

Hans Richter and Viking Eggeling: The Dream of Universal Language and the Birth of The Absolute Film

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Abstract: In the mid 1950s, Hans Richter was living in New York City and teaching at the City College. A new independent American cinema was emerging then and many of the young people, enthusiastic to discover new models for cinematic production, looked to Richter as a predecessor and mentor. So it was that Jonas Mekas asked Richter for a contribution to the first issue of the film magazine he had founded, *Film Culture*, that soon became the unofficial house organ of the New American Cinema movement. Richter's essay, 'The Film as an Original Art Form' (1955) was a reflection on his accomplishments during the early years of Absolute Film.

The main aesthetic problem in the movies, which were invented for *reproduction* (of movement) is, paradoxically, the overcoming of *reproduction*. In other words, the question is: to what degree is the camera (film, colour, sound, etc.) developed and used to *reproduce* (any object which appears before the lens) or to *produce* (sensations not possible in any other art medium)? ... In the words of Pudovkin: "What is a work of art before it comes in front of the camera, such as acting, staging, or the novel is not a work of art on the screen". Even to the sincere lover of the film in its present form it must seem that the film is overwhelmingly used for keeping *records* of creative achievements: of plays, actors, novels, or just plain nature (Richter 1955: 15-16).

The interest in sensations that are unique to the film medium, sensations that could not be produced but through the film medium, is pure modernism. So, too, is the idea that film becomes film – film becomes an original art form – by purifying itself of any contaminating influence from adjacent media and becoming truly (purely) film. This, Hans Richter went on to claim, is what the documentary cinema accomplished.

With the documentary approach, the film gets back to its fundamentals. Here, it has a solid aesthetic basis: in the free use of nature, including man, as raw material. By selection, elimination, and

coordination of natural elements, a film form evolves that is original and not bound by theatrical or literary tradition. That goes, of course, for the semidocumentary fictional film (*Potemkin, Paisan*), as for the documentary film itself. These elements might obtain a social, economic, political, or general human meaning, according to their selection and coordination. But this meaning does not exist *a priori* in the facts, nor is it a reproduction (as in an actor's performance). [...] It has come to grips with facts – on its own original level. (Richter 1955: 17)

Here Richter offered the semiotic proposition that documentary and semi-documentary film is art because it is productive – it *makes* meaning, rather than records pre-established meanings. It does this through configuring relations that do not pre-exist the film's making.

However, he went on to say that relations in a documentary film elicit a rational response, because in documentary films the relata are of a factual character. There is another type of film that can elicit a response of a different order:

[The documentary film] covers the *rational* side of our lives, from the scientific experiment to the poetic landscape-study, but never moves away from the factual. Its scope is wide. Nevertheless, it is an original art form only as far as it keeps strictly to the use of natural raw material in rational interpretation [...].

The influence of the documentary film is growing, but its contribution to a filmic art is, by nature, limited. [...] Since its elements are facts, it can be original art only in the limits of this factuality. Any free use of the magic, poetic, irrational qualities to which the film medium might offer itself would have to be excluded *a priori* (as nonfactual). But just these qualities are essentially cinematographic, are characteristic of film and are, aesthetically, the ones that promise future development. (Richter 1955: 18)

Richter did not explain why he believed that irrational, poetic, magical qualities are essentially cinematic. But one might conjecture what led him to the conviction: dynamism exerts a spell, a sort of magical charm. This charm is the cinema's real strength; but the documentary cinema restricts its effects by shackling its dynamism to the order of facts. The avant-garde cinema, however, unfetters dynamism and allows the cinema's capacity to charm to achieve its full potential – to become mysterious.

There is a short chapter in the history of the movies that dealt especially with this side of the film. It was made by individuals

concerned essentially with the film medium. They were neither prejudiced by production clichés, nor by necessity of rational interpretation, nor by financial obligations. The story of these individual artists, at the beginning of the 1920's, under the name of 'avant-garde', can be properly read as a history of the conscious attempt to overcome reproduction and to arrive at the free use of the means of cinematographic expression. This movement spread over Europe and was sustained for the greatest part by modern painters who, in their own field, had broken away from the conventional: Eggeling, Léger, Duchamp, Man Ray, Picabia, Ruttman, Brugière, Len Lye, Cocteau, myself and others.

These artists discovered that film as a visual medium fitted into the tradition of the art without violation of its fundamentals. It was there that it could develop freely: "The film should positively avoid any connection with the historical, educational, romantic, moral or immoral, geographical or documentary subjects. The film should become, step by step, finally exclusively cinematography, that means that it should use exclusively [what Jean Epstein called] 'photogenic elements'". [By photogenic elements Epstein meant, essentially, elements that cause strong sensations.] (Richter 1955: 18)

This insight led Richter to assert: "Problems in modern art lead directly into the film. Organization and orchestration of form, colour, the dynamics of motion, simultaneity, were problems with which Cézanne, the cubists, the futurists had to deal". (Richter 1955: 18-9) He continued by relating the reasons for his own early involvement in Absolute Film to the issues being dealt with in visual arts of the time.

Eggeling and I came directly out of the structural problems of abstract art, *volens-nolens* into the film medium. The connection to theatre and literature was, completely, severed. Cubism, Expressionism, Dadaism, abstract art, surrealism found not only their expression in films but also *a new fulfilment on a new level*.

The tradition of modern art grew on a large front, logically, together with and into the film: the orchestration of motion in visual rhythms – the plastic expression of an object in motion under varying light conditions, "to create the rhythm of common objects in space and time, to present them in their plastic beauty, this seemed to me worthwhile" (Léger) – the distortion and dissection of a movement, an object or a form and its reconstruction in cinematic terms (just as the cubists dissected and rebuilt in pictorial terms) – the denaturalization of the object in any form to recreate it cinematographically with light – light with its transparency and airiness as a poetic, dramatic, constructive material – the use of magic qualities of the film to create the original state of the dream – the complete liberation from the conventional story and its chronology in dadaist and surrealist

developments in which the object is taken out of its conventional context and is put into new relationships, creating in that way a new content altogether. [As André Breton wrote about Max Ernst] “The external object has broken away from its habitual environment. Its component parts had liberated themselves from the object in such a way that they could set up entirely new relationships with other elements”. (Richter 1955: 19).

Richter expanded on Breton’s remarks on the role of the external object in Max Ernst’s art by relating it to the shaping role the external object has had in the experimental cinema.

The *external object* was used, as in the documentary film, as raw material, but, instead of employing it for a *rational* theme of social, economic, or scientific nature, it has broken away from its habitual environment and was used as material to express *irrational* visions. Films like *Ballet Mécanique*, *Entr’acte*, *Emak Bakia*, *Ghosts Before Breakfast*, *Andalusian Dog*, *Diagonal Symphony*, *Anemic Cinema*, *Blood of a Poet*, *Dreams that Money Can Buy*, and many others were not repeatable in any other medium and are essentially cinematic. (Richter 1955: 18; emphases in original)

The Language of Art: Constructivism, Reason and Magic

However magical this new cinema would be, it would still have a rational basis. Reason would uncover the laws that account for the wonder of art. Hans Richter was involved in the international Constructivist movement and his contribution to the theory of form-building emerged partly from the ideals of that movement. Constructivism strived to generalize the principals of form and sought for a supra-individualist basis for artistic construction. It attempted to discover a lawfulness in artistic making. Some of Richter’s visual art of the mid twenties, such as *Farbenordnung* (1923) shows the influence of Eleazar Markovich (‘El’) Lissitzky’s work, especially in its use of trapezoidal forms to suggest perspectival foreshortening using only simple geometric shapes. The influence was more than indirect: El Lissitzky had arrived in Berlin in late 1921 or early 1922, on behalf of Anatoly Lunacharsky, to engage German artists in a dialogue about artistic production in the Soviet Union. He served as a conduit for introducing constructivist ideas into Central and Western Europe – or, more exactly, he introduced his own, highly idiosyncratic idea of Constructivism to Middle and Western Europe. He quickly

became friends with Theo van Doesburg and established contact with the De Stijl artists Vilmos Huszar and J. J. Oud. In late May 1922, Hans Richter and his friend and fellow painter/filmmaker Viking Eggeling went to Düsseldorf, for the first international *Kongress der fortschrittlichen Künstler* (Congress of Progressive Artists). El Lissitzky was also there, representing *Veshch'/Gegenstand/Objet*, while Richter and Viking Eggeling represented *de Stijl* and “the Constructivist groups of Romania, Switzerland, Scandinavia and Germany” (Burchartz et. al. 1922: 68-9). On the second day of the conference, differences arose among the conference participants. This clash resulted partly from conflicting notions concerning the goals of the organization. The main portion of the representatives wanted the organization to focus on practical economic concerns and not to concern itself unduly with intellectual or artistic matters, while van Doesburg, Lissitzky and Richter disagreed. This disagreement led them to establish their own *Internationale Fraktion der Konstruktivisten* (International Faction of Constructivists). The *Fraktion's* declaration gave another reason for the schism, in addition to the *Fraktion's* intellectual thrust:

We define a progressive artist as one who denies and fights the predominance of subjectivity in art and does not create his work on the basis of lyrical random chance, but rather on the new principles of artistic creation by systematically organizing the media to a generally understandable expression [...] the actions of the congress have shown that due to the predominance of individual opinion, international progressive solidarity cannot be developed from the elements of this congress. (Burchartz et. al. 1922: 68).

The *Fraktion's* declaration also echoed Soviet Constructivists' desire to assimilate the labor of art-making to the labor of other workers in other sectors of societies: “Art is the common and real expression of the creative energy that organizes the progress of humanity, which means that art is the tool of the common process of labour”. Emphasizing their anti-individualist convictions, van Doesburg, Lissitzky and Richter declared the time had come to form a group that “denies and attacks the predominance of the subjective in art, and builds artistic works not upon lyrical whim, but rather on the principle of the *Gestaltung* by organizing the means systematically into an expression intelligible to all”. (Burchartz et. al. 1922: 68). The

manifesto was a radical, vanguard attack on the prevailing artistic ethos, for it also condemned Expressionists and ‘Impulsivists’ for their individualism. Two years later, in 1924, Richter commented on the appropriation of the term ‘Constructivism’.

The word ‘Constructivism’ emerged in Russia. It describes an art which employs modern construction materials in the place of conventional materials and follows a constructive aim. At the Düsseldorf Congress of May 1920 [actually 1922] the name Constructivism was taken up by Doesburg, Lissitzky and me as the Opposition, in a broader sense. Today, what passes by this name has nothing more to do with [...] elementary formation, our challenge at the Congress. The name Constructivism was in those days borrowed as a slogan which was applied both against the legitimacy of artistic expressions [present there] and as an efficient temporary communication – against a majority of individualists at the Congress. (Richter 1924: 72)

Richter correctly identified the use of modern, industrial materials as a defining feature of Constructivism. The use of those materials characterized those exemplars of the constructivist ideal, the laboratory works produced by Rodchenko and his OBMOKhU (Obshchestvo molodykh khudozhnikov; Society of Young Artists) colleagues for their Moscow exhibition that opened in Moscow on May 22, 1921. Richter also points out, correctly, that he and his colleagues used the term ‘Constructivism’ in a somewhat different sense: as a movement that concerned ‘elementary formation’, which they conceived as an antidote to impulsivism and individualism.

Some eight months after the founding of the *Internationale Fraktion der Konstruktivisten*, in Berlin in the winter of 1922-3, El Lissitzky characterized the emergence of Constructivism in an unusual way:

Two groups claimed constructivism, the Obmoku and the Unovis. The former group worked in material and space, the latter in material and a plane. Both strove to attain the same result, namely the creation of the real object and of architecture. They are opposed to each other in their concepts of the practicality and utility of created things. Some members of the Obmoku group [...] went as far as a complete disavowal of art and in their urge to be inventors, devoted their energies to pure technology. Unovis distinguished between the concept of functionality, meaning the necessity for the creation of new forms, and the question of direct serviceableness. They represented the view that the new form is the

lever which sets life in motion, if it is based on the suitability of the material and on economy. This new form gives birth to other forms which are totally functional. (Lissitzky 1922: 340)

It is not difficult to see what side El Lissitzky was on: UNOVIS (*Utverditeli novovo iskusstva*; Affirmers of the New Art) had been organized by Kazimir Malevich and reflected his spiritual interests in elementary constructions. Lissitzky's gesture of taking the term 'Proun' (*Proekt utverzhdjenja novovo*; Project for the Affirmation of the New) to refer to his own work of the period aligns him with the work of the UNOVIS. El Lissitzky was more strongly committed to Suprematist spiritual elementarism than to the Productivism towards which most Constructivists inclined (See Bois 1977, 1988, and 1990). Embracing such spiritual convictions in the Soviet Union was a somewhat idiosyncratic gesture; although Malevich's abstractions influenced the new artists associated with OBMOKhU, the 'affirmers' associated with UNOVIS, unlike Lissitzky, did not claim Constructivism as their cause. OBMOKhU artists rejected Malevich's spiritual concerns, the very basis for his new art, in favor of Marxist principles. But in Europe, El Lissitzky's idiosyncratic redefinition of 'Constructivism' took hold and seems to have influenced Richter's understanding of Constructivism as an elementarist art of much the same sort as De Stijl advocated – thus, Richter advertised *G: Material zur elementaren Gestaltung* in *De Stijl* as "the organ for the constructivists in Europe". (Bann 1974: xxxiii. El Lissitzky's redefinition was the view of Constructivism that *Veshch'/Gegenstand/Objet* propounded¹).

There were grounds for El Lissitzky's appropriation of the term 'Constructivism' for his project. Lissitzky noted the similarity between the geometric forms of De Stijl artists and those of contemporary Russian artists, and the correspondence between van Doesburg's artistic radicalism, which proposed to poeticize reality, and the Russian Constructivists' interest in integrating art and life. Thus, at the 1922 *Kongress der fortschrittlichen Künstler*, Lissitzky described Russian thinking as characterized "by the attempt to turn away from the old subjective, mystical conception of the world to create an attitude of universality – clarity – reality". He added, "That this way of thinking is truly international may be seen from the fact that during the seven-year period of complete isolation from the

outside world, we were attacking the same problems in Russia as our friends here in the West, but without any knowledge of each other". (Lissitzky et. al. 1922: 63) And whatever his reasons for disavowing "the old, subjective, mystical conception of the world", he nonetheless would have noted the spiritual interest of the Neo-Plasticists' and their affinity with the spiritual concerns of the Suprematists. His bent of character was to perceive similarities in people's beliefs that might allow them to make common cause with him in the transformation of reality. So he developed a unique understanding of Constructivism: as an art movement concerned with elementary principles and sympathetic to spiritual concerns. Furthermore, in this effort at internationalizing the avant-garde, Lissitzky was faced with the difficult task of reconciling the rational interests of the Constructivists and the spiritual interests of the Suprematists. The Neo-Plasticists' Hegelian leanings allowed him to discern how Reason and Spirit might be reconciled, a problematic that Richter's interest in using reason to the ends of magic rehearsed.

The drive to find the universal laws of artistic making fuelled Eggeling and Richter's research into what they called a *Universelle Sprache* (a universal language) of art. Richter, in fact, took the aim of identifying the scientific principles of art as Constructivism's defining ambition. At the Düsseldorf conference, he declared that Constructivist artists had "overcome our own individual problems and reached the fact of an objective issue in art. This objective issue unites us in a common task. This task leads us (through the scientific investigation of the elements of art) to want something other than just a better image, a better sculpture: it leads us to reality". (Lissitzky et. al. 1922: 63)

Richter's Constructivist interests led him to an enthusiasm for things Russian. His anti-individualism echoed that of Jean Pougny, an expatriate Russian friend who lived near Nollendorfplatz, then the centre of the Russian artistic community in Berlin. In his "*Aufruf zur elementaren Kunst*," Pougny demanded an art that built on the medium's character and formal elements, not on individual whim. Richter also praised a trilingual journal El Lissitzky and Il'ia Ehrenburg had founded, *Veshch'/Gegenstand/Objet*, (two issues of the magazine appeared, one in March/April 1922 and the other in May 1922,) for being a publication "that confronted the problems of our

modern art and underscored the affinity between our artistic efforts and those in Russian art". (As cited in Finkeldey 1998: 97)

The *Internationale Fraktion der Konstruktivisten* founded at Düsseldorf subsequently renamed itself the *Konstruktivistische internationale schöpferische Arbeitsgemeinschaft* (Constructivist International Creative Workshop) and expanded its new membership to include, besides the original trio, Karel Maes and Max Burchartz. KisA associates included Werner Graeff, Raoul Hausmann, Hannah Höch, Erich Buchholz, László Moholy-Nagy and Cornelis van Eesteren. Richter played a central role: a second manifesto of the group, published in *De Stijl* 5, No. 8 (1922) gave Richter's address as the group's office address. Visitors to KisA meetings included Hans Arp, Tristan Tzara and Kurt Schwitters. Gert Caden, an observer of a second congress, convened by the KisA in conjunction with erstwhile Dadaists, observed the accord that the ideas Richter, Lissitzky, van Doesburg and Moholy-Nagy struck. What he wrote reflects Eggeling and Richter's ideas on the *Universelle Sprache* – and its relation to International Constructivism and Neo-Plasticism.

Not the personal 'line' – what anyone could interpret subjectively – is our goal, but rather the work with objective elements: circle, cone, sphere, cube, cylinder, etc. These elements cannot be objectified further. They are put into function; the painting also consists of complementary tensions in the colour-material and the oppositions of vertical, horizontal, diagonal. [...] Thus a dynamic-constructive system of force is created in space, a system of innermost lawfulness and greatest tension.... That is the formal side of our efforts. More important, however, is the ideological side: that these things agitate for a clear, simple plan for life, one of inner necessity with an exact balancing of forces. Here our goal meets the goals of the social revolution. So seen, our task is not party-political, it is rather a task of cultural politics. (Undated letter from Gert Caden to Alfred Hirschbroek cited in Finkeldey 1998: 105)

So Caden, stating the ideas of Richter, Lissitzky, van Doesburg and Moholy-Nagy, echoes Piet Mondrian's ideas of dynamic equilibrium and inner necessity. To be sure, the members of the *Arbeitsgemeinschaft* did not agree upon their political outlook. Van Doesburg and Mondrian clashed with Lissitzky and Moholy-Nagy over Constructivism's political commitments – a clash that Richter tried to mediate. Still, though Piet Mondrian's political affiliations

might have been different from those of, say, Caden, they shared a fundamental understanding of *Gestaltung*. Mondrian would even have agreed with Caden that the goal of art is to balance the forces acting in human life. The coincidence makes it easy to understand how, their revolutionary proclivities notwithstanding, Marxist-Constructivist arts could be committed to spiritual amelioration.

Eggeling and Richter proposed to use formal principles of “*Kontrast-Analogie*,” (contrast-analogy) to reconfigure artistic form, to make artistic forms consistent with the materials in which they are realized. This ambition was among the reasons Richter set to work to make abstract films: the abstract film would be the true art of cinema, the cinema that is true to its own nature, not that of literature, or theater. Richter’s views about recasting the arts took many forms. Sometimes Richter sided with Dadaists, sometimes he sided with Surrealists, and sometimes he sided with Constructivists/Neoplasticists. Richter even attempted at times to put a distance between himself and the Dada movement with which his name is so frequently associated, and when he did, he generally embraced Constructivism. Richter praised El Lissitzky and Il’ia’s Constructivist journal, *Veshch’/Gegenstand/Objet*, the first editorial of which declared that the time for the “negative tactics of Dada” were now past. (Lissitzky and Ehrenburg 1922: 1-2; Bann 1974: 55-6) Richter stressed his constructivist/ neo-plasticist leanings in a 1924 article that first appeared in the journal he and Werner Graeff edited, one of the first journals of avant-garde art, *G – Zeitschrift für elementare Gestaltung*. Titled *Die schlecht trainierte Seele*, the article was illustrated with reproductions of film frames, most of them from *Rhythmus 21*. (Richter 1924b: 22-23) These images, presumably, were intended to indicate ways in which the poor education the article’s title alluded to might be undone.

Die schlecht trainierte Seele foreshadows many of the ideas that structural filmmakers of the 1960s would propound. The article starts out by attacking the contention that feelings are without form.

They say feelings are conceived in sleep and, hatching themselves out, just appear! It is simply not true. Feeling is just as precisely structured and mechanically exact a process as thinking: it is just that our awareness of this process, or rather its IDENTITY, has been lost. So modern man is excluded from a whole sphere of perception and action. (Richter 1924b: 22)

The idea that feelings are formless served as the basis for an intuitive approach to creative making that values sincerity over structure. Richter proposed to combat this tendency by according primacy to rhythm organized by universal sensory laws:

Still without a well-defined aesthetic, it does not understand that creative form (*schöpferische Gestaltung*) is the control of material in accordance with the way we perceive things. Not knowing how our faculties function, film does not realise that this is where its job really lies. Instead, the screenplays of today strain for theatrical effects. By film I mean visual rhythm, realised photographically; imaginative material coming from the elementary laws of sensory perception. (Richter 1924b: 22)

Richter claimed the form of *Rhythmus 21* followed the shape of feelings, a notion that relates to Suzanne Langer's idea that artistic forms have the virtual shape of emotions. The article gives expression to Richter's neo-plasticist leanings: Richter became associated with van Doesburg's De Stijl movement in 1921, and from 1923 to 1926 served as editor of *G.*, which, though not exactly the movement's house organ (there was an official publication, *De Stijl*), was closely aligned with the De Stijl movement. The films Richter made in this period, *Rhythmus 21*, *Rhythmus 23* and *Rhythmus 25*, are all deeply influenced by neo-plasticist ideals.

Richter's aim, to follow the shape of feelings, also meant bringing the time of the film entirely into the compass of the present.

This film gives memory nothing to hang on. At the mercy of 'feeling', reduced to going with the rhythm according to the successive rise and fall of the breath and the heartbeat, we are given a sense of what feeling and perceiving really is: a process – movement. This 'movement' with its own organic structure is not tied to the power of association (sunsets, funerals), nor to emotions of pity (girl match-seller, once famous – now poor – violinist, betrayed love), nor indeed to 'content' at all, but follows instead its own inevitable mechanical laws. (Richter 1924b: 22)

In this article, Richter laid out, in brief, the background to his work in Absolute Film and the efforts he and Viking Eggeling had undertaken to develop a universal form language. His commentary took a dialectical form. He proposed that form-building (*Gestaltung*) relied on several principles, for instance, relations of maximal contrast

between elements. As examples of the attributes that might enter into relations of maximal contrast Richter cited position, proportion and light distribution. Further, he cited relations between most nearly identical elements, and likewise, relations that modulate the contrast between elements. The examples that Richter offered focused on movement; he devoted much thought to the ways that movements could be more or less similar. The article offered several attributes in respect of which different movements could be more or less similar or more or less contrasting and could resolve, to a greater or lesser extent, the tension between otherwise contrasting elements. He argued that film is visual rhythm created using photo technology, and both rhythm and technology serve as building blocks for the imagination, which creates by drawing on the medium's material attributes and on laws governing the senses. Extending Eggeling's ideas of contrast to montage, he proclaimed perception involves opposition. Unless a thing is differentiated (i.e., unless it has borders), it cannot be perceived. However, though separation is necessary to perceive the object as having boundaries, recognizing the affinities amongst things is required to put the perceived object into a context. The important principle of unity-in-difference applies as well in the theory of sensations as it does in aesthetics.

The role that contrast between elements can have in giving shape to an artwork had been a fundamental interest of Richter's from 1917 on. From 1912 to 1917, in his first years as a painter, Richter had painted sometimes in a more cubist manner, and sometimes in a more expressionist manner. During 1917, after moving to Zürich in late August or early September 1916 and coming under the influence of Dada, he began painting what he called 'visionary portraits', intensely colorful and extraordinarily vibrant, ever more abstract paintings, executed by adopting a spontaneous, free-associative method:

For my own part, I remember that I developed a preference for painting my [visionary portraits] in the twilight, when the colors on my palette were almost indistinguishable. However, as every color had its own position on the palette my hand could find the color it wanted even in the dark. And it got darker and darker [...] until the spots of color were going on to the canvas in a sort of auto-hypnotic trance, just as they presented themselves to my groping hand. Thus the picture took shape before the inner rather than the outer eye. (Richter 1985: 49)

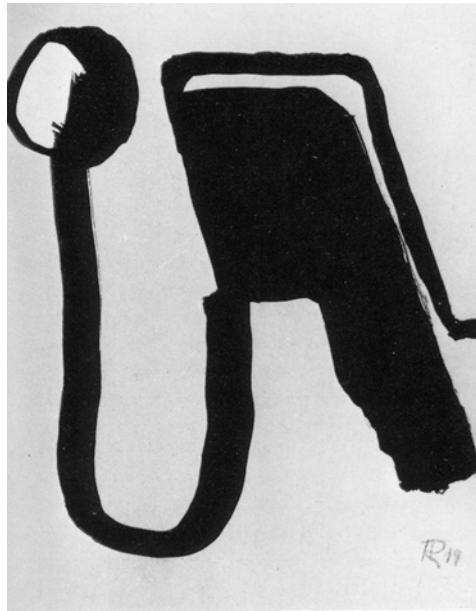
The method allowed Richter to be prodigiously productive, creating sometimes three or four visionary portraits in a day. In late 1917, Richter became disenchanted with this spontaneous method and the results it produced. He conceived the desire to create more structured abstract works, in which a single rhythmical effect would unify the pictorial elements. “The completely spontaneous, almost automatic process by which I painted my ‘visionary portraits’ no longer satisfied me”, he wrote. “I turned my attention to the structural problems of my earlier Cubist period, in order to articulate the surface of my canvases”. (Richter 1985: 61).

These works that resulted were his *Dada-Köpfe*, portraits that became increasingly abstract, and show that, early on, Richter was concerned less with the sitter’s psychology than he was with formal relationships, with working out contrasts in which blacks and whites traded roles in defining volumes and space. These portraits concern figure-ground relationships, which Richter articulated by using contrasting black and white areas that, depending on the areas the tone covered and the relation of those areas to areas in other tones, traded roles in representing form and space. Viola Kiefner wrote of them: “What was strived for was not a choice for or against some position, but a synthesis of polarities, the harmonization of opposites, order and chance, logic and intuition, consciousness and unconsciousness, objectivity and abstraction”. (Kiefner 1989: 64). Some of Richter’s other drawings from the period, e.g., *Häuser* (1917) and *Musik-Dada* (1918), work on similar principles. These issues would remain central to Richter’s art for many years to come.

Similar means of creating stark contrasts of black and white, either of which may represent a volume or a void depending on its position and area, characterize Richter’s first film *Rhythmus 21*. In the film’s opening sequences especially, but in some measure in the rest of the film as well, the spatial relations among the various figures are ambivalent and undergo continual transformation. It is sometimes difficult to state whether the white areas on the screen are foreground or background, and, even when you can identify them, foreground elements often transform into background elements. Incorporating negative film enhanced this ambiguity.



Hans Richter, "Dada Head"; ink, 1918



Hans Richter, "Dada Head (Abstraction)"; ink, 1918

Richter's concerns with the harmonization of polarities led him to search for the foundations of visual art, for a *Generalbaß der Malerei*.

Eggeling's Integrity

Eggeling was born in Sweden in 1880, one of twelve children. He became a bookkeeper but moved to Paris in 1911, where he took up painting. Eggeling had little formal training and until 1911, his painting and drawing consisted largely of landscape and figure studies. However, the museums and galleries he visited, the analytical discussions he engaged in, and the work he did in Paris opened up many of the issues that would later preoccupy him. People concerned with advanced art in Paris at the time were under the sway of Cubism, and Eggeling took an interest in the Cubists' formal experimentation. As a result, the paintings he did show an interest in the analysis and simplification of forms into geometrical figures. In 1917, he learned about the Dada movement. While not sharing their anti-artistic animus (or their politics), Eggeling found liberating the dada idea that the conventions of traditional art had grown stifling. In 1918, he moved to Germany, where Dada had taken hold. Eggeling was already working on ideas about orchestrating lines that would eventually form a part of the general theory of painting that Richter alluded to in the passage cited above, a theory he referred to as the '*Generalbaß der Malerei*.' Eggeling had already organized the geometric possibilities of the line into themes. When he met Richter, he had also found means to orchestrate the line. Eggeling would soon anthologize these ideas in his (likely uncompleted) film, *Horizontal-Vertikal Orchester* (1923). These means relied on principles similar to those of counterpoint in music, creating a play of contrast and analogies. Eggeling, (drawing partly on Hans Arp's 'The Rules of Plastic Counterpoint,' but mostly working on his own,) through empirical and practical study, developed his ideas systematically. Over long years, with exacting thoroughness, he drew up models of formal classification, organizing them according to similarities and contrast. Eggeling was soon to discover that, by using contrast and analogy, he could develop any formal element, not just vertical and horizontal lines, as Mondrian was doing. Still, for Eggeling, the origin of all artistic forms was the line. Eggeling drew the idea of harmonizing tonal masses from Richter's idea of counterpointing positive and negative areas; this was

incorporated into Eggeling's structural system, which to that point had focused on counterpointing contrasting linear elements.

When he met Richter in Zürich, early in 1918, Eggeling had already been at work on the scrolls that became the basis of his film experiments, begun as early as 1915-17. He had also already been at work systematically surveying elementary forms and attempting to formulate a set of syntactical principles that governed their relations. Richter soon recognized that a fantastic dedication was reflected in the systematic manner in which Eggeling pursued the study of contrasts. Richter wrote about their meeting forty-five years later:

One day at the beginning of 1918 [...] Tristan Tzara knocked at the wall which separated our rooms in a little hotel in Zürich and introduced me to Viking Eggeling. He was supposed to be involved in the same kind of esthetic research. Ten minutes later, Eggeling showed me some of his work. Our complete agreement on esthetic as well as on philosophical matters, a kind of 'enthusiastic identity' between us, led spontaneously to an intensive collaboration, and a friendship which lasted until his death in 1925. [...]

Eggeling's dynamics of counterpoint, which he called *Generalbaß der Malerei*, embraced generously and without discrimination every possible relationship between forms, including that of the horizontal to the vertical. His approach, methodical to the degree of being scientific, led him to the analytical study of the behaviour of elements of form under different conditions. He tried to discover which 'expressions a form would and could take under the various influences of 'opposites': little against big, light against dark, one against many, top against bottom, and so forth. (Richter 1952: 79)

After meeting and realizing that their interests overlapped, Richter invited Eggeling to return with him to Richter's parental home. Together they worked on formal exercises and in 1920, began to experiment with film. Though the two worked closely for a time, Eggeling's work was clearly of a different character than Richter's. Eggeling's drawings in the Yale University Library reveal that the abstract shapes he took an interest in evolved from natural forms: he prepared what are essentially notations for sets of natural forms, and then, as Goethe's scientific method prescribed, put them through an evolution that proceeded according to visual laws. But, though the forms he studied are organic, they have something of the character of ideograms. Like Mondrian, Eggeling worked with an unvanquishable persistence to distil a vocabulary of elementary forms from nature. Experiencing these gestures can enhance the senses and can (as

Goethe suggested) lead us to grow new organs of perception. The syntax that Eggeling strived to work out would be based on opposition between pairs of attracting or repelling forms. His fundamental task, then, was to identify certain elementary forms and to determine their affinity for, or antagonism towards, other elementary forms.

The difference in Eggeling and Richter's concerns would last into the era when the two artists took up filmmaking. Though both Viking Eggeling and Hans Richter attempted to resolve visual form into elementary units, Richter's film work, like that of the Neo-Plasticist painters, was concerned with the interplay of rectangular areas, which are differentially defined as lighter and darker, while Eggeling was more concerned with revealing linear developments through time. Thus, Eggeling's *Diagonal-Symphonie* is essentially a work of morphological transformation (understood as Goethe understood that morphological process).

Eggeling's investigations carried him beyond traditional art media. Eggeling began, partly under the influence of Bergson, to investigate time in the visual arts. This led him to his scroll painting and his work on the film *Horizontal-Vertikal Orchester*. Eggeling was led to this interest in time partly because he had experienced difficulty in incorporating motion into his visual language. After he had begun collaborating with Hans Richter, he decided that a better way to create a dynamic effect was to extend his work into the dimension of time. Eggeling and Richter's first attempts at this took the form of laying out a sequence of constructions on a long scroll of paper: the viewer was required to scan the length of the artworks, that is, to view them through time, since they could not all be seen at once. However, this approach left them dissatisfied. Scroll paintings implied movement more strongly than the diagonalization of form in traditional painting, but they did not present actual movement. They next experimented with using very thin sheets of rubber as an elastic canvas that could be stretched horizontally and vertically, to create a sort of movement. Even this left them dissatisfied and they found themselves exploring film.

The Analogy to Music

At the beginning of the twentieth century, many artists sought some way to escape 'the tyranny of the object' and to create an art that was

free from the constraints of the visible and tangible realm. Music provided something of model for how a work constituted of pure, non-representational elements could be formed, without falling into ornamentation, arbitrariness or disorder. Contrapuntal music especially showed artists how to resolve abstract elements. Thus, in 1922, Richter, with Werner Graeff's assistance, embarked on a project to be entitled *Fuge in Rot und Grün* (Fugue in Red and Green). To be sure, this was not the first visual fugue to be realized on the assumption of the analogousness of film and music. Around 1910, the Czech artist Frantisek Kupka, an erstwhile Symbolist painter who was deeply involved with Theosophical ideas generally and, in particular, with their ideas on synaesthesia and on color, became the first painter to arrive at the principle of sequential composition based on chromatic progressions. He described his goal: "By using a form in various dimensions and arranging it according to rhythmical considerations, I will achieve a 'symphony' which develops in space as a symphony does in time". These ideas eventuated in *Amorpha – Fugue in Two Colours* (1912).

Music's temporality helps explain why visual artists regarded it as an ideal to which they might aspire. Music could achieve a continually changing quality of tone space, and painters longed to find a means for achieving analogous effects in their medium. Karin v. Maur explains:

The disintegration of the unified pictorial space, the fragmentation of the object, the autocratic employment of liberated motif elements, the autonomy of colour, form, and line, and the increasing dynamism of all three – these developments, which took place between 1908 and 1914 in the guise of Cubism, Futurism, Orphism, Vorticism, or Synchronism – were basically directed towards opening visual art to the dimension of time. Never before in the numerous programs and manifestos of the avant-garde did there appear so many temporal concepts, such as rhythm, dynamics, speed, and simultaneity, or musical terms such as cadence, dissonance, polyphony, etc., proving the existence of a close link between the temporalization tendencies in art and the reception of musical phenomena. (Maur 1999: 44)

In his painting of his Bauhaus years (1921-31), Paul Klee embarked upon a program of discovering the dynamic perceptual qualities of color and form. His thoughts were formalized while teaching at the Bauhaus in the 1920s, where he wrote the *Pädagogisches Skizzenbuch* (Pedagogical Sketchbook), which presented a complete course in the

dynamics of static form. Klee's paintings represent a movement towards dynamic form in abstract painting, and he connected this dynamism to music. Klee took up the problems of painting music in the monochrome *Fuge in Rot* (Fugue in Red, 1921). This work presents fugal themes as different shapes moving from right to left over a dark ground, leaving trails of afterimages behind; the visual effect resembles that of the repetitions of themes in a fugue. Like Kandinsky, Klee used the analogy with music when describing his work and some of Klee's later works developed directly out of musical structures: the form of the fugue was the subject of *Ad Parnassum* (1932), which used a dappled grid of shifting color within an architectonic framework to represent the pattern of repeated elements in a fugue.

The American Synchronists Morgan Russell and Stanton Macdonald-Wright also pursued the analogy between sound and color. At the time of their first solo exhibition, at Munich's *Neuer Kunstsalon*, they proposed that, until then, music alone had been capable of communicating the highest spiritual sensations. Now, abstract painting's time had come. After overcoming the obstacles that the effort to render material reality had put in its path, painters could direct their interests to the higher reality. Painting had developed to the point where it could convey the mysterious reality hidden within ordinary reality. Several artists and theorists went as far as to argue that painting was closer to this ultimate reality than music, because visual perception is more intimately linked than aural perception is to the inner reality of nature.

Robert Delaunay, too, argued that painting is superior to music, though his reasons for asserting that claim were different. For him the superiority of painting turned on its capacity to apprehend several objects and events simultaneously. He unpacked the significance of this principle of simultaneity in Bergsonian terms:

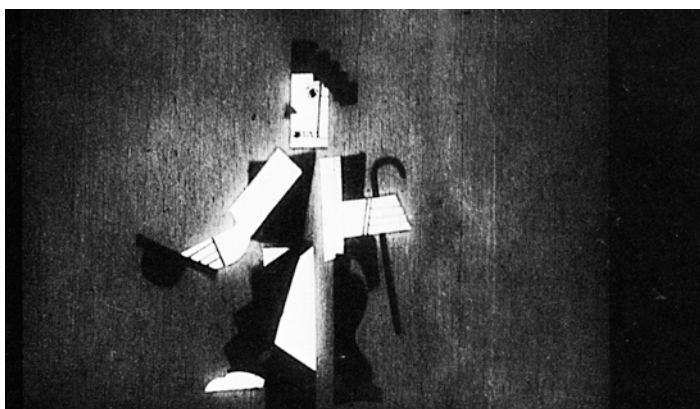
The idea of the vital movement of the *world and its movement is simultaneity*. [...] The auditory perception is not sufficient for our knowledge of the world. [...] Its movement is *successive*, it is a sort of mechanism; its law is the *time of mechanical* clocks which, like them, has no relation with our perception of *visual movement in the Universe*. (Delaunay 1912: 319)

Delaunay used interacting complementary colors to produce a sense of optical motion. His interest in the interaction of color led him to consider the importance of light: he wrote about light as an ordering force, a force whose nature is harmony and rhythm. Different proportions in the mixture of colors led to different harmonies and different rhythms (different rates of vibration).

The dynamics of the modern world had pressed the phenomenon of change towards a new importance. Morgan Russell, Stanton Macdonald-Wright, Robert Delaunay, *et. al.* were looking for a medium that would invest a dynamic medium, a medium that could convey the flux of energy, with the privileges of sight. This is especially clear in Delaunay's case. Despite his advocacy of simultaneity, Delaunay used sequential development in such works as *Les Fenêtres sur la ville* (Windows on the Town, 1912). The work uses a scroll form to unfold color contrasts through time. Klee noted in a diary entry from July 1917, "Delaunay has attempted to shift the accent in art to the temporal, based on the example of the fugue, by choosing a format so long it cannot be taken in at a glance". (Klee 1957: 380) Another medium had led the way: that medium was the cinema. Like many artists, Delaunay, Russell and Macdonald-Wright proposed to reformulate their medium to endow it with attributes of the film medium. The similarities among Delaunay's scroll painting, *Les Fenêtres* (The Windows, 1912), Viking Eggeling's scroll painting, *Horizontal-Vertikal Orchester* (Horizontal-vertical Orchestra, 1919-21), and Hans Richter's scroll paintings *Fuge 23* (1923/76) – and their similarity to the cinema – along with Eggeling and Richter's decision to create cinematic works, suggest the influential role the cinema played in the development of the visual arts in the twentieth century.

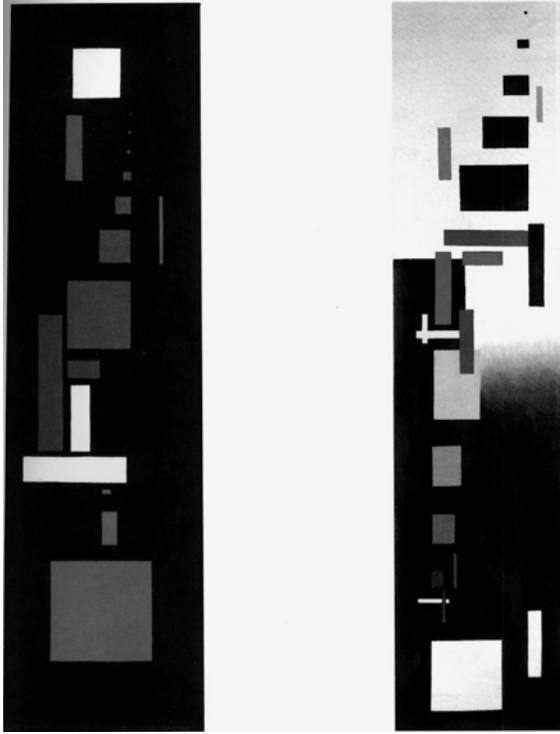
The makers of Absolute Film proposed to reconfigure film so as to highlight the film's innermost dynamics – thereby they would release cinematic form from representation. Light and time, they insisted, were the cinema's true materials – the artists engaged in the creation of the Absolute Film shared an interest in light and time with makers of light sculptures and *Lichtspiele*. These works were as immaterial as music. That something as immaterial as colored light came to represent an ideal medium for artists in the nineteenth and twentieth centuries must be taken as evidence of the important role that music – and the cinema – had assumed in thinking about the arts.

This is so despite early film stocks being black-and-white. Even in Méliès' time, films were often tinted or colored by hand (as *Ballet Mécanique* was). Early artists who gravitated towards the film first conceived of color projects and only later, and by dint of necessity, realized them in black-and-white.



Fernand Leger, *Ballet Mechanique*. 1924

As the title suggests, Richter's *Fuge in Rot und Grün* was to be a color film; since no color stocks existed at the time, Richter was prepared to color each frame red or green by hand – he hoped that the unevenness of colors applied by hand would not be noticeable against the black ground. Graeff convinced Richter the project was not feasible, that every colored stroke would be visible, and the film remained in black-and-white. Even so, color was among Richter's central concerns at this time – the importance Richter accorded color is made evident by the fact that in the same year he made the film, Richter produced *Orchestration der Farbe* (Orchestration of Color), an “orchestration of colour in complementary, contrasting, and analogue colours, as a Magna Carta for colours” and another work, *Farbenordnung* (Color Order), a work that was included in the notorious *Entartete Kunst* exhibition and likely destroyed thereafter. (Richter 1965b: 37) Moreover, as Oskar Fischinger's involvement with Gasparcolor makes clear, the makers of Absolute films used color as soon and as much as they could.

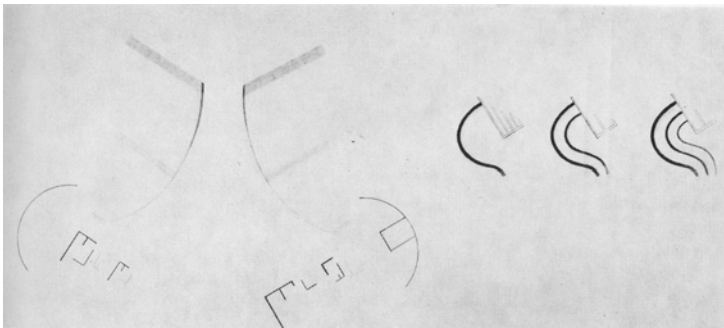


Hans Richter. *Orchestration der Farbe*, oil on canvas, 1951

Towards a Generalbaß der Malerei

When Richter met Eggeling, Richter was already interested in the analogy between music and painting, and soon after they met, Richter explained to Eggeling that he wanted to paint completely objectively, following the principles of music, with long and short note values. This is not to say that Richter, or Eggeling for that matter, wished to create visual forms that imitated a specific musical composition, as Walther Ruttmann did and Oskar Fischinger would later do. Rather, Eggeling and Richter wanted to pattern their work after the lawfulness of musical structure. Viking Eggeling played the leading role in conceiving the core notions of their *Generalbaß der Malerei* and in working out its basic principles. Eggeling was a brilliant theoretician and artist whose intensity deeply affected those with whom he came into contact. Hans Arp described meeting Viking Eggeling:

I met him again in 1917 in Zürich. He was searching for the rules of a plastic counterpoint, composing and drawing its first elements. He tormented himself almost to death. On great rolls of paper he had set down a sort of hieratic writing with the help of figures of rare proportion and beauty. These figures grew, subdivided, multiplied, moved, intertwined from one group to another, vanished and partly reappeared, organized themselves into an impressive construction with plantlike forms. He called this work [his *Diagonal-Symphonie*] a ‘Symphony’. (Arp 1938/1959: 25).



Viking Eggeling. *Diagonal Symphony III* scroll: from a copy made in the 1930s from Eggeling's original pencil.

Richter and Eggeling together tried to work out a theory to ground visual compositions in the formal principles that music had uncovered. Richter explained why he assumed that a syntax regulating the interplay (counterpoint) of these elements could be modeled on music:

In musical counterpoint, we 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. Month after month, we studied and compared our analytical drawings made on hundreds of little sheets of paper, until eventually we came to look at them as living beings which grew, declined, changed, disappeared – and then were reborn. [...]

It was unavoidable that, sooner or later in our experiments, these drawings, which were spread about on the floor of our studio, would begin to relate systematically to each other. We seemed to have a new problem on our hands, that of continuity, and the more we looked, the more we realized that this new problem had to be dealt with [...] until,

by the end of 1919, we decided to do something about it. On long scrolls of paper Eggeling developed a theme of elements into *Horizontal-Vertical Mass*, and I developed another into *Praeludium*. (As cited in Lawder 1975: 43)

The scroll that Richter refers to as the *Horizontal-Vertical Mass* is usually referred to as *Horizontal-Vertikal Orchester*. Erna (Ré) Niemeyer, Eggeling's girlfriend at the time Eggeling was to make this scroll (and later, 1927-9, Hans Richter's wife, and then the wife of the great Surrealist poet Philippe Soupault) reveals that she worked with Eggeling on a film of the same name, and based on the scroll, in 1923. No copy of Eggeling's film is known to exist, and it is likely that, due to some dissatisfaction with it, he did not screen it in public. Art critic Ernst Kállai comments on the film in an article, '*Konstruktivismus*' in the *Jahrbuch der jungen Kunst*:

The aesthetic perspective, recalling Gabo's kinetic constructions, is revealed also in Viking Eggeling's abstract film (sketched in 1919) which the artist calls *Horizontal-Vertical Orchestra*. The name indicates two fundamental traits of the work. The film is a trial of strength in which take part the polar and analogous [recalling the terms *Kontrast* and *Analogie*] relations of form, proportion, rhythm, number, intensity, position and temporal quality. [This provides what is likely a comprehensive list of the feature domains that Eggeling considered in his theory of *Kontrast-Analogie*.] The time factor is experienced immediately, through the spatial-optical course of the movement and indicates the connection with music. [...] In their films where movement of light is presented in square forms, Eggeling's disciple and former collaborator, Hans Richter, and also Werner Graeff, have followed the principles formulated by Eggeling concerning polarity and analogy, and the influence exerted by these two concepts on each other. (As cited in O'Konor 1966: 27-8)

Richter had offered a theory of form-building to the enterprise of applying the principles of music to filmmaking. Artworks should evoke feeling through form, he proposed: through its form, an artwork elicits and resolves tension. The sort of tensions appropriate for artworks to modulate are tensions that arise from creating and resolving contrast between features essential to that medium. Every frame is a distribution of light and dark, and filmmaking is essentially the art of modulating the distribution of light. Thus, it is appropriate for film form to modulate tension by varying the contrasts amongst dark and light areas.

Constructing forms that modulate tension by varying the contrast among features essential to the medium brings the form into alignment with the nature of the materials in which it is realized, but it does more than that. The emotional associations that individuals have with particular representational images are unpredictable. They are loose, or, to use Richter's word, "flabby." The response that people have to forms rooted in the actual materials of the medium, on the other hand, do not depend on the idiosyncrasies of the individual viewers' backgrounds and life experiences; the response is common to all and therefore predictable. Adopting views that in many respects are analogous to Eisenstein's ideas about developing forms on the basis of Pavlovian conditioning, Richter proposes that it should be possible to work out a scientific basis for developing such forms. Once that basis had been worked out, the problems of creating artistic form would not engage with the vagaries of an individual's make-up, but would be rooted in the common constitution of humankind.

From the way the two aspects of contrasting and relating depend on each other, their mutual interaction, comes feeling. This is the way of the creative process. [...]

What flourishes today as 'feeling' is easy submission to uncontrollable emotions about the hero, chaste maiden, and smart businessman. [...] This sensibility, some kind of mad thing made up of feelings preserved from past, and unreal, centuries, dominates and distorts our vision of the world.

Our perceptive faculties have become flabby, our breathing has become restricted; our sensibility – unable to develop – has become more a weakness than a strength. [...]

The development of such a soundly based approach [...] touches at the root of basic questions about the evolution of the psyche, which originally had a certain 'thinking power' now lying fallow. This 'thinking power' enables the sensibility to exercise its powers of judgment and of action. It provides the whole man with powerful means of action indispensable to his general sense of direction. (Richter 1924b: 23)

Elsewhere, Richter explained the connection between Eggeling's theory of *Kontrast-Analogie* and counterpoint.

[A] principle of dynamic relations as in counterpoint, [it] comprehended every possible relation among forms without discrimination, including the horizontal-vertical relationship. [...] Its almost scientific method led him [Eggeling] to analyze how elements

of form ‘behaved’ under various conditions. He tried to discover what expression a form would assume under the influence of different kinds of ‘opposites’: small versus large, light versus dark, one versus many, above versus below, etc. In that he intimately combined external contrasts with analogous relations of form, which he named ‘analogies’, he could produce an endless variety of relations among forms. Opposing elements were used to dramatize, to tighten the form complex; analogies were used to relate them again to each other. (Richter 1922, as cited in Finkeldey 1998: 95)

The earliest theoretical foundations of Richter’s work developed out of a search for a *Generalbaß der Malerei*. ‘*Generalbaß*’ is the German word for ‘thoroughbass’, a 17th and 18th century term denoting the *basso continuo* part, so called because an independent bass part plays throughout the composition. Most European compositions from 1600 to 1750, including most of J.S. Bach’s compositions, make use of a *continuo* part. Those that used a *basso continuo* were so preponderant amongst all the compositions of the period that the era is often referred to as the thoroughbass era. The *basso continuo* part was written as a bass line with numbers under or over or beside the bass notes, to indicate what chords to play. The numbers indicate the interval above the bass note that should be played, however, the pitches can be played in any register and freely doubled, though the general principles of voice-leading must be observed. Converting the numbers into chords to create a complete musical texture musicians referred to as ‘realizing a figured bass’; realizing a figured bass and deciding how to play these chords took real interpretative skill, as it demanded the performer create an ‘accompaniment’ part from a composed bass part by playing the notated pitches and improvising harmony above them. Although the bass line itself could not be modified, the player who realized the harmonies had considerable freedom. The player was not bound by the rhythm of the bass line or to use the simplest forms of the specified harmonies – a chord may be played in root position or not. Bach was extremely adept at extemporizing, and the music he could produce by sight-reading from these general instructions sounded like rehearsed, thoroughly notated compositions. He even wrote a text explaining these skills.

Extending the idea of ‘*Generalbaß*,’ one could describe it as a method for creatively elaborating musical works that proceeds according to well-established principles. It is in this sense that Goethe used the word. In a conversation with Riemer (May 19, 1807), Goethe

accused painting of lacking any *Generalbaß*, that is any established, accepted theory for creating forms by following established principles. In proposing a *Generalbaß der Malerei*, Eggeling and Richter were proposing to fill the lack that Goethe had noted and to provide a rule-guided, but nonetheless creative, approach to making a painting: in making a painting or any visual artwork, the imagination would follow demonstrated principles.

Richter's Dada experiences had led him willy-nilly into considering the analogy between visual art and music. Just before he embarked on his effort to develop a *Generalbaß der Malerei*, Richter had been working on his *Dada-Köpfe*, which, as we have noted, set black elements against white elements, to represent volumes against space or space against volume according to the position and relative size of the black and white elements. In Zürich in January 1918, Richter met the Italian composer and musicologist, Ferruccio Busoni (1866-1924). Busoni had a profound interest in counterpoint. His monumental *Fantasia Contrappuntistica* of 1910, just a few years before Richter met him, was greatly influential. He also produced an important edition of Bach's music.

Busoni saw in the alternation of black and white a set of relations analogous to the play of voices in a contrapuntal composition. He proposed to Richter and Eggeling that they might undertake the systematic study of these relations by examining J.S. Bach's 1725 *Klavierbüchlein für Anna Magdalena Bach* (Anna Magdalena Bach's Clavier Book). This was just around the time that Richter first met Eggeling, and Richter passed Busoni's recommendation on to Eggeling. Busoni's recommendation struck a resonant chord in Eggeling, for he had already undertaken a systematic study of the elementary syntax of form relations, and had begun to consider the analogy between music and visual art.

We don't know exactly what connection Busoni saw between Richter's black and white drawings and the thorough-bass practices of the seventeenth and early eighteenth centuries. But we can conjecture. First, there are many repeating patterns in Richter's *Dada-Köpfe*, and Busoni might have connected this aspect of the works to the tradition of the ground bass and of 'divisions on a ground.' Second, baroque music often exhibits a homophonic texture, with a melody playing against a bass line that has strong harmonic implications. This polarity between the soprano and bass lines Busoni may have seen as a formal

parallel to the contrasts between black and white in Richter's *Dada-Köpfe*. Finally, with the beginning of the thoroughbass era around 1600, this soprano-bass polarity developed into a more complex form, with the inner parts of the composition improvised against the *basso continuo*. In the relation in Baroque music between the strong foundation of a bass and implied harmony parts and one or more supported melodic parts, Busoni might have seen a parallel to Richter's complex, and shifting relation between foreground and background. That he saw such a parallel is all the more likely as sometimes the middle parts of a thorough-bass composition seem to come to the fore and become almost another melody line.

Richter and Eggeling presented the results of their study of the syntax of form relations in their eight-page pamphlet *Universelle Sprache* (Universal Language, 1920), which they mailed to a number of influential people, including Albert Einstein. Among their purposes for the document was to persuade UFA to support their work in experimental film. No copies of the pamphlet are known to exist, but an outline for it can be found in Stephen C. Foster's *Hans Richter: Activism, Modernism and the Avant-garde*, and a statement of what were likely some of its central ideas appears in Eggeling's hardly known essay of 1921, *Elvi fejtegetések a mozgóművészetről* (Theoretical Presentation of the Art of Motion), and Richter's much better known, and nearly identical, essay of the same year, *Prinzipielles zur Bewegungskunst* (Principles of Movement Art).

The purpose of Eggeling and Richter's study into the *Generalbaß der Malerei* was to present the ground principles of *Gestaltung* ('forming'). It would offer a new universal language – universal both in the sense that it applied to all visual media and in the sense that it applied to all cultures, notwithstanding their different natural languages. Eggeling and Richter's goal was to develop a system of communication based on the visual perceptions, whose mechanisms, they were convinced, were universal. "Every person would have to react to such a language for the very reason that it was based on the human ability to see and record", Richter wrote. (Richter 1965b: 24) Some years after the pamphlet was issued, Richter outlined the thesis of the *Universelle Sprache*:

This pamphlet elaborated our thesis that abstract form offers the possibility of a language above and beyond all national language frontiers. The basis for such a language would lie in the identical form

perception in all human beings and would offer the promise of a universal art as it had never existed before. With careful analysis of the elements, one should be able to rebuild men's vision into a spiritual language in which the simplest as well as the most complicated, emotions as well as thoughts, objects as well as ideas, would find a form. (Richter 1965a: 144)

Though all visual media could use this language, Eggeling and Richter believed that film took this language to a higher level. In his *Elvi fejtegetések a mozgóművészetről* Eggeling proposed that “beyond all doubt the film will soon be taken over by the artists as a new field for their activity”. (As cited in O’Konor 1966: 28) The constructivist notions that were at the heart of Eggeling and Richter’s research programme advocated a comprehensive reorganization of life that could only be initiated by reason. In an interview first published in *Art International* [Zürich] in 1959, Hans Richter told Friedrich Bayl, “[M]y driving desire, to control the means of expression and to pair inspiration with understanding, let me first point to a geometric scale as a point of departure. Objectivizing gestures are a universal language”. (As cited in Wolf, 1989: 16)

Eggeling and Richter’s *Universelle Sprache* was a grammar for combining forms into pairs of opposites based on mutual attraction and repulsion. The constellation of opposing pairs would create a form of counterpoint. The theory of the *Universelle Sprache* proposed that polarities between opposites were the elemental relations from which forms were created: positive and negative; black and white; above and below; curved and straight; empty and filled; intersecting and not intersecting; horizontal and vertical; parallel and counterpoint; simple and complicated; dark on light and light on dark; single and multiple; internally linked and separated. It was a language whose elements, then, were not individual forms but which were significant in their relationship to one another.

Eggeling and Richter’s research sought to identify especially the key features of spatial relations. The idea that there might be a grammar of spatial relations was a fundamentally Constructivist notion. László Moholy-Nagy wrote of the need to “apprehend the elements of optical expression” (Moholy-Nagy 1933; cited in Wolf 1989: 16) and of the need to develop a “standard language of optical expression”. (As cited in Wolf 1989: 16) Like Richter, he, too, believed this language – that would be universal since it would be

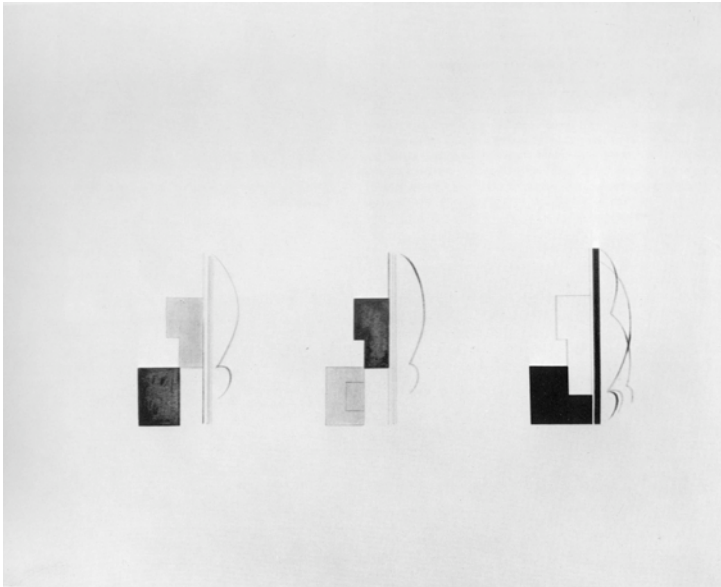
internationally understandable – should be immediately standardized, that is to say, simplified, purified and democratized. Moholy, Eggeling and Richter shared a utopianism. All three wanted to establish a new system of visual communications for a new society, as all three were appalled at the conditions around them. This was a feeling shared by other artists of the time. Recall the horrifying images of suffering in the slums that Käthe Kollwitz produced around this time; Meidner's depictions of urban existence as a veritable terror; Kirchner's images of menacing prostitutes preying on the city; Otto Dix and Georg Grosz' grotesque visions of black market racketeers, sex murderers, disabled veterans, and Freikorps assassins; and John Heartfield's (Johann Herzfeld) photomontages, replete with coffins and death masks.

Eggeling and Richter believed that this new universal language of visual art would help shape the new human who would arise out of the blighted world. Thus, this universal language would not only concern itself with the self-realization of the 'Universal Man' but would be the means for the realization of universal life. In this way, Eggeling and Richter's advocacy reflected utopian aspirations that were in the air in this era. Many thinkers and artists of the time felt that the culture of their time had become weak, superficial, impoverished and that European civilization had entered a phase of crisis: the outrages that humans perpetrated on humans reflected that. Art had the responsibility of renewing European civilization, and to achieve this, it would have to become more spiritual – would have to become, in Eggeling's phrase, 'signs of communication' between people. The old artistic forms were no longer capable of this. The most important task that artists confronted, therefore, was to create a new, universal language that all would be capable of understanding, a language not burdened with outmoded associations carried forward from a civilization in its phase of decadence and encumbered by national differences. Its idiom would be pure, simple, and abstract, for only non-figurative art could do what is essential: to revive culture by creating a new instrument with which all people could communicate.

This language was not to be simply a means of communication that duplicates the languages we now have. It would be an objective language. Its grammar would give instruction on the correct ordering of forms. Its first concern would be with structure, not personal expression. Expressionist values had dominated German

art for two decades, and, although Richter's early drawings were influenced by such German Expressionists as Ernst Ludwig Kirchner, he, and Eggeling too, had come to see Expressionism as a dimension of the culture that should be opposed. Excessive feeling, and especially feeling that was not contained within the bounds of formal, constructive imperatives, could deform art, just as unbridled feeling, feeling that was not contained by the ideals of the Socialist utopia, could wreak havoc on society. Eggeling and Richter considered the elimination of subjective expression to be a purifying process: their vision of the *Universelle Sprache* was that of an immaterial spiritual language that would allow an ascetic and disciplined presentation of a subject, and would ensure that reason would ascend over personal feeling. It would produce a new terrain outside language's communicative domain, a meta-language that would help foster a new reality. As the product of ideal order, the language of this new reality would be spiritualized.

In 1919 Eggeling and Richter had begun working on scrolls – Eggeling on *Horizontal-Vertical Mass* and Richter on *Präludium*.

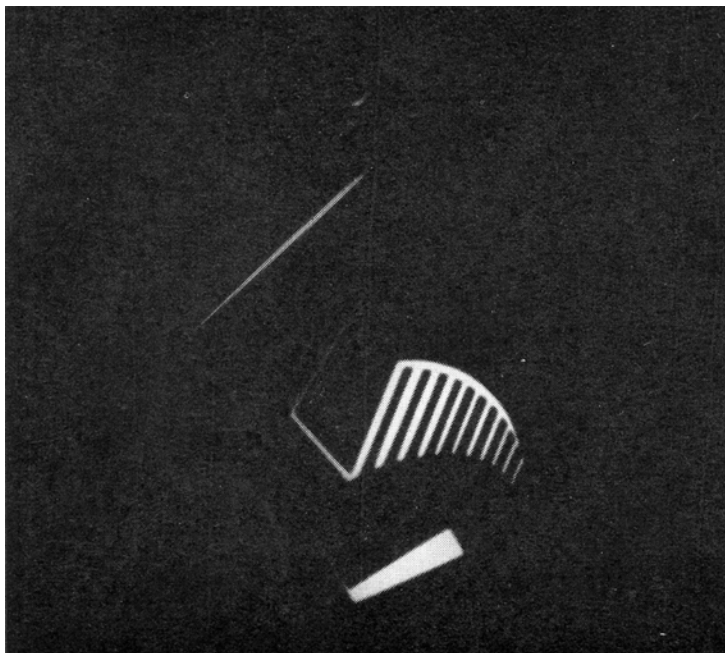


Hans Richter, *Präludium* (detail); ink scroll on paper, 1919

In making these works, Eggeling and Richter developed a form in which the pictorial elements led the eye through the composition. In this regard, the scrolls were like films, and this similarity engendered in the painters a desire to work in film. A wealthy backer who lived in their neighborhood had offered to give them DM 10,000 – a large sum, but not enough to make the film. Neither artist knew any of the technical rudiments of filmmaking. So, the pair decided to start a campaign to persuade UFA (Universum-Film A.G.) to produce their film. They had the idea of producing, as a part of this campaign, a pamphlet, *Universelle Sprache*, which would set out their ideas about a language of elementary pictorial elements, and which they could likewise send out to people of influence. Their campaign was successful, for UFA provided them with a studio and a technician; in the end, however, the technician and the artists did not get along and the resulting collaboration was a disaster.

To be sure, and despite what Richter has written on the topic, Eggeling's first UFA animation tests (1920/21) were so unsatisfactory that he would not show them in public. Eggeling and Richter worked together on creating a film of the *Horizontal-Vertikal Orchester* for about a year before Richter abandoned the project. Eggeling attempted several more animation tests during 1922 and 1923, but they too seemed inadequate. In 1923, Erna Niemeyer, then a young Bauhaus student, undertook to animate his *Diagonal-Symphonie* scrolls. At this point, Eggeling abandoned the *Horizontal-Vertikal Orchester* entirely. Niemeyer and Eggeling, working in appalling poverty, finished the *Diagonal-Symphonie* in 1924 and showed it first privately to family and friends, then publicly. Eggeling was already in the hospital when the public première took place, and a few days later he died of syphilis.

Early on however, an influential Berlin critic, Dr. Adolph Behne, had seen the experiments Richter and Eggeling were engaged in, and had written enthusiastically about them. His report was read by Theo van Doesburg who sent Richter a telegram informing him that he wanted to pay them a visit in Klein-Koelzig. He arrived for a three-day stay and remained three weeks. He recognized, of course, their affinity with the works of the De Stijl movement, which was already underway in the Netherlands.



Viking Eggeling. *Diagonal Symphony*. 1924

In one of his more lucid statements of the idea of inner necessity, Kandinsky wrote: “Thus it is clear that the harmony of forms can only be based upon the purposeful touching of the human soul. This is the principle we have called the principle of internal necessity”. (Kandinsky 1994: 65) Or, making the same point, when discussing color harmony: “The artist is the hand that purposefully sets the soul vibrating by this or that key. Thus it is clear that the harmony of colors can only be based upon the principle of purposefully touching the human soul. This is the principle of internal necessity”. (Kandinsky 1994: 160) The principle that emerges is that a work of art should be constructed so as to move the soul towards some good; this was a principle that Eisenstein was to reformulate in materialist terms with the help of Pavlov Bechterev and Sechenov’s psychology.

In the context of his discussion of internal necessity, Kandinsky, too, referred to the Goethean concept of *Generalbaß*. Kandinsky thought of the *Generalbaß* as a worked-out, reasoned and conscious mode of composing colors and forms that would ensure that

the spectator's soul was stirred toward the good the artist had in mind. It was just this belief that led Kandinsky to conclude *Über das Geistige in der Kunst* (On the Spiritual in Art) with this paragraph:

In conclusion, I would remark that in my opinion we are approaching the time when a conscious, reasoned system of composition will be possible, when the painter will be proud to be able to explain his works in constructional terms (as opposed to the Impressionists who were proud of the fact that they were unable to explain anything). We see already before us an age of purposeful creation, and this spirit in painting stands in direct, organic relationship to the creation of a new spiritual realm that is already beginning, for this spirit is the soul of the epoch of the spiritual. (Kandinsky 1994: 219).

One sees that in Kandinsky's mind, too, the opposition between reason and the spirit (magic) is not one of stark antithesis.

The belief that the *Universelle Sprache* would permit the ascetic and disciplined presentation of the subject, wherein reason would triumph over feeling, led Eggeling to a belief in the transcendent character of art. Eggeling proposed that visual art could become the ideal form of expression, and might even supplant ordinary language in many of its uses – that it could become the embodiment of the perfection that humans heretofore had been able to conceive, but were unable to realize because of the hold the concept of representation had on earlier mentalities. All in all Eggeling was skeptical of representation, for he maintained that representations could not directly communicate a particular state of mind to an audience since viewers' responses are contaminated by their preconceived notions. He searched for a way that would allow artists to convey a precise quality of experience, so precise that artists could think of it as impersonal, objective and universal. His practical programme for freeing the visual arts from biased perceptions led him to abstraction, for he believed that, to accomplish the goal of direct communication, visual constructions must be freed from the concepts we associate with particular objects. To this end, Eggeling began the investigation of the pure visual phenomena: line thickness, orientation, curvature, texture, etc.; he also began to explore the systematic variation of these attributes in constructions that used lines and curves and the simple derivations of them (e.g., semi-circles, triangles and quadrilaterals). By limiting his elements to forms belonging to this set, by avoiding representation, and by working only with neutrals,

Eggeling strove to discover the means to preserve the purity of the message transmitted to the viewer.

Richter maintained similar beliefs. In his essay '*Prinzipielles zur Bewegungskunst*' Richter set out the following precepts concerning the essential attributes of art: Art is a human language that requires definite elements as an 'alphabet'; it consists of an abstract 'form-language' (*Form-Sprache*) through which the pure relations that forms bear to each other can be investigated; it is not the identifying characteristics of the natural objects that are of interest, but the pure material of artistic forms; a composition arises dialectically, as a constructive process based on polarities that evoke tension and release; a work of art contains relations based on contrast, which are visible, and relations based on analogy, which can be experienced only spiritually; a work of art strives for a synthetic solution of rhythmic unification (*rhythmische Einheitlichkeit*). His *Demonstration der Universalen Sprache* proposed that both organic and inorganic elements in analogic relations are stipulated by metaphysical laws or truth of a higher order. The language Richter used was redolent of that of UNOVIS. Richter declared that when artists apprehend these metaphysical truths, through intuition, their artistic production falls into conformity with universal principles that apply to all arts. "Art serves as a realization of a higher unity [...] the completion of individuality in a higher form of organization", he wrote. Richter too, like Eggeling, described artworks as having a transcendental function, for an artwork detaches itself from the natural object in order to approach, through humans' determined striving, the further side of awareness and experience. With the help of universal principles, the standardized language would speak of a higher form of organization, a harmonized and conflict-free condition, an effectively static and non-human condition.

Art effects a synthesis of intuition and rational will, chaos and order. This synthesis allows "the truth of the chaotic to be expressed [...] but it is controlled by will: the manifest law – as far as it really expresses just that, is not improvised". (Richter 1998: 209) When artists intuit these laws or truths, a will for manifestation supervenes. This will commands a rhythmic structure and that rhythmic form serves as a higher law for the material the artist shapes. When artists form material in conformity with a rhythmic structure, the material produces apt results, and the work is therefore full of sense.

Film played an important role in shaping these ideas. Evidence of this can be found in a key passage in which Richter proclaimed that kinetic art could be singled out as the art of the future, for kinetic art promised a new cultural reality, in which movement would be identified with progress. Through artists' efforts, kinetic art would be re-oriented. Rather than being concerned with what is effective – that is, rather than being directed towards producing particular emotions – it would aim at bringing about transcendental experience. In the new cultural reality that kinetic art would bring about, humankind would be functionally integrated in a super-individual collective that would negate the singular being of individual persons.

Richter marked the universality of the objectivizing gestures that constitute this language by expelling all intelligible verbal and visual signs and making use only of elementary geometric forms. Because the elements of this language are without intrinsic significance, no preconceptions are invoked; the syntax of the *Universelle Sprache* undertakes the task of combining these elements into a rhythmic composition and thereby drawing the elements into a higher domain. Rhythm would do the work of fusing the elements into a unity. The principle of polarity inherent in the rhythm sublates the contradiction between these elements, rendering them comprehensible.

Richter's idea of rhythm was expansive: "The rhythm of a work is identical with the idea of the whole. Rhythm is that which conveys ideas, that which runs through the whole: its meaning = principle, from which each individual work derives its significance. Rhythm is not a definitive, regular sequence of time and space; it is the unity which ties all the parts into a whole". (As cited in Maur 1999: 57; Grey 1971: 136.) "Rhythm refers to the metaphysical domain of belief and truth. We experience rhythm intuitively. Rhythm is inwardness. Rhythm is the power of nature. Rhythm it is that forms and animates incommunicable ideas, and through which we are bound to the elementary forces of nature". (As cited in Wolf 1989: 19)

Because the forming process depends on unifying contrasting forms by rhythm, the will-to-form is grounded in emotions as well. "The emotional power of form leads to rhythm as the essence of emotional expression", Richter stated, referring to the form of expression concerned with supra-individualistic, transcendent feeling.

(Hans Richter, 'Rhythm,' cited in Wolf 1989: 19) In the end, though, the purity of rhythm draws artistic form into a higher, trans-individual domain. The inner sense of a linguistic form cannot be grasped literally or symbolically; we can only experience it in process. Such was Richter's basis for arguing that rhythm belongs to a domain beyond the rational. "Rhythm expresses something different from thought", Richter stated. (Wolf 1989: 19) Thought coheres on an intellectual/conceptual plane of communications and concepts; semiotic practices are its proper territory. Rhythm coheres on a plane that is more rudimentary.

Goethe as Precursor

Not only was Goethe responsible for pointing out the need for a *Generalbaß der Malerei*, his *Zur Farbenlehre* (*Theory of Colors*, 1810) provided a model for working out its form. There are several parallels between Eggeling/Richter's ideas about form generally and, in particular, between their ideas about color contrast and color harmony, and Goethe's ideas on the same subjects. Goethe challenged Newton's assumption that color was an intrinsic property of light. Against Newton, Goethe contended that color emerged as a condition of light's environment. Colored light seems darker than colorless light, and Goethe would not deny his intuitive sense that an amalgam of darker luminous materials cannot make a lighter one.

Goethe's science, which the Theosophist/Anthroposophist Rudolf Steiner did so much to restore to public attention, was empirical, but empirical in an extended sense of that term. Goethe assumed that experience could reveal what brings forth the phenomenal realities that belong to the visible world of ordinary experience. Goethe outlined the conditions under which observation might produce insight, recommending "*exakte sinnliche Phantasie*" (exact sensorial imagination) as an active and deep participation with the phenomena. There should be no addition, no speculation, no agenda or desire to adjust observations to represent them as being other than what close scrutiny reveals them to be. Like Galileo and Newton, Goethe looked for experimental procedures that allowed him to undertake a systematic examination of natural phenomena. He did not assume, however, that only the quantifiable attributes of these phenomena were germane to constructing scientific theories. Goethe's

science, in keeping with the spirit of his times, was a science of generative processes. To discover the inward truth about natural processes and the forms they produce, one looked for means of exploring the generative process that produces a variety of observed forms, all of which, these philosophers assumed, are different expressions of its underlying nature.

Thus, in one famous section of his scientific writings, Goethe considered the process by which one comes to understand the development of leaf forms. To understand this process, we lay out samples of the leaf's development in a temporal sequence, from the oldest, most basal leaves to the newest, most apical leaves. Examining the sequence carefully we see the various leaves differ markedly, but mental sight enables us to link the forms of several different leaves into a smooth, continuous metamorphosis that takes us from one form to another. As our attention passes from leaf to leaf, we realize that there is no one representative leaf or ideal leaf, but a fluid spectrum of shapes. The sequence of forms is an integral process, characterized by necessity. This wholeness would be disturbed if we were to change the order in which the leaves are displayed. We begin to experience the dramatic movements of plant growth by entering into our imaginations. Goethe understood *exakte sinnliche Phantasie* as an active process that, as understanding develops, results in our merging ourselves with the phenomenon being studied. Through the imagination, one can intuitively and non-invasively come to an understanding of how the plant grows. This experience reveals a unique 'gesture,' a movement characteristic of the plant, telling us *who* it is as it dances its way into being. Theosophists would say this experience attunes us to the 'deva' of the plant. Goethe stressed that one had to start with the actual phenomenon and, opposing the dominant scientific methods of his time, he asserted that one cannot distance oneself from participation in nature if one wants to uncover its underlying truth. Goethe's science seeks to participate in this gesture of organisms, and it is this experience that shows us the 'inner necessity' of the growing plant. (Likewise, to experience the morphological transformations in, say Viking Eggeling's *Diagonal-Symphonie* fully, we must experience the inner necessity generating the transformations).

As concerns color experience, Goethe happened upon an experiment that allowed him to study color systematically. This

experiment involved examining the spectrum produced by a prism held up to a horizontal boundary dividing a light area from a dark area. When he held the prism with the corner up, against a boundary dividing a dark area above from a light area below, Goethe could see colors from the blue range of the spectrum: from the top down, the colors were violet, indigo, and blue. If he reversed the prism so that a side was at the top, he saw something different: the dark area and the light area below were reversed, so there was a light area above and a dark area below. He also saw a complementary range of colors (from top down, the colors were yellow, orange and red). Moreover, no green occurred in either experiment.

On the other hand, when he placed two black cards on a white card, one card over the top part of the white card, the other over the bottom part, and positioned them so as to form a horizontal slit of white between the black areas, and viewed this through a prism positioned with a corner at the top, then he could see colors from violet to red, with green in the middle. When he placed two white cards on a black card, leaving a strip of black between the white surfaces, he saw a reversed series of colors, with yellow at the top and blue at the bottom. Goethe looked for a pattern in these phenomena and noted that the warm colors (red, orange and yellow) appeared at dark borders on a light background and that the cold colors (blue indigo and violet) appeared at light borders on a dark background. These observations are difficult to explain using Newtonian principles, as is the failure to see green in the first pair of trials.

Like Kant, Schelling and Hegel's philosophies, Goethe's science was one of polarities. For Goethe, the visible and invisible world, light and dark, spirit and matter, are the interacting constituents of a single reality. Goethe's *Zur Farbenlehre* also posited certain polarities as fundamental to the experience of color. Of these, the polarity of black and white is most important, since black and white strips could form all the colors of the spectrum. Goethe observed that when one looked at a clear white surface or a clear blue sky through a prism, one did not see a spectrum of light. However, if a slight spot interrupted the white surface or a cloud appeared in the sky, then one saw a burst of color. From this, Goethe concluded that it is "the interchange of light and shadow" that causes colors to be seen. But how does a shadow produce colors?

Against Newton's idea of the spectrum, Goethe noted first that color appears only when light and dark come together. Newton maintained that the appearance of color depends on chemical pigmentation and that the absence of light alone causes color to appear. Darkness, in Newton's theory, is simply the absence of light. According to Newton, bodies absorb light according to their pigmentation. He believed this explained why it is impossible to mix colors on a palette to produce white. Goethe asserted, to the contrary, that color is produced by the interaction of light and dark and that both the source of light and the source of darkness are real phenomena, so color is really 'troubled light.' Goethe considered the appearance of colors at the borders between dark and light to be simply the effect of darkening areas of light and of lightening dark areas.

One of Goethe's principal concerns in formulating his theory of color was to develop a consistent understanding of our subjective responses to color, of the feelings we experience from different colors, what he called the "*sinnlich-sittliche Wirkung der Farbe*" (the "sensual-moral effects of color", whose effectivity he explained by considering color mainly as sensual qualities within the contents of consciousness). Goethe's interest in these effects reflects his belief that mind and matter develop out of the same matrix. The mind is active in perception, Goethe maintained. It does not simply record visual sensory input, but helps shape perception. The imagination (by which Goethe means a faculty for the inner re-creation of the phenomenon, not for engendering a fantasy about it) plays a role in forming the perception. His analysis of color therefore straddled the domains of physics and psychology. Goethe believed there is a consistent relation between the processes in nature that produce color and our experience of their feeling quality. Therefore, these experiences are the basis of a reliable knowledge about the process that forms the phenomenon. Experience arises from the whole process, which goes on within us and beyond us and includes both outer circumstance and its inner resonances. (Richter reiterated this idea when he proposed the idea that grounded his belief in the universality of the *Universelle Sprache*, that "nature + mind are not opposites. The one completes itself in the other. The law lies above them". (Richter 1998: 209) The consistent relationships organisms have to their environments reflect reality. Consequently, consistent emotional responses to physical processes are unlikely to be arbitrary.

This recognition provides a reason for taking these ‘inner’ responses and qualitative experiences as indicators of the process experienced.

In *Über die Einteilung der Farben und ihr Verhältnis gegen einander* (On the Order of Colors and Their Relationship to Each Other), Goethe attempted to establish that only yellow and blue are totally pure colors. Yellow has the effect of brightness, of being ‘next to light,’ and blue, the effect of darkness, of being ‘next to blackness.’ All other colors can be grouped between these. Blue can be intensified to purple, yellow to orange-red. Red and purple together give magenta, which epitomizes the strong side of colors, and yellow and blue together give green, which epitomizes the weak side of color. Thus, colors can be arranged into a color circle. Red is the highest augmentation of colors leading from yellow to blue, and green, which results from the mixing of yellow and blue, lies opposite it on the circle. The circle is completed by orange on the ascending side and by blue-red on the descending side. Goethe suggested there is a systematic order to the effects of colors that can be disclosed by sectioning a number of triangles out of the color circle. Among the triangles he identified are a triangle of primaries (red, yellow, and blue) and a triangle of secondaries (purple, green, and orange). Perhaps the most important triangle, however, concerns these emotional effects of color, colors can be arranged on the basis of their sensual-moral effect into a triangle whose vertices are marked by force, sanguinity or melancholy. Red is arousing and passionate, as red reflects our own fires being lit as external light darkens. Blue is uplifting, calming, peaceful and contemplative, for blue represents the lightening of darkness – lightening the mood to feelings of serenity and also gives a feeling of coldness. Yellow has a splendid and noble effect, making a warm and comfortable impression. Green is alive and vibrant. Red, Goethe also noted, results from a darkening of light, thus, the sun’s light is darkened by the increasing depth of atmosphere through which its light travels as the sun sinks in the evening, while the blue of the sky results from the effect of sunlight being scattered by the earth’s atmosphere, a scattering that lightens the darkness of space. The part of the circle that runs from yellow through orange to red Goethe referred to as the plus side, and its continuation through green and purple into blue he referred to as the minus side. There are, accordingly, three basic pairs of opponent hues: red/green, orange/blue and yellow/purple. Generally, the colors on the plus side

of the circle induce an exciting, lively, aspiring mood, while the colors on the minus side, “create an unsettled, weak and yearning feeling.” Those familiar with Steiner’s writings on color will note that Goethe’s commentary on the sensual-moral effects of particular colors is quite at variance with those of Rudolf Steiner and the Theosophists, who considered blue (for example) as being the most spiritual color.

Goethe’s interest in the ‘subjective,’ sensual-moral effect of color seems at odds with his desire to create a science of color, as we usually consider subjective associations to be individual and idiosyncratic and, therefore, unreliable as indicators of the real character of physical processes. Yet these sensual-moral effects of color were a primary concern of Goethe’s color theory, and many people believe that studying the effect of individual colors “on the sense of the eye [...] and the eye’s imparting on the mind” were *the* primary purpose of Goethe’s study of color. Goethe’s analysis of the sensual-moral effects of color was an attempt to bring order to color’s more chaotic, aesthetic aspects. Color could be powerful, or gentle and/or radiant. If yellow, yellow-red and purple predominate, the effect will be of power. If blue or its neighbors predominate, the effect will be of something gentle. If all colors are in equilibrium, a harmonious coloration will arise which can produce radiance and pleasantness. Despite the philosopher Ludwig Wittgenstein’s comment, in *Bemerkungen über die Farben* that “[er zweifelte], daß Goethes Bemerkungen über die Charaktere der Farben für einen Maler nützlich sein können. Kaum für einen Dekorateur”, Goethe did give advice to artists about using combinations, whether characteristic combinations, harmonic combinations or complementary colors. For example, he recommended the use of complementary colors to help separate costumes from the scenery. The practical thrust of Goethe’s color theory was probably an inspiring example for Eggeling and Richter in their efforts to develop a scientific theory of visual form.

Kandinsky’s theory of colors was modeled on Goethe’s momentous *Zur Farbenlehre*. Kandinsky’s approach was similarly methodical – he asserted that when one concentrates on color in isolation, and allows one to be affected by single colors, one is able to couch the question about color in the simplest possible terms.

The two great divisions, which at once become obvious, are:

1. warmth or coldness of a colour.

2. lightness or darkness of a colour.

In this way, for every colour there are four main sounds [*vier Hauptklänge*]: (I) warm, and either (1) light, or (2) dark; or (II) cold, and either (1) light, or (2) dark [...]

In the most general terms, the warmth or coldness of a colour is due to its inclination toward yellow or toward blue. This is a distinction that occurs, so to speak, within the same plane, whereby the colour retains its basic tonality, but this tonality becomes more material or more immaterial. It is a horizontal movement, the warm colours moving in this horizontal plane in the direction of the spectator, striving toward him; the cold, away from him. [...]

The second great contrast is the difference between white and black, i.e., those colours that produce the other opposing pair, which together make up the four main possibilities of tone: the inclination of the colour toward light or dark. These also have the same movement toward or away from the spectator, although not in dynamic, but in static, rigid form. (Kandinsky 1994: 177-9)

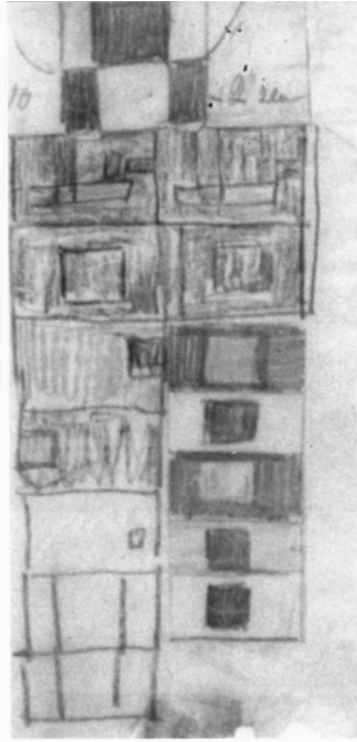
In fact, Kandinsky had set out to develop a grammar for visual art that cast syntax as the arbiter of meaning, just as Eggeling and Richter did. In Kandinsky's formal syntax, the concept of opposition plays the key role – similar to the role that the idea of *Kontrast-Analogie* plays in Eggeling and Richter's *Universelle Sprache*. For Kandinsky, the fundamental polarity is that between the circle and the triangle; their interaction creates a mysterious pulsation. In this opposition, the triangle plays the role of an active or aggressive element, while the circle plays a role that suggests interiority and spiritual depth. Mediating between the triangle and the circle is a third elemental form, the square, which evokes feelings of peace and calm. The circle brings together opposing characteristics, e.g., the concentric and the eccentric, in a dynamic equilibrium. When this union of opposites goes to its furthest extreme and the opposites are brought together in an absolute identity, the circle becomes a point, the *Indifferenzpunkt* of Schelling's philosophy of identity, where the invisible becomes visible. "In geometry, the point is an invisible entity. It must, therefore, be defined as a nonmaterial being. Thought of in material terms, the point resembles a naught. [...] Thus, the geometrical point is, in our imagination, the ultimate and most singular combination of silence and speech". (Kandinsky 1994: 538) Speech, too, he understood as form and silence as formless. In asserting that the point marks the identity of speech and silence, Kandinsky suggests that art

emerges at the point where form passes over into, or fuses with formlessness, the point where it becomes possible for an artistic form to articulate what lies beyond form, the point where vibrations become still.

The directions in which artist and Bauhaus teacher Johannes Itten took Goethe's color theory tell us much about what the early abstract filmmakers, and avant-garde artists of the early twentieth century generally, must have found in the great writer's scientific work. Itten developed a twelve-part color wheel that, because it was practicable and rational, won wide acceptance, both by practicing artists and by teachers. Itten hoped to find a way to harness the richness of the rainbow, with its inestimably large range of colors, and to use it to extend the restricted and more controlled palette of traditional pigments. He explored color mixtures, as well as some of the optical effects that had intrigued Goethe. Itten's color system also served as a color-music code whose character reflected Itten's Mazdaznan beliefs. Rather than using Newton's spectral progression of ROYGBIV, Itten chose the painters' standard color wheel. The primaries and the secondaries were supplemented by six intermediate hues to form a twelve-color system, one color for each of the semitone notes of the musical scale. Itten also believed that different colors have different spiritual values. This belief that colors have spiritual value was common in the late nineteenth and early twentieth-century's art circles. A Miss Georgina Houghton, for example, claimed that spirits worked through her to choose her colors according to their meanings. The catalogue of her painting exhibition of 1871 in London laid out their meanings: Houghton started her list with the primaries red, yellow and blue, which she claimed stood for the Father, Son and Holy Ghost. From there she went on to offer other precise, if extravagant, associations. Burnt sienna, for example, represented Clearness of Judgment. Itten offered moral equations for color mixtures. The mix of red and blue that gave violet is equivalent to the combination of love and faith needed for piety.

Kandinsky, Eggeling and Richter: Color as Feeling, Rhythm as Form
Eggeling and Richter's ideas about color and form were influenced by Blavatsky, Steiner, Leadbetter and, above all, Kandinsky, especially his version of Goethe's color theory. In fact, Richter embarked on the

project of understanding, and developing, Goethean ideas about color before embarking on his final rhythm film, *Rhythmus 25*. Like Goethe, he understood color as the product of opposites interacting and proclaimed there to exist only a single pair of primary colors: red and green.



Hans Richter, study for *Rhythmus 25*, colored pencil, pencil on paper, 1923

The scientifically denominated elementary colours, blue, red and yellow, do not have, esthetically speaking, an absolute distance from each other. Red and yellow are nearer (warm); blue is the opposite of yellow as well as of red, whereas green and red are incomparably unequal to each other. And if you want to use technical measure, green and red are together, black. All other colours I consider more or less variations. (Richter 1971: 85)

Rhythm in painting was often understood as a temporal form – Richter himself did not propose that view, but some of his contemporaries did. They also likened rhythm to color. The American Synchronist Morgan Russell (1886-1953) remarked:

In order to solve the problem of a new painterly structure, we have considered light as tightly linked chromatic waves and devoted closer study to the harmonic combinations among the colors. These ‘color rhythms’ lend a painting a temporal dimension; they create the illusion of the painting developing over a period of time, like a piece of music. (As cited in Maur 1999: 48)

Around 1925, just a short time after Hans Richter began working on scrolls, Carl Buchheister’s (1890-1964), one of Richter’s Constructivist/Dada colleagues, produced elongated, almost scroll-like paintings whose titles identify music and visual art, for example *Konstruktive Komposition mit Dreiklang Gelb-Rot-Blau*, (*Constructive Composition with Three Sounds Yellow-Red-Blue*). A few years later, in 1929, he offered this observation:

Rhythm is the essence of abstract artworks [...] a good abstract image is born out of inner necessity [note the Kandinskian expression], the rhythmic structure of a good abstract image is in harmony with the rhythmic events of nature. It is a layperson’s task gradually to make itself familiar with the inner necessity of abstract images sensed through the exercise of the rhythmic feelings”. (As cited in Maur 1985/96: 148)²

Rhythm, then, experienced through *exakte Phantasie*, allows us to apprehend the unifying force of inner necessity, a unifying force that pervades the artwork and the cosmos alike. Kupka maintained a similar view so he created a ‘two-part composition,’ one part in red, the other in blue, whose parts converge and diverge (that is, they develop through time), as the parts of a fugue do. The effect Kupka apparently desired was to present the dance of cosmic rhythms.

By the beginning of the twentieth century, the relations between painting, music and time had become a key issue among artists. Richter’s interest in rhythm is associated with similar ideas about vibration. Standish D. Lawder, following up on Richter’s remarks, offered the following comment on *Rhythmus 21*:

Richter's first film, *Rhythm 21*, was a kinetic composition of rectangular forms of black, grey, and white. Perhaps more than in any other avant-garde film, it uses the movie screen as a direct substitute for the painter's canvas, as a framed rectangular surface on which a kinetic organization of purely plastic forms was composed. For, normally, the movie screen is perceived as a kind of window, more or less arbitrarily circumscribed, and behind which an illusion of space appears; in *Rhythm 21*, by contrast, it is a planar surface activated by the forms upon it. Thus, its forms, like those of an abstract painting, seem to have no physical extension except on the screen, nor do we sense their lateral extension beyond the limits of the screen as is usually the case in images created by camera vision. The film is a totally self-contained kinetic composition of pure plastic forms. (Lawder 1975: 49-50)

In the final two sentences of this passage, Lawder interprets the significance of Richter's recasting the role of the screen surface in an orthodox modernist fashion (hence the allusion to De Stijl at its end). He is not wrong in this: some years after making *Rhythmus 21*, Richter made a similar point.

The simple [square] of the movie screen could easily be divided and orchestrated by using the rectangle of the cinema-canvas as my field of pictorial vision. Parts of the screen could then be moved against each other. Thus it became possible on this cinema-canvas to relate (both by contrast and analogy) the various movements to each other. So I made my paper rectangles and squares grow and disappear, jump and slide in well-articulated time-spaces and planned rhythms. (Richter 1965: 29)

But there is more to Richter's recasting of the role that the screen surface plays than either Richter or Lawder allows: the screen is treated as it is because Richter conceived of it as a surface that could be set into dynamic motion, that could be made to pulsate and vibrate.

Rhythmus 21 and the Generalmaß der Malerei

The *Generalmaß* provided Richter with a schema for understanding the relations between music and painting. His first film, *Rhythmus 21*, involved expanding and contracting forms on a black or white background in a contrapuntal interplay. Much of the tension of the film results from the way that background forms develop into foreground figures and foreground elements turn into background,

much as the lines in a polyphonic composition do. Richter, following Eggeling, used the term '*Kontrast-Analogie*' to refer to this ambiguity of the spatial illusion. The use of both negative and positive footage heightens that ambiguity: in the negative footage a dark shadow form, a form that suggests that one figure is raised above the other, sometimes marks the edges of figures. As in the other *Rhythmus* films, in this work Richter created a distinctive abstract genre. As Richter and Lawder (1975) have noted, in these films, the cinema screen is treated like a painter's canvas that is activated by the white, black and grey geometric shapes projected upon it. Like the other *Rhythmus* films, the work is an autotelic kinetic composition of pure plastic forms. Lines turn into oblong shapes, which collide with squares that grow out of darkness, and curves become circles. Individual forms wax and wane, expand and shrink. Their movements create a sense of spatial ambiguity.

The film's fundamental structural principle is the counterpointing of contrasting pairs. Wipes from black to white are answered by wipes from white to black and similar forms move in contrasting vertical or horizontal or diagonal direction, according to regulated rhythm, a rhythm that is less that of regular succession in time than the coordinated movement of parts. For Richter, artistic form reflects the fact that the universe manifests itself in harmonic configurations and rhythmically organized compositions. The fluidity of the movements and their precise co-ordination create a remarkable harmony.

Although Richter embraced the fundamental tenet of the *Universelle Sprache*, that principles regarding contrasting elements hold in all visual media, his experience in filmmaking led him to the conclusion that additional laws – laws that did not apply in painting – also had a role in filmmaking. The difference between the two media, Richter determined, resulted from the fact that the events in a film unfold in a fixed, regulated, invariable time, while the spectators' attention moves from point to point in a painting in a less regulated time and in an order that is not invariant from one spectator to another. Further, in film, single forms had hardly any importance: only the relation of one form to another in time matters. Time had a different character in film and it was time, Richter realized, that must govern the forms of film.

Notes:

¹ Christina Lodder emphasizes this in ‘El Lissitzky and the Export of Constructivism’ (Perloff and Reed 2003: 27-46). There is more to be said: Maria Gough does a fine job of proving that El Lissitzky considered his *Proun Room* (Berlin, *Große Berliner Kunstausstellung*, 1923), his *Raum für konstruktive Kunst*, (for the *Jubiläums-Gartenbau-Ausstellung*, Dresden, 1926), and his *Kabinett der Abstrakten* (1927-8, for Hanover) to unfold a reasoned argument, as Sergei Eisenstein believed montage was capable of doing. This is why he referred to these projects as *Demonstrationsräume*. Lissitzky’s works are essentially paracinematic works, she shows. Like Sergei Eisenstein, Lissitzky formulated means to transform the spectator from a passive consumer to an active participant, but while Eisenstein used cinematic means, Lissitzky used paracinematic means. See Gough, ‘Constructivism Disoriented: El Lissitzky’s Dresden and Hanover *Demonstrationsräume*’ in Perloff and Reed 2003: 77-125.

² Quoted in Maur 1985/96: 148. Translation mine. Note: in the original publication, all words except the first appear in small letters.

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* note: Eva Wolf's statement, on p.16 of the Gehr book, that "*Vom Pigment zu licht*" appeared in a 1936 edition of *Telehor*, (edited by Kalivoda Frantisek, and published in Brno,) could not be verified. The Moholy-Nagy Foundation suggests that the article appeared as '*A festéktól a fényig*' (From Pigment to Light) in *Korunk*, issue 8(10). Kolozsvár: 231-37 in 1933. The article may have been reprinted in the 1936 edition of *Telehor*, but no evidence of this was found, therefore, in this bibliography, the 1933 version of the article is listed. See: http://www.moholy-nagy.org/Bibliography_3.html.

Further, a reference by Wolf on p. 16, to a Moholy-Nagy article in *De Stijl* (Moholy-Nagy [1926-7] 'Ein Fragment über den Elementarismus von van Doesburg', in *De Stijl*, vol. XIII no. 7) may be inaccurate. The Moholy-Nagy article does not appear in the journal – nor in any issue of *De Stijl* – I've been through them.

AVANT-GARDE FILM

Edited by
Alexander Graf and Dietrich Scheunemann



Amsterdam - New York, NY 2007

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