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Videographic film studies and the analysis of camera movement

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I.

Albrecht Schäfer's installation *Swing* (2008) is as simple as it is intriguing. In the catalogue its components are given as 'video projector, DVD player, nylon thread, DVD, color, no sound'. The nylon thread (in the realised work more a robust steel cord) stands out in this list; as will become clear the punchline of the work literally is delivered by this thread. What *Swing* presents could hardly be more quotidian: the image is of a bird of prey circling under a blue sky. The camera continually follows its movement and translates its flight into swaying, sometimes jerking circular movements. It is not always easy to distinguish between figure and background against the monochrome surface; there is no unmoving, anchoring object that would enable us to estimate speed and direction of movement. Although we immediately perceive the bird to be *in motion*, in reality we apply the existing experiential value 'bird in flight' to the filmed situation.

Albrecht Schäfer, "Swing", 2008

However, the nylon thread complicates things, as the DVD player and projector hang freely swinging in the exhibition space. As soon as the visitor enters the space the equipment is set in motion by the unavoidable air draft. While the identification of movement types (here that of the bird, there that of the camera) initially causes a mild irritation the gentle swinging of the image on the wall adds a form of movement rarely encountered in film history. Object and observation tool are in motion; the *dispositif* of perception also 'swings'. The precise correlation of each type of movement thus becomes even more unclear and the visitor feels a subtle but distinct dizziness. Even if it is possible with some concentration to single out the individual levels of movement analytically a physical-sensory confusion sets in, more or less intense depending on the viewer. We all know that slightly queasy feeling of sitting in a stationary train while another one approaches on the neighboring track and we think our own carriage is moving. *Swing* deals with this discrepancy between the cognitive evaluation and somatic experience of movement.

II.

Given the multitude and variety of moving images today it is helpful to take a look at the technical and institutional conditions under which a work is created and shown. The first thing about *Swing* is that it was shot with a digital camera. However, the materiality of the image, its resolution or material carrier are barely relevant. Whether it is on Super 8 or HD video is secondary to the actual effect. More important is the fact that it is a short, two-and-a-half-minute loop. Of course the production of loops was also possible with analogue film material but only with the repeat button on the DVD player did it become the default mode for moving images in exhibition spaces. Through the presentation in loop form and the absence of temporal markers the work seems timeless and abstract despite the concreteness of its banal event. *Swing* can thus be understood as a generalising examination of movement – more conceptual than narrative, more recursive and cyclical than linear.

A second specification is necessary: the work requires a digital projector that, in combination with the DVD player, is light enough to be set in motion by a mere draft. For the same reason the images are bound to an exhibition venue like a museum, as it is the visitors who add the decisive element to the movement palimpsest and complete the work by walking through the space. The antiquated word 'interactivity' is inadequate to describe this circumstance as it is not a case of intervening in the structure or nature of the images but rather and more subtly of a discreet involuntary entanglement in the movements of object, camera, and projector in the three levels that intersect on the image swinging on the wall. Because of the conventions of the museum Schäfer can rely on me moving and setting the image surface in motion and not kicking or shoving the projector in order to observe the result on the wall.

III.

Swing is one of conceptual artist Albrecht Schäfer's few video works; it is interesting here as an example of a complex that could be described as 'practical research' into camera movement. Experimental cinema and (due to the force of attraction of contemporary art) the museum are the privileged locations of such studies.[1] Here are two examples. In a funding ap-

plication for the Canadian Film Development Corporation, in March 1969, Michael Snow wrote: '[a]fter finishing *Wavelength*, which is in its entirety a single camera movement (a zoom), I realized that the movement of the camera as a separate expressive entity in film is completely unexplored.'[2] Whether a zoom (the displacement of lens components) can adequately be described as a 'camera movement' is arguable,[3] but after *Wavelength* Snow did shoot two further films (*Back and Forth* [1969] and *La Région Centrale* [1971]) that are characterised by excessive camera pans and rotations and run through all the technical possibilities and psycho-physical effects of camera movement.

Snow's films are explicitly made for the cinema. Mark Lewis' mostly short loops, which are either concentrated on a single movement or a calculated combination of camera and image movement, are tailored to the conditions of the gallery and the museum. A hovering dolly shot imperceptibly transitions into a elaborate boom shot in *North Circular* (2000); an isosceles-triangular traffic island is patiently orbited in *Isosceles* (2007); the work *Willesden Laundrette* (2010) names its operations (*Reverse Dolly, Pan Right*) in its subtitle; *The Moving Image* (2011) suggests to be what the title says, but in reality a freight elevator is responsible for the movement. It would not be difficult to list further works that, indebted in the widest sense to the legacy of the structural film, isolate and thus analytically expose the element of camera movement. In this respect today's much-discussed 'artistic research'[4] has long been an integral part of art and film history. Another conclusion can also be drawn here: the search for studies on camera movement is most likely to be rewarded in the cinematic and artistic works themselves.

Film theory, by contrast, has always had a hard time with conceptualising camera movement. As David Bordwell wrote in 1977, '[c]amera movement has usually been considered too elusive to be analyzable.'[5] Five years later Vivian Sobchack came to the same conclusion from a different theoretical angle: '[a]lthough it is possibly the kind of movement most central to our primary understanding of the cinema as a semiotically expressive form of human communication, camera movement has unfortunately seemed to elude the descriptive and interpretive grasp of traditional and contemporary modes of theoretical reflection.' She continues: '[r]ecognizing camera movement as significant and signifying, film scholars have not been able to account for it as such, or to describe it in terms that speak to our experience as viewers.'[6] Surprisingly, nothing has substantially altered in this during

the more than 30 years that have elapsed since Sobchack's and Bordwell's diagnoses.[7] Theoreticians regularly address the cinematic principle of movement but in most cases they operate either too far removed from or too close to the material practice of camera, tripod, and concrete image movement.[8] Too far removed, as in the philosophical reflections on the *movement-image* by Henri Bergson, Gilles Deleuze, and others; too close, as in the praxis-oriented handbooks for camerapeople in which the respective operations tend to be assumed rather than problematised and the imparted knowledge is integrated as an on-hand tool into a pragmatics of shooting.[9]

There are several reasons for the gap between these poles. The most important one is cited by Bordwell and Sobchack when they speak of the strange elusiveness of the operation. In order to be able to analyse it movement has to be suspended, which paradoxically eradicates it as movement. Maurice Merleau-Ponty put his finger on the problem in 1945 in the chapter on movement in his *Phenomenology of Perception*, where he gives paragraph 23 of the second part on 'The World as Perceived' an unusually programmatic title: 'Thinking of Movement as the Destruction of Movement'. In Merleau-Ponty's criticism of the Cartesian, analytical approach to movement phenomena there is a clear echo of similar figures of thought from Bergson and Hugo Münsterberg. Merleau-Ponty writes that

> [e]ven if we invent a mathematical instrument which allows account to be taken of an indefinite multiplicity of positions and instants, it is impossible to conceive in one and the same moving body the very act of transition which always occurs between two instants and two positions, in whatever proximity to each other we choose them. So that, in thinking clearly about movement, I do not understand how it can ever begin for me, and be given to me as a phenomenon.[10]

In film studies the fundamental elusion postulated here of the phenomenon of movement and its resistance to mathematical dissection has led to the above-described evasion. Camera movement has only been given scant attention while the research literature on montage can be measured in shelving meters. What is the reason for this? The gesture of montage, to be sure, establishes a firm and explicit sense of relation and can therefore be more easily integrated into semiotic systems of expression and effect. By contrast to the discontinuous, conflict-laden, abrupt montage of shots (whose principles, taxonomies, and potential impact have been discussed in countless studies of Pudovkin to Eisenstein and Vertov to Pelechian) camera movement confronts us with transitions, flowing developments, gradual and continual shifts that are difficult to describe.[11] This also implies that

the phenomena and effect of editing can more readily be reconstructed and rendered in texts. The principle of montage can be represented at least rudimentarily through the reproduction of stills, but the characteristic of a horizontal pan can actually only be reproduced *as movement*.[12] However, the technology for doing just this is available today. This applies both to the possibility of reproducing movement as movement and to the 'mathematical instruments' anticipated by Merleau-Ponty which allow 'account to be taken of an indefinite multiplicity of positions and instants'.

IV.

Merleau-Ponty speaks of movement *tout court*, not of its cinematic recording, and yet his quote contains the basic conflict between two views: on the one side stand those who approach the phenomenon through analysis and calculation; on the other those who insist on the synthetic character of the movement complex and call for a hermeneutic or phenomenological approach. The former, one might add and actualise, consider the moving image to be a calculated and thus computable surface; for the latter the measurement and calculation of images misses the crucial point, which lies in an indivisible and, following its Latin etymology 'individual', experience which Merleau-Ponty always conceives as bodily. These two ideas and ideologies always oppose one another whenever the possibilities and use of calculation are at issue – that is, software for analysing aesthetic phenomena such as film. Barbara Flückiger has summarised some of the debates relevant to film studies in an article on the measurement of aesthetic phenomena,[13] so I will restrict myself here to brief references and direct my comments to the question of camera movement.

(1) The first thing to become apparent is that the use of software-based analytical tools is primarily concentrated on the compilation and visualisation of the 'average shot length' (ASL) and the types of framing. This was already the case with earlier analogue methods of statistical analysis as developed by Barry Salt and it continues in formalistic or neo-formalistic-inspired projects such as Yuri Tsivian's Cinemetrics tool and the Digital Formalism project in Vienna.[14] The measurement of Dziga Vertov's films in the collection of the Austrian Film Museum was designed as a direct continuation and reformulation of the formalist innovations of the 1920s. Aside from the digitalisation and various analytical-visual evaluations of the

Vertov films, this also implies (in the Vertov tradition) a reflection on the methods of digital analysis itself. Even if not entirely neglected camera movement tends to play a subordinate role here – a setting of priorities that is understandable considering the emphasis of the Russian avant-garde on montage.

(2) One of the most interesting aspects of the numerous projects of digital analysis in recent decades has been the transformation of films into alternative forms of visual presentation: synoptic displays, spatialisations of the temporal structure of films, and the digital 'fingerprinting' of a film based on the juxtaposition of all its shots are only some of the wide-ranging and often playful forms of diagramming[15] the temporal object 'film' and organising it on a surface.[16] Color, length of shot, or other parameters are initially converted into data and then translated back into descriptive forms. It stands to reason that camera movement is difficult to integrate into such analytical abstractions. Moreover, despite the evocative aesthetic unfolded by many of these portrayals a conceptual gap remains which Flückinger has named in reference to Salt's statistical surveys. 'These analyses have a strangely banal and bloodless effect as soon as they leave the domain of strict factography, and important questions remain open, namely why, where, and with what effect were the spectacular dolly and boom shots deployed in Max Ophüls's films, for example.'[17] Here too there is an obvious rift, in this case not between practice and theory but between empicial-factual survey and hermeneutic interpretation. Helpful as the computer can be in addressing and evaluating formal phenomena, the question often remains open as to how the often immense data sets should be read.[18]

V.

Parallel to the discursive success of the so-called 'digital humanities', since around 2006 we have seen the emergence of a new genre on the internet that is more subtly based on the use of digital tools. First here and there and on private blogs such as *The House Next Door* or *Shooting down Pictures*, then increasingly associated with cinephile streaming portals like fandor.com or the website of the Museum of the Moving Image in New York, and for quite a while now on blogs specifically devoted to the format, including Indie-wire's *Press Play*, the genre can now be considered to have established itself. The terms 'video essay' and 'videographic film studies' have become com-

mon, the latter primarily through the Vimeo channel Audiovisualcy founded by the film scholar Catherine Grant in April 2011 as a collecting point for cinephile, analytical essays.[19] It currently (as of April 2016) contains 1,095 works of this kind, which despite varying in quality all share a specific mixture of Cinephilia 2.0 and DIY methods between file-sharing and Final Cut.

Protagonists of the genre can now be discerned, such as Tony Zhou, kogonada, Kevin Lee, or Catherine Grant, and meanwhile there is a myriad of canonic analytical procedures, including split screen, dialogical voice-over, slow motion, and stills. In July 2012 the first edition of the online magazine *Frames* attempted an overview of the field and an integration of these largely para-academic practices into established film studies under the almost Pentecostal title (despite its question mark) of 'Film and Moving Image Studies Re-Born Digital?'[20] Even though a digital workplace (DVDs, AVIs, or MPEGs, Final Cut, several simultaneously open screen windows) forms the background to 'videographic film studies' it would be misleading to emphasise only what is new about this. In fact, mostly unconsciously and without interest in potential precursors, many contemporary video essays take up techniques and procedures with a long and convoluted history in the analogue world. There have been significant forms of analysis and critique of cinema for at least 50 years, both in the medium itself, which was accompanied by a self-reflective, analytical parallel history from the start, and even more frequently through other media and from institutional sources: the television programs of André S. Labarthe/Janine Bazin or Claude Ventura; the numerous productions from 1970 onward by the WDR film department, which commissioned critics and filmmakers such as Hartmut Bitomsky, Harun Farocki, Enno Patalas, and Frieda Grafe to produce analytical essays; the education sector, above all in France, where Eric Rohmer made films for school television which was just beginning in the 1960s and where a number of cine-analytical films were produced on VHS for schools and universities during the 1980s; and finally as on DVD, where, usually hidden in the limbo of bonus material, authors like Tag Gallagher found a space for their analyses of Ford, Rossellini, and Ophüls.[21]

In the dichotomy of materiality versus content, codes versus surfaces, syntax versus semantics, most of these early works as well as the contemporary video essays and 'videographic film studies' take the side of content, surface, and semantics. Differently from software-oriented data banks and the open-source project OxdB which came about as copyleft initiatives for locating and providing large quantities of films in various file-sharing

communities,[22] and also differently from experimental datamoshing practices,[23] they operate on this side of the interfaces and within the logic of the images, not beneath or beyond the surfaces in the keyframes, command lines, codes, and algorithms. This runs the risk of upholding established categories such as mise en scène and the auteur and of only using a fraction of the digital tools' potential. In fact the majority of the videos on Audiovisualcy would also have been possible under the conditions of electronic media, albeit with considerable budgets and only with the infrastructural backup of television channels, education ministries, or DVD producers. Nevertheless there are cases in which the possibilities of the genre are explored and the historicity and materiality of the images recognised. In this respect Chicago filmmaker Kevin Lee is an exception not only because of his astonishing productivity but also in his explicit reference to the genre's past. I would like to discuss two of his video essays briefly here; one because it expressly operates within the history of the genre and deals with the work's interfaces; the other because it paradigmatically develops a possibility of speaking about camera movement within the video essay. A third example, *Variation VI: Motion Panorama Still Landscape* (2012) by Aitor Gametxo, will then complement my short survey and provide the example of a diagrammatic comparison of horizontal camera movements.

VI.

Schnittstelle (Interface, 1995) is a video installation from 1995. In a retrospective look at some of his films Harun Farocki relates the media of film and video to one another. To do this he chooses the *dispositif* of two monitors, by means of which he thinks about the difference between film editing and video editing. It is a fundamental difference and gives rise to reflections on the tactility of media, the utopia of reflection internal to images, and the editing suite as laboratory. The work can be seen as a blueprint for numerous later installations in which Farocki uses the juxtaposition of two images as a tool to reflect on images, but it is also the first example of an approach that Farocki called 'soft montage'.[24] By this he means a type of montage in which one image does not replace another but where less tangible or absolute visual relationships become possible.

Lee updates *Schnittstelle* and poses the same question in relation to the difference between the video editing suite and work at the computer screen. What is achieved by the analytical operation of relating images to one another? What does it mean that now it is not merely two images that are juxtaposed, as with video editing, but an arbitrary number, and that this constellation belongs to the everyday experience of every computer user? What gestures does this kind of work provoke? *Interface 2.0* (2012) shows us the desktop on which the interfaces to process images and sounds are presented. The changes are quantitative and pragmatic in nature: there are

more images, potentially all the shots of a film simultaneously, and access to them (differently than in 1995) is open to practically anyone.

Under these conditions, I would argue, the detailed examination of camera movements becomes possible for the first time. We can now study films in as similarly precise a way as art historians have done via catalogue reproductions and slides; we can stop them, navigate within them, and create permanent loops. After Laura Mulvey and her eulogy to 'delayed cinema'[25] Jacques Aumont has called the immobilisation of the image a decisive media-historical turning point in *Que reste-t-il du cinéma*:

> [f]rom this point of view the most significant innovation at the end of the twentieth century would not be the digital image (which, taken by itself, leaves the *dispositif* intact). Neither would it be the miniaturized and now mobile screen (which penetrates the social ties around the projected image in order to establish a different one, while not essentially affecting the invention of the 'moving image'). The most important invention from an aesthetic point of view is in fact the pause button, which produces a categorically new type of image.[26]

No matter whether we agree with Aumont's assessment or not the availability and disposability of stills and sequences, the stopping and shuttling back and forth of images, is the analytical a priori of the diverse digital access to the moving image.

It seems crucial that the new techniques enable movement to be repeated and analysed *as movement*. Only now, it seems to me, can we juxtapose and compare camera movements, locate them historically or arrange them synoptically, discern and describe fleeting, musical qualities like rhythm or rhyme.[27] It has often been observed that because of this the 'unattainable text', as Raymond Bellour and others described film in the 1970s, is easier to find, catalogue, and inventory today, although under different media conditions from that of the cinema. A particularly salient example of such an analysis of camera movement again comes from Lee. To mark the release of *The Master* (2012) he extracts five Steadicam shots from films by Paul Thomas Anderson and comments on the development of this specific tool from *Hard Eight* (1996) to *There Will Be Blood* (2007), exemplifying the simultaneity of object and spoken comment.
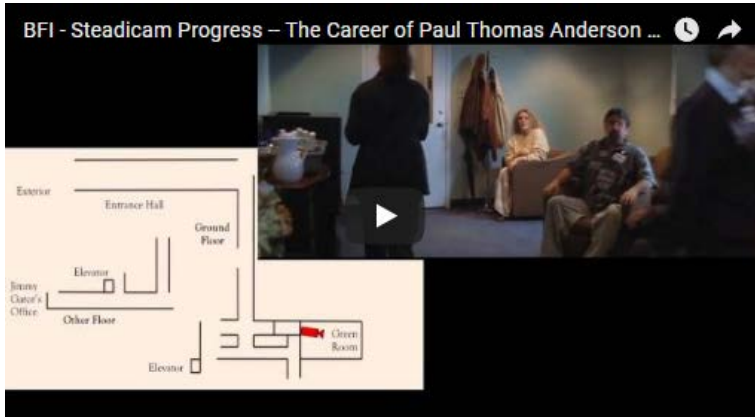
All kinds of analysis, interpretation, digression, repetition, redundancy, and tension are possible in principle. But there is a further analytical operation, as Lee translates the cinematic movement back into a simple spatial sketch, a floor plan on which we (synchronised with the Steadicam movement) can trace the path of the camera from overhead. A similar sketch may have served to plan the tracking shot on set. The analysed shot is thus opened up in two directions: into the past of the shoot and into the future of the analyst's reception and experience.

A more experimental look at camera movement is taken by a two-minute clip that surfaced in February 2012 on the Vimeo platform Audiovisualcy. The work is titled *Variation VI: Motion Panorama Still Landscape* (2012) by Aitor Gametxo.

The object of study in this case is the extremely wide pans by the cameraman Jörg Schmidt-Reitwein in Werner Herzog's *Fata Morgana* (1971). We are shown pans across desert landscapes in six horizontally-ordered rows of images. But here, instead of the landscape, the image itself moves evenly from left to right while the visual content, the desert, appears to stand still. The procedure is based on a simple substitution. The movement *in the image* is replaced by the movement *of the image*. This neutralises the movement of the landscapes in Herzog's film; they remain in place and can be spread out horizontally in a succession of single frames in a next analytical step. Various things become visible in Gametxo's synopsis of these pans. For one thing the diagramming of the moving image allows a graphic compari-

son of coloration and horizontal proportion; it also enables the varying speeds of the pans to be examined in their respective effects. *Variation VI* lies halfway between analytical dissection and synthesising assemblage. The work is thus exemplary of a productive-analytical approach to camera movement today.

VII.

After this cursory survey of various sites, techniques, and problems both in the analysis of camera movement and the difficulties of finding adequate means of displaying the findings I want to conclude with a few remarks primarily intended to indicate the possible development of these thoughts.

(1) More than other cinematic phenomena the analysis of camera movement appears to require an oscillation between technological history, the detailed description of aesthetic operations, and the reconstruction of the effects of reception. Camera operations are gestures in which all these three levels coincide and crystalise. A material history of the tripod would be as helpful to the description of horizontal pans as the reconstruction of 19th century panoramic *dispositifs*. This should be supplemented by a differentiated description of the ways in which pans make connections, how they process anticipation and memory, and how they structure the cinematic space.

(2) I have hinted at rather than discussed the particular suitability of a phenomenological view to the description and analysis of such camera gestures. The reason lies in phenomenology's premise of proceeding from a description of a phenomenon and its perception that is as free of presupposition as possible. This seems to me to be the primary task upon which the other above-mentioned levels would have to build on.

(3) The fact that through the possibilities of visual tools the movement itself is present in the analysis does not mean that production of evidence can simply be delegated to the images.[28] On the contrary, the aim should rather be to both use and resist the evocative power of visual evidence. Being able to show something does not release us from delivering exact descriptions. The history of film criticism and analysis has many convincing examples of just this. Raymond Durgnat's astonishing descriptions of films come to mind, particularly his obsessive examination of Hitchcock's

Psycho (1960); or Helmut Färber's critical reconstructions of the films of Griffith, Ozu, and Renoir; or texts by Peter Nau and Gilberto Perez.[29]

(4) My occasional differentiation between form versus content, code versus surface, data versus images only marks an apparent difference, of course. Barbara Wurm gets to the heart of this in the context of the Digital Formalism project: '[t]he apparent paradox underlying everything we do in formal film analysis, even our attempts to locate it historically, is that the primary concrete material has to be translated, transcribed, converted into symbols; but the symbolic ultimately only serves to create a new dimension of concreteness.'[30]

(5) At a time in which the *dispositif* of the cinema and the material of film are no longer the norm but one option among many,[31] the question of how the relevant considerations of materiality and historicity can be re-integrated into the analysis of composition, poetic principles, and aesthetic effects becomes important. The more hegemonic digital practices are on the level of production, distribution, and presentation, but also on that of analysis and theory, the greater the necessity there is for transparency about the materials we are talking about.

Among other things the availability of digital analysing tools could be for film studies what the invention of the slide projector and the circulation of photographic reproductions was for art history.[32] Where once an un-imagined view of detail opened up and made it possible to analyse painting, sculpture, and architecture regardless of one's physical location, the juxta-position of moving images as an epistemic and aesthetic gesture now appears on the scene.

Translated by Michael Turnbull

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Objects: Things and Operations (Berlin: August, 2015; editor); and *Screen Dynamics: Mapping the Borders of Cinema* (Vienna: Austrian Film Museum, 2012; co-editor).

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http://german.princeton.edu/ssms/2011/11/11/thomas-y-levin/ (accessed on 15 April 2016)

http://framescinemajournal.com/article/in-so-many-words/ (accessed on 15 April 2016)

Notes

[1] See Leighton 2008 and Balsom 2013. Two recent German-language publications are Gass 2012 and Bellenbaum 2013.

[2] Snow & Dompierre 1994, p. 53.

[3] For an illuminating comparison between dolly shot and zoom see Anderson 2003.

[4] See Bippus 2009; Holert 2011, pp. 38-63; Ott 2013, pp. 180-186; and Rottmann 2013, pp. 160-166.

[5] Bordwell 1977, p. 19.

[6] Sobchack, 1982 p. 317.

[7] Nielsen 2007.

[8] A different approach which mediates between general aesthetic questions and concrete analysis has recently been suggested by the anthology *BildBewegung* vor: *BildBewegung/ImageMovements* (see Rathgeber & Steinmüller 2013).

[9]   Here the numerous and often very detailed and helpful 'craft journals' such as *American Cinema-tographer* or *Film und TV Kameramann* should be taken into account. See also Nielsen 2007.

[10] Merleau-Ponty 1962 (orig. in 1945), p. 269.

[11] In this respect camera movement is comparable with color distribution and the proportion of light and darkness, with the important difference that cinematic aesthetics of color connect to long art historical traditions, whereas in the question of camera movement it was not initially possible to borrow parameters from other disciplines.

[12] Of course scholars like David Bordwell have always done their best to give an approximate impression of camera movement by working with abundant screen shots in canonical works like *Narration in the Fiction Film* (Bordwell 1985).

[13] Flückiger 2011, pp. 44-60.

[14] Salt 2009. For Cinemetrics see the extensive website http://www.cinemetrics.lv/. The results of the Digital Formalism project were published as *Digital Formalism. Die kalkulierten Bilder des Dziga Vertov* (see Gruber & Wurm & Kropf 2009).

[15] For a concise overview of the definition and popularity of diagramming see Krämer 2013, pp. 162-174.

[16] Some examples of this visualisation which frequently springs from cinephile enthusiasm can be found at http://www.cinemetrics.fredericbrodbeck.de. 'Cinemetrics is about measuring and visualizing movie data, in order to reveal the characteristics of films and to create a visual *fingerprint* for them. Information such as the editing structure, color, speech, or motion are extracted, analyzed, and transformed into graphic representations so that movies can be seen as a whole and easily interpreted or compared side by side'. See also http://brendandawes.com/projects/cinemaredux. 'Created in 2004 and acquired for the MoMA permanent collection in 2008, Cinema Redux creates a single visual distillation of an entire movie; each row represents one minute of film time, comprised of 60 frames, each taken at one second intervals. The result is a unique fingerprint of an entire movie, born from taking many moments spread across time and bringing all of them together in one single moment to create something new.'

[17] Flückiger 2011, pp. 44-48.

[18] For a more general discussion on the problem of 'big data' see Schneider 2013.

[19] See http://alsolikelife.com/shooting/about/; http://www.movingimagesource.us/; http://blogs.indiewire.com/pressplay/tag/video-essay; https://vimeo.com/groups/audiovisualcy.

[20] See Grant 2012, http://framescinemajournal.com/?issue=issue1.

[21] The project *Kunst der Vermittlung* (http://www.kunst-der-vermittlung.de/), aimed at a historicisation and derivation of such 'film-conveying' formats in the cinema, television, DVD, and other media, as well as in educational contexts and various institutions.

[22] On 0xDB: '0xDB is an experimental – and to some degree imaginary – movie database. It is intended to help us rethink the future of cinema on the Internet, just as it tries to push the boundaries of what we understand as "web applications". What 0xDB proposes is an entirely new approach to visualizing and navigating moving images, and we hope that it can serve as a point of reference for individuals and institutions who are dealing with large collections of films.' See http://0xdb.org/about.

[23] See Levin 2011, video recording here: http://german.princeton.edu/ssms/2011/11/11/thomas-y-levin/.

[24] Farocki 2004, pp. 57-62.

[25] Mulvey 2006.

[26] See Aumont 2012, p. 41.

[27] 'Visual rhythms (in film) can have as infinitely varied qualities as rhythms in music', writes the musician in the above-quoted letter. See Snow & Dompierre 1993, p. 53.

[28] For a critique of the unbridled enthusiasm that video essays enable see Martin 2012, http://framescinemajournal.com/article/in-so-many-words/.

[29] See Durgnat 2010; Färber 1986; Färber 1992; Färber 2006; Färber 2010; Nau 1978; Perez 1999.

[30] See Wurm 2009, p. 33.

[31] See Koch & Pantenburg & Rothöhler 2012.

[32] See Grimm 1897; Reichle 2002, pp. 40-56.