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Article abstract

Taking as a point of departure the 1970s concept of the 'dispositif', this article seeks to redefine it in the context of experimental cinematic practices which reject the usual tools of filmmaking, or, more precisely, replace them by 'retrograde' technical means (such as handmade techniques, camera-less films, etc.). Instead of adhering to the classical notion of dispositif, which privileges the screening situation, the author rather suggest that we envisage a dispositif of production, involving the spatial relationship between the body of the artist, the 'pro-filmic' event and his/her material at the very moment of production, and that informs the practices of cinematic retrograde technicity.

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Retrograde Technicity and the Cinematic Avant-Garde: Towards a New *Dispositif* of Production¹

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If we construe the so-called "cinematic apparatus" or "dispositive" ("dispositif" in French) as a complex, interlocking system of three distinct components – the spectator, the representation and the machinery, that is, as the point of intersection of spectatorial, textual and technical aspects - the specificity of this arrangement contributes to an understanding of cinema's peculiar properties. In a more general sense, the apparatus helps to determine the distinctive features of a given medium, its potential qualities and limitations: in brief, its medium-specificity. However, the perversive power of electronic and digital media calls into question the concept of a medium and its specificity by challenging the cinematic apparatus at all its levels. Confronted with the multiplication of media platforms and screens, the notion of a medium as such can no longer be maintained. Technological progress and its pursuit of media convergence has considerably modified the premise on which apparatus theory is based, and has been the focus of much scholarly attention (cf. Casetti 2009, 2011). Much less debated – or even ignored – is the question of how those cinematic practices which reject the usual tools of filmmaking alter the notion of the cinematic apparatus. What this article seeks to explore then is the encounter between apparatus theory and avant-garde cinema, or more precisely, a particular version of this cinema based on "retrograde technicity".

As Frank Kessler (2003) points out, the concept of the cinematic apparatus, as defined in the 1970s, needs a double revision: first, because of its ahistoricity, which does not sufficiently account for

the far-reaching changes cinema underwent from its beginnings to its institutionalisation: that is, from the "cinema of attractions" (Gunning 1990) to its classical narrative period. From a historical and non-teleological perspective, there is not just a single apparatus, but possibly a variety of differing apparatuses. Kessler consequently pleads for a pragmatic historical perspective, which leads – and this is his second point – to the abandonment of the traditional metapsychological approach inherent in the classical model of the cinematic apparatus. The "cinema of attractions" on the one hand, and retrograde avantgarde cinema, on the other, are both different methods of challenging the very notion of the cinematic apparatus, the first by recalling that the screening situation is not a trans-historical phenomenon, the second by pointing out that the production situation equally deserves attention.

It remains a matter of fact, that, all in all, apparatus theory showed little interest in the situation of production, and, as a corollary, in those cinematic works which reveal the trace of their production because it is essential to their identity. This nearly exclusive devotion to the moment of presentation might be due to the fact that apparatus theory's privileged object was classical cinema, which suppressed its own marks of enunciation. Given that the production situation, in contrast to the screening situation, has remained an issue quite underexposed in apparatus theory, my aim is to address the concerns of apparatus theory from a production point of view. Via examples of cinematic works which replace the usual means of filmmaking by 'older' ones (e.g., camera-less films, handmade techniques), I will describe the activity of the producing subject (artist) and the relationship to his/her technological or medial material with regard to their arrangement.

François Albera and Maria Tortajada's (2011) recent methodological propositions regarding the concept of dispositif have the advantage of taking into consideration the producer as well as the situation of production, though they do not deal exclusively with cinematography in the strict sense of the term. It is their third definition, called the "dispositif externe", which seems particularly suitable to my own conceptualization of artistic experimentation in terms of the dispositif. Having in mind scientific experiments undertaken by Muybridge and Marey, Albera and Tortajada write: "[Le dispositif externe] ne se borne plus au fonctionnement de l'appareil ou de la machine considérés, ni à l'effet qu'il obtient, il les relie à leurs utilisateurs, à d'autres appareils ou machines, il définit une situation" (2011: 16). Conceptualizing the experimenter (be it the scientist or the artist) as the first 'user' or 'spectator', he/she becomes part of the dispositif along with the situation of experimentation.

A terminological note: Whereas the term "apparatus" stresses the 'mechanical side', "dispositif" underlines the aspect of a specific disposition or arrangement (cf. Kessler 2007), which is crucial to my present argument. Inherent to the notion of the cinematic disposi-

tive is the idea of a certain 'appropriate' distance between spectator, screen and projector. As Albera and Tortajada remind us, not only the screening situation (or, in the case of scientific experiments, the monstrative situation of the showing), but the production situation too can be regarded from a spatial viewpoint. As far as artistic 'experiments' are concerned, they involve the body of the artist and his/her relation to the material or medium – including 'software'2, i.e., the filmstrip; as well as 'hardware', i.e., the mechanical parts of the machine. However, if the term "dispositif" or dispositive in English should be maintained. we have to put it in use in a manner that includes the very act of production. Therefore I suggest that we envisage a dispositive of production that could throw light on the relationship between the material/medial base and the activity of the producing subject, and that also informs the practices of retrograde cinematic technicity.

Retrograde Technicity

Since the early 1990s, the recourse to 'old' media and technologies has figured prominently in contemporary art and is far from being restricted to the use of analog media. That electronic and digital media have found their own ways to deal with obsolescence can be seen, for instance, in Ben Tibbs' Font Taktile (1995), a touch-sensitive digital typeface, which allows for character imprints on the computer screen that correspond to the length of time the user's finger remains on the key, or in Vuk Ćosić's experiments (since 1992) with the ASCII code, a relic from the early days of computer technology. The pursuit of outmoded apparatuses and materials, such as slide projectors, turntables, magnetic tape recorders, film projectors and filmstrips, is particularly striking in contemporary installation formats designed for gallery exhibition (cf. Nardelli 2009). Whereas the so-called "cinematization of the gallery" with its celebration of the machines and materials of cinema is a more recent phenomenon, avant-garde cinema, where film is not just one medium among many but rather is the centre of artistic practice, shows an unbroken interest in the materials and processes offered by analog modes of creation and/or exhibition.

In 2002 the journal *October* devoted a special issue to the concept of "obsolescence", launching a broader discussion concerning the potential of the 'outmoded' in contemporary art. Today, obsolescence is a central topic for artists and scholars alike, and includes material as well as technological aspects and goes far beyond the context of analog filmmaking, even beyond artistic practices, as the increasing interest in lo-fi technology in contemporary popular culture demonstrates (cf. Thorne 2003). Though the term "retrograde technicity" is located within the broader field of "obsolescence", it clearly engages with the historicity of technological forms. In a more general perspective, retrograde technicity is characterized by the replacement of technical devices of a 'higher' grade by technical devices of a 'lower' grade and can take a variety of forms.

It is important to underline that the notion of "technology" itself applies to both the use of hardware apparatuses and basic bodily techniques such as spoken language or dance (cf. Mauss 1975: 205), and hence is equally oriented towards the future and towards history and tradition. Such an understanding of technology complicates the unidirectional logic frequently applied to the term.

As recourse to 'older' media and technologies already existed in predigital times, the "reaction" (or "nostalgia") argument does not suitably explain the peculiarities of retrograde practices. Let me briefly give two examples. Already one of the first avant-garde films, Corra and Ginna's lost experiment from 1911, made at the dawn of the Futurist movement, was realized without the use of a camera (cf. Jutz 2010). Another case is the Dadaists' tendency to engage with dated technology, as Thomas Elsaesser points out: "[...] the Dadaists' attitude to the new technologies of visual reproduction and imaging was retrograde, but necessarily so, given their radical aspirations" (1996: 22). Hence again, in what follows, it is essential to broaden the scope beyond contemporary art practices and to include a historical perspective as well.

The history of the cinematic avant-garde and its varied uses of technology is not a simple narrative of technological progress. From its very beginnings it showed a decided ambivalence towards the technological standards of its own time. On the one hand, the avant-garde embraced recent technologies, being aware that it owed its very existence to technological innovation. On the other hand, in order to transform passive consumer equipment into creative tools, it often modified the equipment, handled it 'improperly'. As Peter Wollen (1980) has pointed out, avantgarde film has had other technological implications than commercially produced film; most prominently it figures in what Wollen calls a "misuse of existing technology", that is "its use to transgress the norms implicit in it" (1980: 20). This mis-use can be regarded negatively, as an infringement of legitimate codes and practices or positively, as an exploration of "possibilities deliberately overlooked within the industry" (20). Though there is, as Wollen admits, an area of mis-use in which technological innovation takes place, he concludes that "on the whole [this mis-use] has not involved very advanced technology" (20). In order to highlight this retrograde aspect, inherent in Wollen's concept of "mis-use", I suggest calling it more precisely a "deliberate under-use of existing technology".

It is true that the notion of "retrograde technicity" crosses Wollen's notion of "mis-use of existing technology", but it implies a historical dimension of moving backwards. This regressive historical move is not simply due to the fact that there are fewer machines or apparatuses involved, but rather to a *pre-normative* engagement with the medium, what Pavle Levi, building on a term introduced by Jay David Bolter and Richard Grusin, calls "retrograde remediation" (Levi 2012: 42). Bolter

and Grusin's concept of "remediation" focuses on the ways in which an older medium (such as cinema) may be contained within a newer one (such as television). "Retrograde remediation", however, takes the reverse path: it concentrates on the ways in which a newer medium (such as cinema) may be represented through older, non-cinematic media (such as, for example, drawing or writing). "Retrograde technicity" is a peculiar version of this process. Though it does not necessarily involve pre-cinematic media in the strict sense of the term, it attests to a pronounced technical *inadequacy* between the technical devices available at the time and the means put in place to realize an artwork (such as, for example, Gebhart Sengmüller's replacement of the film projector by the slide projector in his projection performance Slide Movie, which I will discuss below). This pre-standardized use of the medium, which is indifferent to its specificity, is in fact a case of retrograde technicity, because not taking advantage of the technological standards can be regarded as an anachronistic move.

Retrograde technicity covers a wide range of practices. Often combined with low-tech, hands-on devices, this alternative cinematic strategy seems to have gained new relevance in the digital age (cf. Takahashi 2005, 2008). What is remarkable about today's avant-garde film culture is the sheer range of inventiveness with which analog technical devices are applied, bestowing upon them new and original uses. However, as mentioned, retrograde technicity in the sense of "underutilization" of existing technology is not exclusively a contemporary phenomenon, occurring only at a moment when the 'old' analog media is falling into obsolescence, but it also can be detected at the very onset of a new technology.

From early on in film history, numerous artists have put their trust in camera-less filmmaking - so-called "direct film" - whether by drawing, painting or scratching directly onto the filmstrip or by exposing it to external influences, such as water, heat, chemical or even biological processes. Retrograde technicity cannot only be applied to image production, but to the production of sound too. Handmade sound, the audio version of direct film, is based on "optical sound", or, more precisely, on "optical sound synthesis", which allows for a direct intervention on the sound strip by circumventing the recording equipment. Beside direct film, expanded cinema performances - in all their variety - are a further prominent realm of retrograde technicity. Often enough, they not only reject the usual tools of filmmaking, but of exhibition practices (the common projector/screen-exhibition) as well. The Dadaist film-performances of the 1920s, the Lettristic séance de cinéma of the 1950s, the expandedcinema-performances of the 1960s as well as contemporary projection performances have shown that an 'incorrect', retrograde use of the supporting media and machinery is the rule rather than the exception.

In Hollywood's industrial mode of production three distinct phases

are present: the recording phase, which involves the work of the camera and the filmstrip; the processing phase, related to the laboratory; and the exhibition phase, related to the theater (cf. Wollen 1980: 14). Each of these phases can be subject to inadequate use of technologies, so that they are no longer clearly distinguishable and can even collapse one into the other. A 'normal' scenario would be for the creative process to be temporally separated from the moment of presentation; however, it is also possible for production and presentation to coincide, as, for example, in expanded cinema performances. In what follows, by focusing on the process of production, I will discuss some examples of retrograde technicity in the sense of inadequate, pre-normative engagement with the medium, as outlined above, and which come from different periods and distinct realms of analog media technology, involving both vision and sound and their supporting media and machinery.

Deliberate Under-Use of Software

An early theorization of creative retrograde use of existing technology can be seen in László Moholy-Nagy's proclamatory text "Production-Reproduction" (2007). Originally published in De Stijl in 1922, it has generally been interpreted as a call for a new kind of art education, while its far-reaching technological implications have long been overlooked (cf. Jutz 2012). This is all the more unfortunate because it is precisely this aspect that contains his most spectacular ideas. Moholy-Nagy's theory of "productive creation" ("produktive Gestaltung") argued that new forms of auditory and visual expression might be found by exploring alternative uses of established apparatuses. As an example of an extension of these apparatuses into productive means, he singles out the phonograph record, for which he devised a "groove-script alphabet" that was to be scratched directly onto the record's surface. Moholy-Nagy put his call for "productive creation" into practice in the now lost short film Tönendes ABC (Sounding ABC 1933), whose sound was exclusively created by means of optical sound synthesis. As Thomas Y. Levin (2006: 46) explains, optical sound rests on the principle of translating "sound waves [...] into patterns of light that [are] captured [...] as tiny graphic traces on a small strip that [runs] parallel to the celluloid film images". Since optical sound emanates from graphic patterns, it seemed a natural next step for Moholy-Nagy to transfer these patterns directly on to the soundtrack, in this way allowing any desired shape to be made audible. The method he employed consisted of preparing drawings, then photographing them - frame by frame - with a standard animation camera and contact printing them on to the margins of the filmstrip. In Tönendes ABC, Moholy-Nagy was again interested in the correspondence between graphic marks and their tonal counterparts: "I can play your profile", he said to a friend, whose facial features he was sketching in his notebook. "I'm curious to hear what your nose sounds like" (S. Moholy-Nagy 1972: 67). The most interesting point about Moholy-Nagy's theory of "creative

production" is that it refers exactly to those media that had until then been used only for reproductive purposes. As Andy Birtwistle points out, such a conceptual shift should not be underestimated, "since this fundamentally challenges the ontological basis of the dominant model of cinema as a medium of record[ing] and reproduction" (2010: 131) - and, one could add, it challenges the dispositive of production too.

What we refer to as synthetic sound today traces its theoretical rationale to 1922 and Moholy-Nagy's theory of "creative production". What all these experiments with optically synthesized sound, also described as "sound-on-film" or "animated sound", undertaken from the 1930s to the present, have in common is a deliberate engagement with a pre-apparatus state, or at least a return to less sophisticated techniques as promoted by the industry. In the same year that Moholy-Nagy realized his Tönendes ABC, Oskar Fischinger undertook a series of experiments with synthetic sound, entitled Tönende Ornamente (Sounding Ornaments). Not unlike Moholy-Nagy, Fischinger was interested in the question of whether the relationship between visual forms and their corresponding acoustic manifestations are purely accidental or whether they are governed by an internal common logic. Whereas Moholy-Nagy and Fischinger's experiments deserve the term "direct film", because both circumvent the sound recording device³, we enter the realm of 'real' handmade film sound only with the French composer Arthur Hoérée. While working on his sound montages, Hoérée discovered that the recording changed when ink drawings were added to the optically composed soundtrack. Hoérée was fully aware of the significance of this discovery, which he called "zaponage" (retouching): "I invented sounds with the paint brush" (James 1986: 83). In the late 1930s, the New Zealander Jack Ellitt and the Canadian Norman McLaren, among others, started to experiment with hand-drawn sound.

Direct sound is an example of a deliberate inadequate under-use of the equipment and/or medium because scratching or drawing - whether onto the surface of a record, as does Moholy-Nagy, or onto the sound area of the filmstrip, as in the case of handmade sound - does not require a recording device. The origin of these sounds is no longer an instrument or a voice, but a graphic mark left on the celluloid, due to a manual procedure that intimately involves the artist's body. In the case of Moholy-Nagy's "groove-script alphabet" the process of recording via a microphone is replaced by a physical gesture, depending on a direct relationship between the artist and his support. According to Johanna Drucker (1994: 122) we could call scratching and drawing a signatory, somatic and expressive art practice, which falls short of the technological standards available at the time, just as today we might compare writing by hand with the use of a computer keyboard.

Moholy-Nagy's theory of "creative production" not only represents a kind of prototype for handmade sound but also for all forms of cameraless filmmaking that are based on a physical trace, like brushwork, imprints, scratch marks and so on. These examples include Marcel Duchamp's *Anémic cinéma* (1926), where the artist left his fingerprint on the film's last frames, the handpainted films of Len Lye and Harry Smith, Stan Brakhage's numerous explorations into handmade film (including the use of his fingernails to leave marks), Su Friedrich's *Gently Down the Stream* (1981) with hand scratched words or, more recently, *Blutrausch* (*Bloodlust* 1998) by German filmmaker Thorsten Fleisch, who imprinted the blood from a self-inflicted wound on to the filmstrip, using it as an 'agent' for the production of image and sound.

To give a fuller idea of the material act peculiar to these strategies, I want to take a closer look at the work of American filmmaker David Gatten, whose films demonstrate in a paradigmatic way the issues at stake in camera-less practices. The first example concerns the material strategies Gatten employs in *Moxon's Mechanick Exercises*, or, *The Doctrine of Handy-Works Applied to the Art of Printing* (1999), which is based on Joseph Moxon's 1703 account of the printing press. After a series of experiments with clear cellophane tape to produce a film made entirely by dust, Gatten discovered that the cellophane could be used not only to lift up dust, but also to gather black, inky words from his daily newspaper. Gatten gives a detailed account of the making of these "ink-and-tape emulsions":

[...] the tape goes on the paper, I rub it down, I soak it in warm water, and, after an hour or two, the pulp starts to fall away and the glue from the tape soaks up the ink and that is now the negative. I register that on clear film leader, go to the darkroom, and make a print of it" (Willis 2013: 50).

Moxon's Mechanick Exercises is not only an example of the close contact between the artist's hand and his material, but also perfectly illustrates a creative inadequate use of existing technology. From a conceptual point of view, Gatten's 'improper' use of the celluloid tape to produce his own homemade "ink-and-tape emulsions" instead of employing it 'normally' as an editing tool can be compared to Moholy-Nagy's device of turning the gramophone record into an instrument of production instead of mere reproduction. Similarly, Gatten used the scraper of his cement splicer to scratch off the filmstrip's emulsion so as to make ragged landscapes (Secret History of the Dividing Line 2002); he also employed the optical printer not for rephotographing imagery but for registering things such as pine pollen and small flowers (cf. Willis 2013: 51). Another case of deliberate under-use of recording equipment is his series of works titled What the Water Said (1997-2007). The main agent here is water, or more precisely the Atlantic Ocean off the North Carolina coast. For these works, Gatten submerged at varying times and for varying durations unspooled rolls of film stock inside an underwater crab trap, so that image and sound became "the result of a series of camera-less collaborations between the filmmaker, the Atlantic Ocean, and a crab

trap"⁴. Depending on changing weather conditions and the film stock used, the traces left behind by sand, rocks, shells and aquatic fauna emerge as abrasions and scratches at varying depths and densities. As the immersion not only affected the image track but the sound track too, what is heard can be regarded as the direct, immediate inscription of the ocean sounding like radio static – or even ocean waves (*cf.* MacDonald 2001: 374).

Moxon's Mechanick Exercises and What the Water Said are both made without the use of a camera and thus can be called "direct films". However, with regard to their mode of production, they evidence two different, even opposing practices. While the first one emerges by way of a more or less direct contact between the filmstrip (or its replacement, the cellophane tape) and the hand of the artist, the second one takes place without any manual intervention, that is, automatically, as the result of various underwater processes.

A third, much less frequent variant of direct filmmaking, where again a more elaborated device (such as the recording equipment) is replaced by a low-tech device, is evidenced by Stan Brakhage's *Mothlight* (1963). For the production of this film, the artist collected dead moths, flowers, leaves and seeds and placed them between two layers of Mylar editing tape, a transparent, thin strip of 16mm celluloid with sprocket holes and glue on one side. The passing of light through, rather than reflecting off, the plants and moth wings reveals a fascinating and sometimes terrifying intricacy of veins and netlike structures (cf. Sitney 1979: 157f.). Compared to the handmade film, where the image/sound source is the human body, and what I have called "autogenerative film" (Jutz 2010), where the process of creation is due to external factors (mechanical, chemical, biological), here the element which stands in for the 'missing' technical tool is a "fragment of reality", as Peter Bürger (1974) would put it. Mothlight might be traced back to the stereopticon, a kind of prephotographic magic lantern, normally associated with painting, and which was deployed for presentations. As Charles Musser (2011) points out, a more marginal use of the stereopticon consisted in the projection of natural objects (like flower petals) placed between two glass plates. In both cases, the stereopticon's deviant use and Brakhage's Mothlight, it is no longer the reproduction of an object (whether painterly or photographically) but the object itself that is present. Hans Scheugl's expanded cinema performance Zzz: hamburg special (1968) pushes this dispositive of production even further, by running a thread instead of a filmstrip through the projector. Here again, the photographic image is replaced by a simple object that does not even depend on a material support: it is the support itself.

Modification of the Hardware

An example of a film that combines the manipulation of the software

(filmstrip) and the modification of the hardware (projector) is provided by German filmmaker Jürgen Reble. His film *Zillertal* (1997) is created from an old film trailer that Reble left hanging in trees for months in his garden, after which point he treated it with various chemicals. The ravages of the chemical reactions and weathering make it difficult to ascertain what connection, if any, the 'original' has with Zillertal, the Tyrolean alpine area that borders Bavaria. Beside these autogenerative processes, which allow the filmstrip itself to register external influences, Reble also undertook a modification of the projector. By removing the shutter, which normally ensures a stable, flicker-free projection, he achieved a jerky image, revealing the projector's discontinuous transport mechanism, which is concealed under normal circumstances.

To rid oneself of all that is not necessary and to use technical imperfections to a film's advantage also characterizes the "cinema povera" of Italian filmmaker Paolo Gioli. His tendency to reduction, to go back to pre-standardization, is best exemplified by his use of the pinhole camera. This camera, which features neither a lens nor a viewfinder does not allow for controlling the shot nor its focus; moreover, it does not work with celluloid film, but simply with photographic paper. Techniques like the pinhole camera connect Gioli's work to the pre-history of cinema, as he himself highlights: "This is proto-cinema, something that precedes cinema" (D'Alonzo 2009).

Modifications of the cinematic hardware frequently occur in works that explore cinema's spatiality, be it live performance or installation. Let's first take a look at contemporary projection performances (cf. Jutz 2014) where the application of the traditional cinematic apparatus in non-traditional ways is a typical feature. Whereas the expanded cinema performance of the 1960s shifted cinema toward a live multimedia performance (Youngblood 1970), its contemporary version returns to the film medium itself, giving prominence to its unique physical qualities. As Jonathan Walley points out:

The key to understanding these works is their preoccupation with the difficulties that the film medium presents: its clunky mechanical nature and resistance to ease of use. Also emphasized is the complex, component nature of film: the multiple, chemical, mechanical and optical components and operations that require mastery, as well as the possibility of glitches inherent in each one (2011: 244).

Contemporary projection performances frequently combine the modification of existing technology with low-tech devices. Disturbances or failures are intentionally provoked, be it through the deliberate impairment of the film material or 'improper' handling of the equipment or the film material, such as in *burn* (or, *The 2nd Law of Thermodynamics*) (2004-present) by Bradley Eros, where the artist threads short sections of Super 8 film by hand through the larger 16mm projector gate. Each time the feed slows down or comes to a standstill, the frame that is exposed

to the heat of the projector lamp begins to melt and eventually burns up. Further examples include Sandra Gibson and Luis Recoder's collaborative performances, where the projector beam is altered by simple means (e.g., masks, filters, by hand) in order to create slowly shifting abstract light sculptures; the "alchemistic" works of Jürgen Reble and Thomas Köner, in which a 16mm film loop is run through a series of chemical baths during the projection, while the hiss and gurgle of the chemicals as they react with one another and the filmstrip is captured by several microphones; the "music shows" of the British duo Emma Hart and Benedict Drew, where not only projectors but various types of audio and video equipment and even household appliances are used as live instruments. Constrained by the fragility of analog media and their constant susceptibility to malfunctions and accidents, according to Jonathan Walley, these various performers turn into "a kind of artisan/ inventor/do-it-yourself-er who has [to master] all of film's mechanical, optical and chemical facets" (2011: 246). It is interesting to note that a striking amount of projection performances find ways of completely circumventing the recording process, whether by using found footage and/or by creating imagery and sounds live (often by means of optically synthesized sound) at the very moment of projection.

American performer Bruce McClure, whose mechanically altered projectors form an integral part of his shows, is exemplary in this regard. Since 1994, McClure uses between three and six modified 16mm projectors in his performances simultaneously. These are equipped with transformers that can vary the intensity of light from the projector lamps. Thanks to punched metal plate inserts built in by McClure, the sharpness too can be adjusted to varying levels. Depending on whether one focuses on the film frames or on the metal plates themselves, the projection will present a sharp picture with a blurred edge in one case, or a sharp edge but a blurred picture in the other. The shapes cut out of the metal plates also ensure that the projection never takes the form of the traditional rectangular screen. Through each of these projectors runs a series of film loops, consisting of rhythmically arranged short pieces of black-and-white leader that create a flicker effect. Sometimes McClure 'blows' India ink or coloured dyes from an airbrush onto the clear leader to build up a light obstruction, or he erases parts of the black emulsion in order to create transparency where he wants it. Mc-Clure processes his sound live by optical sound synthesis, in which the dark/light contrasts of the filmstrip, together with the countless splices and perforations, are made audible when they pass over the projector's optical sound head. These optically generated sounds are manipulated live by going through a series of distortion pedals and other basic analog sound equipment. The result is a machine-like, deafening techno beat, which in combination with the optically layered filmstrips guarantees the spectator an intensely vivid sensory experience (cf. Bruce McClure in Frye 2006).

Not only projection performance, meant to be shown in a conventional theatre space, but also installation works, designed for a gallery space, stand as proof of the film medium's vitality in the digital age, and its capacity for reinvention. In FILM, Tacita Dean's 2011 installation for the Turbine Hall of Tate Modern in London, made with 35mm film, Dean radically challenged the usual horizontal or "landscape" format of the frame, the classic 4:3 rectangle, which has long been the worldwide standard. With FILM, Dean not only returns to the techniques and procedures pioneered by early cinema, such as masking, but has rotated – in a simple but imaginative mis-use of existing technology – the anamorphic lens 90 degrees in order to achieve verticality. With the help of Michael Bölling, a young architect who invented an aperture gate that worked as a sharp and precise mask, Dean was able to stretch the standard film frame optically from top to bottom (cf. Cullinan 2011: 11: Dean 2011: 29). Though this invention does not bear witness to retrograde technicity in the strictest sense of the term, especially given that the mask was built on a computer, the device of masking itself - that is, putting a kind of stencil between the lens and the film - harks back to the pioneers of early cinema. Dean's exploitation of the vertical axis of the cinematic apparatus and the attention she pays to the image's proportion raises awareness of the consequences associated with the migration of images into other formats: "[...] with the scanning and panning, squashing and stretching of our television and internet pictures, proportion has become lost on us of late, and distotortion normal. The precision of the original framing appears increasingly irrelevant" (2011:22).

Another example of retrograde modification of the equipment is Gibson and Recoder's film installation Light Spill (2006). Due to the removal of the takeup reel, the projector spills thousands of feet of celluloid onto the floor, gathering there in a pile, which becomes - depending on the duration of the installation - bigger and bigger, "painting a picture of an unwieldy, messy medium in a clean, slick space that does not quite know what to do with it" (cf. Walley 2011: 250). A particular case with regard to engineering is Austrian artist Gebhard Sengmüller's "fictive media archeology", which tries to make up for 'forgotten' inventions, overlooked within the industry. It is the media artist's declared aim, "to invent things that might have existed earlier but didn't, because they hadn't been invented then" (Landwehr 2008: 132). For Slide Movie (2007), which turns a slide projector into an inefficient movie projector, Sengmüller cut up a 35mm filmstrip into its single frames and fixed them in slide frames. Then he aligned 24 slide projectors, each of them capable of holding eighty slides, pointed them at the screen and ran them at a rate of twenty-four per second. Compared to conventional standards, the quality of the film projection, achieved by such an elaborate and time consuming procedure, was quite poor: "The film is very bumpy, the brightness varies, and it takes some time for the eye to be able to recognize a moving image at all" (Landwehr 2008: 137). From a utilitarian perspective, this hybrid machine, which deliberately falls below established standards, is totally impractical. However, from an artistic standpoint, Sengmüller's transformation of the film projecting device – as well as the projects described above where retrograde modifications of the hardware or the software are involved – are far from being a disadvantage. By repeatedly foregrounding the dual nature of the medium – "the medium as a concept" and "the medium as an actual apparatus" – they rather exemplify a true "conceptual-materialist praxis" (Levi 2010: 59) and thus perfectly illustrate the radical aspirations at stake in retrograde technicity.

"Conceptual-Materialist Praxis"

Retrograde technicity on the one hand, and on the other digital technology, with its tendency to merge all media into one and extinguish the idea of a medium, do not seem to have very much in common. Nevertheless, the two are similar insofar as, with either, film is no longer embodied in a specific medium. However, while electronic and digital media disregard any notion of specificity in favour of specificity in exchange for media convergence, cinematic practices based on retrograde technicity follow a different path. The visual and audio devices they rely on are not propelled by the desire to 'go forward', but rather, at least from a utilitarian perspective, to 'go backward'. What the artistic examples described above so perfectly enact is thus an operation of 'lowering', of 'backdating', rather than that of updating promised by new media. By replacing an elaborate series of optical, chemical and mechanical processes by means that preceded cinema's technological realization. be they handmade, autogenerative or achieved by a modification of hardware, such practices no longer adhere to the medium as an actual apparatus (its technological implementation) but rather to the medium as a concept or an idea. On a theoretical level, such an engagement with the conceptual dimension of cinema is in fact at the centre of Jonathan Walley's (2003) reflections on the American avant-garde cinema of the 1960s and 1970s as well as of Pavle Levi's (2010; 2012) discussion of the historical avant-gardes from the 1910s to the early 1930s. Against the commonly held view that cinematic works that challenge the material limits of the cinematic apparatus should be considered as a culmination of medium specificity and purism, Levi and Walley argue that such pre-normative engagement with the medium is not compatible with the notion of medium-specificity but rather foregrounds and transforms the idea of the medium. What Levi calls "cinema by other means" and Walley "paracinema" both deemphasize the importance of the material properties of the medium itself in favour of its conceptual dimension or generative idea. Though neither of them dwells on the term "retrograde"⁵, Walley's "paracinema" and Levi's "cinema by other means" can both be conceived as forms of retrograde technicity. A conceptual perspective on retrograde technicity, as shown by Walley and Levi, not only resists teleological and essentialist interpretations of cinema's technology but also allows for a fuller understanding of its critical potential. Furthermore, it contributes to an explanation of retrograde technicity as a critical practice in its own right, without resorting to the kind of "reaction" (or "nostalgia") argument already mentioned.

Walley's study of "paracinema" focuses on cinematic works "that are not embodied in the materials of film as traditionally defined" (2003: 18), such as the camera-less, projector-less, film-less films emblematized by the American structural films of the late 1960s and 1970s. These alternative forms reject film as a medium, but nonetheless continue to reference it as an idea or a concept and, hence, as Walley insists, can "still be called cinematic" (2003: 17). In the late 1960s and 1970s, however, the conceptual expansion of art was already underway among avant-garde movements such as minimalism, postminimalism, conceptual art, happening, fluxus, cybernetic art, and so forth, any of which might have buttressed the structural filmmakers' endeavour to erode the physical properties of film and to deconstruct the cinematic apparatus at all its levels (cf. Kim 2009: 122). Walley's "paracinema" therefore has to be understood against the background of an already ongoing skepticism towards medium-specificity, whereas the historical cinematic avant-garde, which is at the core of Levi's "cinema by other means", was on the contrary permeated by a deep sense of fidelity to the notion of medium-specificity. As Noël Carroll explains, mediumspecific arguments are "attractive for the purpose of transforming a new medium into a new artform, because they appear to provide a way of individuating arts" (1984/85: 133). To achieve its own status as an art form, film was to stop imitating established arts, such as theatre and literature, and instead begin to rely on its own qualities. The cinematic avant-garde's vision of an autonomous, "pure" film culminated in its most extreme variation in abstraction - the German "absolute film" and the French "cinéma pur", whilst the Russian montage cinema as well was characterized by its own purist tendencies as well.

It is from this perspective that one needs to approach Levi's "cinema by other means", defined as "the practice of positing cinema as a system of relations directly inspired by the workings of the film apparatus, but evoked through the material and technological properties of the originally non-filmic media" (2010:53). It is important to note that these "non-filmic media" are not simply "other", but are consistently *older* means, media and techniques that precede the implementation of the filmic apparatus, such as performance, sculpture, still photography, painting, drawing, writing, collage or assemblage. Raoul Hausmann's collage Gurk (*Cinémademapensée* 1919), Man Ray's photograms in his films *Le retour à la raison* (1923) and *Emak Bakia* (1927) or Lev Kuleshov's written films may serve as examples. Though it is true that the idea or the dream of cinema preceded its technical realization, Levi stresses that it is "equally necessary to recognize, in a true dialectical reversal [...],

that this Idea acquired sufficient conceptual precision [...] only after the cinematographic apparatus had already been invented" (2010:56). That is to say, it was only the existence of the apparatus, its normativization and technological reification, that created the necessary conditions for its artistic re-conceptualization and re-definition. The obvious reference of Levi's "cinema by other means" is conceptual art, but it should be clear that he is not interested in cinema's de-materialization, but rather in its re-materialization, aptly termed a "conceptual-materialist praxis" (2010:59). According to Levi, the only way to maintain the critical, even utopian potential originally contained in any new medium before it becomes standardized, commodified and subjected to utilitarian purposes is "by repeatedly evoking, by enacting, the discrepancy between the idea and its technological implementation" (cf. 2010: 67). Levi demonstrates how far such an endeavour to differentiate the medium as a concept from the medium as an actual, working apparatus can go, by giving the example of Monny de Boully's 1926 prose poem Ixion (2012:9f.), wherein the Yugoslav writer described and even drew a detailed diagram of a fantastic machine, namely an air-carriage, powered by "sexually starved eagles". As Levi declares, "all the conceptual complexity of [such works] would be lost if its sole point of reference were sought in some general, materially uprooted idea of cinema, rather than, in a fairly exact set of structural relations inspired by the workings of the film apparatus itself" (2010:53). And indeed, Boully's materialized fantasy of a chariot driven by desire is related to the filmic apparatus in structural terms, and may rightly be called a version of "cinema by other means", as it claims to be a techno-libidinal machine, just like the filmic apparatus itself.

Briefly summarized, what Walley's "paracinema" and Levi's "cinema by other means" have in common is their foregrounding of the primacy of the concept of cinema above its materialization. For both it is crucial that this discrepancy between the idea and its technological implementation is repeatedly evoked and enacted, whether by a pre-normative, deviant use of the film apparatus (Walley) or, even more radically, by recourse to originally non-filmic media (Levi). Both result in a practice that can be rightly called "conceptual-materialist praxis".

Conclusion

What is the benefit for our understanding of apparatus theory in general and the cinematic apparatus (*dispositif*) in particular when we broaden our scope beyond the history of classical cinema, even beyond 'early cinema', by looking at alternative film practices based on retrograde technicity?

First: Retrograde cinematic practices demonstrate that film is not reducible to its physical properties and thus defy the concept of a medium and its specificity that once buttressed apparatus theory.

Second: To look at apparatus theory in the light of retrograde cin-

ematic practices shows that it is not feasible to ignore the production situation. Traditional apparatus theory with its exclusive focus on the screening situation cannot sufficiently account for the peculiarities of all those forms of filmmaking for which the very process of production is decisive.

Third: Retrograde technicity contributes to a historicization of the "basic cinematographic apparatus" and identifies the cinematograph as a historical contingency. Or, as Jonathan Walley put it with reference to the writings of Sergei Eisenstein and André Bazin, "the film medium [...] is not a timeless absolute but a cluster of historically contingent materials that happens to be, for the time being at least, the best means for creating cinema" (2003: 26).

Fourth: Though it is true that the transfer from all kinds of existing media – textual, visual, or audio – into digital data might be a relatively new phenomenon, media translation as such is not. Cinematic practices based on retrograde technicity make media translation the basis of their art and remind us that there is not just one direction and one logic in which this operation can proceed. By replacing the usual tools of filmmaking by 'older', less efficient ones, they follow the opposite logic of the consumer society. Compared to the promise of the digital, that every media transfer improves our lives somehow, these cinematic practices rather insist on translating media content from one obsolete format to another (cf. Manovich 1999).

Fifth: Far from being a contingent play with history, retrograde technicity in cinematic art practices offers a way of (re)interrogating the very idea of the dispositive of production, because the alteration and rejection of the usual devices of filmmaking also modifies the spatial arrangement of production. It is here where the value of retrograde technicity becomes most apparent. As already stated, the separation of the idea of cinema from its normative technological apparatus does not lead to the art work's de-materialization, but to its re-materialization and thus can be conceived in material terms. In consideration of the dispositive of production, what we call "direct film" (including the under-use of the software as well as the retrograde modification of hardware) covers two distinct phenomena: on the one hand it is comprised of so-called "handmade films", and on the other hand, all those that can be grouped under the term "autogenerative film". Johanna Drucker's theory (1994), based on the question of how the producing subject interacts with the medium in material terms, helps us to grasp the underlying dispositives of production. Somewhat simplified, handmade techniques are based on bodily gestures and revalorize the touch of the artist's hand. What is decisive here is that the producing subject physically interacts with his or her medium (be it the filmstrip or the hardware), which, in spatial terms, results in a certain closeness between producer and art work. The second practice, where the creative process is due to external factors and which I call "autogenerative", eclipses the artist's signature and shows a relationship to conceptual art practices by keeping the artist's hand at a distance. In other words: handmade film as well as autogenerative film both describe a decidedly material praxis, but in the case of autogenerative film the gesture of mark-making is delegated to agents other than the artist him- or herself.

Within the very framework of a camera-based medium, wherein a certain distance between the artist's body, the technical apparatus and the pro-filmic event is respected, cinematic practices such as those described here explore the limits of this rule. Whether the artist's body is 'too close' to the medium or material (handmade film) or 'too distant', because linked to it in conceptual terms (autogenerative film), they both reject the spatial arrangement provided by the cinematographic apparatus and hence can be seen as attempts to challenge and disrupt apparatus theory and its dispositive.

Notes

- I would like to express my gratitude to Arturo Silva for providing generous and insightful comments.
- I use the term "software" here as opposed to hardware as a synonym for the flexible and changeable components of the filmic apparatus, in particular the filmstrip. The term can be extended to other apparatuses, such as the gramophone's software, the record.
- Though no sound recording device is involved, they both use a photo camera in 3. order to capture the pro-filmic drawings and transfer them on to the sound area of the filmstrip.
- http://canyoncinema.com/catalog/film/?i=3493 (accessed, March 9, 2014)
- As previously said, Levi briefly mentions the term "retrograde" in discussing Jay David Bolter and Richard Grusin's concept of "remediation" (2010:65).
- According to André Gaudreault the term "early cinema" is problematic because it implies a teleological view of film history (2011:41).

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Abstract

Taking as a point of departure the 1970s concept of the 'dispositif', this article seeks to redefine it in the context of experimental cinematic practices which reject the usual tools of filmmaking, or, more precisely, replace them by 'retrograde' technical means (such as handmade techniques, camera-less films, etc.). Instead of adhering to the classical notion of dispositif, which privileges the screening situation, the author rather suggest that we envisage a dispositif of production, involving the spatial relationship between the body of the artist, the 'pro-filmic' event and his/ her material at the very moment of production, and that informs the practices of cinematic retrograde technicity.

Résumé

Prenant comme point de départ le concept de 'dispositif' tel qu'élaboré durant les années 1970, cet article cherche à le redéfinir dans le contexte de pratiques cinématographiques expérimentales qui rejettent les outils habituels de la production de cinéma, ou, plus précisément, tentent de les remplacer par des moyens techniques 'rétrogrades' (tels que les techniques artisanales, le cinéma sans caméra, etc.). Plutôt que d'adhérer à la notion classique de dispositif, qui privilégie la situation spectatorielle, l'auteur suggère d'envisager le dispositif par le biais de la production filmique afin de mettre en jeu la relation spatiale entre le corps de l'artiste, l'événement "pro-filmique" et son matériel (au moment même de la production), et ainsi offrir un éclairage nouveau sur les usages rétrogrades de la technique.

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