

# Kinetic typography

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Last updated: 2011

DOI: <https://doi.org/10.1036/1097-8542.YB110184> (<https://doi.org/10.1036/1097-8542.YB110184>)

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Typography, unlike the spoken word, dance, music, or film, is not inherently kinetic or dynamic. The letters that make up most alphabets in most languages were designed to be read flat, frontal, and upright. But letters can be animated. And in the process of becoming kinetic, typography can take on the intonations and the voice of the spoken word, the emotional characteristics of dance or music, or the narrative qualities of film. This has resulted in new ways of reading, viewing, and accessing texts on Web sites. Visual communication thrives at the crossroads of technology and culture. The advent of television, film, video, and the computer have influenced new paradigms of visual aesthetics even though the molecular components of communication—letters and text—have remained the same for thousands of years.

Pictograms and ideograms—visual markings that represent ideas and thoughts—were used in the first attempts at recording information for what can be termed time-independent communication. The modern Western alphabet evolved in this manner as a simple, modular symbol system through which thoughts and ideas could be externalized and fixed onto a flat surface by the human hand. This system had to be learned, and many people did not have the resources, training, or opportunity to benefit from this powerful communication tool until the fifteenth century when the German goldsmith Johannes Gutenberg began producing 42-line Bibles and other printed matter using a moveable type printing press. Gutenberg translated handwritten and calligraphic letterforms found in medieval illuminated manuscripts into simplified typographic characters cast as physical, three-dimensional objects that could be used and reused to print multiple copies of the same text efficiently and expediently.

The packaging and distribution of portable texts in the form of printed and bound books allowed ideas, information, and knowledge to enter the vast arena of public consciousness. The advent of the printing press gave thousands access to the power of the written word and spread literacy throughout the world. The printed word became a sacred body with intrinsic meaning. The discipline known as typography has evolved since Gutenberg as a practice that embodies the design, production, and application of interchangeable letterforms in order to convey a message to an audience.

## ***Role of the motion picture and animation***

Typography evolved alongside printing technologies over the past 600 years. But it was the advent of the motion picture and animation that played an important role in the short history of kinetic typography. In 1839, Louis Jacques Mandé Daguerre introduced the first successful photographic process, the Daguerreotype, for capturing still images on silver plates using a

camera. Paralleling the development of photographic technology was a simple toy known as a thaumatrope, from the Greek *thauma*, which means wonder, magic, or miracle. The toy consists of a string that suspends a disc containing two images, one on each of its sides. When the disc is spun, the images are superimposed over one another and appear as a single image. This “perceptual” phenomenon is known as persistence of vision. The human eye holds on to images for a split second longer than they are actually projected, so that a series of quick flashes is perceived as one continuous image.

The thaumatrope, along with the photographic experiments in the 1870s of Etienne Jules Marey in France and Edward Muybridge in the United States, paved the way for the development of the motion picture camera. The actual development of moving-image technology occurred simultaneously in England, France, Russia, and the United States in the late nineteenth century. The first practical machine for projecting successive images onto a screen was the praxinoscope, invented by Emile Reynaud in 1877. Subsequently, George Eastman developed the first commercial roll camera, which replaced the cumbersome plate-image photographic technology with flexible, light-sensitive film. And in 1899, William Friese-Greene patented the first camera capable of capturing motion on a strip of light-sensitive film.

Frame-by-frame animation is the process of rendering each frame of film by hand to create a sequence of images the viewer sees as one continuous motion. Most of the early frame-by-frame animations were created as entertainment using illustrated characters rather than live action. Animators used hand-rendered, representational subjects in an attempt to provide the viewer with a simulated link to reality. They were usually domestic and farm animals—cats, dogs, mice, and ducks—whose characterization and anthropomorphism meant a human audience could relate to them.

## ***Early examples of kinetic typography***

The makers of horror and monster films in the early to mid-twentieth century used title-card technology to establish the premise of their stories and evoke an emotional response, which heightened the experience of the theater audience. In the classic 1933 film *King Kong*, massive jungle leaves provide a slow, wiping transition between the title cards printed with monumental letterforms to imply large-scale movement through a dense, mysterious environment. In the 1951 film, *The Thing from Another World*, a darkened backdrop literally burns away and reveals streaking rays of vibrating light that pierce through the letterforms of the title and into a suspense-filled audience.

The use of text in film was originally limited to title cards—two-dimensional surfaces on which dialogue, announcements, warnings, news items, and credits were handwritten or printed. The pioneer filmmaker, George Melies, whose 1902 film, *A Trip to the Moon*, remains a masterpiece of early motion-picture technology, experimented with animated letterforms in advertising films as early as 1899. Another pioneer, D. W. Griffith, incorporated title cards in his films, *The Birth of a Nation* (1915) and *Intolerance* (1916), both of which were considered narrative and structural breakthroughs in the history of the motion picture as an art form. In *Intolerance*, Griffith used a series of title cards as significant components of the film. Each card contained a composition of static letterforms superimposed over a photographic background that introduced the historic time period about to be presented.

In the 1920s and 1930s, Walt Disney led the technological advancements in animation by rendering smoother frame actions, synchronizing music, sound, and dialogue, and incorporating color. But these efforts toward the perfection of realism caused a revolt among animators and designers who wanted to break creative boundaries. The advent of television technology and the exponential growth of the advertising industry in the early 1930s created a prime arena in which to experiment with film and animation. Instead of presenting static postcard realism in the background of a composition, commercial animators began incorporating symbolic and iconographic elements to create messages. Most specifically, they explored the use of letterforms. In the 1950s and 1960s, innovators such as Norman McLaren, Saul Bass, and Pablo Ferro used animation techniques to hand-render seamless compositions—and interactions—of type and image on film for television commercials, short films, and film titles (**Fig. 1**).



**Fig. 1** In the 1951 film *The Thing from Another World*, a darkened backdrop burns away and reveals streaking rays of vibrating light that pierce through the letterforms of the title. (RKO Radio Pictures Inc.)

Initially, animated letterforms were restricted to supporting roles, such as announcing the beginning of films, identifying television stations, or providing information in commercials. In 1961, the animator Norman McLaren brought the animated letterform to center stage in an advertisement commissioned by the Canadian Board of Tourism. McLaren used cutout letterforms in a stop-motion animation sequence that was shown in Times Square, New York, on the Sony Epok Animated Electric Screen, a 720-ft<sup>2</sup> signboard made up of thousands of light bulbs activated by film (**Fig. 2**). Type historian Beatrice Warde described it as follows:



**Fig. 2** Designer Norman McLaren used cut-out letterforms in a stop-motion animation sequence for the Canadian Board of Tourism that was shown in Times Square, New York, on the Sony Epok Animated Electric Screen, a 720-ft<sup>2</sup> signboard made up of thousands of light bulbs activated by film. (National Film Board of Canada)

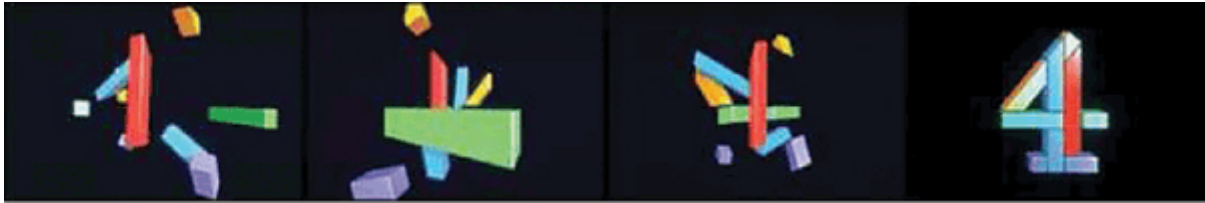
“Do you wonder that I was late for the theater when I tell you that I saw two Egyptian A's...walking off arm in arm with the unmistakable swagger of a music-hall comedy team? I saw base serifs pulled together as if by ballet shoes, so that the letters tripped off literally sur les pointes...I saw the word changing its mind about how it should look (caps? lower case? italic?)

even more swiftly than a woman before her milliner's mirror ... after forty centuries of the necessarily static Alphabet, I saw what its members could do in the fourth dimension of Time, 'flux,' movement." (From R. S. Hutchings, ed., *Alphabet 1964: International Annual of Letterforms*, Kynoch Press, Birmingham, UK, 1964)

## ***The role of digital technologies***

The desktop computer has transformed a predominantly passive communication experience into an interactive one and increased the accessibility and control of information. Information has grown more complex and is now distributed by an overwhelming array of means. The activity of reading has diversified with such formats as e-mail, web sites, smart phones, and e-book readers.

Consequently, the historical evolution of two-dimensional, static letterforms arranged and fixed in a horizontal line is shifting course. Type is no longer restricted to the characteristics found in the medium of print such as typeface, point size, weight, leading, and kerning. Letterforms have behavioral, anthropomorphic, and otherwise kinetic characteristics, including text that liquefies and flows, and three-dimensional structures held together by lines, planes, and volumes of text through which a reader may travel. These are only a few examples of the impact digital technology is having on the once simple and humble letterform (**Fig. 3**).



**Fig. 3** Channel 4 was the first new British television network to be established since BBC2 in 1964. The Channel 4 identity was the first corporate identity specifically devised to exploit the medium of television to the fullest and to provide effective branding devices that could be developed as the character of the network evolved. The modular symbol was designed to represent the diversity of Channel 4's program sources, all of which originate from outside the company itself. In this sequence, the various parts converge in space to assemble the numeral 4. Produced in 1982, this was the first time pure computer animation techniques had been used for a UK television company symbol. (*Lambie-Nairn*)

The page-frame as a compositional structure, with the conventional hierarchies of headings, columns, and margins is also expanding. In contrast to the materiality and permanence of the print medium, readers now navigate through bodies of text in a digital environment such as a web site or mobile telephone. Pointing and clicking has become a commonplace action to access multiple pages in a Web site. Smart-phone navigation systems allow the reader to touch a screen and slide through pages of text. All of this activity falls under the category of kinetic typography.

## ***Production of kinetic typography***

Kinetic typography is generally produced with mass-market software applications, such as Adobe® Flash® and Adobe® After Effects®; Apple® Motion; programming languages such as Processing (<http://www.processing.org>); and an array of freeware and other custom software.

The montage and collage are two types of structures found in kinetic formats. Montage structures involve the planning, assembling, and editing of a multiframe sequence to create a narrative—a cause-and-effect event or continuous series of events usually with a beginning, middle, and an end. Here, letterforms serve as both a verbal and visual function. Freezing a montage sequence captures a single moment in a larger continuous motion.

A collage is a more impressionistic—almost printlike—assembly of individual frames into a sequence without a fixed order of events. Here, letterforms are not always intended to be read but most always serve as components to a visually arresting typographic texture. Freezing a collage sequence reveals an individual, “stand-alone” composition, much like a poster or painting (**Fig. 4**).



**Fig. 4** A collage of overlapping letterforms in various sizes to convey an explosion of type from the swinging bat of a capital letter T. (*Ned Drew*)

See also: [Cinematography \(/content/cinematography/136500\)](/content/cinematography/136500); [Computer graphics \(/content/computer-graphics/153900\)](/content/computer-graphics/153900); [Multimedia technology \(/content/multimedia-technology/757454\)](/content/multimedia-technology/757454); [Printing \(/content/printing/545300\)](/content/printing/545300); [Type \(printing\) \(/content/type-printing/718200\)](/content/type-printing/718200); [World Wide Web \(/content/world-wide-web/757621\)](/content/world-wide-web/757621)

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## Additional Readings

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[Art of the Title Sequence \(http://www.artofthetitle.com\)](http://www.artofthetitle.com)

[Vimeo: Kinetic Typography Channel \[VIDEO\] \(http://www.vimeo.com/channels/kinetictypography\)](http://www.vimeo.com/channels/kinetictypography)

