings, there were of course differences across the brands and models. The East German OHP’s were optimised for educational use, the M7000 model for example was available in a version with practical peripherals such as a transparent film rolling mechanism, a dimmer and an economising counter showing how many hours the device had been in use. The Swedish “Classic” was extremely basic in comparison, not even sporting the almost standard switch to a second light bulb. What it lacked in finesse however, it made up in sturdy construction, with metal casing and easily replaceable parts, making this a kind of Volvo of the OHP.³⁹

The global proliferation of the OHP was especially noteworthy during the 1970’s as the business world increasingly embraced the device. A long-time drawback of the OHP for the business world had been the hand-drawn nature of the transparency slides, not conforming to the slick standards of commercial presentations (Petroski, 2006, p. 28). With the increasing availability of cheap Xerox copying machines, the business world also gradually adopted the OHP technology. An indication of this is the enormous amount of OHP related patents filed from the mid 1970’s

³⁷ With exceptions in countries where development skipped this technology and “leapfrogged” directly to video projection. This would be the case in many third-world countries.

³⁸ In lack of any previous research, I am basing these observations on my own experiences and encounters with these OHP models through The Art of the Overhead festival and related activities. So let this be a disclaimer for any factual mistakes.

³⁹ This author was in touch with the manufacturing plant of this particular brand in 2009 for possible sponsoring of the festival, discovering to much chagrin that they had discontinued production only weeks before and destroyed the remaining line of projectors.

and onwards.⁴⁰ The flow of OHP patents continues until this day, even though there is a considerable slowing down after the turn of the 20th century. The numerous OHP patents are a further testimony to the many ways that a standardised technology still exists in a virtually endless series of permutations, showing how a seemingly linear technological development is broken up in parts that are depending on different situations of use and cultural contexts. Later we will see how patents as exactly “variations on a standard” were activated through artistic research inside the overhead festival.

Today, in both its anonymous character and its near obsolete status, the OHP’s residual status as a device often still sitting there in the back of the class room serves as a silent reminder of the genealogy of PowerPoint templates: the first version of what was soon to become this ubiquitous presentation software was originally called Presenter, devised by the North-American company Forethought who released it as Power Point 1.0 in 1987, a black and white Mac OS application designed for the easy formatting of slides meant to be printed on overhead transparencies (Petroski, pp. 33-34).⁴¹

The early connection between PowerPoint and overhead based presentation is a good example of how the analogue and digital are entangled with one another, and an indication that there was never a smooth transition where the one simply replaced the other. When the software giant Microsoft bought Forethought and released the first Windows version in 1990, you could say that they began the gradual displacement of what Nadine Dolby (2000) called the “The Tyranny of the Overhead” with the new conference epidemic “Death by Powerpoint” (Garber, 2001).

Remember the do’s and don’ts of overhead presentation cited in the introduction to this case-study chapter? During the 1990’s, many of them such as ‘cover only one main idea per slide’ or ‘don’t turn your back to the audience’ easily transferred into the digital realm while others, including ‘always bring a spare bulb’ and ‘don’t

⁴⁰ See online patent archives such as www.google.com/patents or <http://www.freepatentsonline.com/>

⁴¹ It is telling that the German word for PowerPoint “slides” is “Folien”, and is still used for slides in German versions of PowerPoint, see also Müller-Prove, 2009, p. 48.

correct with spit' have fallen into oblivion. The overhead projector schooled generations in a tight cognitive structure of presentation: because of its tactile, even "interactive" features, it more than the slide projector introduced the importance of keywords, summaries, bullet lists and illustrative pictures. In short, the OHP as a device for instruction is also a disciplinary technology which helps frame or rather illuminate presentation as "formal" and distinct from everyday discourse. An ambiguity however arises in this setting, drawing on the trope of projection as Zielinski (2005) has described it in the intertwined histories of art, science and technology, as located in between "truth and illusionising". Even in the educational, supposedly straight transmission of information, the presenter may retort to rhetorical tactics and hide behind the illusionary aspects of the OHP, slipping into an excess of bullet lists and images which, however persuasive, divert from the primary focus of knowledge transfer. And in this process, the instrumental may slip into the poetic, into an art of the overhead where the stylistics of presentation take on the properties of a practice on its own.

In the previous chapter we discussed the possibilities of counter-publics forming transversal media practices through the performative practice of queer publics (Warner, 2002a) within the medium of television. Maybe it is possible to think about the poetics of the art of the overhead as allowing similarly transversal practices to emerge through counter-uses where practitioners imagine themselves and unfold through creative practice simultaneously with and against the institutionalised uses of the overhead medium. This idea of overhead projection as containing a transformatory quality that transcends the idea of a linear transmission would find resonance in Siegfried Zielinski's idea of projection as always existing in a tension between truth and illusioning:

We do not possess a homogeneous concept of projection – neither for the history of science and technology nor for the history of art and media. The term is describing a heterogeneous array of artefacts, technical systems, and particularly visual praxes of experimentation and of culture, where pieces of the worlds we experience or imagine are cast upon a two-dimensional surface.

Projection oscillates between two extreme poles of meaning: first, the spectacular proof – in the literal sense of the expression – that something, which is sent through an image machine, was or is like what we see in the half-space of the screen; second, the production of a reality as an image, which exists as we see it only in the projection. (Zielinski, 2005, p.81)

When discussing the specific role of the overhead projector in this history of projection as tensions between truth and illusionising, a useful reference for considering uses and counter-uses of the OHP is Claus Pias' essay "electronic overheads" (2009) in which he identifies a "split" (p.27) in the everyday application of the overhead projector. In one trajectory, Pias identifies the way that the overhead projector became institutionalised in the 1940's as an educational device for showing materials that the presenter had prepared beforehand. The other trajectory follows the overhead projector as a device that allows you to modify your materials *while* you are projecting them (p. 20). This latter, interactive aspect, was put to use in the so called "War Rooms" of the US military, the strategic info-centers where members of the General staff deliberated about future courses of action, and where the overhead projector became an essential technology to augment strategy presentations (Pias, p.21, 25; cf. 3M, 2002). Here, the overhead projector was not primarily used to deliver lectures of already prepared slides, but was deployed as an instrument of live manipulation of data on which one could envision different strategies and tactics, moving units around, crossing out alternatives, filling in new ones etc. - in short, a mediated process of collective decision-making.

As we'll see in the next section, the "live" aspect of the OHP not only points forward, as Pias explores, to the groundbreaking interpersonal computer environments developed by Douglas Engelbart and Joseph C. R. Licklider in the 1970's, but also to the non-institutionalised counter-uses of the OHP in 1960's intermedia art. I will now consider this hidden heritage of the OHP as the last step before exploring the traversal of these different domains of the OHP through the intervention of The Art of the Overhead festival.

Counter-uses: Light-Shows and Expanded Cinema

The reason why we used overhead projectors was because they had an open working surface.

(Joshua White of Joshua White Light Show, 2005)

Professor Phillipstahl commenced his séance, by appearing on the dimly lighted stage with a small lighted lamp in his hand, saying “Hush de Ghost, de ghost”, with the idea of adding all possible mystery to the proceedings, he would then put the lamp out and retire. The curtain then quietly rose, and disclosed a mass of clouds, which slowly opened exposing a ghostly figure, which appeared gradually to increase in size, and advancing, as though about to come amongst the audience, it finally retired, clouds covering the phantom, other figures then took its place; some of a horrible character appearing and vanishing in like manner. He informed his audience that he could produce any departed relative at will, and as the figure was so enveloped in drapery, there was no fear of recognition, or contradiction. This was a great success.

(Haslam, 1893, p.2)

A ghost seems to appear out of nothing to a bewildered audience. The kind of 18th and 19th century horror show called “Phantasmagoria” was basically a back projection utilising a magic lantern and a transparent glass screen. The *laterna magica* itself was reputedly developed in the time of the 15th and 16th century “optical revolution” (cf. Lefèvre, 2007, p. 7) by Dutch 16th century scientist Christian Huygens. If we follow Lefèvre’s (2007) description of Huygens’ and other scientists’ fascination with the artistic properties of the Optical Camera Obscura at the time, it seems likely that Huygens developed the magic lantern out of this experience.

As is the case with the camera obscura, it is a widely held position within the history of science and art that the lantern was an important visualisation aid in both scientific and artistic experiments (cf. Hankins and Silverman, 1999). Already in one of the first known written records of the device, a 1662 letter to Huygens from his friend Pierre Petit, it is referred to as a “lantern of fear” (ibid., p.

48). Just a few years after Huygens' invention, the magic lantern was put to use to produce effects for what Laurent Mannoni has called "the art of deception": projection "shows" with the purpose of drawing the spectator into a world of skilfully executed illusions such as the Phantasmagoria (Mannoni, 2004, p. 42). The index of the succinctly titled *The Art of Projection And Complete Magic Lantern Manual*, (Haslam, 1893) also tells of the high degree of refinement of different magic lantern applications and accompanying effects and techniques. In this voluminous work, you find entries on Microscopic Attachments, Chemical Experiments, Colored Slides, Curtain Effects, Dissolvers, Double Combination Objectives, Enlarging Lanterns, Frog Plates, Good Friday Services, Growing Slides, Hints to Lecturers, Incandescent Light, Lecturer's Desk, Mechanical Slides, Monkey Slides, Newton's Disk, Panoramic Carrier, Rain Effect, Sciopticons, Transparent Screens... and much more. The book index is also indicative of how the scientific, educational and illusionary uses of this projection device have always been intertwined. Reading Marina Wagner's in-depth study of the Phantasmagoria (2006) it becomes evident that the magic lantern shows staged by institutions for the dissemination of scientific knowledge to the general public, such as those at the London Polytechnic in the 19th century, were hotbeds for this intermingling of the art of illusion and science (Wagner, p. 155).

The overhead projector also has its special place in a history of transversal projection practices, which we might attribute to the rise of mass education and personalised communications developing concurrently with the mass media age. In his bibliographic discussion on histories of new media, "And Lead us not into Thinking that the New is New", Benjamin Peters suggests that every medium goes through a three-stage development of *contestation*, *negotiation* and *institutionalisation* (2009, p.22).

If we apply Peter's model above in a non-apparatus-specific way, by considering the whole nexus of overhead projection techniques outlined as proto-overhead rather than the individual devices, then the overhead only seems to grow into an institutional form with the 20th century. Taking Fitzgerald's and William's 1950's and 3M's 1960's overhead projectors as blueprints here for the overhead as a

mass-produced, standardised and specialised technology, the OHP, especially from the 1950's onwards is explicitly a projection technology made for "professionals", destined for use in settings such as schools, universities and companies and never marketed as an everyday tool for entertainment, mass media or individual creative purposes. However, this does not mean that the OHP was not appropriated in such settings as well. Moving from the rigid structure of overhead presentations or dynamic meeting culture we now open up to the secret history of OHP art and entertainment.

If there is something like a golden age of the OHP, it would probably start with 3M's successful model of the early 1960's and end somewhere in the mid-nineties with the increasing proliferation of PowerPoint in conjunction with video projectors. The 1960's OHP boom coincides with the rise of 1960's counter-culture, so it is maybe not so surprising that the overhead projector was also appropriated into the art practices of the time. The psychedelic rock music coming out of the San Francisco Haight-Ashbury scene in the latter half of the decade, with groups such as The Grateful Dead and Jefferson Airplane, came with its own visual language as well, intended to emulate or enhance the effects of hallucinogenic drugs (Rubin, 2009, p.20; Gordon, 2008, p.29). This visual counterpart to the new popular music became known as "The Light Show" and the OHP would play no small part in it. Variants of the light show can be traced far back in history, and apart from the already mentioned Phantasmagoria, the water tank slides used in 19th century chemical experiments spring to mind, which were used for example in demonstrating the process of dissolving copper in water, and which Werner Nekes in his film *Media Magica II* (1996) suggests were enjoyed as much for their aesthetic as for their scientific qualities.

Relating more specifically to the OHP based "light show", the San Francisco artist and professor at San Francisco State College, Seymour Locks, has frequently been credited as the pioneer of this "new" art form also known as the liquid or wet slide show. Chronicled in Charles Perry's history of the Haight-Ashbury counter-culture (1985), Locks' experiments predated the psychedelic scene by a decade and actually came out of an educational institution, connecting with beatnik jazz rather than psychedelic

rock culture.⁴² It is also significant that instead of being rooted in cybernetics and McLuhanist visions of media as extensions of man, pertinent to so much of the later 1960's media art, Locks' first overhead experiments were looking back to German expressionist stage design and the interplay of light and space in the 1924 "Theatre of Totality" concept proposed by Laszlo Moholy-Nagy (Perry, p.69; Riley, 2008, p. 23).

As a teacher in "Light and Art" and a sculptor, in 1952 Locks was asked to provide projections that harked back to the European 1920's and 1930's traditions for an art educators' conference. (Riley, 2008, p. 22) In an ingenious move fitting the context, Locks chose to work with educational technologies such as slide and overhead projectors. In the process, he came to lay the groundwork for both the slide projector-based "liquid slide" as well as the OHP-based "wet show". For the slide projectors, Locks simply inserted colours in between empty cartridges, while for the View-graph overhead projectors he used old convex school clock-faces turned up-side down on the OHP and filled them with liquids and colours. The convex glass could be spun around and stirred to produce a number of effects, and by placing a smaller glass on top of a bigger one, it was possible to produce different ever evolving colour patterns. A jazz group improvised to the visuals while Locks added abstract vocal sounds (Perry, p.69).

Thus, in its first iterations, the OHP lightshow was initiated by Locks in a kind of institutional-bricolage, employing standard devices ready at hand within an educational context and even finding completely new uses for them, as in the case of the clock-faces. From this initial impulse, Locks' students of his "Light and Art" course later developed the show further and it travelled to new settings (Perry, p.69, cf. Riley, p.22). One of the persons who picked up the technique early on was Los Angeles artist Elias Romero who in 1956 saw one of the Locks' students' shows in San Francisco. Romero, also known as "The Grandfather of the

⁴² Gordon (2008, p.31) points to the connection between the beatnik and psychedelic culture through the observation that the hero of Jack Kerouac's quintessential beat-novel *On the Road*, namely Neal Cassidy, was the driver of Ken Kesey's and The Merry Pranksters tour bus on their first Acid Test tour in 1964.

Lightshow” (Center for Visual Music, 2008) would develop the form further and became the direct link between the early beatnik experiments to the emerging rock culture (Riley, p. 22; Center for Visual Music, 2008). With the aid of Romero, artists of the Bay area soon became the main protagonists of the psychedelic light show. As Riley describes, this development went hand in hand with the reinvigoration of experimental film-practices, creating a kind of intermedia and “expanded cinema” environment (Youngblood, 1970). If experimental film benefited from the introduction of cheap light-weight 16mm equipment, the expanded film and light practices would similarly benefit from innovations in the mass-production of materials available for artistic manipulation as well as an increased abundance of junked technology.

The expansion of materials for the visual artist manufactured by postwar industry, such as Day-Glo and synthetic paints, soluble acrylics, colorful aniline dyes and gelatin, and the salvageable instruments and lighting equipment found in military surplus around the Bay Area created an environment of excess and experimentation. New materials for art were applied as relevant forms to search for a meaningful articulation of place and time, and a refreshed definition of space. (Riley, p. 21)

The experiments that came out of this environment may seem today as part of one unified scene of counter-culture where art and life fused in rock music, Vietnam protesting, LSD etc. as if it was all belonging to one extended Acid Test staged by Ken Kesey and the Merry Pranksters (cf. Wolfe, 1968). But just as such generalisations would be misleading concerning the complex interaction of different political agendas and people, a closer scrutiny at The Light Show phenomenon reveals a network of often connecting but also distinct practices, contexts and individual trajectories. The light-shows as expressions of “psychedelia”, are perhaps today mostly remembered as the quintessential 1960’s lava-lamp aesthetic and as backdrops to psychedelic music, but actually sit ambivalently in between formalist expressionist art, the historical avant-garde, minimalism and emerging post-modernist stylistics in

pop and conceptual art. Even though this was the time that Rosalind Krauss identified with the emergence of the “expanded field” (Krauss, 1979), adopting sculpture as a case in point, it is hard to think of another art form of the time that traverses all these fields, all the while threatening to break down as a distinct art genre at all and fusing with the art and entertainment culture of the era (Gordon, 2008). In fact, in many cases the light-show was never even branded as a distinct art genre predicated on individual auteurs, but was rather automatically packaged together with the major rock concerts of the era.⁴³ Some artists and predominantly light “groups” however, rose to more prominence than others, and typically these would be people who were already coming from a experimental/jazz music, film or fine arts background and who later also moved on to other artistic practices.

“The thing about the light shows is that they were all different.” as light-show pioneer Tony Martin explained to me in an interview conducted in his home-studio in Williamsburg, NYC, 2010 (Martin, 2010). Martin, a painter originally trained as a Jazz musician, had attended a one-man show of Elias Romero in a San Francisco Jazz Club and “that motivated me to get an overhead projector.” As, Michael Scroggins of the legendary LA Light Show group *Single Wing Turquoise Bird* explained, OHPs were by then “ubiquitous” and could be picked up second-hand for 50\$ (Scroggins, 2010). Also coming out of a visual art background, and even though Scroggins was starting a few years later than Martin in the light-show “scene”, he also cites Elias Romero as an important connection. Apparently, Helena Le Brun, of the infamous Hippie commune “The Hog Farm” had studied with Romero and then handed down the techniques to Scroggins. Although trained as visual artists, both Martin and Scroggins did extensive work within the rock environment and helped promote the light-show as a natural accompaniment to rock concerts. At the same time however, they continued their “avant-garde” artistic practices: Scrog-

⁴³ The light-show reflected psychedelic culture in general as also being an international phenomenon. It was a central part of British psychedelia with groups such as The Boyle Family and there was a strong scene across Europe, not the least in Scandinavia where light-group unions were even formed, underlining the “work” character of the light-show. See Krarup and Nørrested (1986) for more information on the Scandinavian light groups.

gins while studying at CalArts where he worked with Nam-June Paik and Shuya Abe to develop one of the first video-synthesizers; Martin becoming closely affiliated with the “new music” increasingly centred around the The Tape Music Centre in San Francisco where he would work as a “visual composer” together with the new music protagonists such as Terry Riley, Ramon Sender, Paulive Olivieros, David Tudor and Morton Subotnick (Martin, 2010; cf. Bernstein, 2008).

Through his contact with Sender, in 1966, promoter Bill Graham contacted Martin about doing projections for a show staged by Stewart Brand as well as Ken Kesey and his “merry pranksters” in the Longshoreman’s Hall, San Francisco. This would become the three-day “Trips Festival”, today recognised as one of the key psychedelic and counter-culture events of the 1960’s (Bernstein, 2008, p. 5). An indication of the iconic status that the festival took on is that subsequently, Martin’s projections to various rock acts of the time were simply billed as “With Lights of The Trips Festival!” (Martin, 2010). Martin described his work at that time as “very close to painting and it still is” (ibid.) and uses modernist tropes such as “the field” in explaining how he likes to break up the rectangular frame through the use of black that masks off parts of the projection. Thus, Martin partly distanced himself from the “entertainment” aspect of the rock shows, instead expressing proximity to the kind of sculptural visual environments he created for the “new music” works by Pauline Olivieros and Morton Subotnick as well as for the world premiere of Terry Riley’s minimalist classic “In C”. In a similar way, Michael Scroggins, talked about his light-show work as following the notion in abstract expressionism, of an initial emotional gesture carrying something forward in the work (cf. Rosenberg, 1952, p.11).

That this dual nature of light-show artists, divided between pop culture and the avante-garde, should reveal such an almost Greenbergian modernist aesthetic ethos is perhaps at first surprising. It may seem as a contradiction on the one hand, to compare the light-show, as Scroggins does, with the sport of Surfing as a “Balance between serendipity and naturally evolving phenomena” (Scroggins, 2010) and on the other hand to view light-shows in the

modernist line of reducing expressive qualities in order to reach some kind of aesthetic essence in relation to the chosen medium. However, when assessed from a dialectical viewpoint, these seemingly diverging lines may rather be seen as existing in an unresolved and dynamic tension between the modernist conception of a medium's essence brought forward by the artist's gesture and the emergence of an expanded field focusing on multiple practices and relations between media.

In an essay on precisely "Art in the Expanded Field" Swedish art-historian and theorist Sven-Olov Wallenstein (2000), seems to suggest something similar regarding the 1960's experimental practices in general, discussing the shadow cast by Clement Greenberg over the supposedly anti-modernist dissolutions of the 1960's conceptual art with its roots in minimalism. According to Wallenstein, minimalism reworks the internalism at the centre of Greenberg's arguments on a medium's essential characteristics by an act of reversion, distributing former unities into space while keeping the reductionist gesture. Following the idea of Krauss, of how an "expanded field" was brought about in the movement from minimalism to conceptualism and where artists were no longer working with oppositions of different media but oppositions of cultural terms (Krauss, 1979); Wallenstein invites us to see this development not only as a radical break with the past but as part of political-economical developments where aesthetics are carrying some of the old concerns further into new contexts (p. 142-43).

If we adopt Wallenstein's conception of the new avant-garde of the 1960's, it can be seen to form part of a macro-historical perspective in which the transition to increasingly immaterial production, of a knowledge- rather than industrial economy, also inevitably leads to attempts to de-materialise the art-work. Many of the works emerging from minimalism and conceptual art can be described in terms of being dependent on the completion of the observer and thus predicated on participation, but as Wallenstein writes they were still dependent on an implicit artistic autonomy of the "composition" of the work (p. 129-30).

Art-historian Robin Oppenheimer positions the light-show "among the first primitive attempts by artists to appropriate many

of the ‘new’ analogue communications media technologies – photography, film, audio – and add the images, beat and lyrics of popular culture and music to create an immersive mediated environment embracing both the performers and the audience in a transformative sensory experience. “(Oppenheimer, 2009, n.pag.). Calling the light-show a “Maximal Art”, she sees the light-show as an indirect response to pioneer media artist Stan Van der Beek’s Utopian manifesto *Culture: Intercom and Expanded Cinema* (1966), in which he calls for artists and researchers to develop a new Universal visual language in order to appropriate rather than be dominated by new technologies and in which he also called on the principle of *maximalisation*, emphasising sensory overload across different media rather than modernist reduction according to the essence of the one medium.

These multimedia and interactive, participatory aspects of 1960’s intermedia and expanded cinema forms of practice and theories were picked up as key points of reference in the mid and late 1990’s, in the emerging field of “new media” art and theory. The dual-nature of light-show artists, of being rooted in modernist traditions as well as in the counter-culture seems to generate a tension that can give us a critical perspective on the contemporary aesthetics of media art versus the fine arts. When light-show artists talk about their work today, this aspect often seems to come up, as when Michael Scroggins described his work to me as being a kind of action-painting inspired combination of “the accident and the gesture”. Some of the performances that he recalled involved the kind of “maximalisation” that VanDerBeek, Gene Youngblood (1970) and later Oppenheimer have been discussing, how for example The Single Wing Turquoise Bird mixed strobe-lights, 16mm film of Spiritual Symbols of different religions, and OHP liquid-light projections - creating a pulsating montage of colours and imagery. At other times however, the same flickering principle would become a principle of extreme reduction. This was the case when the same group accompanied The Velvet Underground, coming in from NYC with a decidedly anti-hippie, aggressive attitude. As Scroggins explained, his light-show group then created a completely monochrome show, based in flickering light operating

with alpha-waves in the same way that Brion Gysin was doing at the time with his “Dream-Machine” (Scroggins, 2010).

This evident other “darker side” of the light-show has also been explored by Danish curator and researcher Lars Bang Larsen who has been looking at the practice of British light-show The Boyle Family, famous for their “chemical” light shows in which violent chemical reactions were being projected as well as involving the projected death of various insects, recalling the work of their contemporary Gustav Metzger and his iconic “auto-destructive art” (Bang-Larsen, 2009). Bang-Larsen also looked at Danish light-show group King Kong who became known as the more “militant” branch in the prominent light-show scene of Denmark, emphasising that they were not into improvisation and instead developing detailed scoring sheets, like compositions, for their shows. In an interview Bang Larsen conducted with the young contemporary artist Jeremy Shaw, one also finds support of this view of psychedelia as not only a part of 1960’s counter-culture but as part of a historical-dialectic of reduction and maximalisation within modernism. As Shaw explains, for him even Malevich’s seminal *Black Square on White* can be regarded emblematic of this dialectic:

I think of Malevich’s *Black Square on White* (1915) as a very early psychedelic proposition: that of the void, which to me can be taken for everything or nothing (...) I see it as existing for both camps: those who claim it’s the end and those who say it’s the beginning. (Shaw, 2009, p. 20)

With this detour into the territory of the light-show we have covered an expanded field of the overhead projector. It is however, as with Malevich’s square, likewise the end and the beginning of considering the appropriation of the OHP in contemporary culture through The Art of the Overhead festival as well as related artistic projects. With the OHP being a ubiquitous technology by the 1960’s and becoming an anonymous, yet vital part of the analogue experimental art-practices of the time, we may consider the post-digital and post-PowerPoint era as providing a kind of after-life for the OHP. Perhaps, as Parikka and Hertz (2012) have suggested

with their notion of Zombie Media (in relation to media devices in general), the OHP is now an “undead” media technology ripe for re-activation.

An important final historical variant of the OHP before we move on: in the case of everyday, “home” DIY culture, the potential rediscovery of the OHP was actually seized upon before the OHP in any major way was re-discovered in artistic practices. The “Volksbeamer” (The People’s Beamer) was the German term for a kind of home-made video projector that emerged in the beginning of the 21st century.⁴⁴ The direct inspiration for this was most likely a curious accessory which literally transformed the OHP into a low-resolution video-projector. This was achieved through a portable LCD-screen which could be connected to a computer through a VGA cable and which had no back-casing, enabling the light to shine through when laid flat down on an OHP. The commercial video/OHP products were rendered obsolete as video projectors became more cheaply available but the idea must have stayed on in the mind of the public. By the time that the first generation of 12” and 15” LCD-screens were becoming available on the 2nd hand electronics market, the Volksbeamer emerged. Countless DIY tutorials (cf. Völkel, 2004) tell of the way you can dismount an LCD screen, keeping the graphic chip and VGA connection as well as the power-supply intact, and mount it on an overhead-projector. With the high Ansi-lumen values of the OHP and the decent resolutions available on computer screens contra consumer-level video-projectors of the time - the home-projector builder could save considerable money by assembling her own projector in this way.

When the overhead projector was being phased out as the primary lecture tool in schools and universities from the mid 1990’s and onwards, being replaced by the laptop/PowerPoint/video-projector, it nevertheless kept on residing in an “undead” position within this configuration: the Volksbeamer consumer-activists transversally fused

⁴⁴ There is no one reliable source chronicling the history of the Volksbeamer since the German Wikipedia decided to remove the entry already in 2007. But a quick search on the net on this term produces countless hits in various DIY culture user forums. The reader is also advised to seek out the definitive video guide on the subject from Tom’s Hardware Guide, now circulating on YouTube.

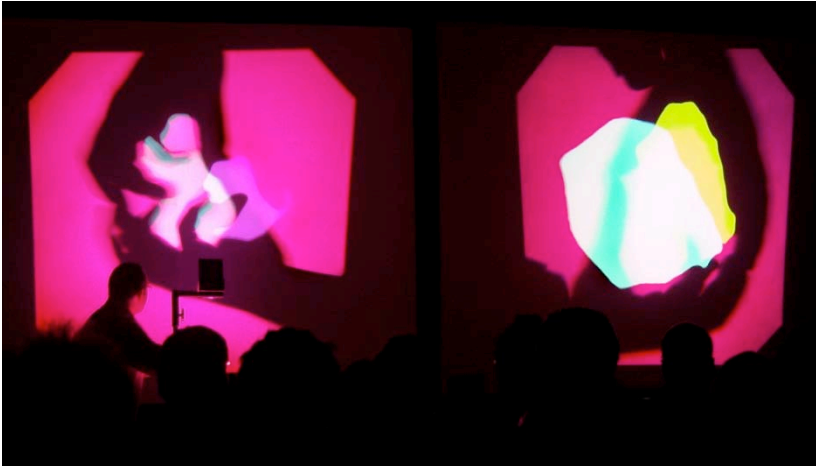
the old with the new, defying the stratification of analogue and digital in this challenging of the industry logic of forced obsolescence. It was not long before that artists also found new (re-)uses for the OHP, both on the technological material level and the intertwined narrative and institutional frameworks of the medium.

Intervention: The Art of the Overhead Festival

In an era of medium saturation, suffused with hyper and virtual reality, can this antiquarian medium (necro-techno, to coin a phrase) inspire anything other than vague nostalgia? A new generation of artists are exploring the possibilities of image projection from film, video, or computer sources outside the usual contexts of experimental film and video, thus dealing less with the established formal paradigms of frame, screen and audience, and playing with ambiguities of space, motion, and ontology. (Gunning, 2008, p. 16)

When Tom Gunning suggests that projection is a kind of antiquated medium that holds the potential for a transversal challenging of the established formal frameworks of media culture, he probably was not thinking about the overhead projector. Yet, what is the imperative behind Johannes Grenzfurthner's & Oliver Hangl's song *Farewell to the Overhead*, commissioned for the first The Art of the Overhead festival in 2005, to let the overhead projector shine its light once again?

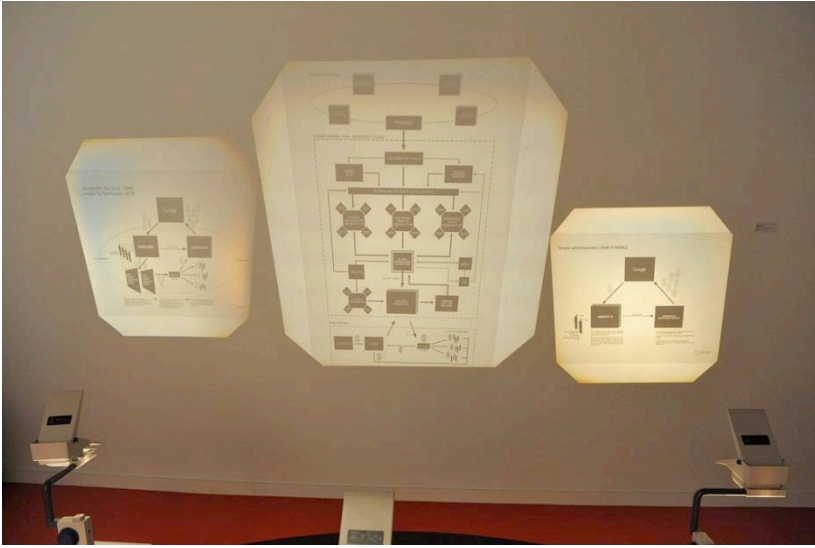
In fact, by the mid-00's, the overhead projector seemed to make an unlikely comeback in contemporary art, as for example observed by art critic Ben Lewis, commenting on the 'swamping' presence of OHP's in art installations at the 2005 Venice Biennale (Lewis, 2005, n.pag.). Even in the media art scene with its obsessive focus on the latest technologies, the OHP was sneaking in: in the installation version of the art collective Übermorgen's intervention net-art project *Google Will Eat Itself* (GWEI, 2005, Pic. 5.8), five overhead projectors are used to project the detailed diagrams explaining the system of Google share buying at the core of the project. For their audiovisual performance *The Manual Input*



Picture 5.7. The Manual Input Sessions by Golan Levin and Zachary Lieberman. Image: Golan Levin.

Sessions (TMEMA, 2004-06, Pic. 5.7) Zachary Lieberman and Golan Levin used overhead-projectors in combination with digital projection, to create an interface where ‘analogue’ hand gestures triggered and interacted with digital live animation and in 2005, Levin also published a short text called “An Informal Catalogue of New-Media Performances Using Overhead Projectors (OHPs)” (Levin, 2005).

Overhead projectors and new media? Levin’s list reminds us that it is not the first time that OHPs has been in vogue within audio-visual performance, stressing the heritage of 1960’s light shows and expanded cinema. But as explored previously in this chapter, even then, the overhead projector was not considered a state of the art piece of technology but was already regarded as an everyday institutional medium, chosen for its cheapness and accessible flat working surface, ideal for manual operation of the liquids, prisms and various filters so central to these kind of performance practices. The two projects mentioned above, GWEI and TMEMA, could even be regarded as emblematic for the works considered in this section in that they represent the two main strands of contemporary appropriations of the overhead projector. In the first instance, we have Übermorgen’s ironic recalling of the OHP as a



Picture 5.8. Google Will Eat Itself by Übermorgen. Image: Julian Stallabrass, CC BY 2.0.

class- and conference- room institution of truth designed for the flat, objective presentation of facts. In the second example, Levin and Lieberman are working in the shadow(-play) of this institution and by letting it take part in their live analogue/digital assemblage they accentuate the informal aspects of this seemingly dusty piece of projection technology.

Taken together these two different projects, through the rich irony of the restrained formal use and the “magic” of the animations brought about in the informality of the live improvised performance, work through the logic by which the OHP, as a standardised technology can be simultaneously open and closed. Perhaps, this is the main lure of the OHP for contemporary artists, that its otherwise unlikely cultish sheen can be derived from an ambivalent double status. As described previously, this dynamic situated in between being a device for persuasion in linear bullet-list presentations, business style, and the quite different dynamic of the OHP as a (proto-)augmented-reality technology in a more spontaneous work-meeting culture where the speaker reveals, rearranges and further modifies his visuals as he goes along.

Call for Overheads!

The Art of the Overhead is a small festival celebrating artistic expression in a medium that is almost forgotten in the age of digital reproduction: the overhead projector. Both an exhibition and a live event, the project is a part of a series of events in Sweden and Denmark by the EAT (Sweden) – Experiments in Art & Technology group.

(...)

We are calling for works that engage in the art of overhead Presentation, Remediation, Illusion and Interaction.

The way that Microsoft's PowerPoint application owes its concept to the Overhead is a schoolbook example of remediation. Yet, is it possible to re-capture this "old" media through artistic interpretation in order create something neither simply "new" nor nostalgic, but a medium for telling meaningful stories today?

EAT - The Art of the Overhead calls for artists, designers, academics, media professionals, business managers, culture producers, professional presenters and storytellers of all kinds to contribute.

SUGGESTED THEMES AND KEYWORDS

PRESENTATION

Keywords: bullet-lists, clip-arts, flow-charts, diagrams, statistics, formulas, to the point, results, conclusions, quotes.

INTERACTION

Keywords: games, fill in the blanks, hangman, labyrinths, insinuation.

REMEDICATION

Keywords: remixes, analogue/digital, old and new, media archaeology, history, PowerPoint.

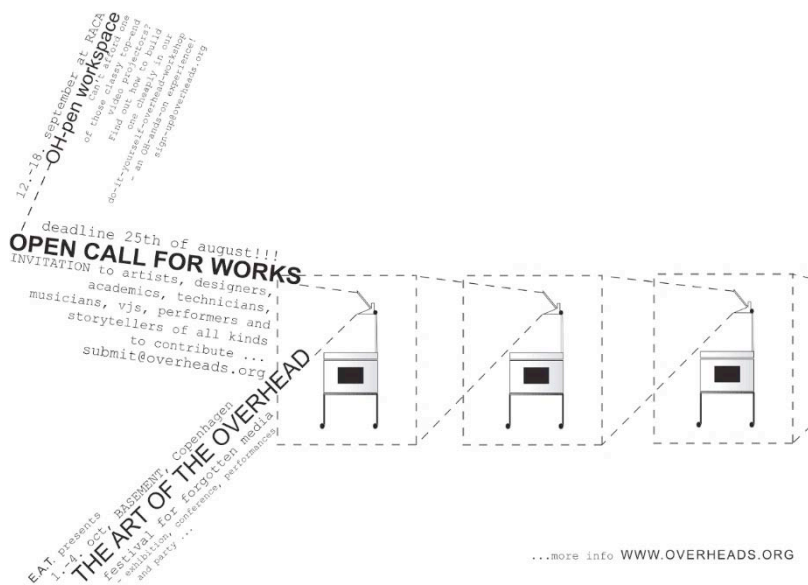
ILLUSION

Keywords: interference, optics, layers, patterns, overlays, traces, double-vision, split-images, distortions, deformations.

You may submit a single or a series of overhead slides or send proposals for installations and performances that incorporate the use of overhead projection.

(From "The Art of the Overhead: Call for Overheads" posted by Kristoffer Gansing and Linda Hilfling on Rhizome.org and various e-mail lists, July 29, 2005.)

The interplay of the formal/informal uses of the OHP however goes much further than the presentation cultures mostly associated with it. This was shown in the previous genealogy where the light of the overhead was traced from its major institutional pedagogic settings to a network of appropriated minor practices extending from its use as an artist drawing aid, across bowling alleys to Haight-Ashbury concert venues and even into DIY home cinema cultures. In spite of this multiplicity of uses, the OHP was never sold on the consumerist basis of being a tool for individual creativity (Gansing and Hilfling, 2007). Consequently, the OHP has seldom been artistically explored on its own terms according to modernistic aesthetics of Greenbergian "medium specificity" or celebrated as a retro consumer-gadget for the nostalgia market. As a rediscovered analogue device it might hold some potential in escaping the linear logic of technological development in digital capitalism and as a mediator of other worlds (and the worlds of others), the transversal (non-)specificity of the OHP makes it suitable for critical reverse-remediations of the relations of production in contemporary network culture.



Picture 5.9. *The Art of the Overhead 2005, Call for Works Flyer.*

The concept of the first The Art of the Overhead festival came out of a personal reflection on the theory and practice of film and new media. In 1999, as aspiring filmmakers, Linda Hilfling and I had been frustrated with the film schools' and film business' focus on "the good story" and the need for high production values that seemed to go with it. The Dogme 95' manifesto by Lars von Trier and Thomas Vinterberg and the Dogme films from 1998 onwards pointed in another, reductionist direction that was refreshing. What we were increasingly interested in however, was breaking up the whole unity of the film medium as such, translating some of its means of expression into other forms. The overhead projector seemed to us both an absurd and fitting proposal as a suitable medium for an event, in that we were part of a generation that had grown up with it during our school days but at the same time, and now with the hype of the "digital revolution", nobody seemed to care for it anylonger. It was a medium as unsexy and anonymous as we could think of, but at the same time ripe for creative re-discovery through what we imagined as a combination of extreme reductionism, telling stories on the overhead, and colorful live

improvisation, toying with imaginary film/OHP formats such as “The Voice-Over-head”. At this point in time, we imagined the as yet untitled event to take place in a cinema with invited filmmakers, artists, designers, academics simply doing OHP presentations from a creative angle. An important part of the original concept also involved shipping OHP transparencies to high-profile names within experimental art practices who were then expected to return it in a state they saw fit. This kind of “commissioned transparency” would later form a part of the “Overhead Archive”, a central part of The Art of the Overhead festival.

About five years later, in late 2004, the idea was updated and brought up at a workshop organised by the art and technology group “E.A.T. Sweden” where ideas for new projects were being presented. The background for the renewed concept was on the one hand, Linda’s and my own increased involvement in the field of new media and net-based art and on the other hand, the experience of the general hype of new media and the new economy, peaking and crashing around the turn of the millennium. In those years, new media art and theory had emerged for us as an experimental field which seemed to carry further some of the critical attitudes towards the relation between media and culture that we previously had found in our common interest in the experimental film practices of the 1960’s.

As an interesting temporal parallel to that of the development of the overhead festival, in *Rethinking Curating – Art after New Media*, curators and researchers Beryl Graham and Sarah Cook even use the period of 2000-05 as a recognisable “hype cycle” of new media art.

From 2000 to 2005 and earlier, many forms of new media art rose up and down the hype cycle before artists and curators started to understand that aiming for the “plateau of acceptance” didn’t have to mean just acceptance by the centralized systems of the art world, but could just as legitimately mean acceptance by the “niche markets” of a more distributed and decentralized community of art makers, technologists, producers, curators, institutions, and everyone else. (Cook and Graham, p.25, 2010)

As previously discussed in the theory chapter, new media art and theory as it emerged in this time period was marked equally by the hype of a kind of digital avant-garde as well as through a historical orientation, focusing on the remediation of earlier forms. The view on new media art that Cook and Graham adopt for rethinking curating, seems to follow this double approach, transposing the supposed specificities of new media to the new media art world and curating practices in general. In this process they are keen to stress that they are not adopting medium-specificity as a model, but rather the “behaviors” they see as essentially connected to new media art (following Steve Dietz), namely, “interactivity, connectivity and computability” (p. 9). This approach takes the characteristics of new media at face value, as it while making connections to some earlier practices of conceptual and avant-garde art, is also supposed to represent what is unique about new media. Cook and Graham thus retain the “new media” notion while critically rethinking some of the “hypes of the new” connected to it as historically conditioned.

When the idea to make an OHP based festival was re-actualised in 2005 it was as a reflection on the experience of working for about five years for various interdisciplinary projects in the new media field. The festival was in itself meant as a conceptual work enacting a kind of meta-critique of the field of new media art, addressing how this by 2005 seemed to have become increasingly institutionalised as well as tiringly focused on “the new”; even when the new was historically grounded - as this grounding was usually an excuse for solidifying what was then truly “new”. Instead, the call for overheads distributed to promote the festival, playfully suggested that this analogue medium already featured many of the properties hyped as part of the newness of digital media such as interactivity and real-time manipulation. Through this reversal of technological development we wanted to, in an argument similar to Cook’s and Graham’s position above, stress the importance of specific behaviors connected to media practice, and perhaps taking this notion a step further by suggesting that such behaviors also take place in an imaginary realm, beyond the medium as such (although always in dialogue with its materiality).

It is important to take note of this “relational” aspect of The Art of the Overhead project, that it is not foremost a medium-specific festival devoted to nostalgia and celebration of the OHP, but rather that it uses this anonymous medium transversally in the spirit of media archaeology: as a device for projecting alternative visions of media history and contemporary network culture in which analogue and digital, the old and the new are intertwined and articulated in new ways. In this process, the different institutional uses and material aspects of the OHP are engaged, as a kind of empirical base from which the connections to other contemporary practices and contexts can be made.

Initially, The Art of the Overhead festival was an art-curatorial-research project that both for Linda Hilfling and myself, formed a conceptual challenging of the progressivist narratives associated with the notion new media, as a kind of artistic piece in itself which somewhat absurdly posited the OHP as a “new” medium that since long was displaying some of the characteristics touted as specific to the digital revolution. Gradually, the festival also became a platform for research, both of a historical and practice-based character extending into products such as this dissertation. Not the least, the festival has also been a collective and collaborative effort in which different subjects entered into a productive dialogue with the original framework; taking it further and into new contexts unforeseen by myself in either role, as curator, artist, cultural producer or researcher.

Perhaps the multiplicity that the project attained is also due to the “festival” as an event form, being a site of production characterised by an excess and abundance of expressions. For Andreas Broeckmann, who 2000-07 was the artistic director of the transmediale festival in Berlin, the festival format creates a special kind of hybrid public space integrating art and a social function (Broeckmann, 2004, p. 153). There might reside a critical potential in the festival form due to its hybrid nature in between the instigation of a reflective public sphere and engaging simultaneously in excessive, immersive aspects. Here it is useful to remind oneself of the traditional notion of a festival, as having the passing of time through the seasonal cycles as its focus. Originally of religious significance, the festivals of modern secular societies arose as

celebrations of specific cultural forms such as music festivals or even specific media such as the “film festival”.

The blueprint for this kind of modern festival would be the 19th and 20th century world fair, with its celebration of modernist progress explicitly linking cultural evolution to technological development. In the world fair, the religious aspect of festivals were transposed to the context of technology, as in the 18th century “theology of electricity” described in the work of Zielinski (2006, p.35; cf. Sconce 2000), where electricity was worshipped as a kind of (scientific-rational) force of magic. In later days, critics of the new media hype has criticised the almost religious fervour invested in linking the utopian visions of human liberation through new media and the gift economy of digital technologies, as in Andy Cameron’s and Richard Barbrook’s infamous article on “The Californian Ideology” (1996).

The new media festival has also been criticised for its “carnavalesque” (cf. Cook and Graham, 2010, p. 221) and work-in-progress nature (Lovink, 2008) often favouring process over results. This open, hybrid and indefinite aspect of festival culture may however, following Broeckmann, be thought of as its condition for publicness – things are allowed to be tried and tested in a public, critical forum even though works may not have reached the finish-state generally associated with work shown in an exhibition.⁴⁵ However, again it must be stressed that these processual aspects of new media festivals have almost been institutionalised by now as temporary media labs, workshops and lounges are set-up within the framework of a festival arranged for the umpteenth time. In this context, The Art of the Overhead festival was never meant as a regularly recurring festival but more as a one-off meta-comment on the state of media art as such, imitating its most common dissemination form, the new media art festival, here “detoured” as a new media festival for an old medium. In this way, we can connect it back to the counter-public discussion, as The Art of the Overhead tries to act within the language of the public media art festival while at the same time queering this format.

⁴⁵ Consequently, the theme chosen for the 2007 edition of the transmediale was “Unfinish!”.

Project Outline

The first instalment of The Art of the Overhead festival took place in Copenhagen September-October 2005. It was initiated and curated by Linda Hilfling and Kristoffer Gansing and a part of the activities of E.A.T. Sweden which was a group founded by Prof. Carl-Henrik Svenstedt (at K3, Malmö University) committed to critically exploring art and technology in the vein of the original EAT as founded by Billy Klüver in the 1960's (cf. Schultz Lundestam, 2004). Apart from Hilfling and myself, a team of people in the E.A.T. Sweden group took part in the organisation of the festival, including producer Malene Sakskilde, researcher Nana Benjaminsen and technical adviser David Cuartielles.

The financial support for all these activities came mainly through the E.A.T. Sweden network and a smaller grant from The Danish Art Council. The main event had about two-hundred visitors and was arranged on the 1st of October 2005 and consisted of a performance night with 10 different performances and also served as an opening of an international exhibition, continuing over the next five days, with over 30 artists including an interactive Overhead Archive and installations of custom built OHPs. The "keynote" speech of the festival was made by Siegfried Zielinski, delivering his genealogy of projection. This edition of the festival was part of the Copenhagen "House of Cultures festival" and was located in the literally underground space "Basement" which is a part of the Vesterbro Culture House in central Copenhagen. The exhibition and performance event was preceded by a series of workshops under the name OHPen Workspace at the nearby gallery space Raca.

On the basis of the success and reputation of these activities, The Art of the Overhead was invited to present another edition at the Rotterdam Film Festival 2007 – as part of the exhibition Borderline Behaviour curated by Edwin Carels for the contemporary art institution TENT. This was accompanied by a series of performance and workshop nights also curated and presented by The Art of the Overhead. Additional activities have included project presentations, such as for the "Electrolobby" at Ars Electronica 2006. In 2007, a German offshoot of the festival also appeared, based in Cologne. "Kunst & Musik mit dem Tageslichtsprojektor"

gathering a community of artists working with DIY electronics in circuit-bending, robotics and kinetic art. It was initiated by Christian Faubel who was an exhibiting participant in the 2005 festival, together with Ralf Schreiber and Tina Tonnagel who have been exhibiting, performing and leading numerous OHP workshops at various International festivals and exhibitions. In 2008, even though the festival was initially meant as a singular event, we started planning a new edition as a joint effort with the Cologne group. The incentive to do this mainly came from the outside – the Cologne group and previously associated artists as well as newcomers to the festival seemed to be keen on the idea of another edition and spurred our newfound enthusiasm.

What's more, we felt that the festival in its 2005 edition had not fully realised its potential and was presented more like a micro-edition of a full-fledged festival program. These thoughts resulted in the 2009, much extended version of the festival: *OHPen Surface - The Art of the Overhead 2009*, which took place May 22-30 in "Stapelbädden", a huge underground building, originally used by a shipbuilding yard situated in the former industrial harbour of Malmö in Sweden. With over sixty participating artists (excluding the archive section), of which forty were actually present on location, the opening weekend on the 22-23rd of May featured an extensive performance program as well as an exhibition opening with about fifteen different installations. This festival was also preceded by a workshop period which was directly tied to the content of the exhibition, with about twenty artists participating in a knowledge-exchange, presenting and developing their works directly in the venue space. The festival was concluded with another performance night on May 30 and in between, on May 24, a research seminar on the topic of "Home Made Media Archaeologies" was arranged in collaboration with Malmö University featuring Verena Kuni, professor in Visual Culture at Goethe University of Frankfurt am Main and director of the "interfiction" conference for art, media and network cultures. In this last edition, it was our hope to reach that abundant state specific to festivals, as Broeckmann (2004, p.154-55) has described it, likening the festival form to a literal feast, in which the festival breaks through the self-

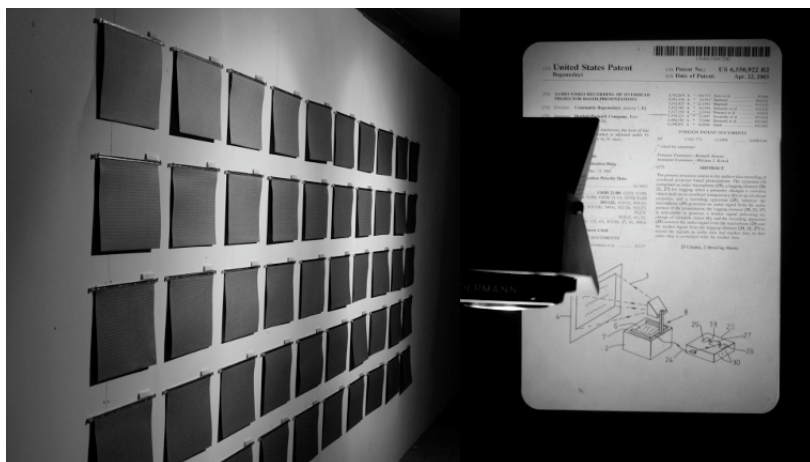
explanatory nature of the already-known through an excess of critical artistic content, constituting an inbetween space for what cannot be seen in the everyday.

Works produced within and/or presented at The Art of the Overhead 2005-09

The following selection of works does not necessarily represent “the best of” The Art of the Overhead festival but these works have rather been chosen for their qualities in relation to the framework of the dissertation. My readings of these projects are attempting to connect the actual content of the festival to the previous genealogy of the OHP and from this connection move on to the overall framework of transversal media practices and how these activities contribute to our understanding of technological development. As with the genealogical approach to the OHP, I’ve tried to outline how the festival approaches the history of the OHP as a network of relations between technologies and practices in its diverse areas of use. This has always been the curatorial drive and concept behind the festival and is also reflected in the performative lecture developed by Linda Hilfling and myself, *OH-istory!*, delivered in the context of the 2009 festival (as well as at earlier, The Art of the Overhead related events, such as in Rotterdam, 2007).

Variations on a Standard: The OHP as an institutional medium

The Art of the Overhead festival and its different projects cuts across the different technologies, institutions and the practices as tentatively mapped out in Picture 5.2. Within the festival there are transversal “partial territories”, to use a term from Guattari, opened up by reverse-remediations such as Katrin Caspar’s installation *Random Hit* (2009) that transposes Wikipedia entries onto cut-up transparencies or Barbara Sterk’s interactive work for the The Art of the Overhead Archive, *private hypermediacy* (2005) that emulates a Windows-desktop filled with customisable error messages on the projection surface of the OHP. The following section takes a look at a few works which act upon the most common institutional framework of the OHP understood as a standard technology within education and business presentations.



Picture 5.10. Installation view “Variations on a Standard”,
The Art of the Overhead 2009.

One work which attempts an overarching approach to this model is *Variations on a Standard*, (2005- ; Pic. 5.10) developed by Linda Hilfling and myself as a research presented at the festival from 2005 and onwards in the form of an archive of patents. This work takes its cue from the fact that the OHP, on the surface, appears as a fairly simple standardised device for projection: involving a lens, a lamp, a set of mirrors, electricity and a screen. But there are many variations existing on this simple formula as shown in the *Variations on a Standard* archive of overhead related patents dating from 1918 to 2005. They are arranged in a wall-mounted installation, where each patent is printed on a set of transparencies that are sorted into old-fashioned office-archive folders. The audience can approach the wall, take down a folder and project the contents of a patent on a nearby OHP. The archive includes some of the key patents as previously discussed (ie. by Coker, Williams and Appeldorn) and shows different modifications and endless variations of the typical OHP, such as the portable projector, but also encompasses many curious augmentation devices such as “Extension platform to support transparencies for an overhead projector“ (Wright, 1985), “Printing Apparatus for Overhead

Projector Processing” (Imaizumi, Morita, 1994), and “Shielding device for the unwanted reflection from an Overhead Projector” (Siems, 2000).

The patents archive was especially developed further and presented in an extended edition for the 2009 festival. The theme of this festival was “OHPen Surface” relating to the notions of open and closed as a recurring dialectic within network culture, for example concerning standardisation of hardware and software. A patent can be seen as the traditional inventor’s way of closing off a certain technology, marking the limits of a particular assemblage of technological parts through the cultural notion of an “original” invention (cf. Johns, 2009). Patenting is a standard procedure ensuring that the invention can be commercialised and not copied by others without proper crediting. Arranged side by side like this however, as endless variations on a standard for the audience to browse and project, it may also reveal how the closed world of a patent and its denoted standard object is part of many diverse networks in which the open, the variation, appears by way of that which is closed, the patent.

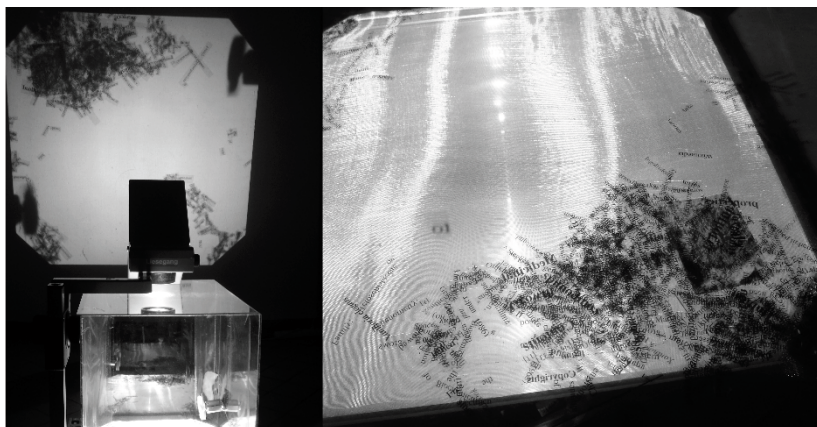
Patent archives, as described by Adrian Johns in his massive study *Piracy – The Intellectual Property Wars from Gutenberg to Gates* (2010, pp. 258-264), were institutional bodies regulating access to patents, first developed in Britain in the mid 19th century with the purpose of minimising the piracy of inventions. This institutionalisation, Johns points out, was concurrent with the advent of an anti-patenting movement (p. 262). Thus, the development of the patent archive marks an important point in the debate about open and closed knowledge. Discussing how anti-patent stances were taken up in the post-war situation by significant 20th century liberal and cybernetic thinkers such as Michael Polanyi and Norbert Wiener (pp. 416 – 430), Johns writes that “it is not so much that pure science never existed, as that the idea that it *could* exist is one we owe to debates about intellectual property and piracy.”. In other words, patents are placeholders for the

imaginary of scientific culture and patent archives, as the institutional access to patents, can be seen as regulating this imaginary.

In my discussion of media archaeology in the theory chapter, I argued for combining a discursive and material understanding of the archive. The archive of patents in *Variations on a Standard* attempts a demonstration of how such an approach could be performed in artistic practice: materially by the literal creation of an archive which can be used to explore the variations of a specific technological development, and discursively as an exploration of a specific technological imagination. This is a transversal intervention, following the idea of the archive as always containing seeds for the transversalisation of linear histories. In the words of Glen Fuller, this kind of archival transversality problematises historical events:

(...) transversality is a concrete manifestation in the institution (psychoanalytic clinic) or the archive. In both cases it may not exist at all but has to be evoked or deployed. Transversality is a bomb; it is a weapon, and sometimes a tool. In the institution it problematises subjectivity (as an event); in the archive it problematises the historical event. (Fuller, 2007, n.pag.)

Variations on Standard: The multifarious story of the OHP is here activated by a transversal intervention that deploys an archive of OHP history in order to initiate reflection on how a standardised media technology is dependent on the imaginary and the practice of its endless variation.



Picture 5.11. Installation view "Random Hit", Katrin Caspar, 2009.

Random Hit

An OHP-based installation which, through the performance of a reverse-remediation of the new into the old, further develops the open/closed dialectics and double-status of the OHP discussed above is the German artist Katrin Caspar's *Random Hit* (2009; Picture 5.11). In this work, Caspar has placed a transparent square plastic-box container on top of the projection surface of the OHP and in it we see small words printed on and cut out from transparency foils. The words are blown about the OHP projection surface with the help of two computer fans situated at the edges of the box. When projected, these words form generative and temporary clusters reminiscent of tag clouds, cut-up poetry or perhaps its more mundane version, the once so popular fridge-poetry. However, it is the method of selection coupled with the materiality of this collage which adds a transversal dynamic to the project beyond the temporary territories of meaning and poetic statements generated by the air moving the words. As the title indicates, the words have been selected from a simple script which performs a randomising operation on Wikipedia entries which have been cut up into words to be printed on the foils. As Caspar herself describes this simple experiment, she is connecting the flat space of the OHP as a stage for the teacher's typically linear pedagogic

narratives, with the encyclopaedic and data-base knowledge space of Wikipedia – a concept which is reinforced literally by the physical materiality of the assemblage-like installation. The three dimensional space on top of the OHP creates a further shadow play so that words are projected over their own more or less blurry copies, a process evocative of the politics of information networks and their incessant copying-as-transmission.

Random Hit can be thought of as a reverse-remediation not simply of the digital into the analogue, rendering the discrete continuous again, but also of the politics of networked knowledge formation with its seemingly transparent logic of the dynamic generation of “tag clouds” vis a vis the pre-organised illusionary representation of projection. The result is that the supposed openness of one model blurs together with the supposed closed nature of the latter, forming partial territories of meaning situated between these regimes of knowing.

Through the spatio-temporal traversal of different media-archés, *Random Hit* can be described as a synthesis of the approaches identified in the previously mentioned projects of GWEI and TMEMA (although excluding the latter’s element of human live manipulation), which I suggested to be emblematic of two key approaches in the uses and counter-uses of the OHP. On the one hand, we have the institutional context of the OHP as a conveyor of knowledge but on the other hand there is also a presence of its connection to improvisational and intermedial aesthetics. By bringing the analogue into dialogue with the digital and through reverse-remediating the context of use of particular knowledge technologies, *Random Hit* goes against the connective and techno-fetishism of much generative network-based art, and the cybernetic dream of smooth self-emergence within systems is here countered by an aesthetics of dislocated messages and in between projected worlds. In the context of media archaeology, a work like *Random Hit* is transversal in relation to the cybernetic disclosure of the noises of the past, evoking Gerald Raunig’s (2007) characterisation of transversality precisely not as conforming to teleological feedback mechanisms, but as practices of rupture and fault lines that do not necessarily connect yet bring new bastard subjectivities or “concatenations” of art and politics into play.

The Writings on the Wall (Copy their Faith)

The traversal of the uses and counter-uses of the OHP is also explored in a work by German artists Martin Conrads and Ingo Gerken. Originally developed for The Art of the Overhead 2005, the piece has since then continuously evolved and been presented at different exhibitions, concluding with the 2009 festival. The original proposition of the project takes belief structures around media as its point of departure. As the artists describe: “In 1967, The Roman Catholic Church’s Holy See declared the papal (or apostolic) blessing also valid, if received through live transmission by radio. This was followed by an equivalent decree concerning television live transmission in 1985 and internet live transmission in 1995. ” (Conrads and Gerken, 2008, p.1). Apparently, the Catholic Church was inclined to issue these decrees as a consequence of the power of mass media but they at the same time did not want to acknowledge those media as also being storing technologies and thus, the blessings cease to be valid if the transmissions are not received live. As Conrads and Gerken point out, in the case of the Internet, this condition concerning the “liveness” of the transmission becomes contradictory, as all net-based communication is at least temporarily stored before being passed on to its receiver. Following this argument, they make the case for other storage media entering the Catholic canon, proposing the OHP as the ideal medium for the storing and transmitting of Papal blessings.

The overhead projector as a live transmitting (or projecting) medium and the foil as its storage “program” always have been ideal, yet neglected media for an apostolic blessing: the visibly blessing hand, the aureole, the writings on the wall, all of these biblical motifs should very well support the idea of the overhead projector being a medium perfectly serving the Holy See’s standards for a mediated blessing. (Conrads and Gerken, 2008, p.2)

In their efforts to receive a blessed OHP transparent foil, the artists sent letters to The Holy See of the Vatican state only to have their requests denied. They did however manage to persuade a friend who happened to be a Catholic priest to bless a foil for them, and

this unofficial “holy overhead” becomes the centrepiece of their ensuing installation, together with the different letters sent back and forth to The Holy See requesting the blessing.

In the final version of the work, at the 2009 The Art of the Overhead festival, Conrads and Gerken had also approached a completely different “holy see” in their search for a blessing. This was the legendary 1960’s light-show, *The Holy See*, based in San Francisco and whose main perpetrator, Ray Anderson is now the owner of the San Francisco “Grooves” record store (Zarling, 1999). On a trip to San Francisco in 2009, Ingo Gerken visited the store, seeking Anderson’s blessing as he incarnated a kind of papal figure for the psychedelic and counter-cultural side of the OHP. Unable to make the contact as the store was closed, Gerken took a photograph of the store’s iconic logo and together with Conrads decided to incorporate it into their installation. The installation finally comprised of an OHP, placed high on a pedestal with the “holy” overhead foil and the “Grooves” text/logo overlayed in the middle, also printed on a cut-out piece of transparency. The OHP was placed in a passageway, with the light brightly shining out in the face of visitors and across an adjacent larger hall, serving as the performance space of the festival, with the light and ensuing “Grooves” projection hitting the back-wall of that room (Picture 5.12). Placed in front of the OHP were neatly arranged rows of chairs, making the space somewhat chapel-like, resembling a space for a lecture or a sermon. The piece was completed by the providing of all the documentation from the artists endeavors to get the OHP blessed by various authorities. The central part of Conrads’ and Gerken’s piece is in the end essentially consisting of a blank OHP foil, the “blessed” foil where it is largely up to the spectators to decide which belief to invest in it. The work connects the educational lecture situation to a religious one, likening the live knowledge transmission involved in education to the process of being illuminated by a blessing – an allegory especially suitable for the OHP and its “shadows on the wall”.



Picture 5.12. Installation View "The Writings on the Wall" by Martin Conrads and Ingo Gerken, 2009. The image shows the Grooves logo projected in the exhibition space.

At the same time their work juxtaposes this setting with the psychedelic culture and the counter-uses of the OHP. Usually we might think of this context as one in which authorities were being contested, but in Conrads' and Gerken's piece, there are also traces of the deep interdependence of mainstream and subculture. Connected to military-funded drug-experiments, the emergence of psychedelia partially had its roots in behaviouristic and cybernetic belief structures of programming or hacking the mind (cf. Gordon, 2008). Conrads' and Gerken's *Writings on the Wall* strip down the colourful psychedelic aesthetic to a minimalist white, in your face light, where the overlayed rendition of the "Grooves" logo seems like a biting ironic after-statement on the interdependence of uses and counter-uses of the OHP.

The OHP in a Performative Context

Apart from the patents archive, the OHP transparency archive comprising of 60+ works mounted in a similar manner as that of the patents archive and the many other external installations part of the exhibition; performances are a crucial component of The Art

of the Overhead festival. The performativity of the festival however, is not restricted to literal “performances” but should also be understood as part of its general approach, featuring many works whose making is opened up by their artists and offered in a DIY spirit as skills to be picked up by the public. This is very much the case with the activities of *Kunst und Musik mit der Tageslichtsprojektor* who formed part of the organisation of the 2009 festival. The origins of their work lies in a mix of the *minimal robotics* developed by artist Ralf Schreiber and its extension project *Overhead Bots* developed by Christian Faubel for the 2005 festival. Later they were complemented by the mechatronic and kinetic art approach of Tina Tonnagel and together they also started to do audiovisual live performances using parts of their installation work. In the “proto-work”, *Overhead Bots* (Pic. 5.13), Faubel built on Schreiber’s technique of building small, solar cell powered robots, which in Schreiber’s minimal robotics projects frequently formed small self-evolving eco-systems generating some visually or aurally perceivable movement in space.

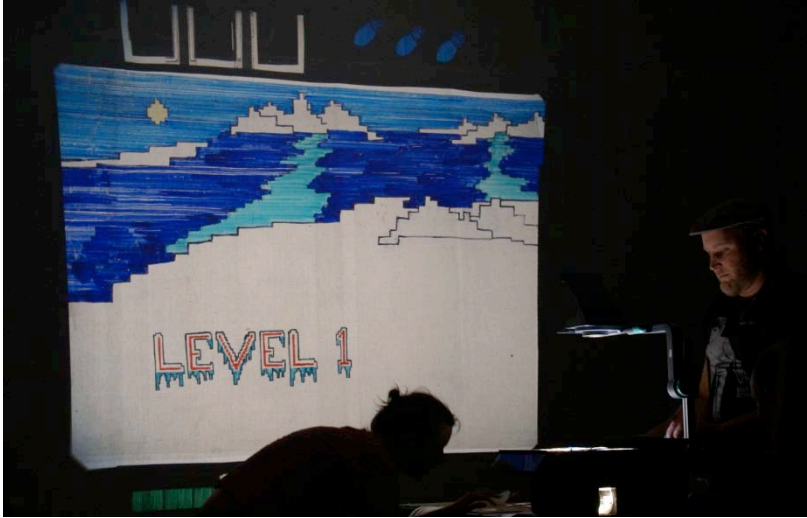
The *Overhead Bots* however, have their solar-cells turned downwards towards their light-source, the OHP surface, as they live on top of the machine, slowly walking about and emitting small squeaking sounds as they get powered up. The bots are further equipped with transparent plastic “hats”, or rather “sombros”, in different colours so that while moving about they are simultaneously being projected, in an ever evolving feedback system which also doubles as an ongoing abstract film. In connection with the *Overhead Bots* and subsequent OHP/robotics projects, always presented in a way in which people can clearly see the robots functioning on the OHP, Christian, Ralf and Tina offered countless workshops teaching people of all ages to build their own solar-powered robots. In 2009, they were the DIY and technical wizardry of The Art of the Overhead festival *OHPen Surface*, reflecting this thematic through their ethos of open knowledge transfer.



Picture 5.13. Installation view “Overhead Bots”, by Christian Faubel, 2007.

Looking at actual performances at The Art of the Overhead, similar DIY approaches often seem to have a strong presence. This probably stems from a mix of the general approach of many of the performers and the transversal character of the festival as such and its position within network culture. Devoted as it is to a more or less outdated medium, there is little room for high-tech smoothness, instead the attraction of a specific performance frequently comes from the realisation that such and such an effect could be achieved with so simple, perfectly understandable means. This may involve acts of humorous reverse-remediation, for example in the work of *Milk Milk Lemonade*, a group of three artists who in performances such as *The Game*, “re-creates” and “plays” the levels of a fictional 8-bit computer game transformed into a live animated movie for the OHP.

Describing themselves as “the kids whose parents couldn’t afford a Spectrum or an Atari, so they made their own computer game with the aid of analogue, OHP technology.”, *Milk Milk Lemonade*’s working methods are completely revealed to the public, even displayed in a performance-installation before the work is shown.



Picture 5.14. "The Game", live Performance by Milk Milk Lemonade, 2009.

By employing the retro-graphics and a soundtrack featuring a dreamy voice singing "it's time to go home now", "i want to see that face" and "i want to hear that voice" – *The Game* is reminiscent of the whole nostalgia market connected to 8-bit culture and retro-gaming.

Their reverse-remediation can however also be regarded as a critical commentary on the 8-bit and retrogaming scene, if we compare *The Game* with the practice of "game-modding", the practice of hacking and publishing new versions of existing computer games. As a game-mod of a fictive game the artists never could play in their childhood, *The Game*, is a performative reverse-remediation of an imaginary 8-bit production, in which the artists are queering the desire of the tech-nerdy nostalgia connected to retro-gaming. Instead of emulating an old game inside a more advanced computing architecture, this is a digital to analogue conversion which we might best describe as a reverse-remediation that is also modifying game hacking and modding in itself, here cast as a tangible, embodied and performative practice. It is a queering of the showing-off of technological skills connected to

such practices, recalling how Cory Arcangel published all the work behind his game-mod *Super Mario Clouds* (Super Mario brothers stripped of all graphics save the clouds and blue sky) but with the difference that the artists have here rather gone for a productive tension of analogue reduction/maximalisation, as they manually “pluck” the characters off the game track/stage in the end.

Around by 170cm

One work which lies in between the categories of installation and performance is *Around* presented in 2009 by the French duo 170cm (in this case represented by Magalie Rastello and Marcelo Valente). This piece deals with structures of compulsory and abundant communication as the artists work around the construction and deconstruction of one single image mirrored across the room in an evolving installation/performance environment. Using tripods, mirrors and small screens, 170cm spread the image from a single source, the OHP, across the performance space in what they call an “exploration of the space between an overhead projector and its projection surface.” (170cm, 2009). In the process, they utilise small portable sound players, texts and live drawing to continuously add new layers to the performance.

The main image in *Around* is that of an e-waste mountain, and is thus depicting the physical trash resulting from our contemporary network culture of supposedly immaterial communication. Throughout the performance, this image is seldom seen in its entirety but is molded through reflections and refractions across the room. At first, there is complete darkness with a gradually rising light from an OHP where the lamp-head is manually unfolded and brought into alignment with a number of small tripods being mounted by the performers at various positions in front and to the side of the OHP. A mirror is placed on one of the tripods and the image on the OHP becomes vaguely visible on the wall behind it, its projection also broken up by the presence of the audience. Then a second mirror is operated by one of the performers casting parts of the image back to the second performer who unfolds small portable screens “catching” the mirrored image, revealing bits and fragments of the full image. On a soundtrack



Picture 5.15. Installation/Performance view, "Around" by 170cm. 2009.

played from small portable audio players, a voice sounding like it comes in through an old phone-line comments in Portuguese, repeatedly talking about “accumulation” and asking for contact with someone on the other side of the line. There is no smooth process of one-to-one communication going on here, as the transmission of images and sounds “around”, are cast out by a medium, only to be captured and redistributed by others. These media work as capture and distribution devices yet the images also spill over into other surfaces thanks to human intervention, spatial factors, errors and unintentional effects. The same applies to the sound, of the objects and of the people of the audience who move about in and around the installation, their interaction, both performing and watching. The materiality of the devices are made very present in small details such as the flapping sound of the screens being rolled out or rolled in again.

Around engages the viewer/visitor in how the paradox of the compulsion to always communicate, typical of horizontal organisational culture (remember Guattari’s critique of both vertical and the horizontal power systems), also leads to a state of abundant

information in which everything also has the potential to become spam, leaving us with a wasteland image of communication in network culture. The work creates a “transversal territory” (Reynolds, 2009), which invites us to think about communication in similarity to the theoretical work of Terranova and Fuller on network culture and media ecologies (see chapter 2). Through their work we learned how information does not move neutrally through time and space, but instead information is produced through a transversal line that is transformed in movement, involving subjects and machines.

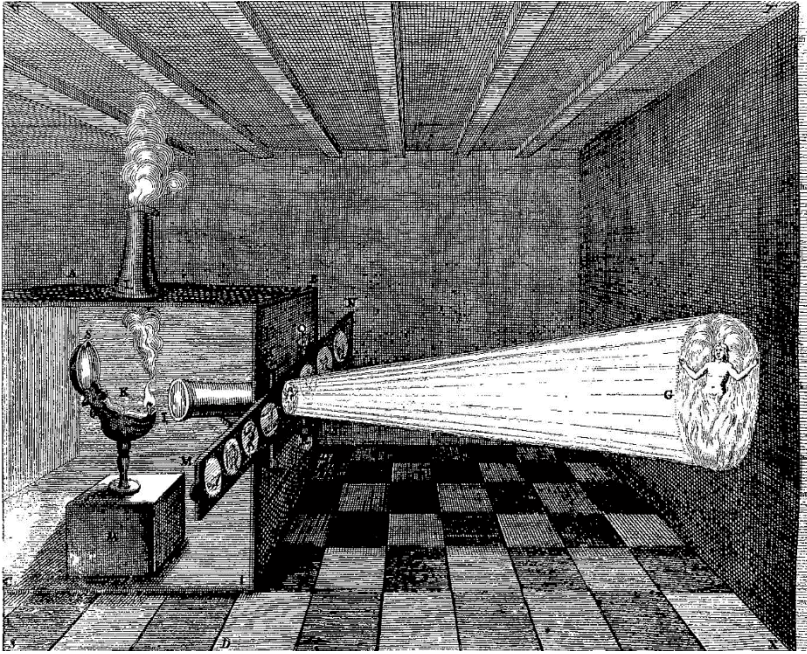
The environment created in *Around* is forming transversal lines of communication when it continually exposes and deconstructs the very simple principles of an “immersive media environment”: the mirrors, screens and the hands that move them. The compulsory horizontality of network communication thematised in this performance installation does not lead to a recuperation of hierarchical thinking. Instead, recalling my earlier discussion of Lovink’s idea of “Notworking” as a critique of convergence culture, contradictions are here left unresolved and communication is allowed to exist because of them rather than in spite of them. Jonathan Crary (1996) observed that seemingly immaterial, once new, media technologies such as cinema led to a disembodied media user turned viewer, mirrored in new ideas of scientific objectivity. *Around* does not present a media ecology that intensify such a disembodiment into the dream of a technological “virtual reality”, but rather transforms the virtuality of the real through a transversal mediation: a space of contradictions paradoxically in convergence, where subjectivity and objectivity are not opposed entities.

Coda to The Art of the Overhead: Imaginary, Residual, Renewable

“Take, for instance, an overhead projector” Bruno Latour wrote in a 1994 article (p. 36). And why not? Introduced as a non-human actant by John Law in 1992 (p. 382), Latour further employed this standardised piece of presentation equipment as an example of a generic black-box technology whose operation is hidden from the user. Most likely drawing on his own immediate experience as a lecturer, Latour described a situation where the technological complexity of the overhead projector only reveals itself in breaking down, when technicians come to the rescue and open up the machine, revealing components in a seemingly never-ending network. Today, one may assume that Law and Latour have since long abandoned the overhead projector. However, as I have explored in detail in the second case study of this dissertation, the act of opening up an overhead projector (discursively as well as materially) has curiously returned, and at the same time migrated outside the exclusive domain of the University AV department.

The first part of this chapter featured an excavation of the history of the overhead projector, not in a hierarchical genealogy of inventions but through a network of relations between technologies and practices in Education, Science, Business, Entertainment and Art. Then it moved on to The Art of the Overhead festival as a transversal media practice that intervenes into this history and that was simultaneously a critical intervention in the field of media art. In the following concluding discussion, I will look at the notion of the imaginary and how it leads us to the residual and the renewable as important aspects of this media archaeology as transversal media practice.

Eric Kluitenberg (2006, p.8), riffs on Benedict Anderson’s famous book *Imagined Communities*, when he writes that “*Like communities, all media are partly real and partly imagined.*” How can a medium be both imaginary and real at the same time?



Picture. 5.16. Illustration depicting a Magic Lantern set up from “*Ars magna lucis et umbrae (The Great Art of Light and Shadow)*”, Athanasius Kircher, 1671.

In the case of the overhead projector, we saw how the history of the overhead cannot be locked down to one linear progression of technologies, in fact, since a medium is almost always in transition, it by necessity carries an imaginary dimension. This imaginary can be observed in how processes of standardisation, such as patents, never totally control the evolution of a medium which exists in an endless series of variations. In fact, the existence of patents even allow for some of the necessary tensions that allow us to imagine the existence of specific media technologies at all. We also saw how media such as the overhead projector, when forgotten, neglected or simply receding into the background, always contain a potential of renewal that re-activates the imaginary dimension, bringing the old into the new in order to create an alternative technological development.

To further think about this imaginary dimension of media archaeology, let us consider an often used image in the history of projection: the illustration (Pic. 5.16) from the Jesuit scholar Athanasius Kircher's *Ars Magna Lucis et Umbrae* (The Great Art of Light and Shadows, 1671 edition). This is one of two illustrations in Kircher's book that is often cited to be among the earliest known portrayals of magic lantern type of projections (cf. Carlsen, 2000). What is striking about this image is the disjointed nature of the apparatus presented: the magic lantern is not here presented as a standardised technology (it also was not at this point in time), but rather as an arrangement of different devices. This is an exploded view of what is partly a black-box and partly an open installation laid out across the whole room according to principles for producing an optical effect.

As often as the illustration from *Ars Magna* is cited as an early portrayal of the magic lantern, writers point out its curious mistake: the image slides are not positioned between the oil lamp and the lense but *outside* the projection booth, which would result in a blurry, barely distinguishable image (cf. Carlsen, 2000) and considering the upright positioning of the slides, it would result in an upside-down projection. Instead of attributing this to a fault on behalf of the illustrators, something we can never gain knowledge of anyway, I would rather see this mistake as fully congruent with Kircher's general idea of the world as a "dissonant multiplicity" (Zielinski 2006b, p.32), in which the role of the scientist/artist was the radical linking together of heterogenous elements in a process of simultaneously universal and transversal articulation. Kircher is in effect presenting us with an imaginary media arrangement: on the illustration we are not yet seeing a complete black-box device for producing cinematic illusions, rather in showing the slide image-strip as external to the device, this illustration occupies an ambiguous territory moving *between* the earlier camera obscura room-sized set-up and the as later standardised optical camera obscura or magic lantern black box technology.

In a footnote to his influential study of the shifting discursive function of technologically aided vision from the classical to the modern age, Jonathan Crary (1992) classifies Kircher's illusionary experiments in magic lantern projection as a "crucial counter-use

of classical optical systems” (p. 33, n11). This is a counter-use which relies on assigning a different role to the observer than that prevailing through the camera obscura type of projections that were much more common at the time.

According to Crary, the camera obscura served in Western scientific work from the 15th century onwards as a dominant principle for structuring knowledge about the world as posited through a clear demarcation of the interior and the exterior, thus adhering to the Cartesian duality of (unreliable) external reality and introspective (truthful) contemplation. The room-sized camera obscura projection in this context can be interpreted as a dark room in which the observer as a subject and body situated in time and space becomes invisible, a disembodied technology mimicking how an emerging mechanised world view conceptualised the human eye and its vision as analogous to the contemplative work of the rational mind, where the optical camera obscura became its perfected, objective device. "The orderly and calculable penetration of light rays through the single opening of the camera corresponds to the flooding of the mind by the light of reason, not the potentially dangerous dazzlement of the senses by the light of the sun." (Crary, 1992, p. 43; cf. Lefèvre 2007, p.8)

Kircher's model of the magic lantern upsets the rational relationship between the internal and the external as it deploys an artificial light source as well as artificially created images, thus laying the foundation for illusionary representations of reality. (cf. Zielinski 2005, 2006b). Crary fleetingly suggests that one can attribute Kircher's counter-use of projection to his background in a Catholic counter-reformation line of thinking, while the camera obscura would be more rooted in "the inwardness of a modernized and Protestant subjectivity." (1992, p. 33n11). This interpretation is also to be found in the work on projection by Zielinski who discusses the Jesuit founder Ignacio de Loyola's call for extreme physical challenges to the self as an imperative for Kircher to invest in "visual shocks, surprises and overpowering with special effects", thus connecting Kircher's illusionary "black box" practices to later developments in modern culture industries such as the cinema (cf. Kittler, 2009).

The device in the illustration, in other words, seems to function *transversally* across the Camera Obscura and the Magic Lantern as technologies for looking at and knowing about the world, pointing out the function of illusion and construction within both situations. (of being/not being situated, of the external and the internal) As such it is, rather than an analogue precursor of cinema or digital convergence, probably closer to Kant's conception of the function of the *transcendental illusion* which he paradoxically posited as a fundamental condition regulating any knowing about the world (Kant, 1781 , cf. Grier 2001; Pias 2006). In this context, Grier has in her extensive study *Kant's Doctrine of Transcendental Illusion* (2001) pointed to the optical metaphors used by Kant, as he regarded unconditioned knowledge of the world to be the at the same time an impossible and necessary "focus imaginarius" (Kant cited in Grier, p. 25, cf. p. 144) of all ideas of reason.

Kant deploys an optical analogy, arguing that just as the optical illusion involved in mirror vision is necessary for the "seeing" of things that lie behind our backs, so too transcendental illusion is necessary for the "knowing" of things that lie beyond our particular experiences (A645/B673). (Grier, 2001, p. 25)

With this argument on the productive function of illusion in generating "focii imaginarius", Grier is able to show the potential for a positive knowing about the world, as regulated by illusionising acts, rather than being constrained by them – an idea which she points out is usually interpreted to be a paradoxical limitation in Kant's thought. In relation to the productive possibilities of the transcendental illusion generating focii imaginarius, residual media technologies such as the OHP seems to me a particularly strong case. Following the brief outline by Acland (2007), we may understand residual media as media that by way of their near obsolete status, attain a kind of post-medial aura of self-evidence, ie. their illusioning have become so embedded into culture that they as specific technologies recede from having any obvious importance. In the examples of artists working with the overhead projector, this taken-for-grantedness of the residual is made strange

again, demonstrating how the imaginary potential of residual media may result in a transversal *re-newal* ⁴⁶ of the technological development of a given medium. In the concluding chapters of this dissertation I will return to all the concepts that I have hinted at through this and the previous case-study: the imaginary, the residual, the renewable as well as the processes of reverse-remediation and eventualisation. The detailed outline of this set of conceptual tools will be preceded by a brief interception of a critical discussion on the media archaeological as a cultural “generic”, a discussion that serves as a moment of critical reflection on the theoretical premises of this investigation before moving on to its conclusion.

⁴⁶ As previously discussed, Peters’s 2009 consideration of new media history puts forward the idea of the renewability of media.

6 THE MEDIA ARCHAEOLOGICAL GENERIC?

To Take Some Distance of it All

In the introduction and the theoretical chapters, the relation between old and new media was framed through a discussion of the problematic of how to conceptualise the logic of technological development. The linear approach to media history found in so called evolutionary models of technology was contrasted with the transversal approach found in media-archaeological approaches. The non-linear and transversal approach was furthermore seen to be related to the cybernetic materiality of networked and digital media, as well as to cultural and artistic practices that engage in remediations of the past.

The critical question I would like to pose in this discussion chapter is if, in the context of network culture, such media-archaeological practices have taken on a generic character? This question is important to address before going on to systematise the findings of the case studies, as its answer may have a “sobering” effect on their supposed radical character. In this chapter, I suggest that the historical and influential theory of cybernetics gives us an idea of media archaeology as an increasingly generic force in everyday cultural production. At the same time this idea of the generic will point us to a new understanding of the possibilities of transversal critical practice emerging as a result of this “genericity”.

The idea of a kind of “media-archaeological generic” is a perspective that can be compared on the one hand, to recent commentary on contemporary culture such as Simon Reynolds’s *Retromania - Pop Culture’s Addiction to Its Own Past* (2011) and on the other hand to corresponding cultural and artistic practices obsessed with recycling the past. Reynolds (2011b, p. 34) writes on the transformation of music culture in which artists are no longer “astronauts but archaeologists, excavating through layers of debris (the detritus of the analogue, pre-internet era)” and where “the place once occupied by the future is now taken by the pasts” (ibid.). This recycling of the past is present in pop music, for example in genres bearing epithets such as “hauntology” and “hypnagogic pop”, names that hint at the time-conflating operations in the cut-up neo-folk-psych of Broadcast and the Focus Group or the hazy analogue synthscapes of Oneohtrix Point Never. But this recycling of the past is arguably also a much wider phenomenon and cannot be confined to vanguardist pop and electronic music. In mainstream Hollywood cinema, the films *Zodiac* (2007) and *Super 8* (2011) are two fairly recent titles that strive on a fetishistic focus on analogue technologies. In contemporary art, the assemblage of second-hand consumer technology and furniture in the work of Haroon Mirza or the time-bending politics of films such as Omer Fast’s *Nostalgia* (2009) show that the interrogation of temporality as a way to explore and construct hybrid realities is a concern beyond the confines of media art.

Could it be that the general structure of cultural production in network culture, under influence of the cultural circuit of network capitalism, is generically predicated on theories and practices which are constantly mixing (and re-mixing) the old and the new? Instead of embracing media-archaeological practices as critical by default, one needs to ask what *arché*, that is what idea of cultural or medial “origins” these kind of media excavations presuppose. In chapter three, I discussed how for some researchers, like Wolfgang Ernst, this *arché* has moved from being the administrative and cultural memory of classical archives to the algorithms of processual and networked archives, always in a state of transmission. Here, the constant cybernetic dynamic of “feedback” between old

and new data seems to have replaced the bureaucratic ordering of the past as a static entity – so that technically speaking – the past has become operational in the cybernetic regime. As Keith Jenkins argued in his postmodern classic *Re-Thinking History* (2003 (1991)) the uses of history are in fact endless, at the same time reminding us of the party slogan in George Orwell's 1984: "Who controls the past controls the future; who controls the present controls the past" (Orwell, 1977, p. 248). The dystopia of Orwell's 1984 was conceived concurrently with the utopia of the cybernetic model which turned to the data of the past as a resource for controlling the present and managing the uncertainties of the future. Orwell completed his book in 1948, the same year as Norbert Wiener published *Cybernetics: Or Control and Communication in the Animal and the Machine*, laying the foundation for cybernetics as a science based on the probabilistic prediction of the future. Wiener's work establishes cybernetics in a way that uncannily recalls the 1984 vision of a state eradicating the possible subversive elements, arising out of the past as a space from which to construct multiple interpretations of the present.⁴⁷

"To predict the future of a curve is to carry out a certain operation on its past", Wiener (1965, p. 6) famously wrote in his foundational work on cybernetics. "Teleological mechanisms" was the term originally used in 1940's cybernetic research to describe the function at work in the operationalising dynamic of "feedback" (Frank, 1948, p. 191). As a concept geared towards the control of an uncertain post-war future, systems of practically any kind would be seen as containing a potential for self-correction and evolution according to the constant comparison of present output with past input. If we follow the cybernetic media archaeology outlined by Ernst, such processes may be regarded as further intensified in the materiality (technical as well as cultural) of digital networked media. Here the convergence of the old and the new clearly forms a part of a new kind of "archive fever" (Derrida, 1996) in which, whether user- or industry -driven, old media content is constantly repurposed for new consumption. In this

⁴⁷ For the sake of context, we need to remember that both Orwell and Wiener were working in the direct aftermath of WWII, with its strong impetus to correct the wrongs of history's past mistakes.

sense, digital and networked archives allow for a networked, modular and, most importantly, temporally non-linear version of the principle of creative destruction once posited by economist Joseph Schumpeter as integral to the evolution of the capitalist economy (Schumpeter, 1942, p. 83). This networked political economy gives us a background to approach media archaeology differently than as a by default radical force in network culture. That is, we should approach media archaeology not only as a critique of technological development and linear assumptions about the progression from old to new media. Media archaeology could in this way be explored according to the idea of a highly developed cultural “generic” which is increasingly integral to much contemporary cultural production.

In order to further substantiate this conceptualisation of media archaeology the next section explores the problematic conceptual gaps and possible fault-lines within cybernetic theory itself, as designating those instants from which non-linear and non-evolutionary technocultural changes may be developed. The next section discusses some of the basic premises for how cybernetics entails an instrumentalised concept of the past, and then moves on to consider the problematic conflation of the “actual” past with a more expanded sense of the past as the space of memory and degeneration of memory. Here, Wendy Chun’s discussion of the “enduring ephemeral” in computational culture will serve as a guiding concept and this discussion ultimately leads us back to reconsider the transversal criticality of media-archaeological practices, in the spirit of Zielinski’s “fortuitous finds”.

Cybernetics and the doing and un-doing of History

The “father of cybernetics”, Norbert Wiener published his first forays into cybernetics under the framework of “Teleological mechanisms” (1948) which united a number of interdisciplinary researchers in the search for a holistic rethinking of cause and effect, according to principles of self-regulating systems, in nature, technology and society. Moving away from linear models of cause and effect and geared instead towards circular feedback movements, the teleological perspective advocated by Wiener in essays

like “Behavior, Purpose and Teleology” (with Rosenbleuth and Bigelow, 1943) and “Time, Communication and The Nervous System” (1948) was not one of final causes but rather a kind of behavioural “soft teleology” aimed at delimiting the set of probable actions available to humans as well as to machines within a given situation through constant comparison of results (output) with past input. In the latter essay, as well as in the opening chapter of *Cybernetics*... Wiener discussed Newtonian and Bergsonian concepts of time, favouring Bergson’s formulation of duration as the constant irreversible “directedness” of time over the measured time of astronomy which (for Wiener) falsely extends into the past and the future like a palindrome (1965, p. 31). For Wiener, the past is the past precisely because of its fixed, specific nature and thereby the past for him becomes, in Bergsonian terms, the actual which through quantification may be operationalised so that we can apprehend the virtual that is the openness of the future. Writes Wiener: “In short, we are directed in time, and our relation to the future is different from our relation to the past. All our questions are conditioned by this asymmetry, and all our answers to these questions are equally conditioned by it.” (Wiener, 1965, p. 33).

The study of the “directedness” of teleological mechanisms, for the purpose of “Control and Communication in the Animal and the Machine”, as the subtitle of Wiener’s foundational work suggests, does not draw any “natural” demarcation lines between the world of biology and the mechanical. Mechanical and computerised devices are in cybernetics seen to be highly instructive about the self-regulating dynamics of humans and animals, albeit not completely analogous. So even though early cybernetics evoked Bergson’s concept of time as duration in constant movement, as opposed to the spatial quantitative time of science, this is where Wiener also departed from what he saw as Bergson’s “vitalism” (1948, p. 48), in that human and machine were in Wiener’s realism to be seen as congruent entities, available to the same processes of control through probabilistic statistics.

While much has been made of the connection between the cybernetic orientation towards the future and its relation to the

society of control and surveillance issues (cf. Holmes, 2009), less has been made of the possible relation between its problematic actualisation of the past as a material informational entity and of temporality in network culture. Despite, the goal of cybernetics being the management of the future, the greatest operation of control it seems, is actually carried out on the interpretation of the past. On the surface, Bergson's virtuality as "bound up intimately with the activity of a living centre" (Ansell-Pearson, 2005, p. 1118) and denoting a subject's actions of subtracting and dividing the whole into parts through perception and representation, does not seem that different from cybernetic sampling of continuous reality into discrete units.

In cybernetics, the construction of such sensing subjects takes place across the realm of machines as well as of organic life, yet it aims at an ontology for determining the future through a disclosure of the past as that which is known. This instrumentality of the past as materialised through information is different from the Bergsonian and later Deleuzian reading of the virtual and the actual as both tied to a positive *indeterminacy* of 'pure virtuality' (Bergson 1991; Deleuze, 1997) or in the words of Keith Ansell-Pearson: "In insisting that memory is not a simple duplication of an unrolling actual existence (...) Bergson is granting the virtual an autonomous power. The disruptive and creative power of memory works contra the law of consciousness, suggesting that for Bergson there is something 'illegal' or unlawful about its virtuality." (2005, pp. 1119-1120). In the networked processes of instant archiving and repurposing of media content the disruptive power of the pure and "illegal" virtuality contained in the past is repressed, at least on the surface of functionality which only accounts for a reduced sense of the actual. As Wendy Chun has suggested with her notion of "the enduring ephemeral" (Chun, 2008) digital media culture is characterized by an ideological conflation of memory and storage where the degenerative aspects central to memory are repressed "in order to support dreams of superhuman digital programmability and of the future unfolding predictably from memory." (2008, p.2)

For Chun, "memory does not equal storage" (ibid, p. 164) – memory is connected to the past as an active process of looking

backwards while storage ‘always looks to the future’ (ibid.), but everyday computer jargon and practice have come to see the basic computational processes of storing and erasing data as the constant writing and re-writing of memory. This conforms memory to a kind of storing and erasing of the past as already actualised data, a clinical information-keeping which we can see as deriving directly from cybernetics as the science of the most effective circulation of information. In her article, Chun discusses how the conflation of memory to storage and the repression of memory as an active process involving degeneration, derives from Vannevar Bush’s seminal design of the (never constructed) “Memex” machine for the associative storing and retrieving of “personalised” data. Not too surprisingly, as a contemporary to Bush, Wiener describes the functioning of computerised memory in a similar way, although he does actually take some steps to consider how to counter the degenerative processes inherent to computing and how they relate to similar aspects of the human brain.

Whether our computing machine be artificial or natural, if it is to operate with no intervention but what enters through sense organs, it must be able to store data and recall them when they are needed later. (...) Usually, a message gets blurred in transmission; it does not take many consecutive blurs until it is unintelligible. To avoid this, the message should be copied, so that instead of transmitting a blurred image of itself it recreates a sharp image. (1948, p. 211)

Wiener argues that if degeneration (the “blurring” of the message) appears, simply copy the original message to ensure that it stays the same. Cybernetics would go on to describe just how such processes of copying as transmission can be designed for the minimum of information loss and consequently forming a vital part in store-and forward protocols of communication such as packet-switching on the net. In the original cybernetic vision, technology is glitch-free, while the human brain is not:

When the machine has done its task and settles down to rest, these data are removed and replaced by other elements or by others of the same kind, and the machine is set up for another problem. But the human machine is never completely cleared. It always retains memories, from the past, of every situation which has ever confronted it. The depth and permanence of these memories is indicated by the success of a hypnotist or psychoanalyst in summoning them up from the depths. In other words, we can regard human life only as one grand problem and its separation into particular smaller problems as relative and incomplete. This coupling of all problems to all previously undertaken problems greatly complicates the behavior of the brain and may significantly contribute to its pathology. (Wiener, 1948, p. 214)

In the passage above, the haunting aspects of the memories in the human psyche is even linked to mortality, seemingly implicating the viewpoint that the brain might become an immortal machine if such aspects were eradicated. Perhaps what we rather need today, given the media-archaeological generic is a reconsideration of the degenerative and indeterminate aspects also of machinic archives of the past. With this idea I do not want to suggest a pathology of machines modelled on human biology but a transversal realm of information exchange which can never be complete and which gives rise to inconsistencies across the realm of machines, humans and their cultures. Recalling the above discussion of Chun's identification of the cybernetic conflation of memory to storage, a media-archaeologist needs to be attentive to the productive critical potentiality of unavoidable gaps of non-pasts (forgotten, repressed, misrepresented) in the cybernetic transmission processes. Such excavations, be they theoretical or practical may allow for the intermission of transversal agencies beyond the control of clinical information ideals and neo-rationalist managerial agendas. With Deleuzian philosophy (1994, p. 128) as a focalizer we see how "in the infinite movement of degraded likeness from copy to copy, we reach a point at which everything changes nature, at which copies themselves flip over into simulacra" and by applying this insight to

the alteration produced by the combination of incessant archiving and re-deployment of the past, we see how the past re-acquires a new kind force of becoming in the present. So even though we have in cybernetic systems a kind of copying of the past that is *directed* towards the future, this process can still in spite of itself give rise to the “not-quite” and “bad copy” of other possible pasts (cf. Tuer, 2006, p. 44).

Difference and change may here be seen not as particularised cultural practices within delimited spheres, but as immanent alterations of the cybernetic temporality of network capitalism. As an example we may turn to Suominen (2008) who points out that typically consumerist media-archaeological practices such as retro-gaming may also involve the “agony of home coming” associated with the original meaning of nostalgia and this may lead to self-ironic reflections on the nature of the practice itself, in this process reformulating it. In the context of retro-gaming, such critical media-archaeological practices are analysed by Dieter (2007) who points to the dysfunctional aesthetics of DIY game-mods, citing Cory Arcangel’s *Super Mario Clouds* as the quintessential example. In this work, Arcangel famously hacked the original 8-bit cartridge of the NES *Super Mario Brothers* game, producing a version stripped bare of anything but the blue sky and pixellated clouds. In the modified game one simply follows the clouds as they scroll across the screen, and as Dieter suggests, contemplating the technological obsolescences of a lost gaming childhood along the way.

A media-archaeological “hack” such as *Super Mario Clouds* is potentially transversal to the cybernetic media-archés analysed above in the way that it works across different memories, subjectivities and materialities of a medium as well as its associated institutional framework, setting up an imaginary constellation of theory and practice.

From Generic to Generative

To sum up this discussion of the link between the “teleological mechanisms” of early cybernetics and media archaeology: I posit a certain operationalisation of the past as inherent to the constant play between old and new in the cultural circuit of contemporary

network capitalism. In this sense I argue that the political economy of new and networked media relies on an instrumentalised making available of the old for constant re-appropriation into the new. In light of the cybernetic as well as aesthetic and political context of feedback between the old and the new, part of my initial problematic was the question if media-archaeological art practice not simply conforms to the feedback mechanisms of digital capitalism as in the “product-making-nostalgia” (Suominen, 2008, n.pag.) of phenomena like retrogaming? Or does media archaeology rather work to critically dislocate the teleological mechanisms of the old and the new, in the manner that Siegfried Zielinski looks for “the new in the old” or in the way that Michael Dieter (2007) has discussed the critical dysfunctional spaces created in the hardware archaeology of artist game-modding?

Media archaeology was in this dissertation initially discussed as a field of media theory which deals with the problematic of technological development from the point of view of a non-linear and non-evolutionary understanding of history as a network of events and discourses into which it is possible to critically intervene. Further, media archaeology was discussed as an artistic practice as well, especially evident in the case study chapters. The key aspect of media-archaeological methodology was introduced as being one of “transversality” understood through thinkers such as Guattari and Raunig as a movement cutting across different temporalities, subjectivities and institutional frameworks. This notion of transversality has now been problematised in line with the idea of the media-archaeological impulse in cybernetically informed culture at large, i.e. its increasing generic character. A critical dimension of transversality has however been retained, defined as the simultaneous taking part in and critiquing this generic from within where an important aspect of theoretical and artistic work is the decoupling of the instrumental relation between the old and the new in order for transversal media practices to propose alternative technological developments and publics. This can be compared with the initially discussed perspectives of Carolyn Marvin and Lisa Gitelman, seeing the old and the new as an always unresolved yet productive tension.

The media art practices considered in the case studies of this dissertation embody a transversal approach that cuts across material, discursive and institutional configurations of media-archaeological culture, activating them beyond the cybernetic disclosure of the past. According to the concept of transversal reason of Calvin O. Schrag (1992), these would be “chronotopal communicative practices” (p. 163) which operate according to a transversal rationality cutting across ‘multiple configurations of discourse, perceptions, human emotions and actions, and institutional complexes,’ (p. 154) without at the same time being entirely coincidental to them. Here the “shift of grammar is that from the universal to the transversal” (p. 168). Thus the transversal character of media archaeology constitutes a critical potential within its generic cultural status, rather than being opposed to it. This means that media archaeology as a generic transversal media practice can follow from different archés or paths: conforming to the circulation of capital or it may become the ontogenetical or perhaps rather ‘Variantological’ (Zielinski and Wagnermaier, 2005) base from which to imagine and establish new media-archés going beyond the 1:1 relationship with cybernetic consumer society.

A similar reading of the generic is also found in the “non-philosophy” of Francois Laruelle (see transversal meta commentary in chapter 2), through which we can approach the generic and “genericity” as forces simultaneously of the “general” and the “generative”. In this double understanding of the generic, Laruelle gives us a new understanding of transversality. Transversality no longer stands for an absolute heterogeneity, but for lines always contingent with what they traverse, differing not by default but always in the last instance. Media archaeology as a generic cultural force embodies such transversality in its constant re-articulation of the old and the new across material, discursive, institutional, subjective and archival spectra. By way of artistic media-archaeological interventions, the old and the new of such fields are becoming, in Laruellian fashion, “transversal yet unilateral”, “universal yet incomplete”, “dual yet not dialectical” and, we may add, simultaneously old and new: “The generic will be the Two that has lost its totality or system” (Laruelle, 2011, p. 246).

7 TRANSVERSAL MEDIA PRACTICES: EMERGING CONCEPTS

Willing war against past and future wars, the pangs of death against all deaths, and the wound against all scars, in the name of becoming and not of the eternal: it is only in this sense that the concept gathers together.

Gilles Deleuze and Félix Guattari, *What is Philosophy?* , 1994, p. 160.

In the discussion of the previous chapter, I advanced the idea that media archaeological practice is becoming a generic feature of technological development in network culture. But I also argued that this “genericity” can be *generative* as well: of transversal media practices that set into motion alternative conceptualisations of technological development. My focus is in other words on the performative and interventionist character of transversal media practice and thus expresses affinity with the position of Parikka in *What is Media Archaeology?* (2012, p. 161), when he emphasizes the importance of looking at “what you can *do* with media archaeology – not only what media archaeology means”. In the case of my research that “looking” also transforms into actual *doing*, indeed the research has been a combination of an analytical looking *at* and doing *with* media archaeology as transversal media practice. In order for this practice to have some productive results, I believe one must move beyond the purely analytical viewpoint and develop speculative, even operational models for further

practice, into a kind of toolbox. For this to happen, I argue that we need to first refine the concepts of technological development at play in transversal media practices.

The following outline of the concepts of transversal media practices has inherited the structure of the case-study chapters, first by considering concepts relating more to the “Excavation” parts and then by considering concepts relating to the “Intervention” parts. With these concepts, I extract a vocabulary from the analysis of the case studies that can be used to challenge and reconfigure an operationalised conception of the past and present (as discussed in the previous chapter). In this sense, these concepts should be understood as tools for further critical speculation, and not as providing complete and closed models of technological development. Instead, the concepts should be possible to be varied by others in other situations of theory and practice. Thus, the concepts outlined here are to some extent philosophical concepts, following Deleuze’s and Guattari’s notion of the concept in *What is Philosophy?* (1994) as something that exist only in and through its endless variation. Although I am aware that this is a slight mis-use of Deleuze and Guattari’s notion of concept, I believe it will prove to be a productive one. It is a mis-use because Deleuze and Guattari are very clear in their account of the creation of concepts as a distinct form of philosophical practice that is different from artistic or scientific practices. In the following I will shortly touch upon this issue in order to clarify my proposal that the notions presented here are conceptual tools.

For Deleuze and Guattari, philosophy creates concepts that are, even though they always relate to other concepts, unconditioned by specific points of reference and can be infinitely varied (1994. p. 19), whereas art creates aesthetic sensations of what is possible (p. 177) and science creates functions with variables within temporarily stabilised “states-of-affaire” (p. 158). But the fields are at the same time not closed off to each other: “With its concepts, philosophy brings forth events. Art erects monuments with its sensations. Science constructs states of affairs with its functions.”, Deleuze and Guattari write, adding that “A rich tissue of correspondences can be established between the planes.” (p. 199). In this

dissertation, I believe that all these modes of practice have been in operation, as my research moved between situations of artistic practice, cultural analysis referencing those practices and theoretical speculation situated always somewhere inbetween. In the following outline of concepts, I both apply and further develop Deleuze's and Guattari's idea of the concept as a "fragmentary whole" (p. 16) and as a "matter of articulation, of cutting and cross-cutting" (ibid.) which should serve to suggest that concepts are the ideal tools for transversality.

Excavation: Imaginary, Residual, Renewable

The structure followed in both chapters was to proceed from the stage of "Excavation", understood as historical and theoretical contextualisation of the conditions of production in the given case, to "Intervention", understood as the practice-based level. In the following, I will consider how the excavation sections each in different ways functioned as transversal archaeologies: firstly by considering how the excavations departed from generic conditions of old/new media practice and secondly by defining the generative potential within the generic conditions that made the latter interventions possible. Given the specificity and limited range of the cases, I am not aiming here for a final picture of how media-archaeological analysis works. What can now be offered however, is a both empirically and theoretically informed critical discussion of this media-archaeological approach to the history of media and associated cultural practices. Out of this discussion I highlight three conceptual notions of media which emerged as useful for doing media-archaeological excavations: "Imaginary", "Residual" and "Renewable".

Imaginary

The archaeological excavations which formed the first half of each case study chapter were contextualising investigations that aimed at more than mere historicisation of the given case. Following media archaeology as a transversal methodology, these chapters approached the history of media and media practices in terms of their relations across material, institutional, subjective and collec-

tive contexts. From these investigations, we may say that a medium is in a general sense always more and in a specific sense always less than the sum of this network of relations: more in the general sense that there is no thinkable limit to which new contexts a given medium may relate, less in the sense that in specific projects and practices only so many relations can be activated and grasped at one singular time. A fitting way to grasp this “ungraspable” always more and less aspect of media is the notion of the *imaginary* dimension of media.⁴⁸ The imaginary is that dimension which allows us to capture, if only for moments, a certain sense of the limits of a medium and at the same time to picture how it could be different. We saw this at work in the tv-tv case, when television was challenged on its own terms of production: we will not make TV, we will make *tv-tv*. Or in the overhead festival on the whole: challenging the idea of what an old, seemingly standardised medium is and can be in the future.

This idea of the imaginary is always dependent on spatio-temporal as well as subjective contexts and should be understood as always political: being both a distribution of the sensible (Ranciere, 2004) and the realisation of a Benjaminian “historico-political stage” (Hanssen, 2006, p. 5) in which unilinear materialisations and conceptualisations of past, present and future become blurred.

In *The Book of Imaginary Media* (Kluitenberg, 2006), Zielinski offers us a model of imaginary media divided into three categories:

Untimely media / apparatus / machines. Media devised and designed much too late or much too early, realized in technical and media practice either centuries before or centuries after being invented.

⁴⁸ See Gansing (2003) “The Myth of Interactivity or the Interactive Myth? Interactive Cinema as Imaginary Genre” for an exploration of the genre of “interactive cinema” as an imaginary constellation of diverse media and practices, covering computer games, web cinema and digital art. Also, Parikka (2012, pp. 41-62)) offers a useful take on imaginary media which does not only rely on the Lacanian concepts of the real and the imaginary but which takes its cue from archaeology as examining the conditions of the discursive and the material. In this view, imaginary media may also well be existing media that enact another imagination of reality, even a non-human one.

Conceptual media / apparatus / machines. Artefacts that were only ever sketched as models or drafted as concrete ideas on paper, but never actually built.

Impossible media / apparatus / machines. Imaginary media in the true sense, by which I mean hermetic and hermeneutic machines, that is machines that signify something, but where the initial design or sketch makes clear that they cannot actually be built, and whose implied meanings nonetheless have an impact on the factual world of media.

(Zielinski, 2006b, p. 30)

These categories lend themselves excellently to “deep-time” media-archaeological inquiry, but they do not tap into the full potentiality of the notion of imaginary media. At least they do not if we follow the more expanded notion offered by Kluitenberg in the same book, saying that all media are partly real and partly imagined, in a reformulation of Benedict Anderson’s well-known idea of the imagined community (Kluitenberg, 2006, p. 8; cf. Anderson, 1983). In his essay, Kluitenberg talks about how each new medium is typically accompanied by dreams of how it can enable a new perfected form of communication. Even when new media fall short of such dreams, as they usually do, this imaginary dimension has a significant power in that it may shape how a specific medium or set of media technologies is perceived, used or even further developed.

In the “Coda” to the second case study, I pointed out that Kircher’s “incorrect” depiction of the *Laterna Magica* was at the same time a suitable depiction of the space in between the *Laterna* and the *Camera Obscura*. It was in other words only technically incorrect if we are pre-supposing the natural unity of a medium, but from a transversal viewpoint, this fictive depiction actually communicated a truth about the migratory development of media forms. The Dutch historian of science Koen Vermeir has similarly argued that what has been described as errors in Kircher’s experiments rather build on a sense of illusion that is not only deceptive: “The illusion (*il-ludere*) is elusive (*e-ludere*) but also allusive (*al-ludere*) and points to a hidden meaning and a higher reality.” (2005, p.140). For Kircher, this higher reality was the truth of his

Jesuit beliefs, with God as a transcendent higher being connecting all things. Vermeir writes: “By combining instruments and metaphysics, Kircher visualizes invisible philosophical truths about the universe.” (2005, p.151). For a contemporary eye and our concerns here, these metaphysical aspects can be seen as historical versions of the imaginary investment in media. Perhaps in this context we can understand the seemingly erroneous device in Kircher’s illustration of the *Laterna Magica* as a prime example of Imaginary Media in precisely the transversal sense that all media are partly real and imagined.⁴⁹

At the end of the second case study, the imaginary dimension of media was also likened to Kant’s function of the “transcendental illusion”, generating imaginary focus points in the construction of knowledge. Similarly, in his analysis of the analogue/digital divide posited by cybernetics, Pias has also demonstrated how a renewed understanding of Kant’s “transcendental illusion” can be of use when approaching contemporary media culture (Pias, 2006). Pias turns to Foucault’s analysis (in Foucault’s 1961 PhD thesis on Kant) of the category of “man” as the foundational anthropological illusion of the 18th century. This illusion of man was for Foucault functioning as an “>empirical/transcendental doublet<”, something that is both the empirical object of knowledge *and* the center of every possible knowledge, something that needs to be understood *and* makes understanding possible at all.” (Pias, p.9). Pias takes this idea of the empirical/transcendental doublet as the basis for a discussion of how this illusionary aspect of modern human sciences came to be replaced in the 20th century by a “cybernetic illusion” as an attempt to build a “non-contradictive unity of technology”, based in notions such as information and feedback as well as a subsequent repression of analogue, non-computable flows. In this context, Pias calls for a return to the productive part of the cybernetic illusion as a way to actively interrogate the world. This is for Pias rooted in the early experimental and investigative part of cybernetics rather than the

⁴⁹ The Kircher illustration also appears in Zielinski’s contribution to *The Book of Imaginary Media* even though the idea of it as imaginary media is not made explicit.

instrumental, problem-solving approach of contemporary informatics (Pias, p 12).

We can take this notion of an experimental cybernetics, aware of its own illusion, as a linkage of the generative aspects of media archaeology discussed above and contemporary network culture, in a de-centering of instrumental perspectives. This amounts to a mobilisation into artistic practice of the alternative ontology of media defined as a “Variantology” of media called for by Siegfried Zielinski and his collaborators (2005). As part of that variantology we now incorporate the here expanded category of “imaginary” media, as a tool for the re-thinking and appropriation of the existing (or imagined) media and their institutions.

Residual

Adding to the list quoted from Zielinski’s article above, a category relating to an expanded notion of imaginary media, in line with the case studies of this dissertation, would be *Residual Media*. Being inspired by the title of a 2007 anthology edited by Charles R. Acland, my own definition of residual media goes as follows:

- *Residual media / apparatus / institution / machines / humans / network*. Technological objects and “grey media” which by way of their near-obsolete status are situated at the precarious border of, on the one hand, being ubiquitous, institutionalised taken for granted phenomena associated with everyday life and, on the other, antiquated strangely out-of-place relics of times gone by, soon to be relegated to the junk-yard.

Residual media strongly evoke the imaginary dimension of media. This becomes clear if we turn back to my case studies which were looking at two different kinds of residual media: television and the overhead projector. The excavations tended to describe the standardisation of these media which must be seen as an important process through which a medium eventually becomes residual in that its novelty then recedes into the background. At the same time, the standardisation of a medium is not the same thing as locking it down to only one configuration, as in some cases even

the opposite happens: the standardisation enables new variations. In the cases we saw that media and their cultures of production or use are caught up in states of transition giving rise to different kinds of media imaginations.

In the tv-tv case, we were dealing with the transition from analogue to digital television, transforming the major medium of the 20th century consumer society. In the case of the overhead projector, we were dealing with a device whose functions have largely been displaced by digital technologies but which continues to live on in select settings. This was evident not the least in new artistic imaginations that use the overhead projector to reach out into a rich historical network of different projection technologies and media practices.

What was rendered “obsolete” in the tv-tv case, analogue television, did not actually die but remained exactly as a residue – an undead analogue spectrum once occupied by a myriad of media operators. But this transition did not only concern the literal analogue “switch off” discussed in the intervention section but also the whole organisation of production and the possibility of forming counter-public projects within this mass medium. Thus what was supposedly rendered obsolete was not only a technical signal but a whole culture of production and counter production associated with this old media format. This conceptualisation of residual media as both incorporating material culture (such as hardware) and cultural practices resonates with Acland’s introduction to *Residual Media* which draws on the cultural materialism of Raymond Williams: “Together the collection is defined not by a time period, or by specific media, but instead by an interest in the processes by which technological forms and related cultural practices age and are selectively revitalised.” (2007, p. xxiii).

The tv-tv project inserted itself at the beginning of the critical stage of a techno-cultural transition process, reclaiming television as a space for collective creative expression in a way that revisited some of the earlier utopian imaginaries that played out on the TV-Screen in the 1970’s. This revisiting also, crucially, adopted some of the new flexible production strategies and tactics associated with network culture. A transversal production strategy became clear in

projects such as *Everyone Can Make TV (About Bush)* as well as the intervention of the TV-Hacknight. The power of tactically appropriating a residual medium was here manifested as a state of inbetweenness, a transversal media practice that uses the medium's past while at the same time deconstructing a seemingly given idea of the future, reflecting on the counter-publics materially and organisationally excluded from this future. These traversals however did not lead to any resolution of the medium in the form of a new institutional framework, rather they stayed, for good or bad, more rooted in the imaginary dimension, having a by necessity temporary character. In this sense, tv-tv on a whole remains mostly as an imaginary mobilisation of a residual medium which nonetheless tapped into real communities and situations.

In the second case study, the excavation of the overhead projector showed that it had acquired the status of a residual medium early on in its history. We should put "history" in brackets here since the excavation further explored how no medium's history is definite and instead, in this case, consists of a network of projection technologies as well as communication agendas. It was the standardisation, the locking down of this network into a mass-produced artefact which enabled the overhead to transform into a residual medium. In the introduction, I discussed Peter's bibliographic discussion on histories of new media,"And Lead us not into Thinking that the New is New" in which he suggests that every medium goes through a three stage development of contestation, negotiation and institutionalisation (Peters, 2009, p.22). If we apply this model then the OHP projector seems from the start to enter directly into the third stage, of institutionalisation. As a mass-produced, standardised and specialised technology, the OHP, from the 1950's onwards is explicitly a projection technology made for "professionals", destined for use within settings such as schools, universities and companies and never marketed as an everyday tool within entertainment, mass media or individual creative practices. However, as the case study demonstrated, this didn't mean that the OHP was not appropriated in such latter settings as well. The overhead was in a sense born as an already standard object, as an

early contender in the field of “grey media”⁵⁰, but this standardisation also ensured its early becoming residual (in class rooms, military briefings and business meetings) and this in turn further opened up its imaginary dimension, giving rise to all kinds of counter-uses as well as institutional uses.

In *The Art of the Overhead*, the residual character of the overhead medium was re-employed in a new setting: to hijack and subvert an increasingly generic new media hype. Keywords such as “Interactivity” and “Remediation” were attributed to the overhead and the audience perception of the meaning of these terms were to be challenged through the multiplicity of artistic works presented. In the patents archive, a multiplicity of imaginary spaces were exposed as part of the history of this standardised piece of projection technology. This an-archival approach to history, is one that is in line with Walter Benjamin’s famous dictum “to brush history against the grain” (Benjamin, 1999, p. 248) in the sense that it breaks up any idea of an absolute origin of the OHP, instead positing a never ending chain of associations. What the people participating in the overhead festival did was to seize on the generative opportunity of the archival gesture, and engage in media archaeology that intervenes in the present. The excavations of the tv-tv chapter and *The Art of the Overhead* point to a common aspect of the imaginary and the residual: together they generate situations where standard objects and generic cultural developments become generative, and where the media become renewable.

⁵⁰ This notion has recently been productively elaborated in Matthew Fuller’s and Andrew Goffey’s work on “Evil Media”: “the approach works extensively with much of contemporary grey media such as expert systems, workflow, databases, human-computer interaction and the sub-media world of leaks, networks and permissions structures that establish what eventually appears as conventional media. These systems are now far more widespread and functionally significant than those which are most often apparent as media. The relative invisibility, or naturalization through ostensibly neutral technicity, and their fusing of the cultures of the workplace with those of consumption and policing offers numerous opportunities for interesting uses.” (Fuller and Goffey, 2010, pp. 156-57). As evident from this quote, they use this notion mainly to designate new forms of anonymous computational media forms such as algorithms and database structures although their work has also been developed further through the artistic work of Graham Harwood and Matsuko Yokokoji who in their exhibition *Evil Media Distribution Centre* at transmediale 2013 demonstrated the historical relevance of grey media by including material objects such as microwave ovens, instruction manuals and clipboards.

Renewable

We may now say that the transversal potential of residual media stem from their ability to be re-newed. This follows the same sense that Peters points to, writing about the renewability of media as depending on variations of use over time.

Herein lies the crux of the idea of media renewability. Each medium may have a few basic ideas (e.g. telegraphy or distance writing) that take many forms in material technologies. While various institutions and actors clothe a medium in ever-changing outfits and external forms, the operative idea of a medium as an environment for communicative action connects it back to other similar media throughout time. (Institutions make new media new, ideas make new media old and perhaps variation in users and uses bridges the difference.) (Peters, 2009, p. 22)

With this idea of renewable media we are also setting the stage for the generative domain of media-archaeological intervention which offers us different strategies of renewal in generic situations. We saw this taking place in the tv-tv case, when the participants of the TV-Hacknight engaged in an eventualisation of the launch of the “new” TV-signal through the focus on the “old” and in this process paradoxically invented a new social situation and use of digital television through the re-discovery of what was supposedly its antiquated past. Similarly, the participants of the The Art of the Overhead, for example the performances of artists like Milk Milk Lemonade, engage in a reverse-remediation that challenge the preconception of new media as allowing for the live manipulation of modular and convergent media flows. Their performances demonstrate how principles of digital “transcoding” (cf. Manovich, 2001) may also be performed with an analogue medium, in turn renewing the contemporary use and meaning of old media objects such as the overhead projector.

Intervention: Eventualisation and Reverse-Remediation

In the second part of the case-studies, media-archaeological projects were instigated and examined as reflecting back on the initial

excavation of the context of the medium and its associated practices, providing new transversal connections between the temporality, materiality and cultural production of network culture. The interventions will here be discussed in terms of their mobilisations of transversal territories into specific projects that to some extent were engaged in not only interpreting but also “changing the changes”.

Having dealt with the excavations in terms of the imaginary, the residual and the renewable, the question now is on what terms do media-archaeological practices intervene into these dimensions? We need to think about how the interventions activate the renewable dimension of media and in this sense how they can also be thought of as *inventions*, albeit not of objects but as processual variations of standards. While I do not want to propose that media-archaeological intervention is the only force of renewal within media production and use, I will here take a closer look at the inter-connected critical methodologies which has emerged as the most relevant to the case-studies: eventualisation and reverse-remediation.

Eventualisation

The second half of each case study chapter devoted itself to media-archaeological interventions in the excavated media and their cultures of production and use (as well as counter-production and counter-use). The notion of “eventualisation” was previously hinted at as the shared concept of these interventions. In relation to the TV-Hacknight and the works presented in The Art of the Overhead festival, eventualisation can be further understood as a force that breaks up the supposed continuity and self-evidence of technological development.

For Foucault, eventualisation (or “eventalization” as it is written in the English translations of his works), is a “theoretico-political” method that looks at specific historical phenomena in order to enact a “breach of self-evidence”. In an interview conducted in 1978, Foucault explains the concept of eventalization as such:

It means making visible a singularity at places where there is a temptation to invoke a historical constant, an immediate anthropological trait, or an obviousness that imposes itself uniformly on all. (...) Secondly, eventualization means rediscovering the connections, encounters, supports, blockages, plays of forces, strategies, and so on, that at a given moment what subsequently counts as being self-evident, universal and necessary. In this sense, one is indeed effecting a sort of multiplication or pluralization of causes. (Foucault, 1996, p.277)

The method of eventualisation is clearly a transversal one for Foucault, speaking of how it brings into contact a network of polymorphous elements, relations and domains of reference in order to destabilise causes and the seemingly natural unity of historical phenomena (ibid). This should not be confused, Foucault reminds us, with getting rid of all logic of development (ibid). The destabilising of unities is on the contrary a basic constituent of his archaeology of mapping the transversal network of heterogeneous conditions that make certain phenomena and developments possible at certain points in history.

The archive of overhead patents, as “Variations on a Standard” discussed earlier, is an example of an attempt at a transversal mapping that eventualises the history of a specific medium. Instead of an uni-linear narrative of inventors and inventions, one is here treated to a polymorphous idea of a medium whose variations depend on a complex network of institutions, uses and counter-uses. When brought into play by the audience, the materiality of the archive may open up the imaginary that is resident in this “pluralization of causes”, leading to renewed understandings and subsequently new directions of media practice that are not foreclosed by standardised historic narratives. This media-archaeological eventualisation is close to Foucault’s idea of the historian’s work, which as Glen Fuller has eloquently formulated was to “transverse the documents of the archive and work towards producing a ‘grid’ or ‘series’ of the distribution of statements.” (Fuller, 2008, n.pag.) In this work there is an implicit opening up of history to a multiplicity of developments through the confrontation of continuity with discontinuity.

The archive of OHP patents also points to the “unspectacular” and everyday nature of the historical event, showing that mundane and non-eventful artefacts such as patents may also be eventualised. Caton (1999) has argued that our concept of event needs to be rethought as it does not necessarily have to be found in situations of great disruption:

It isn't a periodic or a cyclic phenomenon which appears in a moment of disruption, only then to be reabsorbed by the normative order; it is in a sense always already there, though under the surface or in the background, and then appears spectacularly for a while. (Caton, 1999, p. 8)

This understanding of the event also implicitly suggests that particularly dramatic or event-like happenings, could similarly be de- or re-eventualised. In the TV-Hacknight case, the transition of analogue to digital television was explored as on the one hand depending on the presentation (by the state campaign, TV-operators and other stakeholders) of a natural progression of technology from one stage to another. Using the vocabulary of a Foucauldian archaeologist we may say that this was a discursive statement creating a unity of heterogeneous elements or more precisely a smooth transition: the analogue signal is simply upgraded to a better digital one. The eventualisation, or perhaps better de- and re-eventualisation, of the TV-Hacknight worked precisely at the contours of the otherwise invisible discontinuities, revealing the displacement of certain symmetries of producer-viewer relations specific to analogue television, by new asymmetries specific to the singularities of the digital technology and modes of flexible production in network culture. In this situation, the TV-Hacknight engaged an idea of Utopian transversal media practice – transversal in the sense that it worked across the singularities of this transition, so that while being contingent with these changes, it modified the interpretation and possible consequences of this technological development. The residual medium of the analogue TV-Signal was employed to counter-act the closed nature of the digital signal and suggest the imaginary of other configurations of

producers-users. When the discursive statements of the archive encounter the singularity of discontinuity, it may give rise to new archival statements that modify our present situation.

The concept of eventualisation, which involves an opening up of a foreclosed past to the multiplicity of the present is strongly advocated by Deleuze. The Deleuzian perspective on eventualisation is employed in an essay by Asmund W. Born, Christian Frankel and Niels Thyge Thygesen (2006, p. 123), asserting that “time is of course the hidden machinery in any eventualization.” The specific temporality of “the event” has been discussed extensively in the work of Deleuze who from *The Logic of Sense* (2001 (1969)) onwards offers a theorisation of the event that confounds the past, present and future. The event works against linear temporalisation for Deleuze because it is related to a state of becoming that can never be completely resolved – lest it loses its singularity of being precisely an event. In “Towards an events-based history”, Christian Buss deploys this Deleuzian notion of the event:

The event’s temporality also resists teleologies of past-present-future. It exists in a time which has always just past and is always about to come. As such, the event is always expressed in the infinitive, ‘to die,’ ‘to be sick.’ Without movement, becoming, the event is inconceivable, temporally resisting specificity as it resists spatial location. (Buss, 2004, p.2)

This idea of a state of becoming inherent to the event as ultimately impossible to represent is also highly pertinent to the analogue to digital transition of Danish Television. In the excavation of that process we saw how the transition itself was transformed into a media event where paradoxically, for television, there was nothing for the TV-Audience to actually see or hear. The transition was instead happening in a suspended state of the actual, a “live” experience of history, but as precisely ready-made “history” for the TV-consumer, already foreclosed to any other possibilities than the one stratified into an analogue-digital divide.

Through Deleuze's "atemporal" temporality of the event as a state of becoming we receive a crucial understanding of eventualisation as an opening up of past-present-future to a non-evolutionary sense of time. In the previous chapter's discussion of cybernetics and media archaeology, we looked at the constantly feedbacking micro temporality of network culture. Eventualisation may be understood as an intervention into the teleologically formulated mechanisms of this kind of instrumentalised time in the same sense that Badiou reads Deleuze: "the event extracts from a time the possibility of an other time. This other time, whose materiality envelops the consequences of the event, deserves the name of a new present. The event is neither past nor future. It makes us present to the present." (Badiou, 2007, n.pag.). This making possible "an other time" within a stratified time, for example in our case of technological development, is the principle at the heart of eventualisation as a transversal concept for doing media archaeology.

Learning from the tv-tv and TV-Hacknight, we can say that an important part of eventualisation is the study of the specifics of how materialities of media and their associated discourses and practices are negotiated in the construction of the old and the new. In line with Ranciere's thinking of aesthetics and politics as "the distribution of the sensible" (Ranciere, 2004), aesthetics are in this case not only a question of TV taking on hypermedia ways of representation, but have a political functioning, as the technological process of change defines ways one can and cannot take part. It is in the context of transversal media-archaeological analysis and practice that I propose the concept of eventualisation as a way to describe how projects such as the TV-Hacknight are making the politics of such processes visible, which turn the the categories involved (old/new) on their head through a re-distribution of the sensible, that is of the ways of taking part associated with these terms.

Reverse-remediation

If the process of eventualisation can be seen as a basic transversal strategy of media archaeology emerging from the case-studies, then a more specific operation within this strategy is the insertion of the new into the old. This was earlier hinted at as a strategy of *reverse-remediation*, especially present in the OHP works of Katrin Caspar and Milk Milk Lemonade. One can also suggest that The Art of the Overhead festival on a whole is a form of reverse-remediation of new media culture as the participating artists here engage in revisionist interventions by way of a near-obsolete, analogue medium.

Recently, Saskia Korsten (2010) in response to Bolter's and Grusin's concept of remediation, proposed a similar term, "*reversed-remediation*" (my italics) to describe a common strategy in art practices to make the familiar, transparent workings of media strange by way of "uncanny" transcodings and changes of perspective.

In reversed remediation, hypermediacy is used to display the incongruities between media in order to frustrate immersion and fosters critical awareness. (...) Reversed remediation works counter to remediation mechanisms in the sense that it makes the media visible instead of transparent. (Korsten, p. 4)

The strategy of reverse-remediation invites us to re-think the McLuhanist statement that "the 'content' of any medium is always another medium" (1964, p. 8). From being simply the founding principle of the process of "remediation" we may see it as related to a transversal approach in which old and new are not only questions related to the linear temporality and evolutionary functionality of technological development but of different formations across materialities, subjects and their performative spaces of action. If we go back to the concept of remediation, one should note that Bolter and Grusin formulated it as a two-way concept: new media remediates older media according to the logic of immediacy (the old persisting in the new) and hypermediacy (new media aesthetics and functionality) but old media is also refash-

ioned in response to the new; as an example Bolter and Grusin discussed how television newscasts, Bloomberg style, have taken on the hypermedia aesthetics of windows and constant info-flows.

The Bolter and Grusin concept of remediation however, is till unidirectional and oriented toward functions – the old is refashioned in response to the new, taking on some of the properties of the new. The concept of reverse-remediation looks at how the new is transcoded by the old and how in this process both the old and the new is transformed and actually sidetracked in order to allow transversal understandings and concepts of media development and practices. This process is similar to Korsten’s notion, when she writes that “To push it towards reversed remediation, the multiple media used must work together to create an unfamiliar (uncanny) outcome which propels the user out of immersion and into a state of critical. (sic.)” (Korsten, 2010, p.4). This process does not need to follow Bolter’s and Grusin’s two-way model where the new would be compromised by the old in order to create transparency for the user. Instead, being a media-archaeological operation, reverse-remediation forms part of a transversal media practice that opens up the old/new dichotomy, a making strange that holds potential for a critical innovation of media without at the same time being prescribed by the evolutionary model of technological development.

8 CHANGING THE CHANGES: A SUMMARY AND SET OF TOOLS

Transversality needs tools. But not any tools. Those tools sitting on the shelves in your local hardware store are not the ones at issue.

Gary Genosko, *Félix Guattari – A Critical Introduction*, 2009, p. 55.

In the introduction to this dissertation, I described 2005 as a kind of “year zero” for the projects and issues at stake. I connected this to a personal trajectory in the field of new media art and culture as well as to an increasing concern with media history in these fields. The first seeds for this dissertation were also sown around the same time as, in late 2004, I was preparing the first proposal of what would later become this research project. The developing proposal bore the title “Local Media – Global Flows” and dealt with the questions raised in the first case study of the present research, concerning the transformation of local and alternative media in network culture. Even though my own disciplinary background is rooted in the humanities and in cultural production, I was confident that the academic context of media and communication studies would be ideal for the PhD project. This was because the research proposal, as I saw it, raised questions central to media and communications studies as an interdisciplinary field sitting somewhere inbetween the social sciences and the humanities. In taking a practice-based approach, my proposal also included

potentially innovative approaches in the form of my own media experiments and projects.

The first contact with a University department for media and communication studies that I had concerning this project, however, was not very encouraging. At the University of Copenhagen, PhD positions starting in 2005 had been announced and I got in touch with one of the professors who could possibly serve as supervisor. This well established media and communications scholar was not that impressed, writing in response that the proposal, while exciting and raising interesting points had “serious theoretical and methodological weaknesses”. The professor kindly offered to meet up anyway in order to advise me on how to develop the proposal further for another application round. At the meeting, it turned out that the weak points mainly concerned the fact that I was personally involved in the case studies. Although, as the professor added, “this can probably be resolved with some form of action research”, he made it clear that it was not a research approach of particular relevance to his department and was clearly a problem rather than, as I thought it to be, an asset.

The reaction of the media and communications professor in this case is maybe not that surprising if we recall the discussion I laid out in the third chapter, concerning the lack of practice-based approaches in the discipline. However unsurprising it was, this initial skepticism towards the basic approach of my research continued to nag me. It is true, that this dissertation has not included much theorisation about my *own* role in the case-studies. It was also never part of my goal to make the dissertation overtly selfreflexive in a more hermeneutical sense. Yet, here, at the end of the dissertation it seems unavoidable to be just a bit selfreflexive. As I wrote in chapter three, I use the artistic, collaborative and cultural production activities as springboards for further analysis and development of concepts rather than as instrumental projects that need to be evaluated in terms of their failure or success. In this process, I do believe that the dissertation has avoided all of what Hannula et. al. have defined as the pitfalls of practice-based research, namely “the pitfalls of introversion, of hermetical traditions (including solipsistic individualism), and of uncritical

repetition.“ (2005, p. 44-45). At the same time, I feel it is my task here at the end to provide a perspective on the findings, in order to demonstrate that the concepts of transversal media practices are not only my personal reflections on the case studies but also potentially useful to others. For this purpose, I will, as a conclusion, show how these concepts can be thought of as a set of tools, in a way similar to how Jacob Lillemose (2011, p. 240) invites us to think about tools that “facilitate the imaginations of the users and their imagination of uses.”

In the end I’m aiming for a conclusion that opens up towards the future, and not a finalising summary: transforming the concepts into a tentative set of tools that display an openness to the many possible other modalities of the past, present and future than the ones disclosed by the generic consumption/production logics of technological development. These “tools” are not meant in the sense of instruments operating in a linear way upon culture, but in the sense of transversal, non-evolutionary operators that may be utilised in theoretical or practice-based interventions into and excavations of network culture. But first things first... let’s proceed to a summary of the dissertation and then move on to the results understood as tools.

In the first chapter, “Concerns, Questions, Aims”, I stated that the overall aim of this study is to develop concepts for transversal media practices that can contribute to our understanding of technological development framed as a problematic of how media and media practices develop over time. Thus on a very general level the work is a contribution to our understanding of the interplay between society, culture and technology. Media archaeology was later introduced as a particular discipline for transversal analysis of technological development in the context of network culture. Previous work in media archaeology was explored as a critique of linear and evolutionary models of technological development. But media archaeology was also proposed as a practice-based approach to media-studies: not only as the theory of other temporal orders, but as the active intervention into a capitalist logic of development based in the principle of creative destruction and planned obsolescence. Both the theoretical and practice-based dimension of media archaeology as a transversal

approach to technological development were explored in the projects of the two case study chapters, engaged in different transitions and hybridisations between the old and the new, of the materiality of analogue and digital and of different media institutions, publics and modes of (self-) organisation.

In the first case study chapter, productive tensions between the old and the new were analysed in the clash of different modes of production and organisation in the tv-tv project and in the seemingly natural transition from analogue to digital television in the media-archaeological intervention of the TV-Hacknight. The tv-tv case-study thus addressed television as a medium in transition in network culture and described an interventional critique of convergence through the transversal eventualisation, as opposed to resolution, of the old and the new.

In the second case study, I looked at a project where the overhead projector was appropriated in a variety of different ways, for example in a somewhat absurdist gesture, re-presenting this medium as a worthy contender for attention in relation to the industrial and cultural hype of features such as “interactivity”, “ubiquitous technology” or “immersion”. The interplay of old and new media was here critically examined in practice, and the specific examples analysed helps to further consider the complex temporality of cultural production in network culture. At the end of this second case study, the outlines of three concepts for transversal media practices were made: the imaginary, residual and renewable character of media as mobilised in the media-activist and artistic projects of the case-studies.

In the discussion chapter following the case studies, I took a step back from the transversal media practice as such in order to consider the idea of the “generic” character of the media-archaeological impulse, as a moment of critique and opportunity for a better examination of the cybernetic roots of media archaeology. In this context, it was suggested that media archaeology is not opposed to technological development, but rather follows a “non-evolutionary” approach that if employed transversally across the materiality and discourses of media and media institutions is able

to insert gaps and stops in operationalised past-present-future feedback loops.

With this critical perspective in mind, I returned to the findings of the case-studies in order to refine the earlier categories of the imaginary, the residual and the renewable. From this emerged two sets of concepts, adding to those previously mentioned, reverse-remediation and eventualisation as concepts for interventions into specific media situations.

The transversality of media archaeology has in this dissertation been problematised in relation to the idea of an increasing generic character of old/new hybridisation in contemporary culture. When the recycling of the past becomes part of a cybernetic feedback loop, working concurrently with a globally connected cultural circuit of consumer culture, media archaeology as a by default radical cultural practice recedes into the background. If the *arché* of the archive is, following Derrida (1996), a movement where order is created from disorder, then the materiality of networked media culture seems to lead to a generative multiplicity of parallel disorders as well as orders. There are no absolute origins to be found in this culture of constant computation and transmission of data, but rather a constant generation of new links leading to what some have characterised as either a pervasive real-time culture (Volmar, 2009) or a state of atemporality (Sterling, 2010) where all cultural forms and media content seem to be simultaneously accessible, extending across past-present and future.

Can the concepts of transversal media practices help to better understand this tendency towards atemporality in networked media culture, and carve out new forms of living within it? The question now concerns the status of the resulting concepts which I would like to invite the reader to think about as a set of tools. This follows the famous idea of Deleuze, of theory as a “box of tools” (1972).⁵¹

⁵¹ “A theory is exactly like a box of tools. It has nothing to do with the signifier. It must be useful. It must function. And not for itself. If no one uses it, beginning with the theoretician himself (who then ceases to be a theoretician), then the theory is worthless or the moment is inappropriate.” (Deleuze, 1972). Again, I would as in my earlier discussion of concepts add, that I probably differ from Deleuze also in my adaptation of his notion of “tools”, since I believe that these concepts as “tools” can be put to work both in philosophical and artistic practice.

Integrating theory and practice, the conceptual tools I offer here are in line with what Gary Genosko has characterised as “tools for transversality” (2009, p. 54), a notion through which he discusses Guattari’s transversal practices that worked to break up organisational routines and allowed subjects to redistribute themselves inside institutional structures of power. In this sense, “Tools for transversality not only adjust to the changing conditions they help initiate, they may be modified in and through and by the processes in which they participate.” (Genosko, p. 55). Following this double logic, my tools for transversality can be used for and further developed through interventions into media institutions and media devices, including their materiality and practices. At best these tools can be used to engender activities of integrated critical theory and practice and for developing projects exploring the problematic of technological development from novel viewpoints.

Thinking about the concepts of the imaginary, the renewable and the residual aspects of media, along with eventualisation and reverse-remediation as tools, we need to ask: how are these tools useful? How do they offer themselves for further research and practice? How do we distinguish between them and establish their specific characteristics?

- On a *general* level these tools build a bridge between theory and practice: they can be used for cultural analysis in the sense previously suggested by Mieke Bal (see chapter 4) where objects of study speak back to analytical concepts. At the same time these tools for transversality expand this form of cultural analysis as the travelling between disciplines in their case also means a travelling between theory and practice.
- On a *specific* level, the tools enable this travel between theory and practice in media- and communication studies, and as such they contribute to the development of new practice-based methodologies in media research.

These tools are meant to assist in the opening up and intervening into processes of media development. In this respect:

- *The imaginary*, is a concept that allows us to look at and indeed imagine new linkages between the discursive and material aspects of media.
- The *residual* encourages us to look closer at the histories and present configurations of “grey media” as near-obsolete or naturalised media devices and practices that increasingly inhabit and enact a powerful influence on everyday life.
- The *renewable* dimension of media can be used as a tool for interventions, countering linear conceptions of media development.
- *Eventualisation* is a specific form of intervention which exploits the performative rationale behind any technological development and in this sense it is intervention as a process of invention, adapting existing developments to tell new stories or instigate new events.
- *Reverse-remediation* turns against the idea that the old always feeds into the new, and instead makes the old remediate the new and thus it creates a hybrid medium of transversal relations between the old and the new.

When we consider the collection of these concepts as a set of tools, we encounter a contradiction since these tools are non-instrumental. However, they can still be productive if we think about them as poetic tools that invite us to think differently about technological development. This box of tools consists of open concepts rather than instruments, and it tries to give shape to a transversal approach that may help future scholars to look beyond the “digital” as the ultimate horizon against which cultural production takes place today.

SAMMANFATTNING

Ansats

Den här avhandlingen undersöker förhållandet mellan gamla och nya medier. Teknologisk utveckling är den överordnande problematik som här behandlas utifrån kulturanalytiska, historiska och konstnärliga perspektiv. Särskild tonvikt läggs på hur konstnärliga praktiker kan berika vår förståelse av olika mediers utveckling. I det sammanhanget placerar jag mig i den gryende disciplinen *mediearkeologi* som utmanar linjära föreställningar om teknologisk utveckling och istället betonar oväntade kombinationer av gammalt och nytt. Det mediearkeologiska tillvägagångssättet omsätts här både i teori och praktik inom två fallstudier som innehåller exempel på vad jag kallar "transversala" eller enklare uttryckt *tvärgående mediepraktiker*. Dessa mediepraktiker går tvärs över olika temporala, institutionella, materiella och kulturella aspekter av specifika medieformer och omförhandlar sådana aspekters förhållanden genom kreativa och kritiska ingrepp.

Det överordnade målet för avhandlingen är att utveckla konceptuella verktyg för dessa tvärgående mediepraktiker. Syftet med de konceptuella verktygen är inte att generellt fastställa exakt hur det gamla och nya påverkar varandra utan snarare att inbjuda läsaren till att använda dem för vidare analys och kritisk kulturproduktion. Verktygen handlar om mediers imaginära, "kvarblivande" (residual) och förnybara dimensioner och deras användningområde är specifika situationer i samtidskulturen som präglas av ett standardiserat och kapitalistiskt betingat förhållningssätt till teknologisk utveckling.

I den första fallstudien, "The World's Last Television Studio", engagerar jag mig i kollektivet *tv-tv*, en grupp bestående av konstnärer och aktivister som arbetat med att omformulera premisserna för produktion inom 1900-talets kanske mest betydelsefulla massmedium: televisionen. Den andra fallstudien, "The Art of the Overhead", tar sin utgångspunkt i ett annat, något mer anonymt men inte destomindre institutionaliserat medium under förvandling: overheadprojektorn. Här har jag själv varit med och iscensatt en festival som i likhet med mediearkeologen Siegfried Zielinskis motto "söker det nya i det gamla". Om den första fallstudien behandlar teknologisk utveckling utifrån hur ett gammalt medium förändras i en digital nätverkskultur så undersöker den andra hur en innovativ användning av ett gammalt medium kan komma att påverka vår föreställning om det nya.

Grundläggande för avhandlingens metodologiska utgångspunkt är en integration av teorik och praktik. Det "empiriska" materialet består inte som så ofta är fallet inom medie- och kommunikationsvetenskap huvudsakligen av data som insamlats genom kvalitativa eller kvantitativa metoder. Istället slår jag ett slag för en engagerad medieforskning som är besläktad med så kallad praktikbaserad och konstnärlig forskning. Jag har själv deltagit i fallstudierna och även initierat aktiviteter som ligger till grund för min forskning, däribland utställningar, workshops och konstnärliga interventioner. Ett andra syfte med denna avhandling är således att visa på hur kulturproduktion som praktikbaserad metod kan berika medie- och kommunikationsvetenskap som ett transdisciplinärt forskningsfält.

Kapitel 1: "Sammanhang, Frågor, Syften"

Hur utvecklas medieteknologier över tid? I avhandlingens första kapitel redogör jag för hur 1900-talet dominerades av linjära, framstegsinriktade och monomediala historieskrivningar och föreställningar (cf. Snickars, 2006). Inom sådana perspektiv utvecklas var och ett medium enskilt och hela tiden mot det bättre. Under 1990-talet ställde så kallade "nya medier" dessa perspektiv inför ett dilemma. Utbredningen av digitala och nätverksbaserade teknologier medförde då en så kallad "konvergenskultur" (Jenkins,

2006) där medier som tidigare uppfattats som åtskilda tycktes sammansmälta och interagera på nya sätt. Konsekvenserna av denna konvergens har diskuterats utifrån en mängd olika perspektiv inom medieforskningen, från teknikeuforiska till mer kritiska perspektiv (Negroponte, 1994; Lovink, 2002). En markant tendens inom "new media studies" har varit ett nyväckt intresse för en mediehistoria som går bortom linjära modeller (Bolter och Grusin 1999; Manovich, 2001). I mina teoretiska ansatser ansluter jag mig till denna historiserande tendens med sin insikt om att alla gamla medier också en gång varit nya och där det gamla och det nya kan förstås genom ett spänningsförhållande där deras positioner ständigt är under förhandling (Marvin, 1990; Gitelman, 2006). Särskild tonvikt lägger jag på mediearkeologi som en särskild utveckling av "new media" fältet som lämpar sig för att både analysera och utöva de tvärgående mediepraktiker som är avhandlingens huvudfokus.

I detta kapitel påbörjas också det metateoretiska "sidospår" som löper genom de första tre kapitlen i form av korta texter om begreppet "transversality". Min tillämpning av transversalitetsbegreppet härstammar från den franske psykoanalytikern och aktivisten Félix Guattari som under 1960-talet började utveckla en särskild form av institutionell kritik för att motverka enhetliga föreställningar om subjekt, medier och system. Av detta följer att mitt eget transversala tillvägagångssätt syftar på att sammanföra heterogena element, för att öppna upp för vidare kritiska frågeställningar om teknologisk utveckling snarare än att uppfinna *en* lösning eller *en* modell. Det är ett tillvägagångssätt som också är en logisk konsekvens av fallstudiernas tvärgående karaktär, där jag kombinerar historisk forskning, teoretiska spekulationer, deltagande observationer samt praktiska projekt.

Kapitel 2: "Medieteorier och Mediearkeologi: Historia, Materialitet, Praktik"

De teoretiska ansatserna fördjupas i det andra kapitlet. Liksom titeln antyder utvecklar jag här teorin utifrån tre utgångspunkter, nämligen historia, materialitet och praktik. Dessa tre begrepp ska tjäna till att utveckla en teoretisk kontext med tillräcklig spännvid

för fallstudiernas tvärgående praktiker som rör sig mellan gamla och nya medieformer såväl som olika kulturproduktionsfält.

Inledningsvis diskuterar jag hur materialitetsbegreppet, det vill här säga frågan om ett mediums specifika egenskaper, spelar olika roll inom olika inriktningar i medieforskningen. Medie- och kommunikationsforskning så som den institutionaliserats i t.ex. Sverige och Storbritannien har följt ett "cultural studies" perspektiv som betonar vikten av att studera hur människor använder och tolkar medier. I detta sammanhang visar jag på hur medie- och kommunikationsforskningen i sin institutionaliserade form länge varit rädd för en viss typ av mer teknikoriterad medieteorier som ibland kallas "medium teori" och som identifieras med namn som Marshall McLuhan (Meyrowitz, 1985; Morley, 2007). Inom denna inriktning har tonvikten legat på teknologins utveckling och egenskaper "i sig" och hur teknologin påverkar eller till och med styr kulturell utveckling. Istället för att diskutera dessa olika perspektiv utifrån en sedan länge etablerad debatt om kulturell- kontra teknologisk- determinism (cf. Castells, 2000) så pläderar jag för ett mer integrerat förhållningssätt där insikter från båda fälten tillgodogörs. Särskild tonvikt lägger jag på utvecklingar inom den nya medieteorier som diskuterar medieteknologiska egenskaper utifrån politiska perspektiv, en inriktning som jag sammanfattar under begreppet "network culture" (Terranova, 2004; Fuller 2005; Galloway, 2004). Mitt argument är att medie- och kommunikationsforskning, särskilt om den skall närma sig praktikbaserade metoder, kan ta lärdom av sådana analyser som inte sällan är gjorda av forskare som själva arbetat kritiskt och konstnärligt med medieutveckling (cf. Kember och Zylinska, 2012).

Materialitetsdiskussionen är som sagt kopplad till ny medieteorier där även en historiserande tendens har konstaterats. Intresse och "hype" av det nya leder kanske inte alltför överraskande också till ett intresse för det förgångna. I detta kapitel ser jag även närmare på olika ansatser inom medieforskningen som tar sig an förhållandet mellan gamla och nya medier. Inledningsvis diskuteras Eric och Marshall McLuhans *Laws of Media* (1985) som tycks ha haft ett stort omän dolt inflytande på senare populära och inflytelserika verk

som Jay David Bolter's och Richard Grusin's *Remediation* (1999). Skillnaden mellan dessa verk, hävdar jag, är att McLuhan och McLuhan drivs av ett singulärt och funktionellt medieperspektiv, där senare teorier betonar sammansmältning av olika medieformer genom digitalisering samt estetiska snarare än funktionella aspekter (Manovich, 2001; Fuller, 2005). *Laws of Media* visar sig dock användbar på den punkten att den genom begreppet "obsolescence" lyfter fram hur principen om mediers åldrande och föråldrande utgör en viktig kugge i logiken bakom teknologisk utveckling i kapitalistiska ekonomier. Samtidigt diskuterar McLuhan och McLuhan hur det föråldrade kan utnyttjas i konstnärliga syften samt hur det gamla och nya kan komma att byta plats. Sådana diskussioner leder direkt till det transversala perspektiv på medieutveckling som ligger avhandlingen närmast, nämligen mediearkeologin.

Återstående delar av det andra kapitlet ägnas mediearkeologin som ett tvärgående perspektiv på teknologisk utveckling. Detta är ett perspektiv som söker motverka monomediala och linjära föreställningar om mediers utveckling och som samtidigt rör sig utanför det rent historiska och snarare arbetar med konstnärliga och interventionistiska metoder. På så sätt är mediearkeologin även ett utmärkt instrument för att syntetisera den diskussion som hittills förts i kapitlet mellan historia, materialitet och praktik. Dock råder heller inte enighet om dessa frågor inom mediearkeologin och jag introducerar här olika synsätt. Å ena sidan betonar kulturteoretiska forskare så som Siegfried Zielinski mediearkeologin som en slags "variantologi" (Wagnermeier och Zielinski, 2005) som relativiserar den samtida instrumentaliserade medieutvecklingen genom att gräva fram ett rikt material av historiska kuriosa och "motexempel". Å andra sidan argumenterar materiellt inriktade forskare som Wolfgang Ernst för en mikro-temporal uppfattning där medier inte kan tillskrivas historia på samma sätt som mänsklig kultur utan istället bör förstås utifrån deras specifika sätt att verka i tiden, och att till och med producera en ny form av cybernetisk tid (Ernst, 2002). Detta kan komma att påminna läsaren om diskussionerna mellan kultur- och teknik-determinister. Även i detta sammanhang argumenterar jag för att det går att kombinera perspektiven, vilket också är tydligt i yngre mediearkeologers

arbeten så som i Jussi Parikkas på samma gång kulturhistoriska och materiellt inriktade studier (2012).

Det spännande med mediearkeologin är hur den utmanar gängse föreställningar om teknologisk utveckling och hur den tar in både teoretiska och praktikbaserade metoder. Men samtidigt identifierar jag i detta kapitel även en brist på motexempel till mediearkeologins kritiska perspektiv. Den blinda fläcken i mediearkeologiska studier tycks ofta vara själva ”fienden” – vart finner vi de linjära historieskrivningarna och förenklingarna av förhållanden mellan gammal och ny teknologi? Här försöker jag fylla ett tomrum genom att belysa hur den evolutionära synen på teknologisk utveckling, med rötter i ekonomisk teori, kan betraktas som mediearkeologins motpol. Den tyske filosofen Günther Anders kritik av teknologisk utveckling som ”negativ ontologi” illustrerar kärnan i det evolutionära perspektivet: konsumtionssamhällets kortlivade produkter ”föds för att dö” (Anders, 1980). Mediearkeologin är för den skull inte mot-evolutionär i en kulturkonservativ bemärkelse utan snarare *icke*-evolutionär⁵² i betydelsen att den försöker etablera möjligheter för andra utvecklingsperspektiv än den evolutionära ekonomins.

Samtidigt sår jag också rötter för en diskussion av hur man skulle kunna se mediearkeologin som allt annat än kritisk i ett samhälle där allt kulturarv digitaliseras och blir en del av en ny form av retro-fixerad och nostalgisk kulturindustri (cf. Reynolds, 2011). En nödvändig kritisk perspektivering som jag återkommer till efter fallstudierna.

Kapitel 3: ”Sammanhang och Metoder”

Det tredje kapitlet är ett metodkapitel där jag först introducerar sammanhang som är specifika för fallstudierna och sedan den bredare metodologiska ansatsen. Den första fallstudien är besläktad med tidigare arbeten inom alternativa och lokala medier och

⁵² Betydelsen av begreppet evolution bör här inte förväxlas med en rent naturvetenskaplig definition. Det rör sig snarare om hur man inom ekonomisk vetenskap har kommit att anamma den Darwinistiska terminologin för att på så sätt ”naturliggöra” den ekonomiska sfären. Inom detta synsätt erhåller ekonomisk och teknologisk utveckling en aura av ofrånkomlighet. Ett icke-evolutionärt synsätt skulle i detta sammanhang påstå att den ekonomiska och teknologiska utvecklingen i själva verket konstrueras utifrån sociala, kulturella och teknologiska sammanhang som inte följer någon inneboende egen teleologi.

därmed ägnar jag några sidor på att introducera huvudperspektiv från dessa fält. Här beskriver jag skillnaden mellan att se på alternativ medieproduktion antingen ur ett politiskt radikalt eller civilsamhälleligt perspektiv (Downing, 2001; Rodriguez 2001). Samtidigt lyfts nya perspektiv fram där alternativa mediers ”rhizomatiska” karaktär betonas, för att beteckna ett fält som är i ständig förändring och som rör sig mellan olika sammanhang (Bailey, Cammaerts, Carpentier, 2007).

Även om båda fallstudier handlar om konstnärlig medieproduktion så rör sig den andra fallstudien mer uttryckligt inom mediekonsten. Detta fält introduceras genom en kort redogörelse för senare års diskussion huruvida ”mediekonst” som begrepp överhuvudtaget fungerar i en värld som till synes är helt genomsyrad av medier. Här argumenterar jag, i likhet med Florian Cramer (2006), att beteckningen mediekonst fortfarande är användbar av strategiska skäl som har att göra med detta fälts fokus på hybrida konstnärliga aktiviteter som utmanar vardagliga och standardiserade mediebruk.

Större delen av detta kapitel ägnar jag dock åt att diskutera min kombination av kulturanalytiska och praktikbaserade forskningsmetoder. Först tar jag upp hur ett praktikbaserat synsätt inte tycks ha någon synlig historia överhuvudtaget inom medie- och kommunikationsvetenskap. Åtminstone inte om vi förstår praktikbaserad forskning som en där forskaren själv deltar och påverkar de fenomen som han eller hon studerar och där forskare och praktiker ibland är en och samma person. Kapitlet beskriver perspektiv från praktikbaserad och konstnärlig forskning så som kollaborativa fallstudier och interventioner (Hannula et. al. 2005) som kan vara användbara för medieforskningen och ställer samtidigt epistemologiska frågor kring forskarrollen i ett medialiserat samhälle. Till sist sammanfattar jag de olika resonemangen under vad jag kallar ett kulturproduktionsperspektiv där kulturanalys (Bal, 2002), interventioner och aktiviteter så som curating kan ingå. Kulturproduktion ses som ett passande ramverk för praktikbaserad forskning inom medie- och kommunikationsvetenskap eftersom detta fält tillåter ett intresse för både texter och praktiker.

Kapitel 4: "The World's Last Television Studio"

I denna fallstudie behandlar jag teknologisk utveckling utifrån konstnärliga och alternativa mediepraktiker inom televisionen som ett institutionaliserat massmedium i förändring. I blickfånget står tv-tv, ett kollektiv som etablerades 2005 i Köpenhamn med syftet att producera en kritisk och konstnärlig lokal-tv kanal och som genom en deltagande struktur sökte skapa en alternativ offentlighet i det danska medielandskapet. Fallstudien perspektiverar tv-tv genom att diskutera den tilltagande nätverkskultur där tv-mediet självt är under förvandling genom bland annat övergången från analoga till digitala tekniska format och där förhållanden mellan gamla och nya produktions- och distributionsstrukturer omförhandlas.

Gemensamt för båda fallstudiekapitlen är en struktur där jag går från en kontextualiserande del, en s.k. "Excavation", det vill säga en utgrävning, till en "Intervention", det vill säga ett ingrepp, där jag i den senare delen omsätter analysen i ett praktiskt projekt. I "utgrävningen" av tv-tv placerar jag projektet i ett bredare historiskt sammanhang, dels lokalhistoriskt då det gäller kanalens tillblivelseprocess i det danska medielandskapet och dels i en medieaktivistisk tradition där tv-tv som ett tv baserat konstprojekt problematiseras.

Inledningsvis diskuterar jag hur tv-tv's manifest kan ses som ett försök på att i likhet med projektet i övrigt skapa en form av *mot-offentlighet* ("counter-public", Warner, 2001). Detta avsnitt kompletteras av mina egna observationer som deltagare i tv-tv projektet. Observationerna baserar sig även på intervjuer med de övriga tv-tv medlemmarna samt närläsningar av specifika tv-tv produktioner. Här konstateras framför allt att tv-tv som projekt karakteriserades av motsättningar mellan att man å ena sidan försökte skapa en deltagande öppen struktur och att man å andra sidan försökte behålla en hög konstnärlig och mediekritisk integritet. Den institutionella kritik som tv-tv försökte bedriva påverkades även av den förvandling som statlig och privatiserad television samt den alternativa mediesfären genomgick på grund av digitalisering och nya distributionskanaler via Internet. Här argumenterar jag för att tv-tv etablerades i ett produktivt mellanrum – i över-

gångsfasen mellan vad medieforskare kallat "institutionaliserat missnöje" ("institutionalised dissent", Atton, 2002) som en beteckning för statligt understödda kritiska alternativmedier och vad jag kallar för "upplöst missnöje" (dissolutionised dissent) som en beteckning för Internetkulturens och särskilt Web 2.0/YouTube-kulturens kaosartade blandning av högt, lågt, kommersiellt och icke-kommersiellt. Samtidigt erbjöd detta mellanrum endast en tillfällig möjlighet för den subversiva aktivitet som tv-tv ville bedriva och analysen visar på svårigheten att förnya invanda strukturer, både teknologiskt såväl som organisatoriskt.

Interventionsdelen tar oss tillbaka till ett mer utpräglat mediarkeologiskt sammanhang i form av projektet TV-Hacknight. Ett projekt som bokstavligen gick tvärs över det analoga och det digitala eftersom det försökte skapa en alternativ mediepraktik och offentlighet omkring övergången från analog till digital television i Danmark 2009. Denna övergång kan också ses som slutet på en specifik fas i tv-tv's historia eftersom kanalen då övergick från lokal analog sändning till nationell digital sändning. TV-Hacknight däremot etablerade en tillfällig pirat-kanal som sände från tv-tv studion under samma natt som övergången från analog till digital tv skulle ske. Publiken uppmanades till att bygga egna sändare och på så sätt återta den svarta skärm som uppstod under övergången och TV-Hacknight bestod således enbart av en direktsänd workshop i hur man själv enkelt kan sända analog pirat-tv.

Redogörelsen för denna interventionsdel i fallstudien utvidgas genom en analys av den kampanj som ledsagade digital-tv-övergången i Danmark. Kampanjen "Det Nye TV-Signal", den största offentliga kampanjen i landets historia, var tydligt formulerad efter den evolutionära idén om teknologisk utveckling som något naturligt och ofrånkomligt. TV-Hacknight analyseras till sist som en tvärgående "eventualisering" av detta medie-event (Dayan och Katz, 1994), det vill säga ett tillfälligt ingrepp som skapade ett alternativt event ovanpå det officiella eventet och som genom bland annat "omvänd-remediering" (reverse-remediation) visade på andra möjliga medieutvecklingar. En lärdom jag drar av detta är en begynnande konceptualisering av transversala mediepraktiker som tillfälliga ingrepp i etablerade medieteknologiska sammanhang.

Kapitel 5: "The Art of the Overhead"

Avhandlingens andra fallstudie tar oss till ett på ytan helt annorlunda medieteknologiskt sammanhang, nämligen overheadprojektorns. Även här har jag dock att göra med konstnärliga aktiviteter som ifrågasätter en rådande mediekulturs produktionsvillkor. Bakgrunden för fallstudien är mediekonstfestivalen The Art of the Overhead som jag startade tillsammans med Linda Hilfling år 2005. Detta projekt var mediearkeologi i praktiken på så sätt att det var ett försök att utmana den till synes överdrivna fokuseringen på det nya och spektakulära inom mediekonsten och istället presentera tvärgående positioner mellan det digitala och analoga.

Avhandlingen går härmed från tv-mediets massmediala logik med dess standardiserade produktions- och distributionsstrukturer till overheadprojektorns till synes mer småskaliga och lärandeinriktade situationer. Det finns dock intressanta likheter fallstudierna emellan då även overheadprojektorn kan ses som ett standardiserat medium som spelat en viktig, om än anonym, roll under 1900-talet. Övergången från analog till digital teknologi är särskilt närvarande i overheadprojektorns historia eftersom Microsofts inflytelserika mjukvara PowerPoint ursprungligen utvecklades i syftet att ge användaren ett verktyg för en mer "professionell" och automatiserad gestaltning av overheadpresentationer. Samtidigt är overheadprojektorn intressant att betrakta i förhållande till dagens syn på medier som kreativa och personligt anpassbara verktyg eftersom den under sin historia anpassats för en rad olika konstnärliga ändamål utan att den för den skull någonsin marknadsförts som en kreativ och personlig teknologi.

I fallstudiens utgrävnings-avsnitt fördjupas ovanstående perspektiv på overheadprojektorn genom en genealogi över overheadprojektorns användningar och mot-användningar ("uses and counter-uses") inom undervisning, affärsverksamhet, populärkultur och samtidskonst. I denna historieskrivning ansluter jag mig till perspektiv inom mediearkeologin (Kittler 1999; Zielinski, 2005) som hävdar att ett mediums utveckling bör ses som ett nätverk av relationer mellan olika typer av användningar och teknologier snarare än genom en linjär berättelse om vem som uppfann vad och när. I min kartläggning av overheadprojektorns många manifestationer och

variationer har jag bland annat använt mig av patent som vägledande material för att se på hur detta medium kom att standardiseras under 1900-talet. Dessförinnan existerade overheadprojektion mer som en princip än som ett specifikt medium.

Vad utgrävningen också visar på är samspelet mellan ett mediums föreskrivna användningsområden och vad jag kallar *mot-användningar*. Diskussionen kan liknas vid föregående kapitelns analys av tv-tv som mot-offentlighet. När det gäller overheadprojektorn så redogörs här för en historia av alternativa användningar t.ex. inom 1960-talets psykedeliska ljuskonst som var kopplad till den tidens "counter-culture". I detta sammanhang intervjuar jag en rad nyckelpersoner från den amerikanska ljusshow rörelsen och försöker peka på hur overheadprojektorn tar plats som en slags mellanteknologi i en större utveckling mot mer och mer standardiserade verktyg för konstnärlig aktivitet. Den här diskussionen har betydelse för konst- och medie- teoretiska begrepp så som post-medialitet och intermedialitet och ljusshowen blir här ett historiskt exempel på en tvärgående mediepraktik som existerade mellan olika medier samt mellan popkultur och avant-garde konst.

Den historiska utgrävningen av användningar och mot-användningar av overheadmediet leder fram till interventionsavsnittet som redogör för festivalen The Art of the Overhead med särskild fokus på andra utgåvan, "OHPen Surface" som arrangerades i Malmö 2009. Själva interventionen utgörs här av projektet i sin helhet: The Art of the Overhead beskrivs som ett försök på att undergräva mediekonstscenen och den där etablerade mediekonst-festivalformen inifrån. Jag redogör här för en rad konstnärliga verk som producerats och presenterats inom festivalens ramar och som följer upp på och utvecklar de olika användningar och mot-användningar som föregående avsnitt utforskat. Genom dessa analyser framträder några av mina konceptuella begrepp allt tydligare, så som det imaginära och omvänd remediering. Till sist, i avsnittets "Coda", för jag en diskussion där jag diskuterar mediernas imaginära, kvarblivande och förnybara (imaginary, residual, renewable) egenskaper. Begreppen bereder väg för den avslutande "verktygslådan" och kan ses som ett amalgam av teoridiskussionen

(Kluitenberg 2006; Acland, 2007; Peters 2009) och lärdomarna från verk- och produktionsanalyserna.

Kapitel 6: "Mediearkeologins 'generiskhet'?"

I det här kapitlet återvänder jag till de grundläggande frågeställningarna omkring teknologisk utveckling för att problematisera och perspektivera avhandlingens underliggande premisser. Om fallstudierna omsatte de teoretiska utgångspunkterna i praktiken så är detta kapitel att betrakta som en filosofisk flik med ett mindre instrumentellt perspektiv. Tanken är att denna distansering är nödvändig för att fallstudierna skall förstås i sammanhanget av en bredare utveckling i den samtida mediekulturen och därmed ifrågasätts här också deras påstådda kritiska och radikala natur.

Inledningskapitlet och kapitel ett diskuterade hur relationen mellan gamla och nya medier är en fråga som mer grundläggande bottnar i en annan problematik: hur vi ser på teknologisk utveckling. Linjära modeller kontrasterades här mot mediearkeologins tvärgående synsätt. Samtidigt diskuterade jag hur mediearkeologin också befattar sig med arkivets materialitet i den digitala nätverkskulturen (Ernst, 2012) och i detta sammanhang är det värt att ställa frågan om inte mediearkeologin, snarare än en motståndspraktik, är på väg att bli ett dominerande kulturellt paradigm? Detta kapitel lånar begreppet "generiskhet" från filosofen Francois Laruelle för att diskutera implikationerna av ett sådant perspektiv.

Det generiska skall här förstås i en dubbel bemärkelse: som något som allmänt råder och som det som har möjlighet att producera, att generera något nytt eller en skillnad. För Laruelle är dessa två aspekter av det generiska oskiljbara och är det som möjliggör en kritisk verksamhet. På samma sätt ser jag utbredningen av ett arkeologiskt paradigm i mediekulturen som en möjlighet snarare än ett imperativ till resignation. Kanske har mediearkeologin och de därmed förbundna tvärgående mediepraktikerna större potential än någonsin att påverka den teknologiska utvecklingen just på grund av utbredningen av en cybernetisk arkivkultur. Mediearkeologins uppgift vore här att motverka hur det förgångna inom cybernetiken reducerats till en instrumentell och matematiskt

bestämd resurs för att producera framtiden och istället arbeta med det förgångna som ett rum fullt av tolknings och handlings-möjligheter i samtiden.

Kapitel 7 och 8: "Tvärgående mediepraktiker: Framträdande koncept" och "Förändring av förändringarna: Sammanfattning och en samling verktyg"

Det två sista kapitlen redogör för de koncept som jag utvecklade genom fallstudierna. Syftet med dessa koncept är att de låter oss förstå teknologisk utveckling inom mediekulturer på nya sätt och att de kan användas som verktyg för vidare teori och praktik. Själva grunden för att kalla dessa begrepp för både koncept och verktyg hämtar jag hos Gilles Deleuze och Félix Guattari (1972; 1994). Dispositionen följer här samma struktur som fallstudierna: först redogör jag för koncept som mer har med själva "utgrävningarna" att göra och sedan för koncept som är av mer interventionistisk karaktär. Idén om det generiska spelar här åter en roll då koncepten som är mer relaterade till utgrävningarna har att göra med mediers generella utvecklingsmekanismer; de mer interventionistiska koncepten däremot utnyttjar dessa generella egenskaper för att generera nya utvecklingar.

Inom den första kategorin återfinner vi begreppen om det imaginära, det kvarblivande och det förnybara. *Det imaginära* är ett koncept som tillåter oss att analysera och att skapa nya föreställningar om kopplingarna mellan mediers diskursiva och materiella egenskaper. I fallstudierna såg vi t.ex. hur tv-tv som deltagande mot-offentlighetsprojekt både begränsades och möjliggjordes av tv-mediets specifika sätt att skapa offentlighet genom en föreställd massmedial gemenskap som på den tekniska sidan motsvarades av en synkronisering mellan sändare och mottagare. I TV-Hacknight omformulerades tillfälligt denna imaginära gemenskap genom ett materiellt ingrepp i övergången mellan digital och analog teknologi. Det imaginära spelade också en stor roll i den andra fallstudien där en alternativ föreställningsvärld om ett medium så som overheadprojektorn byggdes upp, i en kommentar till den samtida medieutvecklingen.

Det kvarblivande är ett begrepp som uppmanar till större uppmärksamhet kring de osynliga och anonyma medieteknologier som fortfarande är i användning men som fallit i skymundan på grund av nya utvecklingar. Vi rör oss här i det nästan föråldrade och bortglömdas domäner. Därmed inte sagt att det kvarblivande är något som inte är av vardaglig betydelse utan tvärtemot så är det ofta inom vardagslivssfären som kvarblivande medier kan antas utöva mest inflytande. Här kan vi förstås tänka på en overheadprojektor som kanske fortfarande används ihärdigt inom t.ex. undervisning men även på andra mer dolda medier så som maskiner och mjukvaror inom branscher där man av säkerhetsskäl inte lika snabbt kan genomföra teknologiska uppgraderingar (cf. Thrift och French, 2002).

Både det imaginära och det kvarblivande leder logiskt vidare till konceptet som rör mediers *förnybara* dimension. Här lyder argumentet att medier inte bör ses som ändliga utan i linje med medie-arkeologin som en slags an-arkeologi är mediers aktualitet snarare att betrakta som varierbara över tid. Båda fallstudier har försökt att illustrera fruktbarheten i ett sådant perspektiv där ett visst medium som betraktas som föråldrat kan erhålla en ny relevans ifall dess återaktivering är förbunden med en viss politisk, kulturell eller social utveckling.⁵³

Slutligen redogör jag för eventualisering och omvänd-remediering som konceptuella verktyg för intervention genom tvärgående mediepraktiker. *Eventualisering* är ett begrepp inspirerat av Michel Foucaults idé om "eventalization" (Foucault, 1996) som han beskriver som en slags omkoppling av vad som i en given situation ter sig som naturligt och nödvändigt. Omkopplingarna i den här avhandlingen har gripit in i situationer där teknologisk utveckling presenterats i linje med den evolutionära modellen och dess framstegsideologi. Det mest framträdande exemplet i fallstudierna är undersökningen av övergången från analog till digital tv i Danmark och ingreppet TV-Hacknight som skapade ett alternativt

⁵³ Som ett exempel ur den samtida politiska världssituationen kan nämnas hur hacker-kollektiv som Telecomix i Sverige och tyskland bidrog till att återupprätta internetförbindelser under den s.k. arabiska våren genom att erbjuda medborgare i de berörda länderna analogt uppringd Internet som inte lika lätt kunde stängas ned av de olika regimerna.

event ovanpå det officiella. Eventualisering skall förstås som en specifik interventionsform som omformulerar givna situationer för att berätta andra historier och initiera nya praktiker inom dem.

Omvänd remediering är det andra interventionsbegreppet och rundar på ett sammanfattande sätt också av de konceptuella verktygen för tvärgående mediepraktiker. Bolters och Grusins (1999) koncept remediering utvidgas här till att inte behandla hur det gamla omsätts i det nya men också för att se på hur det förgångna, förstått som ett öppet handlings och tolkningsrum snarare än en stängd resurs, inkorporerar det nya och därmed skapar möjligheter för tvärgående situationer mellan det gamla och det nya.

Vad åstadkommer dessa koncept som verktyg om vi betraktar dem som forskningsresultat?

På ett *generellt* plan bygger verktygen en bro mellan teori och praktik: de är användbara i en form av kulturanalys där studieobjektet får lov att tala tillbaka till konceptet (Bal, 2002) och samtidigt utvidgar de en sådan analys med en dialog mellan teori och praktik.

På ett mer *specifikt* plan, möjliggör verktygen denna dialog mellan teori och praktik inom medie- och kommunikationsvetenskap och därmed bidrar de till att utveckla nya praktikbaserade tillvägagångssätt inom medieforskningen.

Att betrakta koncepten som verktyg kan tyckas motsägelsefullt eftersom de är icke-instrumentella verktyg. De kan dock fortfarande vara produktiva om vi föreställer oss verktygen som en inbjudan till att tänka och praktisera teknologisk utveckling på nya sätt. Den här verktygslådan består av öppna koncept snarare än instrument och försöker ge form åt en tvärgående ansats som kan bistå framtida forskare att se bortom "det digitala" som den horisont mot vilken all kulturproduktion oundvikligen måste äga rum.

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0 How do media technologies develop over time? This is a basic problematic of technological development. In this context, the dissertation Transversal Media Practices does not provide any easy answers but offers the reader a set of tools that points to the imaginary, residual and renewable dimensions of media in our contemporary network culture.

1

The study unfolds through two case-studies. In the first, The World's Last Television Studio, artists and activists are negotiating the socio-cultural and material changes of the "old" and institutionalised mass medium of Television. In the second case study, The Art of the Overhead, another old medium is engaged: the overhead projector, a quintessential 20th century institutional medium here presented as a device for "reverse-remediation" – of rethinking the new through the old.

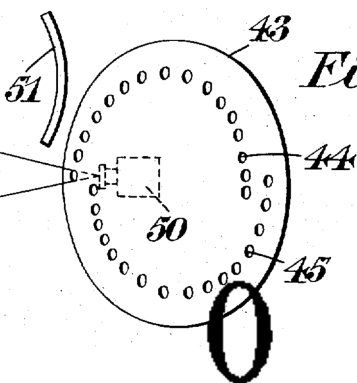
1 The dissertation follows a methodology of integrated theory and practice where Media archaeology is deployed as an interventionist, transversal discipline for cultural analysis and production that investigates the problematic of technological development.

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*Fig.4.*

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