

## ABSTRACT FILM AS VIEWABLE MUSIC: EARLY EXPERIMENTS OF HANS RICHTER, WALTHER RUTTMANN AND OSKAR FISCHINGER

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Abstract film from its origins in the early 1920s has been called with many musical terms, such as “Male-rei mit Zeit”, “Bewegungskunst”, “Augenmusik”, “Lichttönsinfonie”, or “zeitraumliche Eurhythmie”, and in the programmatic writings of its pioneers it is often described as a new art of images moving over time organized according to the formal principles of music. The aim of this paper is to investigate some early abstract films in the context of musical analysis, which as far I know has not been widely applied on it, except for two contributions about the *Symphonie Diagonale* by the Swedish painter and filmmaker Viking Eggeling, some short descriptions of Hans Richter’s *Rhythmus 21* and *Rhythmus 23*, and Walther Ruttmann’s *Lichtspiel Opus 1*.<sup>1</sup>

It is well known that the relationship between music and visual arts became very important at the beginning of the twentieth century. On the one hand, investigations of the relationship between sound and color go back to Castel’s ocular harpsichord in the eighteenth century and culminated with Skrjabin’s *Prometheus: The Poem of Fire* op. 60 (Moscow, 1911), which employed Rimington’s color organ in order to project color light during the musical performance; on the other hand, many twentieth-century painters began to use allusions to musical structures in their work, such as are the paintings *Amorpha: Fugue à deux couleurs* by František Kupka (1912), *Fuga (Beherrschte Improvisation)* by Vassily Kandinsky (1914), or *Fuge (Über ein Auferstehungsthema)* by Adolf Hölzel (1916). The structural principles of these pictures are the counterpoint and its devices: imitation and inversion of shape and color. These principles are also quite identifiable in the figurative silhouette *Fuga: Iš diptiko Preludias-Fuga* of Mikalojus Kostantinas Čiurlionis (1908), where the threes are reflected in the lake like a counterpoint inversion and many lines of three profiles are superimposed like an imitative polyphony.<sup>2</sup> In the first case, the synaesthesia is implicated, the synthesis of visual and aural, the integrated perception of sound and image. In the second, music is the structural model of a new kind of non-narrative image organization.

But with the new technology of the cinema, the time—being the main dimension of music—could be applied to the painting with enormous developing potential. The very first experiments were the short hand-painted films by the Italian futurists Bruno Corra (1892–1976) and Arnaldo Ginna (1890–1982), alias the brothers Bruno and Arnaldo Ginanni Corradini. They painted directly on to the filmstrip. In his writing *Musica cromatica*, Corra had elaborated the idea of an “accordo di colori” (color chord) and described the brothers’ first effort at filmmaking in 1911.<sup>3</sup> Their first film, *Accordo di colore*, in which they attempted to animate a divisionist painting by Giovanni Segantini, *Riposo all’ombra*, was followed by three other films: *Studio di effetti tra quattro colori*, *Canto di primavera*, a cinematic transposition of the homonymous song without words by Felix Mendelssohn Bartholdy, and *Les fleurs*, taken from Mallarmé’s poem of the same name.<sup>4</sup> The films have been lost, but from Corra’s descriptions we can argue that their main aim was a kind of synaesthetic translation.

Another experiment in this direction, but aimed at using music only as an analogy for abstract animation, was produced by the French painter Léopold Survage (Sturzwage, 1879–1968), who outlined his proposals in the article *Le Rythme Coloré* (1914).<sup>5</sup> From 1912 to 1914 he made more than two hundred painted *rythmes colorés*, ink and watercolors on paper, but he had never produced a film.<sup>6</sup>

Among other experiments with correlating musical structures and moving image, both in Europe and in America, the most interesting are the projects of expressionist and then dada painters Hans Richter and Viking Eggeling.

The German Hans Richter (1888–1976) turned away from expressionism in 1917, deciding “to paint completely objectively and logically, [...] according to principles like those in music, with long and short note values”.<sup>7</sup> In Zürich he met the composer and musicologist Ferruccio Busoni and studied with him counterpoint, what led him to realize that his experiments with positive and negative forms could be correspondent to the principles of musical counterpoint.

Also very important in Richter’s career was a meeting in Zürich with the painter and pianist Viking Eggeling (1880–1925), eight years his senior. The two of them shared a purpose to find a formal universally understandable language (“universelle Sprache”) and soon started to collaborate.<sup>8</sup> They produced drawing studies onto long strips of paper in order to develop a theme in various steps, like in music. One example of this is Richter’s *Präludium* (1919), a picture roll in ten pages that develops the theme of the first page. For example, pages one and two present three elements: in page one we can see a black rectangle on the left, a grey polygon in the central position and a combination of vertical straight lines and two curves on the right [fig. 1]; in page two the same elements are present but the rectangle and the polygon have exchanged their color, which could be interpreted as a counterpoint inversion. And inside the grey rectangle we can see another little rectangle, like a musical thematic expansion [fig. 2]. The thematic development continues on page three: the central polygon becomes white and expands its shape downward, the rectangle in low position also expands its shape inward; the vertical straight lines become one thicker line – or a black rectangle – and the curve lines multiply. And in the following pages this development becomes even more intricate.

These rolls became film experiments in the UFA (Universum Film A.G.) studios in Berlin, but disappointed their authors.<sup>9</sup> Then, Richter began working on his very first animated film, *Rhythmus 21* (1921) and at the same time Eggeling produced his *Symphonie Diagonale* structured as a musical sonata-form – which was publically premiered in Berlin in May 1925, only a few days before the author’s death.<sup>10</sup> The musical principles that organize the films are explained by Richter himself:

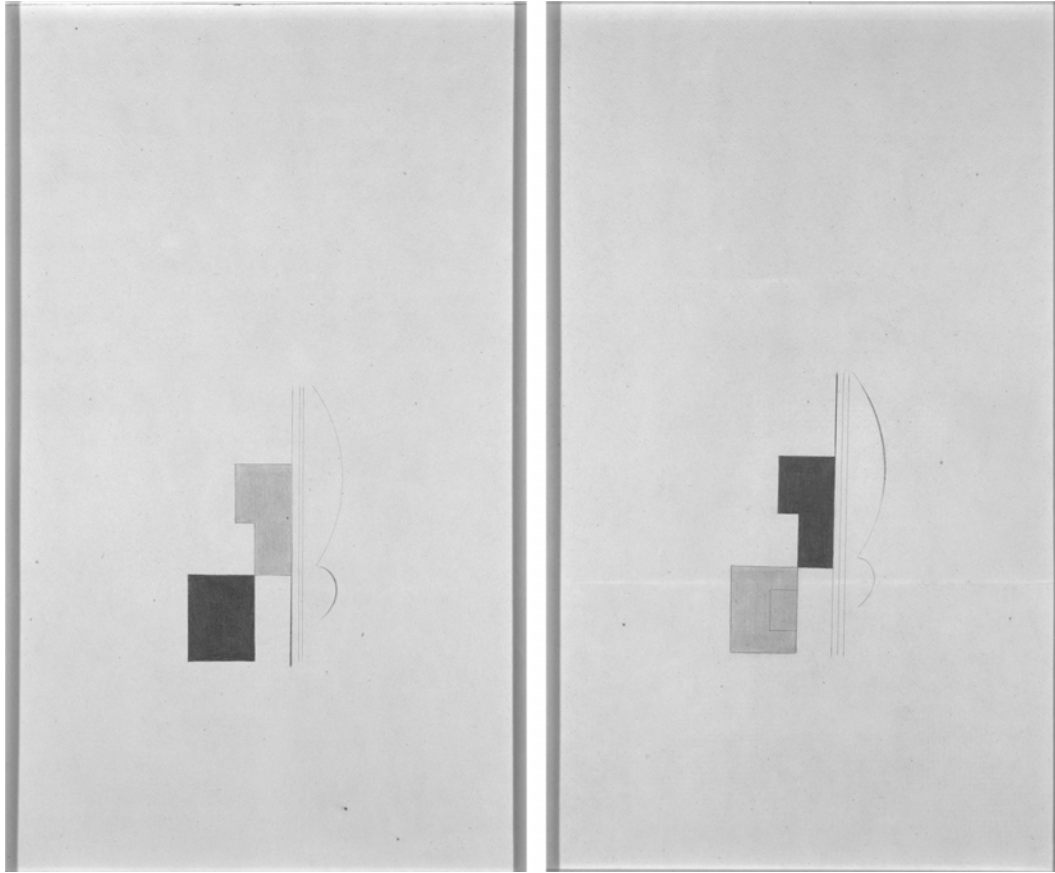
In musical counterpoint, [Eggeling and I] found a principle which fitted our philosophy: every action produces a corresponding reaction. Thus, in the contrapuntal fugue, we found the appropriate system, a dynamic and polar arrangement of opposing energies, and in this model we saw an image of life itself; one thing growing, another declining, in a creative marriage of contrast and analogy.<sup>11</sup>

This is an organicistic vision of the artwork that has many implications in the theory of musical form, which Richter derives directly from Busoni’s theory of musical form as an organism through the use of biological metaphors, strictly linked to Goethe’s reflection on this topic.<sup>12</sup>

So, the first keyword for understanding the film structure is counterpoint, which is understood metaphorically as a contraposition in vertical dimension (i.e., simultaneity of elements on the screen) and in horizontal dimension (i.e., succession of elements over time) but also literally as a complex of rules of organizing sounds. The concept of musical form, however, is also important for an analytical approach: repetition, contraposition and variation – the fundamentals of musical formal structuring – are the principles that structure this film, as well.<sup>13</sup>

Therefore, the title allusion to the rhythm is not the principal musical allusion: for example, it is not possible to tap out the metric pulsation as one could in a piece of music. “Rhythm”, in this case, is more synonymous to “order”, what is confirmed in the author’s later autobiographical writing:

In the rectangle and the square I had a simple form, an element, that was easy to control in relation to the rectangular shape of the screen. [...] So I made my paper rectangles and squares grow and disappear, jump and slide in well-articulated time-spaces and planned rhythms.<sup>14</sup>



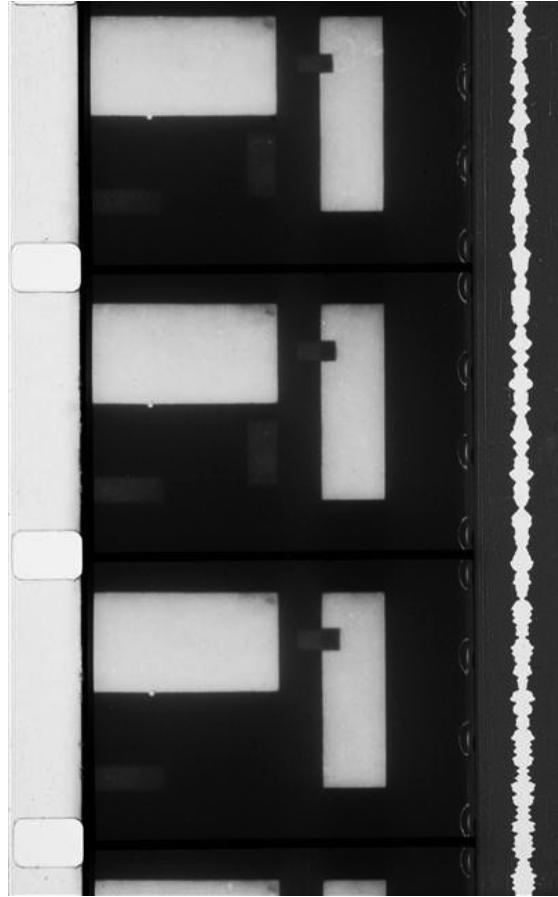
1 – 2. Hans Richter, *Präludium*. Pencil on paper (1919), 84.3 × 51.5 cm (each), pages 1 and 2 of 10. Berlin, Bildarchiv Preußischer Kulturbesitz, Inventar-Nr. NG 9/68.1; NG 9/68.2. © Foto Scala, Firenze/BPK, Bildagentur für Kunst, Kultur und Geschichte, Berlin.

There are many descriptions of *Rhythmus 21* [fig. 3],<sup>15</sup> but they are not so effective from a music analytical standpoint: Hoffmann, describing the visual process and the generated spatial impression simply alludes to the “contrapuntal interplay of black and white” obtained through the use of parts of negative film;<sup>16</sup> Turvey analyzes the movements of the geometrical shapes inside the different sections and is astonished by the unpredictability of sudden variations,<sup>17</sup> as Standish Lawder has noted.<sup>18</sup> In my opinion, Cook misunderstood the basic contrapuntal device of inversion when he states:

there is a section where a white square on a black background becomes a black square on a white background. This change strikes one as inherently visual, there is no equivalent reversal that could be achieved in sound.<sup>19</sup>

The formal analogy between moving images and music is here on a higher abstraction level: it merely concerns the modality of developing the material, not the material’s peculiarities. The contrapuntal devices and the musical procedures of melodic developing have been applied here with precision, as the following description of the first section of the film demonstrates.

The square and the rectangle are the thematic ideas, as Richter himself has stated, and these white shapes are in contraposition with the black screen. In the very first sequence (from 0'16" to 0'23") two vertical rectangles increase their dimension until they fill up the screen, then decrease to the initial black and then repeat the first action. Here we can find at least two analogies to musical procedures: first, a “melodic phrasing” with three elements (*a*, *a'* and *a*); second, the contrapuntal device of retrograde (*a'* is the retrograde of *a*) and of mirror inversion (the rectangles move mirror-like from left and from right). The second sequence (from



3. Hans Richter, *Rhythmus 21*. Film strip (1921). Film 35 mm black and white. Paris, Musée national d'Art moderne, Centre Georges Pompidou, numéro d'inv. AM 1976-F0265. © Service de la documentation photographique du MNAM, Centre Pompidou, MNAM-CCI (diffusion RMN). © Art acQuest.

0'23" to 0'29") is contrasting: a white square completely occupies the screen and then decreases until it disappears (*b*), then the action is repeated, but shortened (*b'*). The third sequence (from 0'29" to 0'36") is a repetition of the first one, but with a kind of contrapuntal inversion: the vertical rectangles become horizontal. Moreover, the retrograde *a'* is repeated twice and there isn't a reprise of *a*. Nevertheless, I would argue that it is possible to consider this film section as a tripartite musical form (A, B, A').

The subsequent section is more complex as a musical polyphonic texture: three white rectangles decrease their dimensions (from 0'36" to 0'39"), then a white rectangle fills the screen from the right and then the action repeats with the colors inverted (from 0'39" to 0'44"), maybe another kind of contrapuntal inversion. The "polyphonic texture" gradually becomes more and more complex: rectangles and squares superimpose their actions like in a contrapuntal developing section in music. To sum things up: the organization of moving shapes over time clearly presents analogies with musical form. The new sections follow one another like new musical themes (for example the grey square from 1'09") or developing sections even more complex. At the end of the piece (from 2'38") there is also a reprise of the first sections, but with the colors inverted – Richter employed parts of a negative film, maybe in order to obtain another kind of contrapuntal inversion.

4. Walther Ruttmann, *Lichtspiel Opus 1*. Film strip (1921). Film 35 mm color. Paris, Musée national d'Art moderne, Centre Georges Pompidou, numéro d'inv. AM 1986-F0322. © Service de la documentation photographique du MNAM, Centre Pompidou, MNAM-CCI (diffusion RMN). © Domaine public.



Richter continues to work in this way in the successive films, as well, with some integrations and improvements. *Rhythmus 23* (1923), originally titled *Fuge in Rot und Grün*, was initially planned as a color film but it remained in black and white. Its main theme is an interplay of lines and planes, with a strong employment of symmetry, that we can interpret as an analogy with the technique of *Spiegel Fuge*, present for example in Bach's *Die Kunst der Fuge*. Also, the devices of retrograde and inversion recur abundantly. Once again the inversion could be of many different kinds: inversion of color (negative film from 2'42"), inversion of moving direction, and so on. This statement of Richter – even though it refers to the early *Präludium und Fuge* rolls – explains it more than clearly:

I came to him [Ferruccio Busoni] with my problem; I explained how I was trying to achieve a balance and counter-balance of the white paper with the black spots of ink I made my drawings with, a balance so that white and black were both part of the same work. [...] I studied in [the preludes and fugues of Bach] the up and down, the movements and countermovements all leading to a definite unity.<sup>20</sup>

The following *Rhythmus 25* (1923–25) was to the contrary Richter's exercise into colors. Richter applied here the concept of colors in a constructivist way and not recurring to the synaesthesia, as Walther Ruttmann did in the same period.<sup>21</sup>

Ruttmann (1887–1941) was also a painter, trained in music (he played cello and violin) and was interested in the perceptive correspondences among images, colors and music. His abstract canvases present a fine gradation of colors, which he then tried to capture in his films. Colors and shapes seem to be coherent with the music accompaniment that Ruttmann commissioned from his friend, the composer Max Butting, for his first experiment: *Lichtspiel Opus 1* [fig. 4]. The film was created in 1919–1920 and was premiered privately in April 1921 in Frankfurt am Main, with a live musical performance.

The score, for string quintet, includes the color pictures of the film, with indications of repeats and changes, in order to allow the musicians to synchronize playing with the film projection. The film – more than ten minutes long – is structured like a music piece with three movements. In each of these we can see a thematic work, with contrasting themes and their variation, but a less complex contrapuntal organization than in Richter's experiments.

For example, not only that the first movement has its form organized after a musical form, with contrasting sections and reprises, but it includes also "musical phrasing" like in Richter's films. In the first section (from 0'19" to 1'21") there are two visual themes: a semicircle (*a*) and a brush-stroke (*b*). They are organized into "musical phrases" with repetition or contraposition of spatial movements: the theme *a* (semicircle) first increases upwards nine times – seven very rapid and two slower (from 0'19" to 0'34"); then ornamental elements appear together with the semicircle, and they reappear near the end of the movement (from 0'34" to 0'37"); theme *a* increases upwards and decreases downwards (*a* and *a* retrograde, from 0'37" to 0'42"); the new theme *b* (brush-stroke) moves downwards from the right eight times (from 0'42" to 0'50") and then the precedent sequence of theme *a* is repeated (from 0'50" to 0'55"); theme *b* moves downwards from left four times and then again from the right four times, in a perfectly symmetrical way (from 0'55" to 1'03"), and once again the sequence of *a* is repeated (from 1'03" to 1'08"); then the *a* and *b* sequences are repeated, even more shortened and varied (up to 1'21"). At 1'21" a new theme *c* (a pulsing protrusion) is introduced: it is the beginning of the central section.

The film's "texture" is above all "monodic", with only one "polyphonic" sequence consisting of simultaneously presented elements on the screen, similar to Richter's: the brush strokes (theme *b*) move downwards mirror-like from the left and the right (from 1'51" to 2'12").

Altogether the film does not provide a strict correspondence between musical and visual themes, but only a general correspondence of mood, shapes and colors could be confronted for example with sound articulation and intensity, in a generally synaesthetic manner. Malcom Cook describes the beginning of the second movement of *Opus 1* in this way:

The opposition in the qualities in these [...] elements finds equivalence in the music accompanying the sequence. The graceful fluid movement of the aquatic shapes find a partner in the smoother legato notes, the triangle's fixed, geometric shape and its stabbing motion equally find a partner in the shrill staccato notes in the music.<sup>22</sup>



5. Oskar Fischinger, *Studie Nr. 7*. Film strip (1930). Film 35 mm black and white. Paris, Musée national d'Art moderne, Centre Georges Pompidou, numéro d'inv. AM1987-F1101. © Service de la documentation photographique du MNAM, Centre Pompidou, MNAM-CCI (diffusion RMN).

Synaesthesia is also present in the relationship between color changes and music character changes: for example, the increasing melodic phrasing is reflected by the variation from cold blue to warm pink/orange and red (from 4'32").

Ruttmann's production continues with three short abstract animated films: *Opus II* (1922), *Opus III* (1923) and *Opus IV* (1924). These films were not synchronized with music and show more attention to formal structure.

Oskar Fischinger (1900–1967), the twenty-one-year-old painter and violin player, was introduced to Ruttmann by the theater critic Bernhard Diebold, who wrote in 1916 an important article, *Expressionismus und Kino*, in which he called for a new kind of artist, the *Bildmusiker*, as he imagined Walther Ruttmann to be.<sup>23</sup> Fischinger attended the première of Ruttmann's *Lichtspiel Opus 1* in Frankfurt in April 1921 and admired it so much that he soon tried to imitate Ruttmann's experiments in new ways.<sup>24</sup> Among his most interesting products aimed at investigating the relationship between musical and visual formal organization are the fourteen *Studien* – twelve complete films and two fragments – made between 1929 and 1934. After moving to Berlin in 1927, Fischinger once again encountered Bernhard Diebold, as well as Walther Ruttmann – who had by that time given up abstract film. Stimulated by Diebold he started to work on abstract animation film by drawings with charcoal on white paper and filming it with the positive/negative inversion. The *Studie Nr. 1* was silent film, and from the *Studien Nr. 2* he was working with the sound (soundtracks for *Studien Nr. 2*, 3 and 4 have been lost).

The new technology of soundtrack stimulated a stricter synaesthetic relationship between moving images and music. Fischinger attempted to create a "visual music" perfectly correspondent to the music synchronized to it, from a formal and synaesthetic standpoint. Even though the *Studie Nr. 8* (1931) was the first Fischinger's film to gain wide popularity – and was the favorite of the author himself – the best formal and synaesthetic integration of images and music is reached in the *Studie Nr. 7* (1930–31), for which Fischinger had chosen Dvořák's orchestration of Brahms's *Ungarische Tänze* no. 5.<sup>25</sup>

The two-and-half-minute film is structured to correspondent with the musical piece. Brahms's dance is in a triple form with a contrasting section (A B A' form). Its thematic work is based on two motives (*a* and *b*) and their variations in the A section, two motives (*c* and *d*) in the B section, the shortened reprise of the first section (A'), and closing with a coda alluding to the motive *a*. The moving images are above all synchronized with the soundtrack, but are also formally organized over time as musical themes and motives. Motive *a* always corresponds with little squares flying on the screen [fig. 5]; with the motive *b* the squares become vertical straight lines that move together with squares, horizontal lines and spirals. The central section B, with its new motives, presents new images: *c* corresponds with horizontal straight lines and *d* with curves – similar to the strings of a double-bass. The A recapitulation, quite obviously, reuses the same images.

From the standpoint of formal organization, moving images are indeed a kind of a visual translation of musical thematic progression, but they are also a synaesthetic translation from hearing to sight. Much more precisely than in Ruttmann's *Opus 1*, the perceptive affinities between aural and visual are based on the movements of shapes. For example, at the very beginning (up to 0'25") the repetition of the *a* motive – *a'* with the entire orchestra (from 0'14" to 0'25") – corresponds to an increase in number of the squares. And the *sforzato* at the end of the sequence, which results with the increase of the sound volume, is synchronized with a forward movement of a shape to the foreground and with a resultant increase in brightness. The increase of intensity of the sound is always associated in the film with an increase in brightness, what can be defined as the basic synaesthetic correspondence between hearing and sight.<sup>26</sup>

In the subsequent years Fischinger produced many other abstract films, like the delightful *Komposition in Blau* (1935), a color film synchronized with the overture of Otto Nicolai's *Die lustigen Weiber von Windsor*, and also many commercial advertising films, never again reached the perfect correspondence between music and moving images that he obtained in the *Studien* films.

## NOTES

I wish to thank Giacomo Albert for having provided me with some important materials.

<sup>1</sup> Malcom Cook, "Visual Music in Film, 1921–1924: Richter, Eggeling, Ruttmann", *Music and Modernism, c. 1849–1950*, ed. by Charlotte De Mille (Cambridge: Cambridge Scholars Publishing, 2011), 206–228; Peter Vergo, *The Music of Painting: Music, Modernism and the Visual Arts from the Romantics to John Cage* (London: Phaidon, 2010), 268–279; Malcom Turvey, "Dada between Heaven and Hell: Abstraction and Universal Language in the Rhythm Films of Hans Richter", *October* 105 (summer 2003), 13–36; Justin Hoffmann, "Hans Richter: Constructivist Filmmaker", *Hans Richter: Activism, Modernism and the Avant-Garde*, ed. by Stephen C. Foster (Cambridge, Mass.; London: The MIT Press, 1998), 72–91; Louise O'Konor, *Viking Eggeling, 1880–1925: Artist and Filmmaker. Life and Work* (Stockholm: Almqvist & Wiksell, 1971).

<sup>2</sup> About Čiurlionis see: Antanas Andrijauskas, "Musical Paintings of Mikalojus Konstantinas Čiurlionis and Modernism", *Music in Art: International Journal for Musical Iconography* XXXVII (2012), 249–264.

<sup>3</sup> Bruno Corradini, "Musica cromatica", "... Il pastore, il gregge e la zampogna" (*divagazione sul libro del Thovez*), ed. by Bruno Corradini and Emilio Settimelli (Bologna: Beltrami, 1912), 157–182. See also: idem, "Chromatische Musik", *Der absolute Film: Dokumente der Medienavantgarde*, ed. by Christian Kiening and Heinrich Adolf (Zürich: Chronos, 2012), 11–22.

<sup>4</sup> Ginna explained in 1968: "While the first film was the development of a color chord, the second studied the effects among complementary colors (red-green, blue-yellow) and the

last two were chromatic renderings of music and poetry". Quoted in: Angela Madesani, *Le icone fluttuanti: Storia del cinema d'artista e della videoarte in Italia* (Milano: Paravia-Mondadori, 2002), 5–6. On this topic see also: Gianni Rondolino, *Cinema e musica: Breve storia della musica cinematografica* (Torino: UTET, 1991), 52–53.

<sup>5</sup> Léopold Sturzwage, "Le Rythme Coloré", *Les soirées de Paris* 26–27 (July–August 1914), 426–429. Survage – a French distortions of his original name – affirms that: "Le rythme coloré n'est nullement une illustration ou une interprétation d'une œuvre musicale. C'est un art autonome, quoique basé sur les mêmes données psychologiques que la musique". Quoted in: *Der absolute Film*, 23.

<sup>6</sup> G. Rondolino, *Cinema e musica*, 53. Guy Fihman, "Fare un cinema: Primizie e promesse dell'avanguardia", *Cinema d'avanguardia in Europa (dalle origini al 1945)*, ed. by Paolo Bertetto and Sergio Toffetti (Torino: Museo Nazionale del Cinema, 1996), 115–130.

<sup>7</sup> Quoted in: J. Hoffmann, "Hans Richter", 74.

<sup>8</sup> Of course, in this case we cannot apply the strictly mathematical definition of formal language.

<sup>9</sup> Later Richter stated: "These rolls could not be used, as we actually had thought, as scores for films. If Eggeling did not share this opinion, I became more and more convinced with time. It seemed to me that the picture roll was an art form of its own that could not simply be considered scores and transferred to film". Hans Richter, *Monographie*, ed. by Marcel Joray. Kunst des 20. Jahrhunderts (Neuchâtel: Editions du Griffon, 1965). Quoted in: J. Hoffmann, "Hans Richter", 78.



<sup>10</sup> This film received a detailed analysis from musical standpoint in: L. O'Konor, *Viking Eggeling*. Also Peter Vergo describes the formal structure of the film in musical terms; he stated: "one obvious starting point must surely be the striking similarity that exists between the overall structure of the film and that of a sonata-form movement in music. [...] No one had actually analyzed the structure of Eggeling's film in this terms, even though vague and usually very general allusions to 'sonata form' and 'first movement form' can be found in a number of secondary sources. [...] Looking attentively at the film, the overall tripartite structure of *Diagonal Symphony* is immediately clear, as are the two main visual themes [...] encountered at the very beginning. [...] Once these two themes have been introduced, first separately and then in combination with one another, the exposition is at an end. There then follow several sequences that consist of the same images which are now united in new and constantly changing combinations. [...] In the central section [...] motifs are combined, reversed and inverted or are juxtaposed in new ways, followed by a severely truncated recapitulation, in which each of the initial motifs is seen again but in a much abbreviated form". P. Vergo, *The Music of Painting*, 272-274.

<sup>11</sup> Hans Richter, "My Experience with Movement in Painting and in Film", 142. Quoted in: M. Turvey, "Dada between Heaven and Hell", 31-32.

<sup>12</sup> Ferruccio Busoni, "Sketch of a New Aesthetic of Music". Quoted in: Erinn Elizabeth Knytt, *Ferruccio Busoni and the Ontology of the Musical Work: Permutations and Possibilities* (Ph.D. diss., Stanford University, 2010), 288. The most organicistic theory of Goethe is explained in: Johann Wolfgang von Goethe, *Versuch, die Metamorphose der Pflanzen zu erklären* (Hermannsburg: Albers, 1998).

<sup>13</sup> I think that Richter's goals are not so different from Eggeling's, contrary to the argument by Peter Vergo. One of his interests is indeed in "articulating graphic form" and not in rhythm. See: P. Vergo, *The Music of Painting*, 276.

<sup>14</sup> Hans Richter, *Hans Richter*. Quoted in: J. Hoffmann, "Hans Richter", 79.

<sup>15</sup> The film has been released on DVDs: *Dada Cinema* (Paris: Re:Voir, 2005); *Avant-Garde: Experimental Cinema of the 1920s and 1930s*, 2 DVD (New York: Kino on Video, 2005); *Edition Bauhaus: Medien-Kunst* (Berlin: absolut Medien, 2009).

<sup>16</sup> J. Hoffmann, "Hans Richter", 80.

<sup>17</sup> M. Turvey, "Dada between Heaven and Hell", 30.

<sup>18</sup> Standish Lawder, *The Cubist Cinema* (New York: New York University Press, 1975), 51.

<sup>19</sup> M. Cook, "Visual Music in Film", 211.

<sup>20</sup> Cleve Gray, ed., *Hans Richter by Hans Richter* (New York: Holt, Rinehart and Winston, 1971), 37.

<sup>21</sup> Hans Richter explained his concept of counterpoint of colors in: "Color Notes". Quoted in: C. Gray, *Hans Richter*, 85.

<sup>22</sup> M. Cook, "Visual Music in Film", 212.

<sup>23</sup> Bernhard Diebold, "Expressionismus und Kino", *Neue Zürcher Zeitung* CXXXVII/1453, 1459, 1466 (September 1916). Quoted in: *Der absolute Film*, 30-39. Ruttmann himself stated the same things in his writing *Malerei mit Zeit*: "Eine Kunst für das Auge die sich von der Malerei dadurch unterscheidet dass sie sich zeitlich abspielt (wie Musik) und dass der Schwerpunkt des Künstlerischen nicht (wie im Bild) in der Reduktion eines (reales oder formalen) Vorgangs auf einen Moment liegt, sondern gerade in der zeitlichen Entwicklung des Formalen. [...] Es wird sich deshalb ein ganz neuer, bisher nur latent vorhandener Typus von Künstler herausstellen der etwa in der Mitte von Malerei und Musik steht". Walther Ruttmann, "Malerei mit Zeit" (1919- 20, unpublished). Quoted in: *Der absolute Film*, 52.

<sup>24</sup> For a general introduction to the life and work of Oskar Fischinger see: William Moritz, *Optical Poetry: The Life and Work of Oskar Fischinger* (Bloomington; Indianapolis: Indiana University Press, 2004).

<sup>25</sup> The film is released on the DVD: *Oskar Fischinger: Ten Films* (Los Angeles: Center for Visual Music, 2006).

<sup>26</sup> In general on this topic see: Cristina Cano, *La musica nel cinema: Musica, immagine, racconto* (Roma: Gremese, 2002).