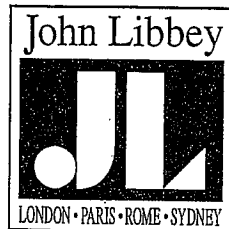


# A Reader in Animation Studies

*Edited by Jayne Pilling*

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## Restoring the aesthetics of early abstract films

*William Moritz*

Critical writing about the abstract films of the 1920s is generally 'bogged down' with the question of primacy. Hans Richter, who supplied information to most early film historians, stressed the point that his own films were the *first* abstract, experimental films ever made – along with Viking Eggeling's *Diagonal Symphony* – which Richter dated 1919 or 1921, even in film titles that he had made during the 1950s and 1960s. He consistently suggested that Walther Ruttmann and Oskar Fischinger began filmmaking later, that Fischinger was a pupil and assistant of Ruttmann's, and furthermore insisted that Ruttmann was an artistic fraud whose films lacked a true sense of rhythm or harmony. Following the publication of Louise O'Konor's superb biographical study of Eggeling<sup>1</sup> and Wulf Herzogenrath's collected research for the 1977 *Film als Film* exhibit at the Kölnischer Kunstverein, it became clear that Richter was lying.

In late 1920 or early 1921, Richter and Eggeling had UFA studio technicians animate (or perhaps just shoot) some tests of their scroll drawings. Richter's test strip, about 30 seconds long (at silent speed), he named *Film is Rhythm* and showed it publicly, and by his own account<sup>2</sup> this test strip was so short that one critic in Paris missed the whole thing because he took off his glasses to clean them and the film ended before he had put them back on. Werner Graeff<sup>3</sup> recalls how Richter, in 1922, had still not realised that the film-frame format was basically horizontal instead of the vertical imagery in Richter's drawings – and how he helped Richter to shoot some additional seconds of footage (also disappointing and unsatisfactory) which Richter added to *Film is Rhythm* and showed this now one-minute-long 'film' at the famous May 1925 Absolute Film Show in Berlin. By October 1927, after his marriage to Erna Niemeyer (who had been Eggeling's animator for *Diagonal Symphony*), Richter had acquired another 30 seconds of film, now titled simply *Rhythm*, for a London Film Society program. This approximately 90-second fragment by Richter's own admission corresponds to the middle section of the erroneously titled *Rhythm 23*, while the rest of *Rhythm 23* and the so-called *Rhythm 21* were shot in late 1927 and early 1928 by Erna Niemeyer while preparing the *Film Study* (which Richter habitually dates 1926, despite the Film Society's

21 October 1928 program notes indicating that this new film was completed after his 'less finished work' shown the previous year).

To further correct Richter's misinformation, Eggeling's first UFA animation tests, circa 1920–21 from his *Horizontal-Vertical Orchestra*, seemed totally unsatisfactory to him and he appears not to have shown this film in public. Eggeling tried several more *Horizontal-Vertical Orchestra* tests during 1922 and 1923, but they also proved inadequate compared to his vision of how they should proceed in time – his complex imagery on the scrolls still constituted a storyboard rather than viable animation drawings. When the young Bauhaus student Erna Niemeyer began to animate his *Diagonal Symphony* scrolls in 1923, he appears to have abandoned the *Horizontal-Vertical Orchestra* entirely. Erna Niemeyer finished animating *Diagonal Symphony* in the fall of 1924 and the film was shown publicly only in May 1925 at the Absolute Film Show, just days before Eggeling's death.

With the discovery in the early 1980s of a partial print of Ruttmann's *Light-Play, Opus No. 1*, it became clear why Richter was lying. Unlike both Eggeling and Richter, Ruttmann had actually mastered filmmaking and animation techniques – something, by the way, which Richter would never master because he had to rely on camera operators, editors and even projectionists all his life since he found mechanical details too complex to deal with. Ruttmann's *Opus No. 1* proves to be vivid, cogent, dynamic and rhythmic – all qualities lacking aesthetically in Richter's own films, which consequently needed the special pleading of 'first, early, primitive' to make them worth considering. Furthermore, Ruttmann had undeniably<sup>4</sup> mastered film technique (not just scroll painting) by 1919, shot and tinted his *Opus No. 1* in 1920 and turned the film over to composer Max Butting to prepare the closely timed musical score that was rehearsed and performed in public before a paying audience at a regular cinema in April 1921. With his pioneer status impugned, Richter's artistic stature as a filmmaker has also crumbled – and we will hear little more of him in this paper. The integrity of Eggeling's and Ruttmann's films, however, remains irreproachable. Yet, during the past 20 years, little is written to suggest what aesthetic qualities or issues might be inherent in their styles of animation. I propose to scrutinise these two film texts, Ruttmann's *Opus No. 1* and Eggeling's *Diagonal Symphony*, for that very purpose here.

Both of these animators were initially painters. Ruttmann began studying architecture at age nineteen in Zurich in 1906, but switched to painting and music in 1909, moving to Munich where he became friends with Klee, Feininger and Corinth, among others. He supported himself as an artist before World War I, when he was drafted and sent to the Russian front where he, as a pacifist and a gentle man, suffered great emotional distress before his release from service as unfit early in 1917. He continued to make expressionistic graphics, which grew gradually more simplified and refined as he strove to capture the essence of things without the ephemera. Although the military service left him a broken man physically, his spiritual energy seemed renewed and concentrated and by the end of 1917 he was painting wholly abstract canvases of great power. By late 1918, he renounced the painting of still images in favour of animating abstract imagery that could develop in space as well as time, which he saw as the art form of the future.

His first animations for *Opus No. 1* were painted with oil paints on glass plates beneath an animation camera, shooting a frame after each brush stroke or each alteration because the wet paint could be wiped away or modified quite easily. He later combined this with geometric cut-outs on a separate layer of glass. Ruttmann had met the composer

Max Butting during their school days in Munich and Ruttmann himself played the cello in the string quintet that Butting wrote for the premiere of *Opus No. 1*.

I mentioned that a partial print of *Opus No. 1* had been discovered. In 1976, Enno Patalas of the Filmmuseum in Munich requested Lang and Murnau footage from the Moscow archives for his superb restorations of *Metropolis* and *Nosferatu*. One reel they sent coincidentally contained extensive fragments of Ruttmann's *Opus No. 1*, along with pieces of other Ruttmann *Opus* films and some advertising or special effects footage. The Moscow fragments of *Opus No. 1* were from a positive-print release that had been tinted; the colours seemed faded in some cases and particularly scenes that ought to be yellow were in bad condition or missing. It seems possible to me that this one positive print of *Light-Play Opus No. 1* could represent, actually, the only copy that ever existed. This print is not only tinted but also toned and then certain figures are hand-tinted frame by frame, so that there are three and four colours in some sequences. This means that there would never have been one simple, consistent negative. Those scenes that would have been toned blue and tinted red, for example, would have to be printed separately in the laboratory from a sequence that was toned red and tinted yellow. And, if a given movement (like a musical phrase) was to appear once tinted blue, once tinted violet and once tinted orange (as indeed some are), the same black-and-white negative original would simply be printed three times at the lab with a different tint or tone for each pass. This means that Ruttmann would have had 50 or more small fragments of negative from which the original 1921 print of *Opus No. 1* was printed, and each individual projection print, however many there were, would have been spliced together from those fragments by hand, by Ruttmann, who would have done the hand-tinting on certain shapes at the same time.

*Opus No. 1* was not shown much after 1921 and was not included in the Absolute Film Show of May 1925, although his *Opus No. 2*, *Opus No. 3* and *Opus No. 4*, which use only general 'mood' tinting and have no specific soundtrack, were. Thus, some commentators have assumed that because the style of the film was too primitive and outmoded compared with the more painterly subtlety of *Opus No. 2* and *Opus No. 3*, Ruttmann himself had withdrawn it. I suspect that quite the opposite might have been true; rather, *Opus No. 1* was too complex, too difficult to 'perform', since the colours and music are aesthetically integral to the experience of Ruttmann's first film. Although the images are beautiful and dynamic without the music, the sound counterpoint adds a significant perspective to the imagery which, after seeing *Opus No. 1* several times with the original music in 'editions' by Lothar Prox, Berndt Heller and myself, should not really be lost. In the musical score of Butting's string quintet (now in the Film Museum in Stockholm), Ruttmann has not only drawn many colour illustrations for the musicians to synchronise with, but he has also provided exacting metronome and timing indications for each musical phrase, so we know how precise and how important the music was to the filmmaker. The difficulty, however, of arranging a projection of a thirteen-minute film with a live string quintet (with considerable rehearsal time, during which the precious hand-made print might be damaged) must have proved so daunting that Ruttmann quickly resigned himself to the fact that it could not soon be performed again in its integral form.

The Russian copy, although it is shorter by about three minutes from the original running time, does not seem to lack any specific *type* of imagery; rather, it is merely missing repetitions (often in alternate colours) of an image that exists at least once. Therefore, thanks to the exacting instructions of Ruttmann in the Butting sheet-music

(colour indication, numbers of repetitions and timings) I was able to reconstruct *Opus No. 1* fairly accurately. The missing pieces might have decomposed due to chemicals in particular dyes, or they could even have been cut out by Ruttmann himself to use them in two commercials he made in 1922, *The Winner* (Der Sieger) for Excelsior automobile tires and *The Miracle* (Das Wunder) for Kantorowicz liqueur. In those two films, we see not only examples of Ruttmann's style of tinting and toning, but also specific images 'borrowed' from *Opus No. 1* – possibly reprinted from the negative, but also possibly cut from a positive print, if Ruttmann faced a tight deadline.

As we watch Ruttmann's *Opus No. 1* in its restored colour version with the original music, several aesthetic principles emerge. Ruttmann consciously refuses the illusion of depth: his abstract film is non-representational in this sense, just as John Whitney and other later non-objective animators would reject the representational illusion of perspective. *Opus No. 1* is overtly a painting, but a painting that moves, a painting in time as well as space. Like a classical piece of concert music, the film falls into three movements with black 'visual silences' between them. Colour also plays an important role in structuring the film, sometimes to differentiate certain shapes, movements or repetitions, but sometimes to establish general mood or atmosphere, as in the long all-blue 'nocturne' section of the second movement that yields suddenly to a yellow-based 'scherzo'. Ruttmann denies any colour/tone correspondence (which fascinated such people as the Russian composer Scriabin or the Swiss animator Charles Blanc-Gatti); rather, he uses the colour as an element in choreography, almost like stage lighting, which reinforces another central aesthetic analogy: for practical purposes, *Opus No. 1* is an expressionistic drama. The film frame, like the theatrical proscenium, encloses entrances and exits, creates conflicts between round shapes and pointed shapes and effects counterpoised balances of rhythmic gestures – all of which is emphasised by *scale* (even as it is in Fischinger's black-and-white *Studies*) when we remember that this 35 mm film was designed to be seen on a 50-foot square screen, with figures streaking across 20-foot trajectories that cause the viewer to turn his or her head, instead of the six-inch micro-movements we see on video monitors or the two-foot action on many 16 mm projections.

Music and colour both provide essential elements in this expressionistic drama. Sometimes the contrast between two differently coloured shapes heightens their tension, while at other times a confrontation between shapes of the same colour can make us concentrate on their formal action. Sometimes the music shrouds the simple geometric shapes in portentous or pensive moods (as in the opening movement), while other times it undercuts the piercing and crushing of the seemingly aggressive shapes with a sensuous waltz (as in the second movement). And lest, by the way, you doubt the 'aggressive' or 'sensuous' intentions of the pointed shapes and the softly curved shapes, remember the two advertising films *The Winner* and *The Miracle* in which evil triangles puncture round tires and the amorous overtures of the lovers find expression in the caresses of two soft crescents.

Eggeling also came to filmmaking with a strong influence of music (he maintained a vital friendship with composer Busoni) as well as painting. He was a key member of the Dada group, one of the creators of the new art, the new universal language of the future which would be needed when the Dadaists had destroyed conventional bourgeois responses to traditional art. Eggeling took this role as an art-prophet very seriously and hoped to establish a Theory and Counterpoint of Visual Elements, which would provide a firm theoretical basis for the composition of non-objective imagery in movement,

development and time frame. He meant to annex the wisdom of auditory music (which had accumulated over thousands of years of experimentation and accretion) by applying, through analogy, its basic principles of parallel and antithetical arrangements to geometric elements. Eggeling requested that his film be seen in silence (probably the first filmmaker to do so) so that the visual harmonies might be appreciated in their own right and not thought to be 'illustrations' of the accompanying auditory music.

The results of some seven or eight years of concentrated research, experimentation and composition that we see in his *Diagonal Symphony* might at first seem simple, but grow more fascinating the closer we study the film. Eggeling also treats the film screen as an overt field for painting, not for representation or illusion. For Eggeling, the musical analogy is all important and the screen area remains self-contained, with no 'entrances' or 'exits' implying a reality outside this frame. Eschewing the notion, as good music theoreticians do, that there are 'high' and 'low' notes (the intensity of vibration has no direction), Eggeling balances his forms around the centre of the screen. Given that the film frame was the space of a concert hall, available to be filled with sound, Eggeling posits a master shape, which nearly fills the film frame and contains dozens of intricate details (interlocking curves and sharp angles, parallel comb-like repetitive forms and solid surfaces), which seems to correspond to the 'ensemble' of an orchestra, with all the instruments playing together, each with its distinct timbre, tone, texture or melodic line that blends into the whole sound of the music. All of the imagery and action in the film is derived from this composite master-shape by extracting various figurative elements (like 'solos') that perform motions commensurate with their form, sometimes in combinations (like 'inversions', 'variations', 'fugues') with one another, or with the master itself. Figures sometimes grow larger and bolder (as if 'louder' in volume) and occasionally develop complex interlocking patterns; for example, the pairs of diagonal 'combs', rounded and triangulated, of which the strands in graduated lengths seem like notes in a chord, that, facing each other, alternate in antithesis, one growing larger while the other grows smaller, one sliding in one direction while the other slides in the opposite, and so on.

Primarily, however, the figures appear and disappear (like the attack and decay of musical sounds). This might be, of course, also a manifestation of the animation process – Eggeling drew some hundred basic variations on the master shape (mostly on scrolls of ten to twenty images), which Erna Niemeyer traced onto tin foil, delicately cut them out from the foil, then animated them under the camera by carefully slicing away minute strips, shooting a frame after each slice; and, planning to shoot in reverse order (possibly with the orientation of the artwork-to-camera turned upside down so that the resulting filmstrip could be simply spliced heads to tails, thus reversing the direction of movement) for a shape to 'grow' or 'appear'. This cut tin foil might be considered a limitation, since its use did not really constitute a 'full' animation in the sense of Fischinger's layered cels for *Allegretto* and *Radio Dynamics*. But, Eggeling knew Ruttmann and Fischinger, he visited the UFA animation studio and knew that Erna Niemeyer could have done a more complex, fuller type of animation. I believe that Eggeling's limited animation was not a technological failing but a conscious choice of aesthetics, just as his choice not to use sound or colour was an aesthetic decision. For Ruttmann, the string quintet was something he could manage, making a visual parallel to the delicate balance of five instruments using colour and fluid painted motions. For Eggeling, the symphony was the greater challenge, even a necessary challenge, since the orchestration of 50 timbres in complex layers represents the pinnacle achievement of Western music

– but a challenge that could not be easily or wholly conquered immediately. While the title *Diagonal Symphony* suggests an indication of key or theme, like César Franck's *D Minor Symphony*, it also, perhaps, suggests something of the 'limitation' of 'mood' titles like Franz Berwald's *Capricious Symphony*, Beethoven's *Heroic Symphony* or Tchaikovsky's *Emotional* [pathétique] *Symphony*. Just as those composers seemed to be saying: 'This piece presents just my light-hearted whims', or 'You're not getting everything here, just Heroism', or 'If you want something else besides a touching, moving experience, you'll be disappointed', so too does Eggeling warn us that he is primarily exploring one particular aspect, diagonal tension, and not 'everything'. And what Eggeling chose to do, he does very well indeed.

The final result of restoring these two films, both physically and within their historical context, should be to allow them to be understood and appreciated more fruitfully and to connect them with a larger continuum of experimental film and animation. What can we say about that now? At first glance, it is very easy to like the Ruttmann film for its colourful, dynamic energy, its passionate exuberance and witty dexterity. Conversely, to many people, Eggeling's film might seem rather dull and repetitive at first, a 'primitive' film lacking music, colour and 'full animation'. But, we can now recognise how the two films differ in purpose. Ruttmann's expressionism led him to exploit movement and colour as tools for communicating moods, sensations and abstracted confrontations or interactions. He used a few simple geometric shapes to perform elaborate choreographies, where entrances and exits, collisions and complementary trajectories establish a linear, cumulative scenario or development in which new configurations, colours and shapes appear right up to the last moments of the film. Eggeling, by contrast, establishes a complex form that immediately constitutes the totality of available resources and then develops variations on this given material in conscious and conscientious patterns of analogy and antithesis. Both of these approaches are valid and successful and both survive as viable modes of animation today. To use a standard critical topos, Ruttmann is more of a romantic and Eggeling more of a classicist. Ruttmann demands and inspires the participation and emotion of his spectator, while Eggeling requests contemplation, the fixed stare and an analytic/synthetic appreciation by his audience.

Ruttmann's simple forms in complex choreography found further development in Oskar Fischinger's black-and-white *Studies* – which, by the way, date from the late 1920s and early 1930s, after Ruttmann had abandoned animation for live action; Fischinger's earlier films (e.g. *Wax, R-1, A Form-play*), contemporary with Ruttmann's *Opus* films, carefully eschewed the Ruttmann style and developed full-screen grids of complex imagery. James Whitney's *Yantra* (1955), which consciously limits the building block to the dot or pure point of light, also carries on this tradition while at the same time exploits new and different perceptual aspects of intermittence (flickers) and dynamic choreography into complex patterns. And, Larry Cuba's computer graphics of the 1970s in *3/78* and *Two Space*, also with pure points of light in dynamic choreography, further explore motion as pattern and afterimage.

One might expect that Eggeling's simple film would engender few progeny; yet, ironically, advanced technology has enabled a number of Eggeling-like 'classists' to appear in the 1980s. Jules Engel turned the clumsiness of computer-graphics programs into the overt subject of his architectonic painting in *Times Square*. One of Engel's students, John Adamczyk, also artfully used cycles of colour-mapping to make virtually static fractals come alive in formal variations in his *Recurrents*. Videographics/computer artist Michael Scroggins (also a teacher of Adamczyk) created more than a dozen of a

series of *Studies* composed of serene cycles of geometric balances that develop out of given complex material with delicate alterations. But, to pigeon-hole Scroggins, for example, also detracts from a broader perspective on his work in some sense. In the hands of great artists, artists conscious of their aesthetic tradition, as Scroggins is, both the Ruttmann and Eggeling methods can be evoked simultaneously. While James Whitney's early 1940s *Variations* might be 'perfect Eggeling' in their appearances and disappearances, analogies and antitheses, his 1963 *Lapis* magnificently transmutes the Ruttmann-based movement-of-simple-forms style into an Eggeling-like whole pattern, and manages to maintain the tension between the two over a breathtaking ten minutes. Another example is Oskar Fischinger who, in his masterpieces the 1943 *Radio Dynamics* and the 1947 *Motion Painting No. 1*, creates a similar tension between Ruttmann and Eggeling styles: in *Radio Dynamics* Fischinger evokes the fixed stare on the complex imagery but gradually (in the flicker sequence) creates such dynamic variations that everything seems to move and change; and in *Motion Painting*, beginning with a fixed-field canvas, slow increments of change in complex patterns are used, which, only after nine minutes, gradually become larger and larger gestures of simpler forms. So, both Ruttmann's *Opus No. 1* and Eggeling's *Diagonal Symphony* are successful films and viable strategies for continued animation, just as both the string quartet and the symphony (and opera and song, for that matter) remain viable formats for music.

### Notes

1. Louise O'Konor, *Viking Eggeling 1880-1925, Artist and Filmmaker - Life and Work* (Stockholm: Almqvist & Wiksell, 1971).
2. Roger Manvell, *Experiment in the Film* (London: Grey Walls Press, 1949), 223.
3. Catalogue for *Film als Film* (Kölnischer Kunstverein, 1977): 58.
4. Jeanpaul Goergen, *Walter Ruttmann, eine Dokumentation* (Berlin: Freunde der Deutschen Kinemathek, 1988).