

Peter Kubelka's *Arnulf Rainer*

“You have the possibility to give light a dimension in time” (Mekas 1978: 103).

In this essay I will look at Peter Kubelka's classic film *Arnulf Rainer* (6 1/2 minutes, black and white, optical sound, 35mm, 1960) in terms of the way it can be seen to operate around a number of dichotomies, between dark and light and black and white, sound and image, balance and asymmetry, film-strip and projection, on-screen and in-brain, work and context. I will also consider some of the wider issues that arise about lightness and darkness generally, and about the scope and purpose of formal analysis.

Kubelka has, famously, made a handful of mostly very short films in a long career. In 1966, when the interview took place from which the above quote was taken, he had produced, since 1952, an average of two minutes of film per year. Since then two more titles have appeared, bringing the sum duration of his oeuvre to just under an hour. Kubelka's films are notable for their being intricately structured and for their extreme concentration and exactitude of form. Every frame of the minute-long *Schwechater* (1958) for example, is ordered according to complex repetitive sequences based on numerical procedures.

Arnulf Rainer is the third of Kubelka's “metrical” films (his own designation) after *Adebar* (1957) and *Schwechater* (1958). It is composed of equal amounts of black and white and sound and silence. The images are organised as rhythmic clusters of black and white frames, interspersed with longer sections of either black or white. The sound is similarly composed. Sound and image are juxtaposed in various ways. The film is both proto-cinematic and fully formed, simple in means yet complex in its effects (less is more in a specifically filmic way), conceptually sophisticated and powerfully visceral: The film was made in 35mm and is best seen in that format, in order that the full power of the picture and sound may be experienced: ‘Oh, it was fantastic in Los Angeles [...] They had a screen as large as a house, and they had these powerful loudspeakers. The sound was like Niagara Falls, so loud [...] and the lights, so strong’ (Mekas, 1978: 106).

Essence and Appearances.

The opening quote evokes William C Wees's formulation of experimental film in the title of his book: "Light Moving in Time" (Wees: 1992), yet for Kubelka, cinema is emphatically not movement: 'It can give the illusion of movement. Cinema is the quick projection of light impulses. These light impulses can be shaped when you put the film before the lamp -on the screen you can shape it' (Mekas 1978: 103). This understanding of film as discontinuous and essentially static underpins *Arnulf Rainer*'s rationale. As in Eisenstein's advocacy of filmic, as opposed to filmed movement, Kubelka takes the clash of shots proposed by Eisenstein's theories of montage to their furthest possible extreme: white shots next to black shots next to white shots or rather, in this case, white and black frames juxtaposed, since the frame is the basic unit of construction. Thus the distinction between shot and frame is dissolved, since every frame is a shot. This is also true of most of Kubelka's other films, even those that have shots in the conventional sense, since they are almost all subject to frame-by-frame forms of organisation. In this way Kubelka gets us to see the whole of *Arnulf Rainer* as formed from chains of elements of equal value, elements that in most films invisibly, and thus subserviently, support larger compounds – shots- the perception of which requires the disappearance of those individual frames as such.

Kubelka also foregrounds the way light can be experienced as pure duration if it is contextualised in the way it is in a film like *Arnulf Rainer*. Here the alternation between black, white, and black and white flicker rhythms allows light to be experienced as time. In shots lasting more than a fraction of a second, white is bracketed by black, marked-off as the presence of duration, and articulated within that duration both by the flicker of the projector at 24 frames per second -projector flicker becomes considerably more noticeable when clear film is running through it- and by the marks and scratches that inevitably accumulate on the film and which are animated by its passage through the projector. Thus the stasis that is the true state of film is articulated by the illusory movements generated in the eye by the rapid presentation of successive empty frames. In other words, illusory movement in the service of true stasis.

Flicker.

Although *Arnulf Rainer* may at times look like a flicker film, it is not. According to P. Adams Sitney:

“For the structural filmmakers who use the flicker form, it is the vehicle for the attainment of subtle distinctions of cinematic stasis in the midst of extreme speed which can be presented so as to generate both psychological and apperceptive reactions in its spectators. Although Kubelka is not closing out the possibility of such reactions, he created his film as both a definition of cinema and a generator of rhythmical ecstasy’ (Sitney 2002: 288).

In these crucial respects, then, *Arnulf Rainer* is very different to a film like Tony Conrad’s *The Flicker* (1966), where long sections of regularly alternating black and clear frames –flicker- are permuted step by step, primarily in order to stimulate a range of psychological reactions in the viewer. In *Arnulf Rainer*, relatively short sections of rhythmically fluctuating flicker are interspersed with sections of plain black or white. The most basic and paradigmatic form of flicker, alternating single frames of black and clear, occurs only briefly at three or four points. Most of the rhythms are more complex than this. The film begins with a pattern of frames as follows: 1 black, 1 white, 2 black, 1 white, 3 black, 1 white, 2 black, 1 white, 1 black, 1 white, etc. Most of the patterns follow similarly fluctuating relationships which will often expand and contract in a kind of simultaneous contrary motion, for example: 3 black, 4 white, 2 black, 6 white, 1 black, 8 white.

The experience is of a set of permutations of possible combinations of black and white frames, sound and silence, based on an imperceptible unit of measure. It does not matter that the film’s metrical order is imperceptible. What matters is that we experience the film as working through the possible combinations of its four components. These could be said to correspond to all possible kinds of shot within film. Thus we are invited to see a film as a matrix of possibilities circumscribed by its shape and (technological) limitations.

Black and White, Dark and Light.

The symmetrical relationship between light and dark frames implied in the use of the terms black and white is actually asymmetrical in several respects. Firstly, the black frames hold back the light from the projector, so that even if there are pinholes in the film's emulsion, the sense of its movement through the projector and its experience as material is diminished. At the same time, the abrupt darkening of the highly reflective screen serves to darken the auditorium as a whole. This darkness in turn facilitates the awareness of strong after-images generated by the white frames. The black frames present a purer absence, yet one in which the glowing afterimage of the screen/frame hovers over the varying perceptible rectangle of the frame on screen. (It is at these moments that the mind seems to meet what is on the screen halfway, since what is in the eye –the afterimage created by the white sections burning a rectangle on the retina- variously interacts with, surrenders to, obliterates what is on the screen). However, insofar as there is an absence of image, one could say that the experience of pure duration is also non-filmic, or rather, that it is only the context in which these pauses/durations are experienced that marks them as cinematic. In other words there is, at these moments, a sharp divide between the nature of the experience and its context.

The white frames, actually clear frames that allow the projector beam to shine through relatively unimpeded onto the white screen, reveal every slight imperfection in the film's surface. Every scratch refracts the projector light, which is already refracted by its passage through a medium, foregrounding the passage of time and the projector's flicker. The marks on clear celluloid replace the photographic image (which has, as it were, bleached into light). They remind us only of the celluloid in the absence of the image. They are not an interruption like a scratch on a normal image, but, in the absence of an image, isolate the material decay of the filmstrip: the scratched white surface becomes a new, entropic index, in a different way to the way that scratches on black frames function as imperfect black latent images. Insofar as white frames expose the medium in its manner of operation, they reduce the medium to its technology, although eventually the accumulation of scratches will become as much an image, a record of the film's projections, as its negation.

That the bending of light can produce an effect that is as strong in its way as the

blocking of light by the black frames seems to contradict a common sense idea of light strength and behaviour: how can bending light be a form of withholding such that it forms a mark that can be as dark as a black line drawn or created photographically: so that bent light and withheld light create an equally strong effect? The effect thus draws attention to the specificity of movie film as light projected through a medium whose material characteristics affect the nature of the light hitting the screen. In this sense different base media; nitrate, acetate, polyester, as well as the emulsion structure and type, will deflect and scatter the light differently (hence the film buff's enthusiasm for Technicolor inks on a (explosive) nitrate base for its particular qualities of colour and light diffusion). Video light, by contrast, emanates unimpeded from its sources. (Both in its manner of organisation and generation at its source, and in the way in which colour is mixed in the eye, it is more akin to pointillist painting than it is to film).

Like the black parts of the film, the white parts also have an environmental effect. The light reflecting off the screen illuminates strongly the auditorium and the people sitting in it, turning the film into a kind of installation (and evoking Malcolm LeGrice's emblematically reflexive first film *Castle 1* (1966), in which a light bulb, hanging by the side of the screen on which found footage is projected, is switched on and off periodically, illuminating the audience and partially obliterating the image, displacing and mixing projected light with the unmediated [though also flickering] light of the bulb).

There are some other asymmetries between black and white, and between dark and light, which arise here. Darkness exists in nature in a way that lightness does not. Absolute dark can be experienced in controlled environments or remote parts of the world in a way that absolute light cannot. In fact there is no absolute lightness, or brightness, in the way there can be absolute darkness. Light can be as bright as the light emanating from the brightest star: unimaginably intense and destructive. Absolute darkness potentially conceals, lightness reveals, but at a certain intensity obliterates. In most films, the absence of light is portentous. The blackness holds something back, literally in a temporal sense, by coming between the moment and the image to come, but also in a spatial sense: the blackness holds back the light which is required to produce an image and in this sense that light is always potential image in a way that blackness is not. The pinholes in a black period/pause emphasise this sense of potential, of light, and hence

image, held back, held in waiting. Conversely, the flecks and scratches on white illuminate the current imperfections in the medium.

The apparatus is working within its capacity when the screen is dark, whereas whiteness is always limited by the specifications of the projector bulb: to see a white screen is to see that limit revealed, to glimpse an aspect of the technology in its nakedness. In another sense, though, when an image dissolves to white (there is a technical description, but no special term equivalent to 'fade' to describe this transition) there is the sense that the light leaves the image behind, obliterates it on its way to infinite brightness.

There is, finally, an imbalance in the way we can see the film as composed of equal numbers of black and white frames. We never experience black and white flicker as being of equal intensity, because the exposure of the retina to white frames bleaches the rhodopsin pigment in the receptors in the eye, rendering the eye insensitive to immediately subsequent stimulation. The brighter the light, the longer the receptors take to recover their sensitivity. This means that when we see a black frame after a white one, we cannot experience it as fully as the white because the eye has not had time to recover from the saturation caused by the white frame. This affects the sense of rhythmic pattern discernible in the sequences that make up *Arnulf Rainer*.

Sound versus Image, Sound and Silence.

Arnulf Rainer's soundtrack consists of white noise and silence that share the same structural patterns as the picture: sound, silence, and rhythmic patterns of sound and silence. The white noise contains all the audible frequencies possible on a 35mm optical film soundtrack –from around 30 Hertz to around 18 KHertz, slightly less than the full range of human hearing- and this corresponds to the way that white light contains all the visible colours of the spectrum (1). These sounds and silences are sometimes in sync with the picture, sometimes not. Sometimes the same pattern of frames is seen then heard, and sometimes vice versa. Sometimes one visual pattern will be followed by a contrasting audio one. For example, the visual pattern of 3 black, 4 white, 2 black, 6 white, 1 black, 8 white described above is followed by a stretch of black with a sound pattern as follows: 4

frames sound, 2 silent, 2 sound, 2 silent etc. The film stresses the absolutely contrasting nature of the experience of picture and sound in film, particularly where visual rhythms are immediately followed by their auditory duplicates.

The discrepancy between image and sound perception arises from the fact that as a photochemical process, vision is inherently slower than the mechanical apparatus in the auditory system. Thus the sound rhythms in the film are bold, insistent and fully discernible, in contrast to the visual ones, where the experience of identical patterns is inflected by the interference of after-images, the temporary partial blindness caused by the exposure to white frames etc.

When audio rhythms are followed by their visual counterpart, the audio serves as a kind of guide to the visual, whose rhythmic patterns are often hard to follow for the reasons outlined above. In their punchy clarity, the audio rhythms emphasise, by contrast, the subtle, inflected character of the visual sequences. The truth of these sequences can never be fixed. They are fundamentally unstable; profoundly subjective in that what they are is defined by the way they are experienced. In every different pattern of black and white frames, the character of the instability is different, whereas the different sound rhythms are uniformly discernible. The subjective character of the visual rhythms can be contrasted with the factuality of the filmstrip when it is examined on a bench. It is merely black and white frames: unambiguously describable, simple, reproducible. In their contrasting reality, the two establish distinct relationships to their spectators, and demonstrate, in a hypostatized form, the dualism of film: as material and as experience.

The dichotomy between the frames as determinate when viewed on a bench and indeterminate when experienced sequentially at 24 frames per second is discussed further below. However, before moving on to that, it is worth mentioning one respect in which sound and picture function in a similar, rather than dissimilar, manner. As mentioned above, the black and white frames have an environmental effect in the auditorium in which the film is shown, darkening or lightening, filling and thus defining, the whole space. The sound also fills the space, articulating its dimensions and animating its resonant frequencies, turning the box of the auditorium into a kind of performance space and the film, perhaps uniquely, into a time-based installation. Most movies try to mimic

the familiarity of the experience in everyday life of the contrast between narrowly focused vision and environmentally dispersed sound, a development facilitated by the use of Dolby Stereo, that makes explicit use of off-screen sound to create a dispersed, immersive soundscape. *Arnulf Rainer* collapses this distinction.

Number crunching and Phenomena.

‘The whole film is interwoven with ...transfers of meter from sound to picture, or the opposite, in phrases that may be (according to Kubelka’s notes) 288, 192, 144, 96, 72, 48, 36, 24, 18, 16, 12, 9,8,6, 4, or 2 frames in duration. There are 16 sets of phrases, each one 576 frames long (24 seconds). Within each of the 16 sections except one, the metrical patterns accelerate their changes as the phrase move from the longest to the shortest in fixed stages. Since there are no distinct, visible boundaries between the sections or the phrases inside the sections, this structure is vaguely perceived as a seemingly endless series of irregular accelerations.’ (Sitney, 2002: 287).

Although sequences are separated by short sections of white or black, at which point the aforementioned rectangular after-images appear, it is hard, as Sitney suggests, to discern the numerical structure of the film. This has a lot to do with the fact that the material can be divided up according to a large number of possible equal divisions. All of the above numbers down to 24 can be divided equally by 24, down to 96 can be divided by 16, down to 8 by 8 (excluding 36, 18 and 12), down to 6 by 3 (excluding 16) and down to 2 by 2. These divisions produce other self-referring or significant numbers. For example, 144 divided by 16 equals 9, one of the lower numbers in Kubelka’s list, and other divisions yield 24, 12 and 16, numbers that refer to filming and projection speeds, seconds and simple fractions thereof. However, as Sitney also notes, many of the film’s sections appear to be composed of units that could not easily be experienced as regular. At one such point, the film can be divided into eight-frame segments, each one of which has a different disposition of one black and seven clear frames. When these are seen as a continuous flow they appear as white punctuated by random occurrences of a single black frame (perceptible as little more than a quasi-blink, a negative interference, let alone as rhythmic punctuation).

These perceptions are compounded by the fact that the sound is often out of sync

with the picture, although what “sync” means here is brought into question by the film. Since there is no necessary, or necessarily fixed, relationship between white and sound, say, or black and silence, there are no grounds for saying that the sound is in or out of sync at any point in the film. However, the dialectic between a stretch of white, synchronised with a burst of continuous sound, followed by a stretch of black with a rhythmic sound pattern, compounds the sense of local asymmetry in the film.

The analytical urge that a film like *Arnulf Rainer* stimulates serves precisely to make the analyst question that urge, for it is immediately apparent that a numerical analysis yields nothing semantic: there are no hidden meanings, only effects, phenomena, and these cannot be amplified or clarified by further analysis, unless analysis were able to generate further phenomena not generated by the film itself.

The urge to analyse is invited partly because the film is its own score: all other things being equal, it could be reproduced exactly by viewing it on a light box and copying it frame by frame. This encourages the idea that the structure is simply meant to be (if it could be) read-off from the work, an attitude that leads away from the work as an experience with effects, to one in which the work is reduced to its compositional structure.

In watching the film, one clearly senses order, rhythms, but this does not imply that a frame by frame analysis of its structure will yield a deeper level of experience, even less a deeper understanding of the work: what could understanding mean here? Thus *Arnulf Rainer* also raises the question of what it means to understand a film, at least a film like this. As in some, (but not all) serial music, the ordering procedures produce a sense of coherence when the work is experienced (rhythmical sequences interspersed with periods of plain black or white) but this emphatically does not mean that an understanding of the structure will focus that sense of coherence, even less yield the work’s meaning: what could it be said to “mean”(outside of itself at least)?

The film thereby constitutes a rejection, in extreme form, of the wider practice of analysing a film shot-by-shot in order to discover how and what it really means. This is the procedure whereby small parts of a film are watched repeatedly in order to understand the structure by breaking it down. Such an analysis, while useful for filmmakers wishing to understand the nuts and bolts of film grammar, the “how” of film’s affects, overlooks

the (ideological) “what” of film’s effects as seen in its intended form, at 24 frames per second for two hours, concealed beneath eye-line matches, action cutting, speech crossing picture cuts etc. Shot by shot analysis academicises the reception and study of cinema. While it may lead to an understanding of how ideological effects are constructed, it does not address those effects per se. Instead of responding to the ideological effects of a film, a response that may then lead to cultural-political reaction, analysis takes place in isolation from the political culture of which it is a part, and in which it has its effects. It thus takes the place of politico-cultural response and action. By its extremity of form, its radical separation of means from effects, *Arnulf Rainer* resists such an analysis, for it is clear that the construction of the film, examined in isolation, cannot disclose what the film does, and that therefore such an examination is futile. Indeed, it is precisely by this evident futility that the film signals its opposition to such critical practices.

It may be coincidence that *Arnulf Rainer* was made in the same “high Modernist” moment as Frank Stella’s black paintings, with which it shares certain obvious features. However, while Stella’s paintings constitute one kind of elegantly reductive (end) point in painting, *Arnulf Rainer* is a kind of new beginning for film (2). While Stella’s paintings are what they are, what they appear to be, and assert a cool distance from their observers, who, to this extent at least, are posited as other to the work, *Arnulf Rainer*, develops a complex, indeterminate, interactive relationship with its spectator through the unpredictable phenomena it generates. Questions of knowledge, understanding and experience are all raised in the process. At the same time the film proposes a kind of return to the beginnings of filmmaking in order to propose a radically different course for the medium, far away from the cinema, even as it also references and figures cinema in its organisation of frames/shots composed of patterns of sound and silence, light and dark, in time but not moving.

Footnotes.

1. 1. Just as the 35mm projected picture will be brighter and more forceful than a 16mm projection, so the frequency spectrum of 35mm white noise is considerably wider than it is for 16mm. (see Kubelka’s remarks in paragraph two)

2. 2. It's also important to mention Kubelka's compatriot and near contemporary Kurt Kren, who was also making similarly complex and highly organised short films at the same time.

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Peter Kubelka's Metric Films and *Dichtung und Wahrheit*

Adebar (1957). 35mm, B&W, sound, 1-1/2 min

Schwechater (1958). 16mm, b&w, sound, 1 min.

Arnulf Rainer (1960). 35mm, 16mm, b&w, sound, 6-1/2 min.

Dichtung und Wahrheit (Poetry and Truth) (2003). 35mm, color, silent, 13 min.

Peter Kubelka's Metaphoric Films

Mosaik Im Vertrauen (Mosaic in Confidence) (1954/55). 35mm, 16mm, color and b&w, sound, 16-1/2 min.

Unsere Afrikareise (Our Trip to Africa) (1961-66). 16mm, color, sound, 12-1/2 min.

Pause! (1977). 16mm, color, sound, 11-3/4 min.