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Kinetic Poetry

Álvaro Seïça

The kinetic poem may still be in its infancy.

—MARY ELLEN SOLT (1968)

The term “kinetic” derives from the Greek verb *kinein*; that is, “to move.” Therefore, action and movement infuse kinetic poetry as it describes poetic works that employ motion. Within the realm of digital poetry, where it is today mostly deployed, the composition of methods that output textual movement—such as transitions, timeouts, and intervals—incorporate temporality in the process of coding and display of writing. Yet a discussion of current works of kinetic poetry must be situated in the wider flux of aesthetic, artistic, and media antecedents that pervaded the twentieth century. These antecedents inform us about the will to move beyond the static linearity of the printed page and the notion of poetry as living in

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a single medium. The most obvious animation medium is film, but many animation mechanisms preceded film. Kineticism can be traced back to the invention of technical apparatus such as the kinetograph and the kinoscope, developed by Thomas Edison and William Dickson at the end of the nineteenth century.¹

In order to create bridges between narratives from different fields and artistic movements, I will focus on five forms of time-based kinetic poetry: mechanical poetry, film poetry, videopoetry, holopoetry, and digital poetry. These five media-specific forms are better seen as media clusters with resemblances, not as groups of homogeneous media artworks, even though they all rely on temporal and spatial dimensions to achieve literary and artistic expressiveness. What they strictly have in common is the way poets and artists engage with a broader vision of “poetry in motion;” that is, kinetic poetry. They are operative insofar as they execute a set of instructions or algorithms, being that of the time slots between frames in a storyboard, or the intervals set for transitions in digital poetry. Even if this chapter offers relations and points of departure, a concise history of kinetic poetry cannot be grasped without understanding some of its immediate antecedents: Mallarmé’s exploration of space in the page, Morgenstern’s phono-visual poems, the Futurists’ typographic quest to set “words in freedom” (Govoni and Marinetti’s *parole in libertà*), Apollinaire’s *calligrammes*, the Dadaist random and sound performances, the abstract films of the Modernists, and the postwar experimentalism involving sound, text, and image with spatialization, collage, montage, and other techniques unfolding with the concrete and visual poets.

Kinetic Origins

Throughout the history of writing, modes of textual inscription have been dependent on space, but rarely on time. The printing process activates text as a discrete element to be displayed on a planographic surface. In film, video, and the computer, textual inscription is presented in different outputs, and potentially acquires new forms of artistic expression—given that it allows for displacement, tridimensional space, time scheduling, and media integration. Certainly, poetry’s progressive transition from static to kinetic media owes its roots to investigations and transgressions done by poets and artists working with visual text from the antiquity to the baroque period,

¹These machines were envisioned upon earlier chronophotographic techniques developed by Marey, Reynaud, Demeny, Anschutz, and Muybridge, to mention but a few, in order to build stop motion devices that would set the illusion of movement: the magic lantern and the flip book (kineograph), the thaumatrope, phenakistoscope, zoetrope, praxinoscope, zoopraxiscope, electrotachyscope, and the “photographic gun.” Dickson also developed the mutoscope.

via the late nineteenth century and Modernism. Stéphane Mallarmé's work is symptomatic of a quest to stretch the boundaries and conventions of words and blanks in the page. Mallarmé's poem "Un Coup de Dés Jamais N'Abolira le Hasard" (1897) is notorious for the displacement of words in space, creating voids and pauses in the free poetic line, and extending the reading area to the double-page spread. The suggestion of movement in the page was later explored by Guillaume Apollinaire in *Calligrammes* (1918), whose visual component is achieved by calligraphic elements that are syntactically and graphically arranged in relation to semantics.

It is within the Modernist period that kinetic works start to be technically activated. In the 1910s, Italian and Russian Futurist writers envisioned a world in which the machine and speed would set words free, with effect on literary expression, spatial composition, and cacophonous phonemes. During the 1910s and 1920s, painters, sculptors, architects, photographers, and filmmakers, used to material experimentation, engaged with mixed media that allowed for motion techniques. Futurist abstract films from the 1910s and Marcel Duchamp's "assisted readymade" *Bicycle Wheel* (1913) can be seen, in this sense, as some of the earliest kinetic artworks. Duchamp's piece is a sculpture that simply modifies two objects, although in 1920, with an engine, Duchamp assembled *Rotary Glass Plates (Precision Optics)*, an installation which produced both kinetic and optic rhythms. Naum Gabo's *Kinetic Construction (Standing Wave)* (1919–20) is a further step in kinetic art, insofar its mechanical motor creates four dimensions by vibrating. Gabo and Antoine Pevsner's *Realisticheskii Manifest*—where the ideas of kinetic art were introduced on August 5, 1920—paved the way not only for the establishment of an abstract constructivism, which contrasted with the political Soviet Constructivists but also for what would follow in kinetic arts: "Space and time are the only forms on which life is built and hence art must be constructed. (...) We affirm *in these arts a new element the kinetic rhythms as the basic forms of our perception of real time*" (Gabo and Pevsner 1957: 152, emphasis original).

Celebrating their hundredth anniversary, kinetic arts have traversed multifaceted experiments with artistic and literary forms in diverse media. Always connected to changes in science and technology, kineticism rapidly became a source of fascination: from László Moholy-Nagy's lumino-kinetic sculptures and abstract films, to Hans Richter, Man Ray, and Fernand Léger's movies; from Duchamp's kinetic mixed-media objects, sculptures, and films, to Alexander Calder's air stream *mobiles*. Kinetic art emerges in the 1920s and reemerges in the 1950s postwar. In 1953, Yaacov Agam's solo exhibition *Peintures en Mouvement* at the Galerie Craven in Paris singles kinetic paintings out, which will resonate in the 1955 collective exhibition at Galerie Denise René. The exhibition *Le Mouvement/The Movement*, curated by René and Pontus Hultén, compiled kinetic and op(tical) works by Agam, Bury, Calder, Duchamp, Jacobsen, Soto, Tinguely, and Vasarely.

Today, it can be considered as a pivotal point in kinetic arts, signaling but also amalgamating two different branches of artistic motion: kinetic art, involving applied physical movement, and op art, suggesting movement or illusion.²

The post-Second World War era certainly provoked a need for artistically reimagining the world and experimental art soon blended even more media. But the effect of war, with its human cruelty and sadistic technologic development, had already shaken the artistic milieu during the twentieth century. During the First World War, Dada artists in Zürich, Berlin, and New York embraced the absurdity of human existence in face of war, and reacted, by turning chaos and meaninglessness into manifestos, literary and visual works, like Hannah Höch's photomontages, and sound performances. Sound poetry arose from the Dadaist tradition of phonetic experimentation, playful and performative randomness, in now emblematic works by Hugo Ball, Raoul Hausmann, or Tristan Tzara, which resonated in Kurt Schwitters's *Ursonate* (1922–32). Following upon innovations in electroacoustic music, such as Pierre Schaeffer's *musique concrète*, sound poetry continued as a concerted movement in France and elsewhere in the 1950s, with Henri Chopin, François Dufrêne, Ilse and Pierre Garnier, and Bernard Heidsieck placing emphasis on language's oral atomization and deconstruction via vocal techniques and reel-to-reel tape recorders. Poets also resumed research with the movement of letter shapes influenced by flows of practice that came from before the war and continued to occur during war time. But the typewriter began to be used by younger poets to establish visual patterns of linguistic signs in a new semiotic reading experience.

As the narrative usually goes, concrete poetry was initiated by Eugen Gomringer and Öyvind Fahlström in Europe, and the Noigandres group in Brazil—Augusto de Campos, Haroldo de Campos, and Décio Pignatari. According to Emmett Williams (1967: vi) and Solt (1968), Fahlström and Gomringer/Noigandres were unaware of each other's work. In fact, by 1951 Gomringer had already conceptualized some of the “constellations” collected in *Konstellationen* (1953), while Fahlström had published “Hättila Ragulpr på Fåtskliaben” (1953–4), a text that became known as the “Manifesto for Concrete Poetry” only in 1966 (Olsson 2005, 2016; Bäckström 2012). Yet E. M. de Melo e Castro (1962), in an eye-opening *TLS* letter for the United

²Future exhibitions during the 1960s—such as *Kinetische Kunst* in Zurich (1960), *Bewogen Bewegung* (1961) in Amsterdam, the *Nove Tendencije* (1961–5) and *Tendencije* (1968–73) series in Zagreb, *Arte Programmata* (1962) in Milan, *The Responsive Eye* (1965) in New York, *Kinetika* (1967) in Vienna, *Cinétisme Spectacle Environnement* in Grenoble (1968), or *Cybernetic Serendipity* (1968) in London—would depart from *Le Mouvement*, or expand its scope around constructivism, concrete art, conceptual art, cybernetics, and electronic art.

Kingdom's poets, affirms that concrete poetry was born in Brazil. Franz Mon (1988: 31), on the other hand, attributes its beginning to the work of Italian Futurist-descendent poet Carlo Belloli in 1943, an author earlier credited by Emmett Williams in *An Anthology of Concrete Poetry* (1967) and by Mary Ellen Solt in *Concrete Poetry: A World View* (1968). If it is true that Belloli's *Parole per la Guerra* (1943) follows a Futurist graphic treatment, several poems in *Testi-Poemi Murali* (1944) and *Tavole Visuali* (1948) already show a break that resembles what would be called "concrete poetry" by the 1950s. According to Belloli's remarks to Solt (1968), even if he saw his work as a precursor of concrete aesthetics, he preferred the term *poesia visiva* because it conveyed an approach to visual poetry that was semantic, not asemic.

The 1950s concrete poets absorbed creative and theoretical influences that came from "the area of fine arts, primarily those of de Stijl, Theo van Doesburg and Max Bill [concrete art]" (Mon 2011: 28–9). To these references, it is important at least to mention, from the part of the Brazilian Noigandres poets, Ernest Fenollosa's and Ezra Pound's writings about oriental ideograms, James Joyce's and e. e. cummings's work; while from the part of the Swedish- and German-speaking poets, the influence of Hans Arp's concrete art, concrete and electronic music. Eduardo Kac (2015) goes further along these lines and re-contextualizes what are, to be sure, the multiple origins of concrete poetry: Vasili Kamenskii's 1914 visual poems and subtitle reference *Tango s korovami. Zhelezobetonnye poemy* [Tango with Cows: Ferro-Concrete Poems], and importantly, for his immediate antecedence, the less-acknowledged Brazilian poet Wladimir Dias-Pino, whose 1940s work greatly influenced the São Paulo and Rio de Janeiro concrete groups prior to the neoconcretism split.

These influences spread at different pace and via different networks of friendship and collaboration. Yet the core notion to retain is that the concrete poets pushed forward in radically transforming the disposition of letters and words with new semantic, syntactic, phonetic, and visual compositional strategies that aimed at reinventing poetics and breaking away from verbose lyricism and discursiveness—what Rosmarie Waldrop (1976: 141) called "a revolt against [the] transparency of the word." The influence of ideogrammatic writing helped in approaching the grammar of mass media, advertisement, and information aesthetics via typography and industrial design. Letters, symbols and words were seen as atoms and sequences ingrained with power—what Gomringer (1954) described as "concentration and simplification." Furthermore, the political repression in which some of these authors lived in, or would live in, both in Europe and Latin America, would have an impact on works of a second wave of concrete and visual poetics. Like Ilse Garnier, Bohumila Grögerová, Ana Hatherly, or Salette Tavares in Europe, in the United States Mary Ellen Solt infiltrated

the male-dominated concrete poetry scene with her inventive *Flowers in Concrete* (1966). If we are to assess today's legacy of concretism, we have to necessarily address the gendered canonization at the global scale of the movement. But this fact is not new either, since there have been occasional attempts since the 1970s to claim back territory and rewrite the narrative of women's role, perhaps starting with the yearly expanding exhibition *Between Language and Image*, first organized in 1972 in Italy by Mirella Bentivoglio (Zoccoli 1976).³

Mechanical Poetry: Motorized Sculpture Machines

By the 1960s, compelling examples of flip books, object poems, and scroll poems, such as those made by Japanese Vou group member Takahashi Shohachiro in the *Poésieanimation* series (Toshihiko 1977; Donguy 2007: 227, 236) show that the scroll and the signifiers could create the illusion of motion. But there was more: artists were also constructing mechanical motorized sculptures with textual elements that actually moved by themselves. That was precisely what the *First International Exhibition of Concrete [Phonetic] and Kinetic Poetry* aimed at in 1964, in Cambridge, United Kingdom.⁴

The exhibition's poster includes a poem by Pierre Garnier that suggests movement due to its visual rhythm (Figure 1). Organized by Mike Weaver, with the assistance of Reg Gadney, Philip Steadman, and Stephen Bann, it recognized kinetic poetry as an expanded form of poetry, especially because Weaver was "soliciting poem-sculpture proposals" (Thomas 2019: 135). For Weaver (1964: 14), "In kinetic poetry the boundaries of the visual poem are extended in time." At this point, some poets and critics thought of "kinetic poetry" as dynamic visual poems, flip books, or book objects (artists' books) that would convey the illusion of movement, such as those by Williams or

³See also Emerson (2011), Beaulieu (2013, 2014), and Barok (2018). It is impressive the lack of women authors selected by Williams in his anthology (Ilse Garnier, Bohumila Grögerová, and Mary Ellen Solt), but even more so in Max Bense and Elisabeth Walther's *Konkrete Poesie International* (1965), Stephen Bann's *Concrete Poetry: An International Anthology* (1967), or Gomringer's anthology of German-speaking authors *Konkrete Poesie* (1972): zero! This is at odds with Solt's broader study and criteria, which is neither alphabetical nor linguistic, but rather geographical, in *Concrete Poetry: A World View* (1968). In contextualizing, Solt refers to the work of Ilse Garnier, Bohumila Grögerová, Elisabeth Walther, Salette Tavares, Blanca Calparsoro, Pilar Gómez Bedate, Louise Bogan, and her own, even though the panorama was larger. I am thinking, for instance, of Ana Hatherly.

⁴The poster and the catalog titles in fact differ (Bann 2020). The "Catalogue" (1964) included the term "phonetic."

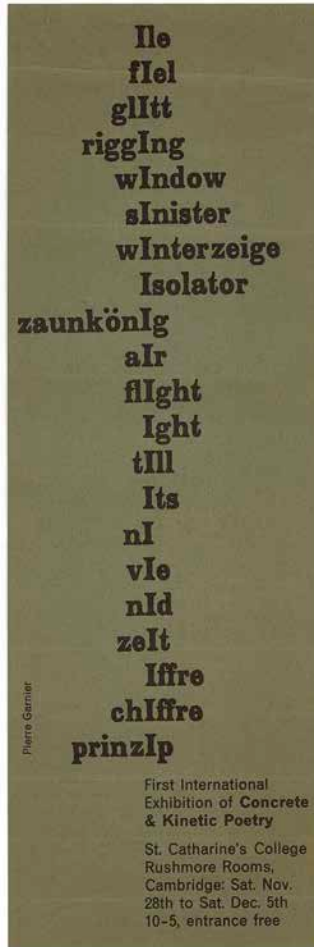


FIGURE 1 *Poster of the First International Exhibition of Concrete and Kinetic Poetry, St. Catharine's College, Cambridge, Nov. 28–Dec. 5, 1964. Poster designed by Philip Steadman with poster-poem “i (prinzIp)” by Pierre Garnier.* Jasia Reichardt Archive of Concrete and Sound Poetry, 1959–1977, Getty Research Institute, Los Angeles (890143B). Copyright Pierre Garnier and Philip Steadman. Courtesy of Violette Garnier and Philip Steadman.

Ian Hamilton Finlay (Solt 1968; Bann 2015), or typewriter patterns that would produce optical effects, like Timm Ulrichs's *Typotexture* (1962)—all of which seem closer to op poetry.⁵

⁵The “actual” and “virtual” (effect on the retina) kineticism of these works is debatable. See Vasarely's “cinétisme” (1955, 1966), Weaver's distinction (1964), Bann's unity and diversity (1966b, 2020), and Popper's historical threading (1968).

For those engaged with art, science, and technology, alongside an idea of the neo-renaissance and interdisciplinary artist, kineticism meant another possibility—kinetic art; that is, mechanical moving art. This tradition was inherited from the 1920s kinetic arts and acquired momentum in postwar arts.⁶ Visual artists got also interested in exploring the potential of moving text. From 1960 onwards, Liliane Lijn created kinetic cylinders in which she would by 1962 include text in a series of mixed-media “poemcons” and “poem machines,” such as *Time is Change* (1964–5), a motorized conic turning sculpture using stenciled text. Also drawing from kinetic art and under the aegis of Dom Sylvester Houédard, Ken Cox started adding letterforms to his motorized sculptures, such as *Shadow Box*, *Four Seasons Clock* (1965) and *Three Graces* (1966–8), which were seen as “kinetic poems” as well as “poetry machines” in a posthumous exhibition given the artist’s premature death.

For the *First International Exhibition of Concrete and Kinetic Poetry*, the four members were crucial in compiling their contacts. Gadney brought news about kinetic art from Paris, such as Frank Malina’s, and thus the attempt of Weaver in intersecting concrete poetry and kinetic art in order to forge an exhibition on kinetic poetry as well. This context would drive the exhibition’s organizers to conceptualize kinetic poems, some of which materialized, like Weaver’s motorized poem “Tempoem.” John Sharkey devised the film poem *OPENWORDROBE* (1964), while the kinetic artist José María Cruxent included text, for instance, in the *Métromane* (1964) installation. Groundbreaking in scope and geography, the exhibition ended up focusing more on its concrete than kinetic dimensions (Bann 2015; Gadney 2017).

Concretism—and by extension experimentalism—seems to be of the utmost relevance for the development of kinetic poetry. Various movements that constitute the landscape of experimental poetry draw from the synthesis and compression of language in mixed-media approaches. They also tend to place an emphasis on visual materiality as a communication means, processuality, collaboration, and participation, which are decisive in the experiences with film, video, and computers enacted by many of the same poets that started in the realm of concretism. Like Fluxus and other groups or movements that populated the landscape of 1950–60s experimental arts, experimental poetry was concerned with the expanded possibilities of media and the materiality of language. At this point, poets were creating and theorizing about a proliferation of non-verbal-bound poetics: visual poetry, auditive poetry, tactile poetry, respiratory

⁶Besides those exhibiting at *Le Mouvement*, collectives working in this area included Group Zero, Group N, Group T, Group Y, Groupe de Recherche d’Art Visuel, and Dvizenie. Individual artists were numerous—see the catalogues of the exhibitions indicated on footnote 2.

poetry, linguistic poetry, conceptual and mathematical poetry, synesthetic poetry, and spatial poetry (Melo e Castro 1965, 2014). This galaxy of proliferating media-oriented poetics finds echo in Adriano Spatola's "total poetry" (1969, 2008) and Dick Higgins's "intermedia" and "metapoetries" diagrams (2018 [1967, 1978]). This sense of innovative poetics led by material or media-specific dimensions—instead of psychological content and discursive communication as the basis of poetics—operates a rupture that emphasizes media poetry as form. On the one hand, the historical thread that derives from kinetic art repurposes kinetic poetry as mechanical moving poetry. On the other hand, it is clear why poets working with film, video, or computers felt the need to name their artworks not "kinetic" but rather "film poetry," "video poetry," and "computer poetry"—not only to signal the importance of technics but also to point out what it culturally meant to shape poetry with newer media.

Antecedents: Abstract and Animated Films

Abstract films from the 1920s were singular for their unique vocabulary in relation towards moving image, shape, expressive time, spatial movement, and light. However, even if lost today, during the 1910s Futurist artists and brothers Bruno Corra and Arnaldo Ginna were already pioneering abstract films: Corra's *Musica Cromatica* (1912) and Ginna's *Vita Futurista* (1916). In the same year, their manifesto "The Futurist Cinema" called for "filmed words-in-freedom in movement" (2009: 233).

By the 1920s, the concern with film as a dense and pictorial medium with a specific visual language, as well as unconventional explorations with the camera as a mechanical apparatus and hand-painted film became primary directions for artists working in Weimar's Bauhaus, Berlin, and Paris. Walther Ruttmann's color film *Lichtspiel Opus I* (1921) acquires cinematic flow by way of organic and dancing forms. Temporal dimensions and form are clearly investigated in Richter's *Rhythmus 21* (1921), in that squares are used to reinforce and choreograph the frames' transitions like breathing organisms. Viking Eggeling, Richter's companion, created *Symphonie Diagonale* (1921–4), a silent film full of dynamism and rhythm because of shapeshifting forms that recall musical intervals. Richter's *Filmstudie* (1926), on the other hand, differs by combining abstract film with Surrealist collage in a nonlinear montage whose soft-edge forms show kinetic text. At the same time, Man Ray, who directed and collaborated in many experimental films, also signed *Le Retour à la Raison* (1923), a Dadaist film which incorporates kinetic *rayographs*, or photograms, a photographic technique used by Ray to create images without camera, that is, solely with light exposure. Léger's *Ballet Mécanique* (1924), which is a film without scenario initiated by

Dudley Murphy and Ray (later redacted from the credits by Léger himself), operates by nonlinear, but also sequential association of abstract geometric shapes and figurative depictions, in line with Léger's Cubist paintings and Ray's random shapes.

A seminal work from this period, due to the materialization of kinetic text, is Duchamp's *Anémic Cinéma* (1926). This 35 mm film uses moving *rotoreliefs*—double-sided 40 rpm disks—with hypnotic patterns that combine cinematic montage, optical tridimensional illusion, and text movement. The film's composition features absurd and whimsical lines of text that act as wordplay and turn in spiraling circles mounted on disks. Seminal contributions came as well from the author of *The New Vision* and *Vision in Motion*, Moholy-Nagy, whose experiments in lumino-kinetic sculpture would openly influence his own filmic production. In *Ein Lichtspiel: Schwarz-Weiss-Grau* (1930), likewise Richter's *Filmstudie*, Moholy-Nagy uses film techniques, such as multiple exposure and negative image, while developing a very specific vocabulary in terms of light, shades, and geometric sculptural patterns with the *Light-Space Modulator*. Early abstract films thus make evident Cubist, Dadaist, Expressionist, Surrealist, and Constructivist affiliations, which would resonate in the experimental films of the 1950–60s.⁷

Film Poetry

Besides early 1920s experimental film, authors working at the intersection of cinema, animation, and visual arts devised as well other influential pieces. These include Sergei Eisenstein's, Dziga Vertov's, and Len Lye's 1930s textual and typographic incorporations in long feature films and short animation movies; for instance, in Vertov's 1931 *Enthusiasm (Symphony of the Donbas)* and Lye's *A Colour Box* (1935) or *Trade Tattoo* (1937). One of the interesting features about Lye's work is the combination of collage techniques with cameraless hand-painted celluloid film. Lye has been credited as an important precursor of kinetic poetry (Dencker 2011; Rettberg 2011, 2019), though Vertov's specific contributions need to be further highlighted (Dencker 2011). Among the many fascinating aspects of his oeuvre, Vertov is particularly important because of his early and inventive use of animated

⁷The *First International Avant-Garde Film Exhibition* (1925) at the UFA Theatre in Berlin speaks to this prolific moment in experimental film production. The "Absolute Film" show included Richter's *Rhythmus 23* and *Rhythmus 25*, Eggeling's *Symphonie Diagonale*, Ruttmann's *Opus III*, Léger's *Ballet Mécanique*, Hirschfeld-Mack's live performance, and René Clair and Francis Picabia's *Entr'acte*.

typography in film, while exploring its relation with sound and rhythm, in “musical and literary word-montages” (Vertov 2011: 2).

Today, kinetic poetry can be investigated from an array of fields and lenses: literature, visual arts, media, design, film, animation, or social semiotics. To be sure, animated movies and the design of text and film opening titles are among other areas that contributed for reimagining textual movement.⁸ Moreover, the titles and credits of movies started to be treated as living animations, and so semantics and semiotics gained an additional layer: motion. *Kinetic semantics* represents meaning-making not only from lexemes but also from their movement and relation in space-time—what could be described as an additional modality in semiotics.

Yet “film poetry” and “film text” appear consistently described as such with the experimental poets.⁹ Experimental film poetry was influenced by Surrealist and Lettrist film, but even more so by concrete poetry.¹⁰ Marc Adrian was one of the early inter- or transmedia artists connecting these traditions, while working with a range of media including analog film and computer-generated processes such as randomization. In the silent, and black and white 35/16 mm film poem *WO-VOR-DA-BEI* (1958), the artist creates movement by alternating close-ups and distant shots of permuted syllables (Husslein-Arco, Cabuk, and Krejci 2016). In *Schriftfilm* (1959–60), Adrian makes use of word replacement with combinatorial game at the level of substantives and verbs, whereas *Random* (1963), *Text I* (1964a) and *Text II* (1964b) are permutation films with sound developed in Berlin with a Zuse computer.

Ferdinand Kriwet, who also worked across media, composed with *Teletext* (1963) a very different collage film. *Teletext* appropriates found footage, radio, and popular music, as it intersperses signs, letters, urban symbols, and advertisement with a sharp multiplicity of sensory inputs. It reads as a critique of capitalism, the consumer society, mass media, war, and acceleration. It is a subliminal window into the 1960s, as political and pop culture events unfold at a pace that shows the contradictions of the decade.

⁸Lotte Reiniger, Oskar Fischinger, Berthold Bartosch, Norman McLaren, Mary Ellen Bute, Saul Bass, Pablo Ferro, or Daniel Szczechura bridged the divide between experimental and mainstream animation film, and the boundaries between art venues and the commercial industry. On Bass, see Cayley 2005.

⁹For the sake of compression, I am departing from the way authors describe their creative works, rather than opening up the discussion about what constitutes “poetry,” “text,” “text-based art,” “language-based,” or “language art.”

¹⁰Films such as 1951 Isidore Isou’s *Traité de Bave et d’Éternité*, Maurice Lemaître’s *Le Film est Déjà Commencé?*, and Gil J. Wolman’s *L’Anticoncept*. Surrealist and Lettrist film also influenced a different type of experimental film that developed in parallel, often using found footage and nonlinear montage: for instance, with French *cinépoésie*, or Italian *cinépoesia*, such as Gruppo ’70’s *Volerà nel 70* (1965).

The montage and multichannel-like simultaneous techniques impress, but more so do the visionary kinetic effects that ignite the sense of information overload and vertigo that are now commonplace in the media-polluted city, as well as in the internet. Kriwet addresses the infant television network by alternating the textual noise of the cityscape, radio and newspapers with his own newspaper collages and circular poems. The alternation of disparate images and text create a tension between legibility and readability, in such a way to destabilize perception modes (Benthien, Lau, and Marxsen 2019). The radio cut-ups are also precious: “Save now, buy later!” or “The *New York Times*: You don’t have to read it all, but it’s nice to know it’s all there.”

Gerhard Rühm, the Vienna Group co-founder, was another poet who strongly emphasized the materiality of language across media. In *3 Kinematographische Texte* (1969–70), Rühm creates a series of three black and white kinetic texts. The first silent film poem contains white shapes that progressively form the glyphs *;*, *i*, *!*, *o*, *a*, *q*, *d*, *b*, and *p*, while recombining as molecules via elongations and contractions. The second silent film shows dislocations of *gehe*, *gehen gegen*, *geben ruhen*, *eben*, *benen*, *rufen*, *enge*, *ende*, *dehnen*, *neben*, *nahen*, *gab* and, at the end, the verb *gehen* (“go, move, walk”) blinks with a fade-out. The third film, with sound, involves an interplay of the “written” and “audible” words *du*, *durch*, *dich*, *ich*, *da*, *haus*, *hausmann*, *und*, *undundundundun*, *und*, *undundu*. Questioning the relation between signifier and signified, Rühm’s sensual and multimodal language explores poetry aesthetics as a written, sonic, and visual art.

Adrian, Kriwet, and Rühm were not alone. In fact, there were plenty of artists working with text and film.¹¹ This artistic landscape was indeed diverse and spread across geographies. In Finland, filmmaker Eino Ruutsalo, who collaborated with electronic musician Erkki Kurenniemi, created the vibrant *Kineettisiä Kuvia* (1962)—the title reinforces the very nature of moving images as “kinetic pictures.” In the United States, the increasing immersion of artists in collaborative computer environments contributed to another type of experimentation with moving image, text, and sound. At the Bell Telephone Laboratories, Kenneth Knowlton developed the programming languages BEFLIX and EXPLOR. He further assisted the artistic work of Lillian Schwartz and Stanley VanDerBeek in the creation of computer-generated films, as computers and microfilm recorders could process and integrate various data formats.

VanDerBeek’s collaboration with Knowlton resulted in the *Poemfield* series. *Poemfield No. 2* (1966, Figures 2a and 2b) is a fascinating 16 mm

¹¹Klaus Dencker, in the monumental study *Optische Poesie* (2011), refers to other equally influential *schriftfilme* and *textfilme* by Eric Andersen, Szczechura, Dieter Roth, Ernst Schmidt Jr., or Ulrichs.

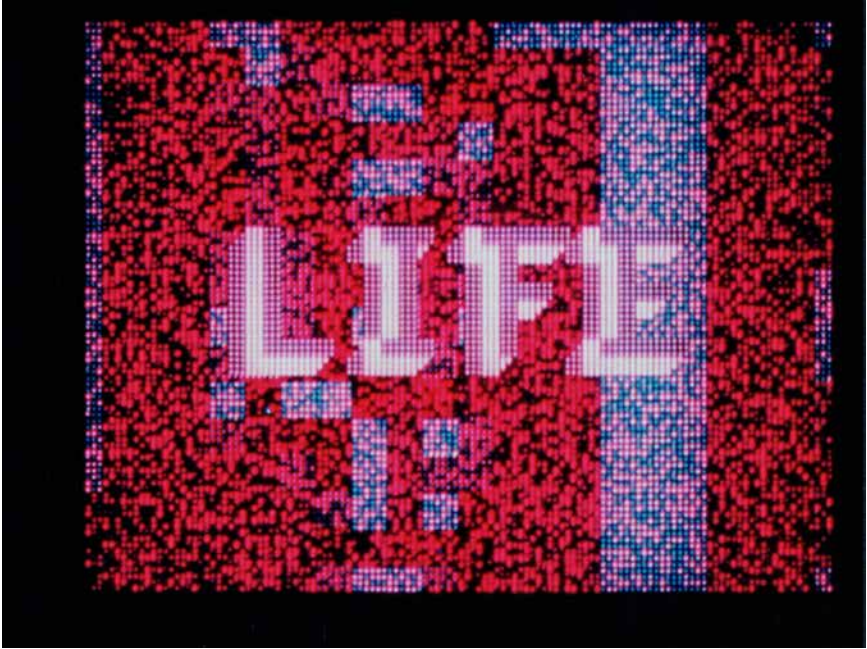


FIGURE 2A AND 2B Stan VanDerBeek, *Poemfield No. 2*, 1966 (Film stills). 16 mm film, color, sound. Soundtrack by Paul Motian. Realized with Ken Knowlton. Copyright Stan VanDerBeek Archive.

“study in computer graphics” produced with an IBM 7094 and BEFLIX. The film makes use of vibrant magenta and strong colors, which are woven in a textile-like dot matrix with jazz music and blinking text. This kinetic artwork impresses psychedelic and synesthetic feelings on the viewer’s retina and ear with its vivid color transitions and Paul Motian’s soundtrack.

Due to their multimodality, *Poemfield* and Paul Sharits’s *Word-Movie (Fluxfilm #29)* (1966)—a fifty-word fast pace letter replacement in 16 mm—have been emphasized as examples that complicate the boundaries between experimental film, computer-generated animation, visual arts, and electronic literature (Gerrits 2014; Wingate 2016). It is in this prism that Wingate further refers to John Whitney’s *Permutations* (1966–8), which was developed with an IBM research grant and computer coding by Jack Citron. Like many early animators, John and James Whitney created their own animation tools. John Whitney also assembled a real-time studio with a mechanical analog computer that produced *Catalog* (1961).

Arthur Layzer’s *Morning Elevator* (1971), a kinetic film poem programmed in FORTRAN, further signals the entanglement of film poetry with programming languages already being used as creative platforms. Other electronic technologies were also being completely repurposed via artistic implementations. If we consider the kinetic text installations made with LEDs by Kriwet or Jenny Holzer, we have yet another avenue of exploration within media and moving text.

Videopoetry

Videopoetry is a form of kinetic poetry that directly derived from experimental film and film poetry as being time-based. However, its creation and recording relied on aspects specific to the medium of analog video. It was neither cinema nor television, even if it related to both in a critical way with regard to the use of text, the construction and representation of time, and memory. It employed not celluloid film, but magnetic videotape (VT), and it used electronic tools such as computational generators, synthesizers, and editors. Inasmuch as in film poetry, the possibility of animating letters, words, signs, and images became an exciting perspective for poets such as Melo e Castro (2007: 176), who had the chance not just to suggest movement in time and space, but rather to let letters and signs “gain actual movement of their own [and] at last be free, creating their own space.”

Melo e Castro’s videopoem *Roda Lume* (1968) draws on the poet’s earlier experiments in film poetry, such as *Lírica do Objecto* (1958), a self-reflexive black and white 8 mm film. *Roda Lume* is also displayed in black and white, but it was already developed in the video studio of RTP. After being broadcast in a 1969 literary program, the Portuguese public

broadcasting company—which at the time was under fascist ruling—deplorably destroyed the recorded reel. Following the 1974 Carnation Revolution, Melo e Castro re-enacted the piece in U-matic format as *Roda Lume Fogo* (1986), with a new soundtrack, given that he had preserved the original storyboard. Shapes, signs, syllables, and vowels, combined with a sound poem, construct multiple semiotic dimensions that stress the power of art to unlock alternative worlds as paths to freedom. Its multimodality, and the juxtaposition of sound, moving image, and kinetic text create a particular reading experience, closer to Spatola’s notion of “total poetry,” in that temporal, spatial and mnemonic dimensions are activated and evoked in complex ways. As Kac (2004: 332) notes:

O ponto central da criação videopoética é o tempo e suas múltiplas formas de manipulação, como a retenção da memória, a duração, a permanência breve, o corte abrupto, a compressão, a aceleração, a interrupção, a passagem lenta, e muitas outras formas que, conjugadas às cores sintéticas, ao som eletrônico, aos osciladores e a outros equipamentos, estabelecem novos parâmetros para a arte poética.¹²

Throughout the 1970s and 1980s, many artists engaged with the medium of video and its electronic tools to foster a dialog with other genres. Peter Weibel’s multiple “videospecific poems” from 1973 to 1975 (qtd. in Dencker 2011: 145), such as *Augentexte* (1975), or Tom Konyves’s *Sympathies of War* (1978) show how video poetry could depart from video art, concrete poetry, or documentary film traditions. Poets collaborated as well with national broadcasting stations and dedicated TV art hubs to produce strikingly singular video poems. While working at several Italian RAI studios, Gianni Toti forged the notion of “poetronica” in often feature-length improv videos such as *Per Una Videopoesia* (1980). Toti’s sociopolitical works throughout the 1980s and 1990s were technically activated by synthesized kinetic lettering superimposed on an amalgam of video art, virtual worlds, and popular TV aesthetics. At the Experimental Television Center in New York, Richard Kostelanetz compiled several series of videofiction and videopoetry that explore typologies of word movement and letter replacement, as well as the electronic effects made possible by the video-editing studio and the Amiga 500 computational lettering.¹³ Kostelanetz’s short videos constitute

¹²“The central point of videopoetic creation is time and its multiple forms of manipulation, such as memory retention, duration, brief permanence, abrupt cutting, compression, acceleration, interruption, slow passage, and many other forms that combined with synthetic colors, electronic sound, oscillators and other equipment set new parameters for poetic art” (free translation mine).

¹³The series *Video Poems* (1985–9), *Partitions* (1986), *Kinetic Writings* (1988), and *Videostings* (1989).

a visual encyclopedia of kinetic forms, frequently via wordplay, which parodies capitalism, bureaucracy, and sexuality.

Videopoetry is a form that has greatly evolved with digital video and still captivates contemporary poets, who do not need professional studios to work with electronic editing tools anymore. With the migration of video into digital platforms and the higher portability of cameras and editing hardware, the very conception and presentation modes have suffered a stylistic and aesthetic transformation tied to the role of video processing and editing software as creative processes.

Holopoetry

While nondocumentary videopoetry and digital poetry might render 3D spaces as 3D objects in a 2D screen, holopoetry creates a clear rupture in visual perception, as it introduces third and fourth dimensions in letters and shapes. In the late 1970s and 1980s, Richard Kostelanetz and Eduardo Kac combined visual poetry and holographic technology, thus expanding the realm of experimental poetics.¹⁴ Kostelanetz's *On Holography* (1978)—a stereo 360-degree multiplex holographic film poem—is a spinning cylindrical sculpture that does not use laser, but rather film, by animating a self-reflexive text, frame by frame, that can be horizontally and vertically read (Kostelanetz 2017).

Kac went on to deeply explore the medium with *Holo/Olho* (1983), the first in a series of holopoems that engage with light as a medium, tridimensionality, and two important characteristics of holography: the possibility for the viewer-reader to see multiple volumes in the same spatial point, and the fact that, in a hologram, the part contains the whole and the whole contains the part. As such, *Holo/Olho* is physically, semantically, and syntactically structured with that purpose, whereas the “olho” (eye) is contained within the “hol(o)-” (*hólos*, the whole) and vice-versa, thus creating both a material and content synecdoche. In Kac's (2004: 287) words, the “holokinetics” and “lumisigns” arising from the poems establish a peculiar relation between verbal and visual signs, as well as re-envisioning kinetic forms in space.¹⁵ In addition, *Wordsl* (1986a) is created in a curved space, using integral holography, while *Chaos* (1986b) and *Quando?* (1987–8) are computer-generated.

Holopoetry takes advantage of vertical and horizontal parallax, and the dematerialization of words in space. Kac's poems impress due to the interplay

¹⁴For further information on holography and poetry, see Funkhouser (2007: 265–70).

¹⁵Holopoems *Abracadabra* (1984–5), *Zyx* (1985a), and *Oco* (1985b).

between “virtual” (hologram) and “real image” (in front of the hologram), and the gradation of colors produced by the visible light spectrum. They experiment with discontinued space and the movement of letters in order to produce a new reading experience. The very movement of the viewer around the hologram transforms the text, thus implying a physical and embodied reading process. Due to its technical apparatus, the hologram does not allow for an extensive output of words. Language needs then to be worked in a compressed manner akin to concrete and visual poetry.

Digital Poetry

As we move from one medium to another, again and again we see two concurrent streams: the reimplementations of old notions in new media, but also an emphasis on how old and new differ from each other—either to specify its singularities or to claim new territory. Moreover, older and newer media tend to coexist during transition periods and that produces interesting feedback loops of artistic practice. As Philippe Bootz (2006) has stressed, digital poetry is not videopoetry. Kinetic poetry specifically written with the computer—and meant to be read and presented via a computer—is comprised of textual, visual, and aural elements. Yet it strictly depends on its underlying code to run and function. In this sense, kinetic digital poetry is algorithmically programmed animation. Furthermore, it often requires interaction or participation from the reader-user, while scheduled events can be determined by random and generative algorithms. The earliest works of kinetic digital poetry sprang from the usability offered by personal computers, though we find static poems being composed with institutional mainframe computers at least since the 1950s in Europe. In the context of Latin America, artists like Eduardo Darino and Erthos Albino de Souza, who worked in the oil industry, had access to mainframes. By 1965–6, the young film animator Eduardo Darino combined GE mainframes, BASIC, teletype printer, and a recording camera to create *Correcaminos*, “an animated visual poem” (Darino 2020; Kozak 2020). Thus, this shows how complex it was for an artist to animate an encoded sequence and how important it was for computational kineticism the digital personal computer and the popularization of simpler programming languages.

The bulk of early kinetic digital poems occurs during the 1980s. It is relevant to understand that most of the following poets were affiliated with the experimental movements of the 1960s. In 1981, Silvestre Pestana coded the first two poems of the *Computer Poetry* suite in BASIC, for a Sinclair ZX81, with white words waving on black background. The final poem (1983) was programmed in a Sinclair ZX Spectrum with more features and symbolic dimensions: color and circular movement suggested

tridimensionality, and the word-shape *dor* (pain) replaced all the potential of the *new people*, Pestana's view of social reform and political freedom. Using the statement PAPER and BORDER for blue background and frame, and INK for white, yellow, green, and red squares and font, the artist represents the Portuguese and EEC flags in a critical stance to the aftermath of the Carnation Revolution and the prospect of joining the EEC.

Marco Fraticelli's *Déjà Vu: Poetry for the Computer Screen* (1983) compiles previous hand-written haikai as visual poems to be read on-screen, while Jacques Donguy and Guillaume Loizillon's *Poème Ordinateur* (1983) outputs an "endless stream of consciousness" (Donguy 2007: 331). Like Pestana, bpNichol's *First Screening: Computer Poems* (1983–4) draws from previous work with concrete poetry and novel graphic exploration of words in motion. The series of twelve poems written in AppleSoft BASIC for an Apple IIe operates with varied kinetic behavior: blinking, vertical and horizontal dislocation, letter replacement, and TV script-like scrolling transitions. Still, the greatest surprise is the fact that bpNichol annotated the source code and inserted an "Easter egg" in the last poem—that is, it contains material that is hiding in the source code. The most interesting codework appears between lines 3900 and 3935. In line 3900, the self-reflexive creative comment announces "REM ARK," whereas in line 3910 it reads: "REM AIN." (REM introduces a comment in BASIC.)

Kinetic digital poetry at this point was in many ways a re-enactment of the experimental practices of the 1960s, when poets were working in the realm of concrete poetry. bpNichol writes about "filmic effects that I hadn't the patience or skill to animate at that time" (qtd. in Huth 2008: n.p.). As Geof Huth asserts, "Earlier kinetic digital poetry tended to use the computer to illustrate the poems; Nichol used it to animate them, to make them live." This first wave can be further exemplified by Tibor Papp's *Les Très Riches Heures de l'Ordinateur n° 1* (1985), a live performance at the Polyphonix 9 festival in Paris, in which Papp, coding with an Amstrad, projected the "visual dynamic poem" onto ten screens (Donguy 2007: 314; Bootz 2014: 11). It is relevant that all these works contain the word "computer" in their titles, attesting the need to disclaim the specificity and novelty of creating poems with, and for the computer medium, but also extending the notion that all these authors perceived the computer program as a poem in itself, or as a fundamental part of the process.

The second half of the 1980s sees an intensification of authoring programs and collective gatherings.¹⁶ In terms of publishing and distribution, the French review *alire* is launched as the first electronic journal dedicated to digital poetry. The journal, initially stored and distributed in floppy disks,

¹⁶João Coelho's *Universo* (1985), Paul Zelevansky's *SWALLOWS* (1985–6), and Huth's *Endemic Battle Collage* (1986–7) further explore poetry's kineticism in BASIC.

was published by the L.A.I.R.E. collective and included *poèmes animés*.¹⁷ Jean-Marie Dutey's *Le Mange-Texte* (1989 [1986]) and Bootz's *Amour* (1989) demonstrate the DOS-based pixelated and flat aesthetics of the 1980s, which was rather different from the 3D virtual textual modeling investigated by artists like Jeffrey Shaw.

Throughout the 1990s and 2000s, very fast developments in technology greatly contributed to diversifying the aesthetic approaches, which are difficult to isolate in clusters. Yet the popularization of the Graphical User Interface and the World Wide Web network gave rise to ubiquitous models of presentation and dissemination that artists sought to transgress. During this period, Caterina Davinio created net poetry that addressed the noise and glitch of communication networks, while earlier experimental poets started reimplementing their concrete poems as animations—Ana María Uribe's *Tipoemas y Anipoemas* (1997) being a case in point. HTML facilitated a poetics of links, which is explored by Annie Abrahams in the multilingual and GIF-animated *understanding / comprendre* (1997–8), as well as DHTML applications such as Jim Andrews's visual poetry. But other types of time-based and trans-linguistic poetics, like “transliterated morphing,” were being enacted by John Cayley's *windsound* (1999), developed for HyperCard, or *translation* (2004).

Animation software such as Flash, Director, and After Effects dictated a mainstream shift in vocabulary from *kinetic* to *animation* techniques. Unlike before, the end user was offered a software interface that did not involve coding and had a practical cinematic timeline. Flash became the 2000s most popular animation suite, being intensely used not only in industry and commercials but also by visual artists and writers with not-for-profit goals. The platform enabled works such as Brian Kim Stefans's *The Dreamlife of Letters* (2000), a self-referential and vivid catalog of moving letters and words; Young-Hae Chang Heavy Industries' prolific narrative puns with black and white graphics; David Jhave Johnston's *Sooth* (2005), an interactive and generative superimposition of text on video; or Stephanie Strickland, Cynthia Lawson Jaramillo, and Paul Ryan's *slippingglimpse* (2007), an artwork that departs from the rhythm and patterns of waves (*chreods*) to display the font's “text fields” according to the waterscape's encoded motion-capture. Collaborative endeavors also show how Flash was fit for grand-scale projects, such as David Clark's *88 Constellations for Wittgenstein* (2009). Authoring platforms became influential in terms of fostering novel ways of integrating media formats with interactive functions, but they also created homogenization. This meant that authors felt a need to understand its inner workings in order to expand the platform's possibilities

¹⁷Founded by Bootz, Frédéric Develay, Jean-Marie Dutey, Claude Maillard, and Papp in 1988. The early issues of the journal published these authors, as well as Jean-Pierre Balpe, Christophe Petchanatz, Donguy, and Philippe Castellan.

or to transgress them. Poets and artist-programmers such as Bootz, Eugenio Tisselli, and Jörg Piringer went as far as developing their own software for live audiovisual performances. Piringer's *soundpoems* (2002–8) and subsequent pieces clearly rework in digital kinetic systems the traditions of typographic, sound and concrete poetry, especially those by Rühm, Hansjörg Mayer, and others working with the alphabet's units.

Meanwhile, the dissemination of dynamic browser-based scripting languages, such as JavaScript, and open-source software for the arts, such as Processing, generated richer possibilities for animation, social coding, and the collaborative development of interfaces. Networked collaborations between writers and programmers, such as those initiated by María Mencía and Zuzana Husárová, have resulted in a synergy of skills. The two decades of the twenty-first century show a striking variety of artworks and styles that continue to redefine poetic interface, space, flow, and kineticism. Two works that explore these features, with extremely fast textual movement, are Ian Hatcher's *∪* (*Total Runout*) (2015) and Montfort's "Alphabet Expanding" (2011)—to run the Perl program copy this single line into your terminal and press enter:

```
perl-e `{print$,=$"x($.+=.01),a..z;redo}`
```

Finally, María Mencía's *El Winnipeg: El Poema que Cruzó el Atlántico* (2017, Figure 3) emphasizes the importance of collective authoring and participation. This collaborative work repurposes the JavaScript library Three.js with programming by Alexandre Dupuis-Belin, while expanding the application of motion to documentary poetry. The artwork departs from testimonies of the 1939 Winnipeg boat's passengers—who were Spanish Civil War refugees helped to exile by Pablo Neruda—while it allows users to contribute with new stories and create poems out of the letters of these fragments in a zoomable planispheric ocean.

Future Movement

Kinetic poetry emerges with the historical avant-garde and it is clearly recycled with the experimental arts. The experimental poets and artists of the 1960s were galvanized by a multitude of *new tendencies* whose practices involved the critique of media and early computational systems. Moreover, these artists updated each other with letters and magazines, while exchanging works for publication and showcase. This network of contacts and collaboration, shaped at a global scale, pre-dates today's emailing lists and digital forums.

Kinetic poetry gained from one of the essential legacies of experimental poetics—its interdisciplinarity—by creating disruption in commonly



FIGURE 3 *María Mencía, El Winnipeg: El Poema que Cruzó el Atlántico, 2017 (Screenshot). JavaScript, jQuery, HTML. Programming by Alexandre Dupuis-Belin. winnipeg.mariamencia.com/.* Courtesy of the artist.

accepted boundaries of what constitutes literature, cinema, music, live and (as in “live arts”) visual arts. What is transversal to all forms of kinetic poetry is a fascination with motion, visibility, temporal modification, and how the animation of language can impact the aesthetic experience. What unfolded from the artistic experimentation with motorized mechanical sculpture, film, video, and digital media influenced current forms of site-specific mixed-media installations. In recognizing its cross-artistic form and its techno-cultural context, this narrative on how kinetic poetry has evolved and branched out in the twentieth century becomes necessarily broader and richer: not only in relation to its media but also to its artistic antecedents and other forms of kinetic writing. This transmedia approach does not locate, nor equate kinetic poetry with the beginning of the World Wide Web and animation software packages. This is why kinetic poetry is not a computational media-specific form, but rather a transmedia form. In each period, poets have, and will continue to engage with media while reacting to artistic and sociopolitical contexts, whereas embodying continuation or rupture, dialog, or radical creation.

If this broader perspective can be expanded and thoroughly researched, it is important to delineate future ways to address the relation between poetry and motion techniques. Along with the specific impact of each medium in the types of kinetic works they make possible, there is uncharted research in trying to understand how authors transgress the way each medium is supposed to be used, or what types of text behavior and meaning-making are enacted through motion. Perhaps then we can reach a satisfactory

grammar or taxonomy of movement. Though practitioners and scholars in digital literature have sketched out types, it is important to understand how dialoging with film and social semiotics, animation and kinetic typography, and with non-Western and non-Roman typography may open more complex modes of moving forward.¹⁸

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¹⁸In digital literature, see Ikonen 2003, Bootz 2006, Funkhouser 2007, Saemmer 2010, Piringger 2015, and Johnston 2016. In film and social semiotics, see Kress 2009, Leão 2013, van Leeuwen and Djonov 2015. In animation and kinetic typography, see Brownie 2015. In non-Western and non-Roman typography, see Khajavi 2019.

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