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Light matter: the transdisciplinary practice of the architectural moving drawing

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In this chapter I will introduce, contextualise and situate my hybrid moving image practice of the 'architectural moving drawing'. This practice exploits contemporary digital moving image technology for new transdisciplinary methodologies between architectural representation and artists' film. I will demonstrate how the practice emerges from and responds to my dual-disciplinary grounding in fine art and architecture, and I will touch upon how such a hybrid practice might inform these disciplines.

I am an artist and architect. I studied fine arts in an architecture school, going on to produce film and installation artwork as part of my subsequent architectural studies. I now teach within a school of architecture, and am undertaking a PhD in an art school. As both artist and architect I work from within the subject of architecture, acknowledging Jane Rendell's positioning of architecture as subject as well as discipline: 'if we define a field of study containing a number of disciplinary approaches but with a shared object of investigation as a recognized subject, then we could define architecture as a subject' (Rendell 2004: 143).

However, my critical practice operates in what Elizabeth Grosz terms a 'third space [...] a position or place outside of both [disciplines], that they can be explored beside each other, as equivalent and interconnected discourses and practices' (2001: xv-xvi). Hal Foster emphasises the importance of grounding for *interdisciplinary* working: 'to be interdisciplinary you need to be disciplinary first – to be grounded in one discipline, preferably two, to know the historicity of these discourses before you test them against each other' (Coles and Defert 1998: 162).

The terms transdisciplinary and interdisciplinary vary in definition and use between theorists and fields (Rendell 2004; Linder 2005), but all assert that activity across, between and outside of disciplinary boundaries enables the generation of new knowledge and processes. The definitions presented by Bremner & Rodgers (2013: 11) are used here: *interdisciplinarity* assumes one discipline is primary, while in *transdisciplinary* work neither are primary, and transdisciplinary practitioners 'work in and contribute to both [disciplines] and generate unique conceptions and artifacts as a result of an emergent transdisciplinary perspective'. My practice is 'transdisciplinary' (rather than 'interdisciplinary') due to my equal 'grounding' in both disciplines.

Artists' film and architectural drawing

In my moving image practice I produce artists' film, not dramatic or narrative film, and this distinction is significant. Artists' film is a form of art practice, often undertaken with minimal budget, made by a single 'artist' to explore their individual agenda, and exhibited in galleries and other artists' venues. Mainstream dramatic or narrative film is a form of entertainment, produced in a commercial environment, needing significant budgets and large teams (led by a 'director'), and screened in cinemas for a ticket-buying audience. Art-house films reside somewhere in-between, but are still a form of dramatic film, albeit with a smaller audience and budget, and less of a requirement for passive entertainment. Whilst acknowledging the value of the extensive existing research relating architecture to dramatic/narrative cinema, I assert that these films remain dominated by narrative – and in particular, as I shall go on to argue, human narrative – to which architecture is subservient.

My research therefore, looks to techniques found in particular artists' film practice, practice which may better support a focus on the temporal and the tectonic as primary concerns. Filming, editing and screening techniques which originated within 1960s and 1970s British, European and North American 'structural film' (Rees 1999; O'Pray 2003) allow, instead, an architectural subject to come to the fore,

and explore related theoretical concerns which resonate with those of architectural representation. Characteristics common to this form include an eschewing of narrative,¹ use of extended duration (Sitney 1974: 412), a focus on the structure, form and materials of the film (Le Grice 2001a) and a requirement for an active viewer to construct meaning (Gidal 1976: 2-3; Sitney 1974: 408). These films demand of the viewer a process of sustained and critical observation (Hamlyn 1996). The lack of explicit human narrative allows other aspects of the film – such as *architectural* content – to be revealed.²

Since the Renaissance, architectural drawings or ‘mediating artifacts’ (Pérez Gómez and Pelletier 1997: 7) have been essential tools in the development and communication of spatial propositions, prior to their physical construction. To unpack and ‘read’ orthographic drawings the viewer has an active role, piecing together the drawings, their eyes and mind constructing a whole building from fragments. Sonit Bafna (2008) discusses the active agency of the viewer in constructing a subject in the reading of architectural drawing, observing that the drawing is often used to stand in for the building, with the unbuilt building discussed as if it were an actual, realised building. He claims that drawing can be architecture because ‘the experiential qualities of the building are invoked through the drawings’, while acknowledging that ‘the aesthetic experience of these drawings is [...] certainly nothing like the kind of experience derived from actually visiting a building’ (Bafna 2008: 543-544). Robin Evans (1989: 19) explains that in the reading of a set of orthographic architectural drawings ‘projected information can be mobilized by the imagination of the observer’. The reading of architectural drawings, therefore, has parallels with the continual acts of ‘prophecy and memory’ (Snow 1967: 40) required of the active viewer of structural film.

Stephen Holl (2007), in taking a phenomenological approach, highlights spatial and temporal qualities absent from traditional and digital drawing (including GCI animations), while Jonathan Hill (1998: 56) promotes the appropriation of other disciplines’ techniques to address this lack. I would further argue that techniques borrowed from structural filmmaking may be used to communicate these qualities of architecture missing from conventional architectural representation. Film allows time to be ‘drawn’, offering a way to embed this essential fourth dimension of architecture within documents that both record and bring it into existence (Suess 2014). Throughout this chapter the word ‘drawings’ refers to mediating artefacts (regardless of the medium) that translate architecture and in turn must be translated to form architecture. This word preserves the architect’s relationship to such documents, even when they move beyond traditional forms and media.

Methodology of practice

My methodology of critical practice – informed by and informing critical theory – follows a design process of testing, reflection, iteration, drawing upon external references, and responding to existing conditions. Filmmaking and architectural design both involve processes of addition, subtraction, altering, layering, and juxtaposition. They take from and react to what is existing, and conclude with the creation of something new, something which is situated and responds to existing physical, social, material, theoretical and historical contexts.

My filmmaking process starts with a response to context, through the use of recorded footage, which then informs the direction of the film, and from which specific architectural content and corresponding film structure are formulated. The editing process that I employ is a form of adjusting; this is akin to the process of architectural design, of working through a number of iterations through drawing, which could also be described as a form of editing. As with the process of editing a piece of written work, a first draft is rarely perfect, and needs revising, which involves reordering, adding and removing, and redrafting. These editing processes are necessarily reflective, requiring review and then action (Schön 1984). Working with the layered timeline of video editing software, repeated changes and review of the edit involve an iterative and reflective process, within which the film is developed, and through

which new knowledge and understanding is generated. For the development of my film work a continual process of review of many drafts of an edit utilises a methodology with which I am familiar from architectural design.

Practice and theory

The relationship between architecture and art practice, but also practice and theory (as they relate to each other and to both disciplines) is central to my intertwined practice and writing. Gilles Deleuze's (1977: 206) notion of 'relays' between practice and theory, extended by Jane Rendell (2006: 9-10) to emphasise a symmetrical, reciprocal relationship, describes my integrated, iterative model of critical practice. As Rendell explains that critical practice requires an interdependent, non-hierarchical relationship between theory and practice, each informing and influencing the other, the self-reflective practices of making and writing collectively constitute a form of critical research. Therefore, in parallel to my filmmaking practice, I analyse works by other artist filmmakers to explore, test and apply emerging ideas along with theory from multiple fields, and to make connections with forms of disciplinary and interdisciplinary practice. My brief analysis of John Smith's 1975 film *Leading Light* – which follows later in this chapter – is an extract from one such case study that has reflexively fed into my practice.

While my filmmaking methodology is informed by other filmmakers' techniques, my own architectural preoccupations form the core of my practice. As it has developed the architectural focus has shifted,³ starting with an early interest in the interaction of the human body in a particular spatial context, as shown in *Arlene* (Suess 1994a) and *Transparency 7* (Suess 1994b) (Figure 1) which both serve to subvert the common use of the figure within architectural images as mere 'staffage'.⁴ Films such as *Map 2b* (Suess 1996) and *Standard 3.35* (Suess 1999-2000) (Figure 2) explore the translation of utilitarian drawings into new filmic space. More recent films focus on views through windows and doors, and the subtle and dramatic changes that occur on either side of the 'threshold' of the glass panes (Figure 3): *60+62 [SunFrostWindRainSnow]* (Suess 2010) records diurnal and seasonal change upon an ordinary suburban view, and *12 Frames* (Suess 2012) considers the mediating device of a window, transforming the window panes into a series of screens, each presenting an uncannily contained fragment of the space beyond.

[Insert Figure 1 here.]

Figure 1: *Arlene*, 1994 (www.eleanorsuess.com/Film/FilmRooms/Arlene.html) and *Transparency 7*, 1994 (www.eleanorsuess.com/Film/FilmBuildings/Transparency7.html) © Eleanor Suess.

[Insert Figure 2 here.]

Figure 2: *Map 2b*, 1996 (www.eleanorsuess.com/Film/FilmHandmade/Mab2b.html) and *Standard 3.35*, 1999-2000 (www.eleanorsuess.com/Film/FilmDrawings/Standard3.35.html) © Eleanor Suess.

[Insert Figure 3 here.]

Figure 3: *60+62 [SunFrostWindRainSnow]*, 2010 (www.eleanorsuess.com/Film/FilmBuildings/60+62.html) and *12 Frames*, 2012 (www.eleanorsuess.com/Film/FilmRooms/12Frames.html) © Eleanor Suess.

Through these (and other)⁵ works I am concerned with the qualities and mechanics of space, and with the methods for its recording and production. Indeed, the position of the film as mediating artefact, which both records and relates to the other mediating artefacts of architecture, such as room, window, drawing, has always been central to my work. The making of a 'drawing' is never, for me, a neutral, objective act, just as the making of a space is always personal, subjective and mediated, both for the architect who designed it, and for the 'illegal architects' (Hill 1998) who make the space through use and experience.

In recent work I have extended this trajectory, dealing with light, and its role in defining spatial and material qualities. This explicit architectural concern is a fundamental component of architectural design, but whose temporal existence is rarely recorded through conventional architectural drawings.

Sunhouse Elevation/Sunhouse Azimuth

Sunhouse Elevation/Sunhouse Azimuth (Suess 2013) is a pair of structural films, dealing with the progress of the sun through a South London Victorian terraced house. I would also categorise this work as an architectural moving drawing; it communicates the interaction of spatial, material, and temporal qualities of light with a particular building. The process of making this work started from a fascination with the quality of sunlight as it moved through, and so changed, the spaces in my home. In this domestic space the sun was a co-occupier of the house: we dwelt in the rooms, each interacting with the space, and with each other. In the film the human inhabitants of the house are absent, although their bodies are implied by the furniture, and my body is implied as the presence of the filmmaker/cinematographer behind the camera. Vivian Sobchack (1992: 181) discusses the 'embodiment relationship' between the machines of camera and projector, with the respective lived-bodies of filmmaker and viewer. She suggests that these machines constitute components of what she terms the 'film's body', and that this 'body' inhabits the filmed space. Therefore, my body, as filmmaker, and the viewer's body are also present in that space.

For this, and all of my other films, I shot my own footage – this responsive process of observing and recording is a fundamental stage of the work's production. I would record footage whenever I came across sunlight occupying a room, and in doing so, observed and anticipated the particularity of how that sunlight interacted with each space. The footage (real-time and time-lapse) was not shot on a single day, rather it was collected over a period of years, always in the months surrounding the vernal equinox, at the emergence of the sun from the long, dark, English winter. The process of filming became about collecting, hunting, these welcome moments of sunlight in rooms.

Within the film, I have used techniques of image composition from architectural photography and drawing. The camera shots are carefully framed, with attention paid to alignment of verticals and horizontals. Where possible the camera is positioned orthographically to the space, with walls filmed in elevation and floors in plan. A range of scales are used from the close up or detail, to middle views: this strategy of scale is one derived not only from architectural drawing but also film. Scale is also used in relation to time – the clips used in the film are both time-lapse and real-time, each temporal scale revealing different qualities of the sunlight and its interaction with the space.

At the commencement of the editing process, influenced by Smith's *Leading Light* (as I shall discuss later), I determined that the sun should dictate the structure of the work. Initially I sequenced the footage by solar elevation, but this resulted in the solar azimuth values being out of sequence, as with each progressing day the sun sat higher in the sky. This highlighted the changing relationship between solar elevation and solar azimuth as the days grew longer, the year moving towards the summer solar solstice. The form of the film responded to this condition, resulting in a dual-screen work constructed from the same pieces of footage. The two different edits, each conforming to their own coherent structure following the sun's elevation and azimuth respectively, display the clips in a different order, undermining the interpretation of either edit as a truthful recording of contiguous time sections. Seen together, the two sequences encourage an action for the observer, who chooses which screen to view at any one moment. This action, along with the viewer's linking of what they have already seen, to what they are now seeing (which may include a repeat of a clip, now on the adjacent screen), has parallels with the act of the viewer of a set of architectural drawings. This slippage in sequence of the two films reveals the variability of the relationship between space, time and light, dependent as they are, not only on time of day, but on time of year. The dual-screen format

highlights the construction of the film as one of mediation, rather than simple re-presentation of an existing condition.

[Insert Figure 4 here.]

Figure 4: *Sunhouse Elevation/Sunhouse Azimuth*, 2013
(www.eleanorsuess.com/Film/FilmBuildings/SunhouseElevAzi.html) © Eleanor Suess.

As the film progresses sunlight moves through the house from east to west. The main body of the film concludes with the setting of the sun, its light golden, and elevation low, allowing penetration deep into the house. The disappearance of the sunlight occurs in an east-facing room, the low sunlight reflecting from the opposite house's west-facing windows. The return to this room re-orientates the viewer, providing a reminder of where they, and the sunlight, started. As the sunlight slips away the values for solar elevation become negative, revealing the atmospheric refraction of light from a sun that has already dropped below the horizon. *Sunhouse Elevation/Sunhouse Azimuth* concludes with a coda, collecting together the fragments of space, time and light that preceded it. The spaces previously understood sequentially become simultaneous, and the sunlight occupies the whole house at once.

Through the procedure of making the film I undertook a process of architectural documentation and analysis, as Malcolm Le Grice (2001a: 164) noted in relation to his own filmmaking, 'to work-things-out, or work-things-through by making films'. As a piece of practice-based research, *Sunhouse Elevation/Sunhouse Azimuth* extends the comprehension of the mechanics of light and space, through a process of observation and analysis achieved through understanding the quality and behaviour of sunlight in specific rooms and times. It may generate in the viewer (as it did for the maker), a greater awareness in the future of when sunlight enters a room, its impact upon the space, and the change of the effect, over time. This form of *qualitative*⁶ analysis allows the intangible qualities of light, space and experience to be expressed in the viewing of the work. It may communicate 'the kind of glancing, slightly dematerialised quality that one does actually see in reality' (Hodgkin 1984: 97). For structural filmmakers the act of screening, of viewing, is a primary act in the construction of the work (Le Grice 2001b: 155-157). *Sunhouse Elevation/Sunhouse Azimuth* asks the viewer to be active in their reading of the film, and in doing so, through their experience of seeing and reading the film to undertake a task similar to that of reading architectural drawings – to construct the subject, the space, in their mind. Despite the film utilising footage of a real space, the space as read is a new, fictional one, constructed by the viewer.⁷ The work exists as both art film and architectural moving drawing, both requiring this action on the part of the viewer.

Leading Light

John Smith's (1975) structural film *Leading Light* is an artwork (made by an artist) with an explicit architectural subject. Smith (1978: 81) writes: 'I wanted to make a film of light cast by the sun largely because I found it *beautiful*. This architectural subject formed the provocation for making the film and provided its form: '*Leading Light* is a "document" of Smith's immediate world, sieved through the structuring devices of location, time and light. It is a study of light as it moves through a lived-in attic room over the course of a day' (O'Pray 2005).

Smith and I started from the same point – noticing something, a quality, that was inherently temporal, in the spaces in which we lived, and a desire to record and explore this quality through film. From that point our processes and intentions diverge. While Smith found the sunlight 'beautiful', as an experimental, and at the time, structural, filmmaker, he also saw in the passage of sunlight, the structure of a film. His piece is principally about film, its structure and material, rather than the qualities of that which is being filmed.

[Insert Figure 5 here.]

Figure 5: *Leading Light*, 1975 © John Smith, 1975.

However, my interest in Smith's film is primarily in regards to its architectural content, how space is read through the viewing of the film, and secondarily how this informs the film's structure. Throughout much of the film, bright sunlight contrasts with a dimly lit room. Space is defined by the objects and surfaces within it and is only visible through interaction with sliding sunlight. Sunlight activates the materials it touches. The hard, curved, painted forms of the chess pieces shine, their colours bright. The carpet acquires a rich texture, the armchair's upholstery a deep hue; the plastic cover of the record player and the glass of the jar of dried flowers obtain fluidity as they respectively reflect and refract light on to the white walls. Oblique evening light reveals the grain of the wood-chip wallpaper, golden light tinting the paper a warm shade, shadows of the flowers patterning it.

When artificial light replaces sunlight, it initiates a simple horizontal camera pan around the room, a movement which is mechanistic, and, like the light, artificial. The even illumination reveals the whole of the room understood previously only in fragments. The space feels dramatically diminished in scale; a formerly mysterious room filled with rich textures, forms, and colours has become ordinary, the simple difference in lighting source initiating a fundamental transformation. In *Leading Light* immaterial light is the primary material, through which all spatial qualities are made manifest. The sunlight has solidity, an almost physical presence; its clear form changing as it meets objects in the room, yet maintaining a wholeness and consistency of presence.

I was not aware of Smith's film when I began collecting footage for *Sunhouse*, but by the editing stage I had seen and begun to analyse *Leading Light*, appropriating it as an 'architectural drawing'. This precedent study informed the 'design' process of editing the *Sunhouse* films, and also contributed to the articulation of my own intentions for the work.

Focused and peripheral vision, distraction and hapticity

In *The Eyes of the Skin* Juhani Pallasmaa (2012: 16-17) explores 'focused' and 'peripheral' vision and their relationship to spatial experience, going on to connect visual and haptic experience: 'Even the eye touches; the gaze implies an unconscious touch, bodily mimesis and identification [...] Our eyes stroke distant surfaces, contours and edges [...] We see the depth, the smoothness, the hardness of objects' (Pallasmaa 2012: 63-64). Pallasmaa's work builds upon Walter Benjamin's (1992: 232) assertion that architecture is experienced 'in a state of distraction', unlike the experience of art which, Benjamin suggests, is viewed in 'absorbed contemplation'. Benjamin also compares the haptic with the visual, particularly associating the former with distracted or 'incidental' experience.

'Buildings are appropriated in a twofold manner: by use and by perception – or rather, by touch and sight. [...] Tactile appropriation is accomplished not so much by attention as by habit. As regards architecture, habit determines to a large extent even optical reception. The latter, too, occurs much less through rapt attention than by noticing the object in incidental fashion.' (Benjamin 1992: 233)

In *Sunhouse* and Smith's *Leading Light*, light is the principal 'occupier' of the spaces of both films, and through association with the shifting area of sunlight, the viewer also begins to occupy the space. As the sun touches a surface the viewer engages with that surface, is compelled to do so by its material and formal qualities. The touch of the sun is a substitute for the touch of the viewer: the touch of light is not just about the visual it is also about the textural and the formal. In *Sunhouse* and *Leading Light* following the sun is a 'distracted' move. Distraction implies that the experience occurs over time, not as a single, instantaneous view, but an accretion of subtle, almost unnoticed, peripheral aspects of

the space. Light moving around a room over several hours forms a key part of the experience of that space, but is too gradual to consciously register. In *Sunhouse* and *Leading Light*, sunlight integrates the viewer with the space through haptic and peripheral vision. In *Leading Light*, this contrasts with the sequence of artificial light which focuses vision and diminishes spatial experience. Once the sunlight has left the room so too has the viewer; the association with the sunlight is not replaced by an association with the artificial light, and as Pallasmaa (2012: 17) suggests, while 'peripheral vision integrates us with space, [...] focused vision pushes us out of the space'. In *Sunhouse*, the sun, and therefore the viewer, remain in the space until the final frame of the main body of the film. It is in the coda, bringing together temporal fragments compressed to a single moment, that the viewer is led (rather than pushed) out of the space.

While *Leading Light* was a precedent for the subject and structure of my film, *Sunhouse* goes beyond Smith's film by moving from a single room to a whole house, and uses structure and form to explore some of the precise mechanics of the behaviour of the sun – it serves as a form of elegant heliodon. Finally, in *Sunhouse* (unlike *Leading Light*) the poetics of space touched by sunlight are never fractured by the introduction of artificial light, and a more expansive view of any space is denied. The gentle extrication of the viewer by the coda allows a fragment of the beauty of the sunlight to remain. In both pieces, this interplay of light with space with viewer does what no static orthographic drawing can do and invites a direct temporal and haptic engagement with the tectonics of the space.

Transdisciplinary practice

The transdisciplinary nature of this practice-based research allows my work to traverse the territories of architecture and experimental filmmaking, and to be informed by and inform practices in each, without being constrained by the limits of either. The artefacts of this practice can be located in either discipline, occupy both simultaneously, or can remain in that 'third space', in unique *undisciplined* (Linder 2005: 13, 15; Bremner and Rodgers 2013: 12) forms. Where the outputs of the practice and research in different media is situated at any given moment, in relation to these separate disciplines, depends towards to whom the research is framed or directed.

To disseminate my research, I reframe the outputs to suit the contexts and discourses of each discipline. When my writing is disseminated through architectural publications, it is framed (and contained) as being within architecture. My practice work is screened at experimental film festivals, and so is framed (and contained) as art practice. Occasionally, the work is shown at architecturally focussed screening events, as it was at several Australian *Expanded Architecture* screenings, and in the *Architect's Journal* 'Light Shots' competition, alongside work of architects and artist filmmakers alike. In this space, the hybrid nature of the work is preserved.

Through the course of my developing practice my disciplinary position has shifted emphasis, with at times a greater focus on one of the two disciplines, but the work has continuously engaged with the subject of architecture, in particular, forming an exploration of the temporal qualities of architecture through the use of artists' film and video. In the undertaking of the practice, in the processes of making that I employ and in the positioning of myself as practitioner, the concept of transdisciplinarity allows me to operate *between* disciplines, from a position which mitigates the discomfort I feel when trying to situate my practice within a single discipline. Within this practice I use strategies from my grounding in two disciplines – I operate in-part as both architect and film artist. However, it may be more appropriate to suggest that in the undertaking of this hybrid practice, I am neither operating as architect nor as artist, but as a hybrid practitioner, in a 'third space' space between disciplines.

Two key aims of this practice-based research are to create and define a hybrid practice of 'architectural moving drawing', through which architectural concerns may be expressed and analysed; and to establish new transdisciplinary methodologies and theoretical frameworks for architectural and

artists' film. For the artist, the discipline of architecture influences their art practice through subject, including ordinary, everyday, or 'banal' spaces, and draws upon the conventions, techniques and theories of architectural representation. The application of architectural analysis to filmmaking practice provides new modes of reading artists' film, and in turn, new ways of producing such films.

For the architect, the use of techniques originating from structural film offers the possibility of 'drawing' time as well as space. The qualities of 'distracted' spatial experience, of peripheral rather than focused vision, can be embedded within architectural moving drawings. Through simplicity of construction and sparseness of action, an architectural moving drawing can express the powerful nature of otherwise subtle architectural qualities, and their normally concealed temporal dimensions. Architects can make architectural moving drawings with a smartphone and a home computer and, if undertaken as a continuation of their *drawing* practice, this may complement their existing repertoire of representational tools. The architectural moving drawing provides architects with a model for architectural moving image practices through which the exploration of the temporal as well as spatial becomes possible.

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¹ In forming an opposition to forms of 'narrative', structural filmmakers were specifically referring to *human* narrative found within the drama film. Other forms of narrative (such as architectural narrative) were not included in this term.

² This is not to say that *no* works of narrative, dramatic cinema foreground architecture – Peter Greenaway's films *Belly of an Architect* (1987) and *A Draftsman's Contract* (1982) both undertake a series of architectural studies as key parts of the film content. However, dramatic cinema of this nature is uncommon.

³ For a more detailed presentation of the following films see (Suess 2014: 251-256)

⁴ Within painting the phrase *staffage* is the inclusion of 'the anonymous personnel of everyday life' (Ling 1977: 15)

⁵ See <http://www.eleanorsuess.com/Film/FilmMain.html>

⁶ Contrasting with quantitative techniques which, while providing verifiable data on lux levels at different times of day and year, do not communicate or record the architectural qualities which result from the light itself.

⁷ Patrick Keiller (2002: 38) suggests that 'the space of a film is assembled from fragments [... therefore it] is always a fiction, even when the film is a documentary.'