

A technological society, quite automatically and without any malign intent, upsets the artist by taking over and transforming the idea of craft, and endlessly reproducing objects which are not art objects but sometimes resemble them. Technology steals the artist's public by inventing sub-artistic forms of entertainment and by offering a great counterinterest, and a rival way of grasping the world.

*Iris Murdock
philosopher and writer*

Foreword

The first half of this essay was written in the nineteen-seventies before the inundation of computer films flooded the landscape of graphic animation. Today, mechanically exact, often spectacular visual images, especially in the area of science films, may be obtained by using computers, but the invigorating texture of imprecision in nature and human artifacts is lost.

No film, nor any other branch of the arts, is successfully made by rote. The purpose of this essay is not to suggest a system for making animated films, but to help students enlarge basic vocabularies of drawn images and sound symbols which can then be combined within the dimensions of structured time.

Philip Stapp 1991

The Delights and Dilemmas of Graphic Animation

Among university students, a "Mickey Mouse" course has come to mean a cozy method of obtaining credits with a minimum of mental exertion. I suspected this was the reason fifty students, instead of the expected fifteen, attended my lectures on the theme of the animated film at Columbia University School of the Arts in 1967. When in conversation with one of the students, I suggested that small mosaic stones, moved frame by frame, under the animation camera, might be a rewarding technique to use in making an animated film, he said, " Great! I could call it 'Mickey Mosaics.'"

Walt Disney was awarded honorary degrees by the universities of Harvard and Yale. His influence in the entertainment field is known the world over. His genius, however, was not as much in the role of creative artist, as it was a talent for showmanship and efficient organization. In order to produce the thousands of images required to make his films, he devised a hierarchical system of skilled and semi-skilled specialists. Individual artists, whose ideas and talents he absorbed, became expendable units in an elaborate assembly line of animators, painters, tracers and inkers.

Early cartoons from his studios are memorable. In the thirties, when the title of a Disney film appeared, there were audible murmurs of eager anticipation. The excitement was almost tangible. Dancing drawings, synchronized with music, seemed to produce hallucinogenic responses. Then, after a few years, the prolific flow of short films became repetitive, the audiences bored. Today, Mickey has moved into assorted playgrounds of Disneyland and the markets of "Big Biz."

The animated cartoon took a fresh turn when, in mid-century, a few of Disney's expert craftsmen set up their own studios. A revival of interest lay chiefly in the sophisticated

humor and semi-abstract styles which replaced Disney's sentimental realism. Animated films are still screened in international film festivals but no longer accompany "feature" films in cinema theatres. The inventive skills of many animators have been diverted to television commercials and entertainment for children. There have been outstanding exceptions. At times, a few individual film makers have lifted the animation film medium from the slough of banality into the realm of visual poetry.

Films made from drawings have never been clearly defined. Neither the French *Desin Animé* nor the German *Trickfilm* provides an inclusive definition. Most dictionaries of the English language classify all animated film as cartoon. To avoid such a misconception in this essay, I am suggesting the phrase "graphic animation" to indicate the genre of film-making, separate from cartoon which is used by individuals whose approach to the medium is similar to the painter or composer. "Graphic animation" defines work free from the demands imposed by narrative entertainment, didactic prerequisites or commercial propaganda. This definition in no way implies criticism of the cartoon film as an ingratiating medium of entertainment, or of the validity of using animated film to instruct. The difference is to be found in the meaning of the word "entertainment." Graphic animation rewards the viewer through sensitive uses of line, color and form, by patterns of rhythmic ingenuity of both sight and sound, as well as visual metaphors and multiple layers of reference. Above all, it can delight the spectator with elegant movement. Cartoon film relies on comic situations; graphic animation on visual wit. If a graphically animated film is to be compared to a painting or musical composition, it should also provide continuing aesthetic sustenance with repeated performances.

There is already a sizable body of work in the field of individually produced graphic animation. So far it has a limited audience. Although the name of Disney is a household word in cartoon animation, relatively few people are aware that Norman McLaren, who devoted a full life to graphic animation, has been awarded the highest Canadian honors available in the arts, including honorary degrees from universities there. His reputation among his co-workers extends not only over five continents, but across all political barriers.

His work is rich, varied and innovative; his influence prodigious. McLaren was not the only master of this genre; but, in this century, was unquestionably the most inventive figure in the field. Substantial credit is due to administrators of the National Film Board of Canada who never imposed upon Norman McLaren restrictions of any kind. Rather, they put at his disposal the machines and money necessary to help him pursue his craft with complete freedom.

Certain writers on the subject contend that current interest in graphic animation is growing rapidly, particularly in schools and colleges. If true, this is a hopeful sign. Although the medium is relatively new, it is not *sui generis*. Graphic animation is an inevitable branch of the tree of art history; a natural growth stemming from the deepest, most ancient roots - the instinctive urge to celebrate life through motion. In the emergence of human self-consciousness, this urge appeared first in ritual and dance. Painting on pots and walls of all primitive cultures indicates this delight in motion, sometimes in the choice of subject - bird, snake, rippling water - or sometimes in the use of abstract patterns which carry the essence of movement as well as an intuitive grasp of complex symmetries. Cave paintings have left magnificent images of animals in action. Sometimes, the act of running would be indicated by drawing innumerable legs in different phases of action in a single picture. This graphic device was arrived at by the same observation which enables animators, twenty thousand years later, to produce the illusion of movement on film. A longing for movement in graphic form has reappeared at different intervals, in different lands, throughout art history.

In the East, as the early appearance of the *I Ching* suggests, an appearance of the continual metamorphosis in nature and life became the underlying theme in Chinese thought and art. Shang and Chou Bronzes seem charged with vibrating energy which erupted, a few centuries later, in joyful images of Han acrobats and jugglers. In the period of the Sung Dynasty, the Chinese invented a paradigm for the graphic animated film - the painted hand scroll. A long thin roll, to be unwound and studied at the viewer's tempo, was a journey in time through a landscape of visual music. Graphic themes were announced and

repeated with variations, at times *staccato*, at times *legato*. Sequences would swell forward in a mighty crescendo or retreat in a serene diminuendo. Occasionally, dramatic incidents came into focus, then faded away – a princess was kidnapped, a palace burned, a dragon twisted sinuously as it approached. These scenes often suggested musical phrases as much as events in a story. Even the format of the scroll resembled a film.

In the West, during the Middle Ages, the influence of Greek and Roman art declined. Lively explicit images of the human body in motion were gradually subdued and abstracted becoming instead spiritual beings, angular and ethereal. Since the church expected its artists to edify the faithful with narrative illustrations from Old and New Testament stories, a saint or hermit appeared several times in the same painting, revealing a desire on the part of the painter to free his images from the boundaries of one frozen moment in time.

With the European Renaissance, the hunger for fluid movement returned, stronger than ever. Angels in the frescoes of Michaelangelo, Tintoretto, Tiepolo and El Greco, defying the magnetism of gravity, sported in the skies. Anxious energy permeated Mannerist forms. The twisting expanding vitality of the Baroque became an orgy of movement, an intertwining gigue of architecture, painting and sculpture.

The Industrial Revolution diverted the evolution of painting from charades of historical personages and pastoral landscapes. The invention of the camera, documenting the contours and modelings of nature with ease and surface accuracy, caused a traumatic shock among painters who began to search in any new direction where they might be free of competition with the mechanical eye of the little black box. As Maya Deran has reminded us, the camera was introduced commercially with the slogan, "You press the button. It does the rest."

Certain painters attempted to visualize the passage of time. Duchamp's "Nude Descending the Staircase," with its multiple superimposed images soon became a conspicuous symbol of "Modern Art." It was in Italy in 1913, however, that the work of a group of painters

who called themselves "Futurists" anticipated the techniques of graphic animation. In large paintings -- of men, horses, a woman leading a dog on a leash -- the focus was on patterns of movement rather than a delineation of static objects. Successive segments of a given action were superimposed on a single canvas. The moving figures were dematerialized. A few decades later, the stroboscopic camera revealed the same successive segments of a given action; for instance, the design made by a swinging golf club or tennis racquet. Today, the illusion of animated movement of film is created by photographing consecutive drawings in graded phases of motion.

The acceleration of the tempo of history and the lust for action implicit in the Futurists' exploration of space-time suggests that these artists wanted to free their work from the static limitations of a single canvas. They wanted to create forms which seemed fluid and elastic so that the spectator might watch visual themes interweaving in a temporal dimension. The invention of the single frame moving picture camera provided such an opportunity.

Few serious painters, however, made the quantum jump into this new medium of graphic animation. There are many hurdles. Instead of a single painting, orchestrated with pattern and color, graphic animation requires a vast number of drawings in which the change between images is as important as the image itself. Subtleties of line and color reflecting the painter's sensibilities must be subordinated to consideration of movement. Instead of a medium in which the artist may record a personal vision directly, the techniques of animation are tedious, mechanical and expensive compared to those of a painter or sculptor. Probably the greatest hurdle of all is the fact that, when the work is complete, there is no single unique artifact. Instead, there are duplicate prints which depend totally on a machine, the projector, to give them the illusion of movement.

The restless creative energy of the present century seems to have found an outlet in the unexpected efflorescence of the dance. In the early years of her career, Martha Graham, if she was known at all, was often a target of ridicule. Any young man who wanted a

career in ballet was considered queer in every sense of the word. Today, performances, not only of ballet, but also of all the dance groups following the pioneering efforts of Martha Graham as well as Doris Humphrey, Charles Weidman and Honya Holm, are crowded with young enthusiastic audiences. Nureyev and Baryshnikov are role models.

Graphic animation may be considered a form of choreography – not, like the dance, of patterns in space made by the bodies of young athletes, but by the designed movement of symbols and drawn images – abstract or iconographic. Still, differences between dance and graphic animation are fundamental. In any dance, the appeal of the human body in motion carries with it the magnetism of a unique personality. On the other hand, the dancing forms of graphic animation are free from the laws of anatomic structure and gravity. Drawn images can fly, alter their contours, penetrate solids, appear and disappear at will. Changes of color and movement can be controlled to within a fraction of a second. The graphic animator has learned much from choreography; both are highly disciplined crafts. In both, the design of visual movement is composed in a controlled counterpoint to patterns of musical time.

The choice of subject matter in designing visual symbols is unlimited – determined only by the imagination and discretion of the animator. Other media than drawn images – clay, collage, the pin machine, sand on back-lit glass – have been used with originality and wit; but these experiments are beyond the scope of this essay. Principles of the structural interplay between sets of symbols apply, however, to any animated medium.

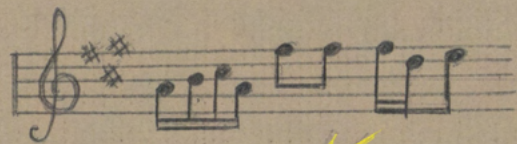
Visual Symbols

The effectiveness of the completed film, and its emotional impact, depends on the skill with which these three sets of symbols are juxtaposed in a precisely defined counterpoint. It may be useful, therefore, first to examine each of these vocabularies separately and, second, to study various ways they may be interwoven.

The vocabulary of graphic animation consists of three sets of symbols:



Visual Symbols
(designed and drawn)



Sound Symbols
(music and/or random sounds)



Word Symbols
(spoken, sung and/or drawn)

The most essential tool for the animator is an ability to abstract patterns from nature or his imagination.

An innate grasp of the language of abstract symbols is imprinted in our genetic makeup. One has only to study the artifacts of cultures we mistakenly call "primitive" to see this intuitive capacity in operation.



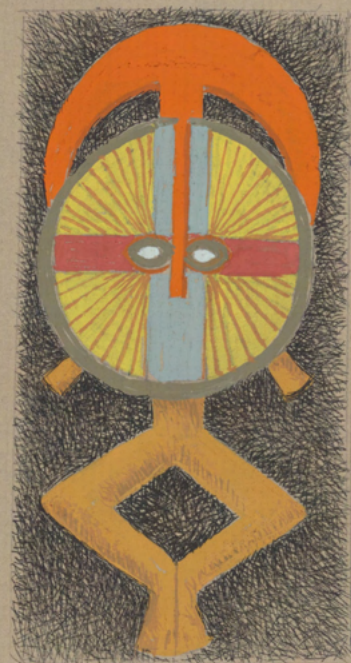
For instance, designs on ritual pottery, both iconographic and abstract, made by the Mimbres Indians of the twelfth century – a culture innocent of any contact with Western civilizations – clearly reveals a subconscious awareness of abstract forms which imply movement.



An intuition of symmetric relationships, both bilateral and rotational, is evident in designs of the Mimbres Indians.



Hohokam Indians, North America



Kota Tribe, Gabon, Africa

The ability to create abstract patterns underlies all traditional art. Any animator can benefit by studying the process of abstraction in such diverse cultures as those which produced African ritual sculpture, Hohokam pottery, Han tomb relief carving, Meso American codices and Celtic Illumination, as well as almost any primitive artifact.



The Lion -- symbol of John, Book of Darrow



Lindisfarne Gospels (detail)



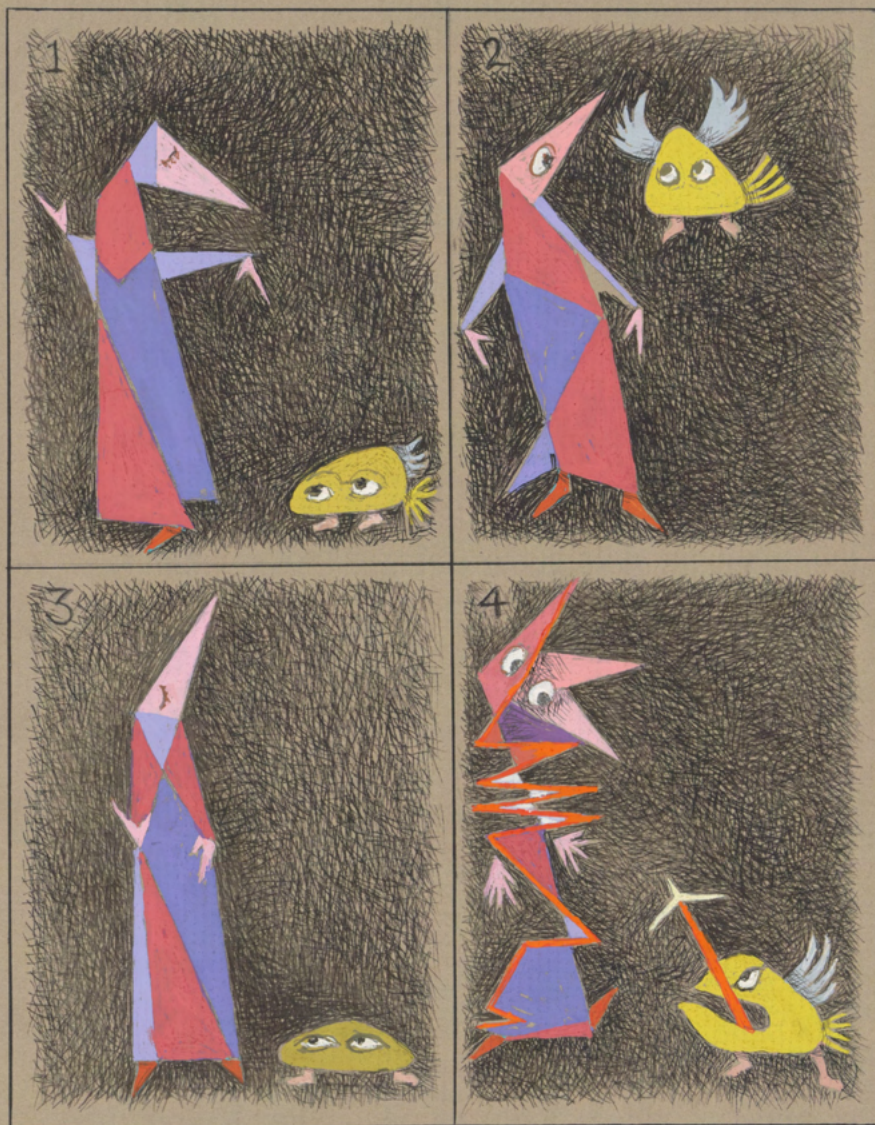
Han tomb relief (rubbing)

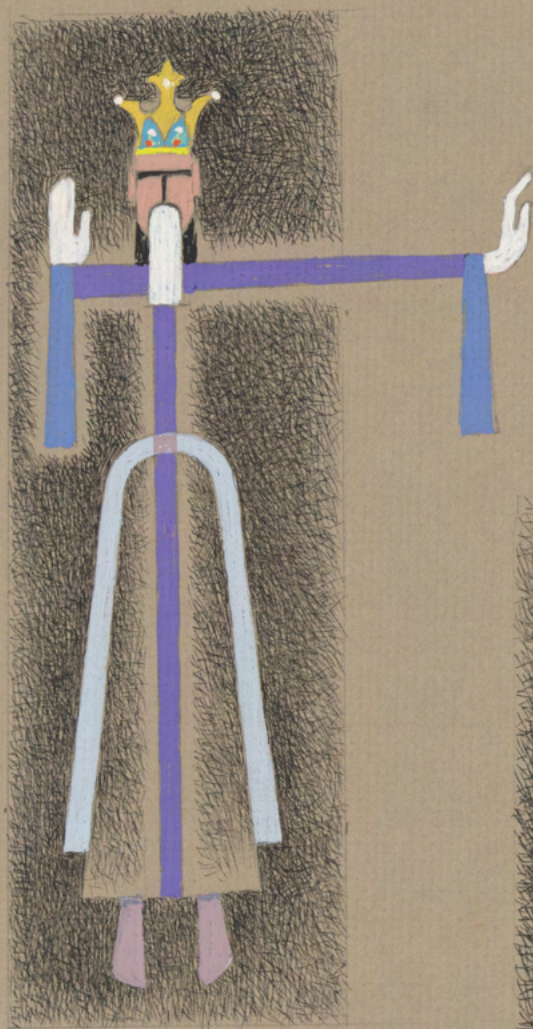


Mixtec Codex (Nuttall)

Symbols can be designed with varying degrees of abstraction in order to invent shapes which permit gestures and movements consistent with the style and mood of the film.

For instance, satiric ...





or stately ... or capricious ... or whatever atmosphere the animator may envision.



Movements of the human body are extremely complex.

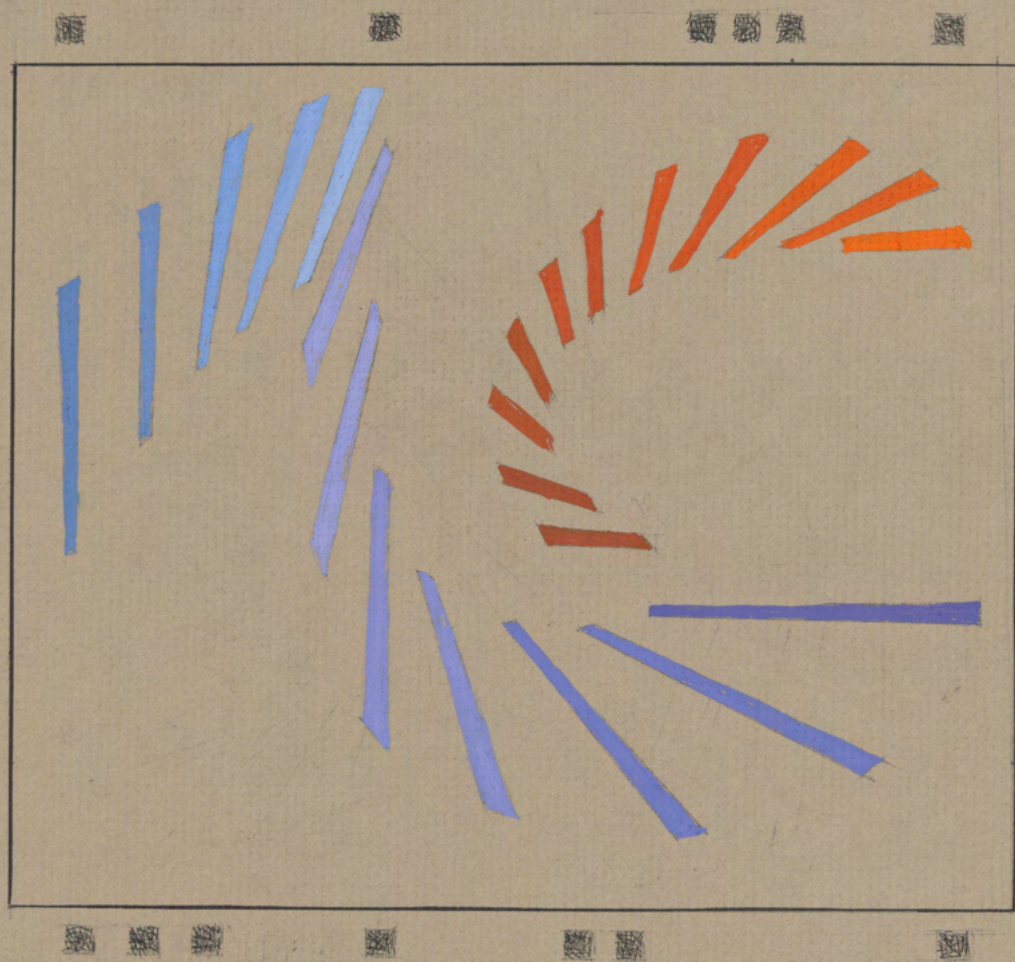


The greater the simplification in the design of the human figure, the more convincing the movement appears when animated.

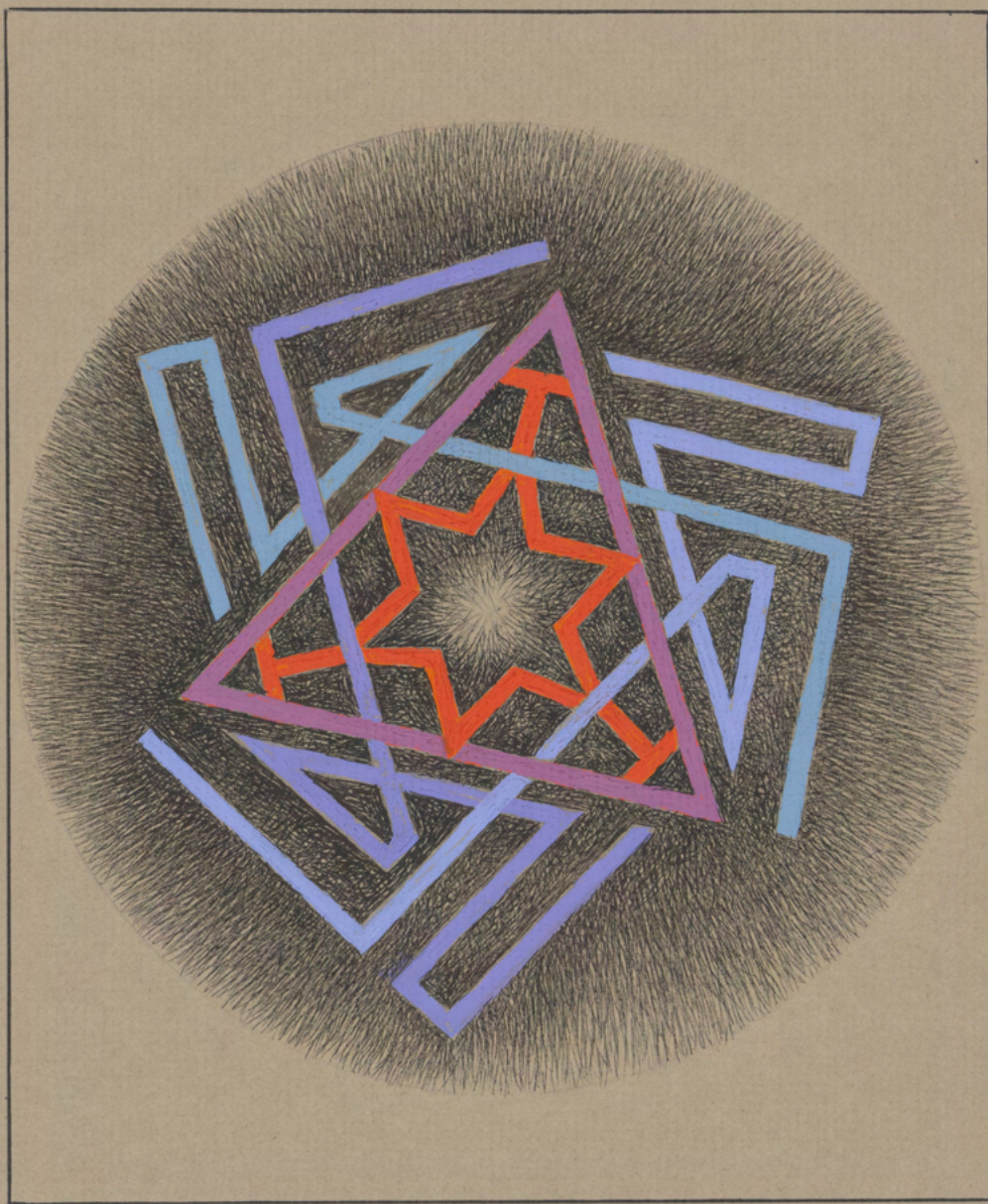


Sometimes graphic animators distort the proportions of the human body with abstractions reminiscent of certain primitive works of art.

Animated films need not always be clever or coy. A whole area, still largely unexplored, could be the composition and design of graphic animation as varied in mood as serious music and dance.



For example, a requiem or the sacred music of Vivaldi, Fauré or Poulenc could be devised so that designed images become intertwined with the voices of the singers, not as illustration or decoration but as visual voices moving in counterpoint to the instrumental and vocal themes.



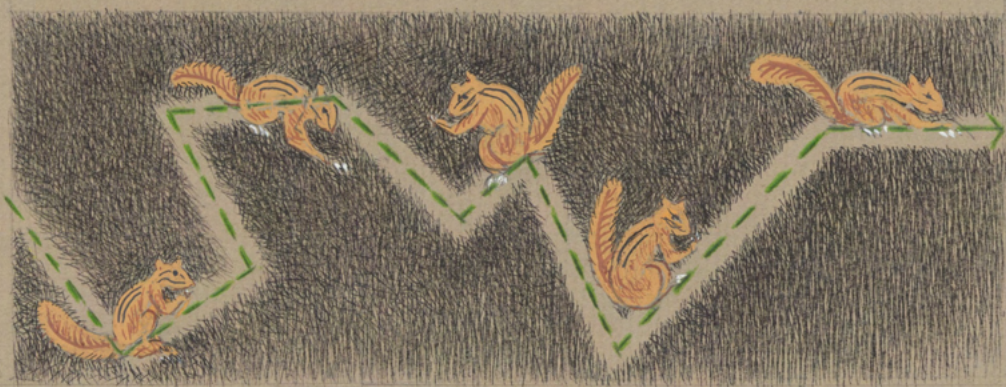
The image could be an evocation of the geometry of nature, the poetry of symmetry, or any theme which speaks directly to the human hunger for order and serenity.

Abstraction is a process by which the image of any object is distilled, becoming a concentrated essence. Narrative live action filmmakers take realistic imagery for granted. Graphic animators invent their own images. In the process of abstraction, the procedure is to simplify the image without losing its characteristic integrity.

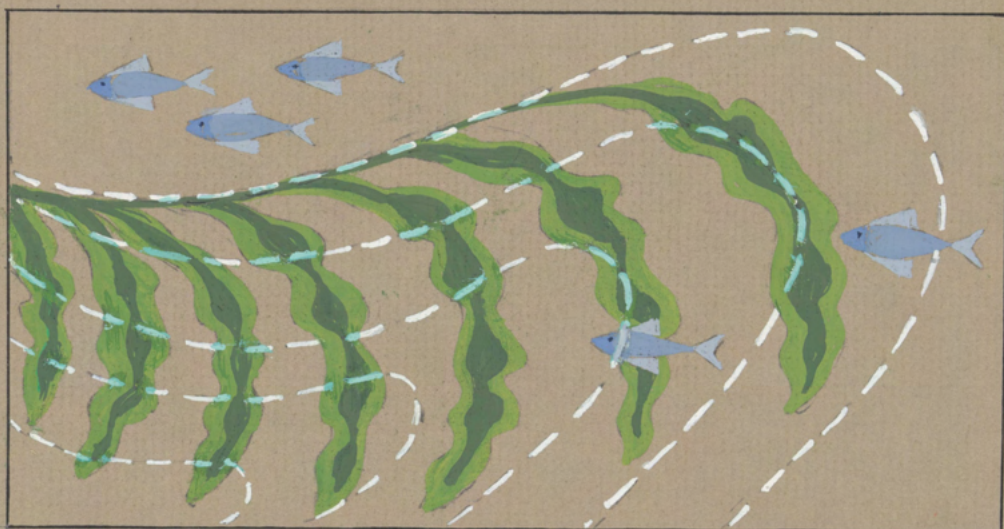
Any symbol which refers to some recognizable object – tree, bird, insect, galaxy – can be given a more "animatable" shape and move with more fluidity if careful scrutiny is given to those abstract patterns characteristic of the object's movement, whether perceived in our clock-bound time frame or in geologic, astronomic or musical measure of time.



An obvious example is a gliding snake which becomes a sinuous curving line.



The movement of a chipmunk, on the other hand, is agitated, attentive, angular with sudden starts and stops, *staccato* in musical terms.



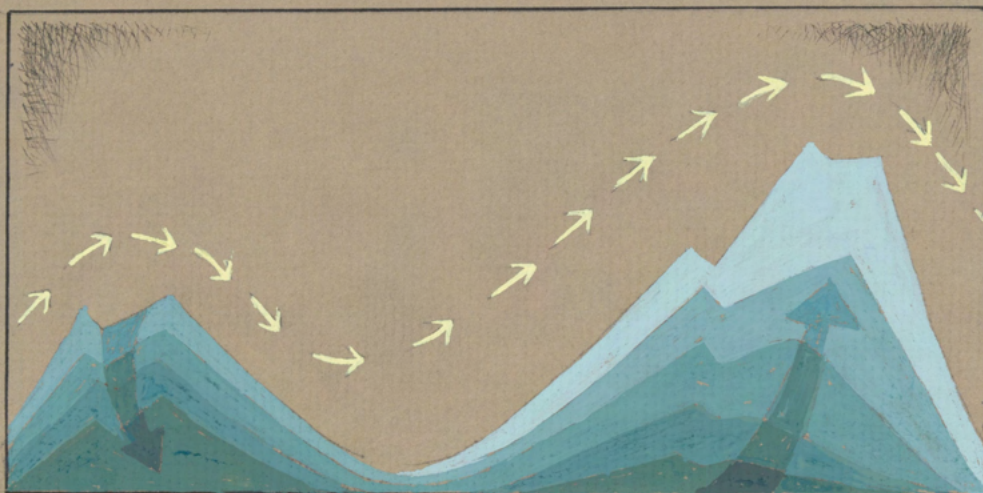
The movement of seaweed partakes of the rhythm of invisible currents.



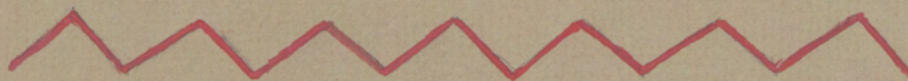
The characteristic flow of a school of fish is one swerving mass, continually altering its shape, expanding and contracting.



The aging of the human face, seen in twenty year intervals, becomes a map of metamorphosis.

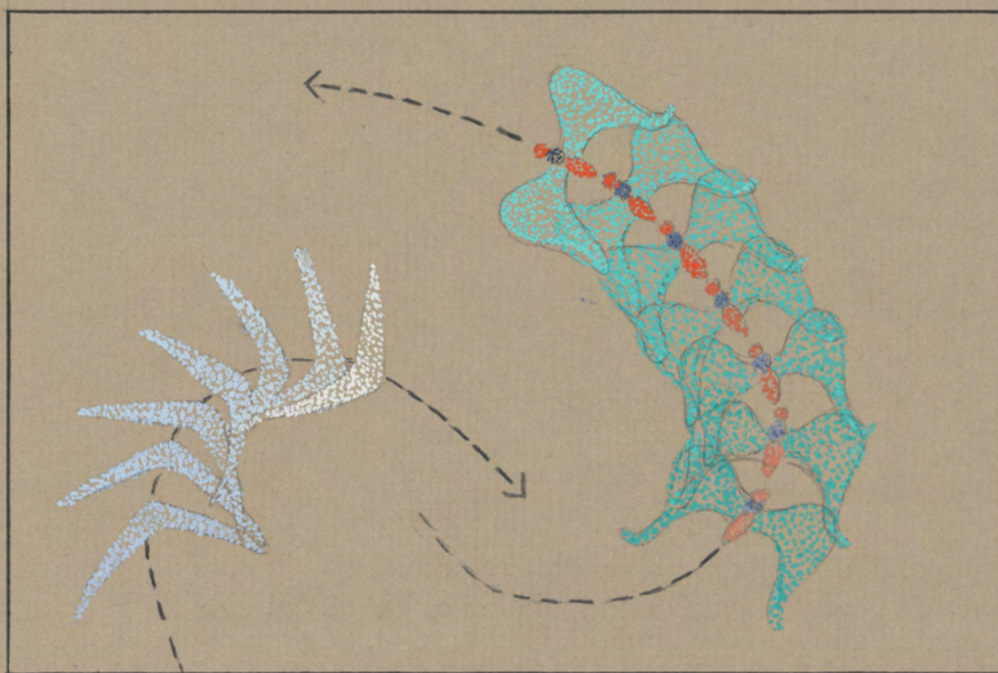


The imperceptible action of the erosion and upheaval of mountain ranges in geological time, if accelerated, becomes wave patterns ...

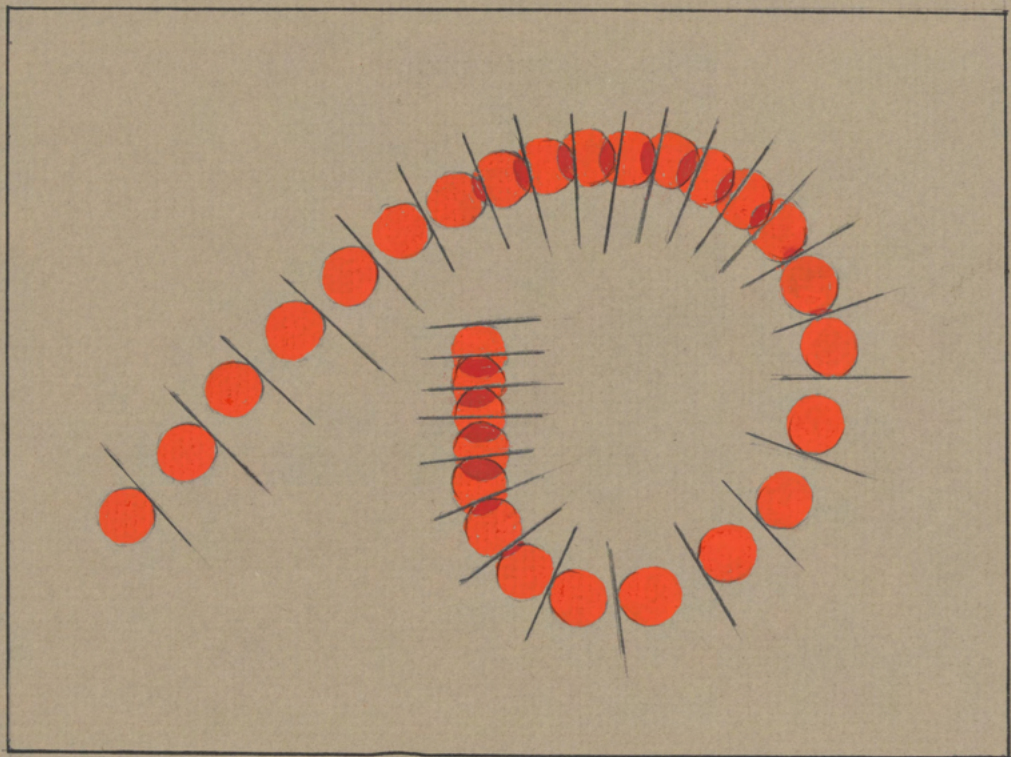


... as all primitive peoples knew.

One procedure which can be useful in the vocabulary of visual symbols is the use of stroboscopic patterns of movement which seem to stretch time. This illusion is made possible by painting consecutive images on transparent cels, using pointillist dots of color. These dots should be openly spaced enough to be semi-transparent. The cels are placed on top of each other creating a multiple image pattern. After each camera exposure, the lowest cel is removed and the next cel placed on top of the pile. When screened, the illusion is one of seeing not only the single image but also the choreographic patterns of movement at the same time.



Aside from all aesthetic considerations, the most basic technical concern of the graphic animator is the amount of change which takes place between each camera exposure.



Wider spacing creates an impression of rapid movement; close overlapping forms seem to move more slowly.

The tempo of movement, smooth or jerky, *andante* or *staccato*, depends on the intention and style of the filmmaker. It can best be learned by experimentation with single frame exposure of the camera or computer.

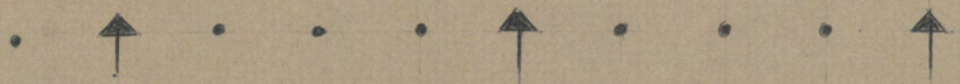
Sound Symbols

Music

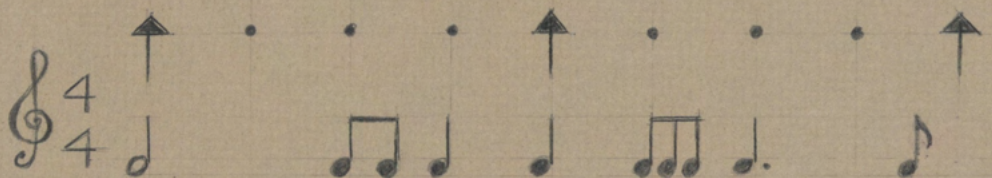
With music, time is transformed, made elastic or condensed. A quarter hour marked *largo* will pass reluctantly; a quarter hour marked *presto* will pass with cheerful urgency. Music arouses genetic memories from the depth of the subconscious, speaking directly to the emotions of the viewer. When rhyming with bodily movement -- breathing, walking, running, skipping, jumping -- music has a powerful visceral appeal. In a serene mood, however, music can speak with poignant sympathy to the spirit.

For the animator, music is an essential thread to be woven precisely into the choreography of visual images, whether the mood of the film may be a somber *largo*, a graceful *andante con moto* or a spoofing *scherzo*. An integrated counterpoint of music and picture -- with or without obvious points of synchronization -- can be structured to within a fraction of a second. This precise interweaving of vision and music gives graphic animation its most characteristic flavor.

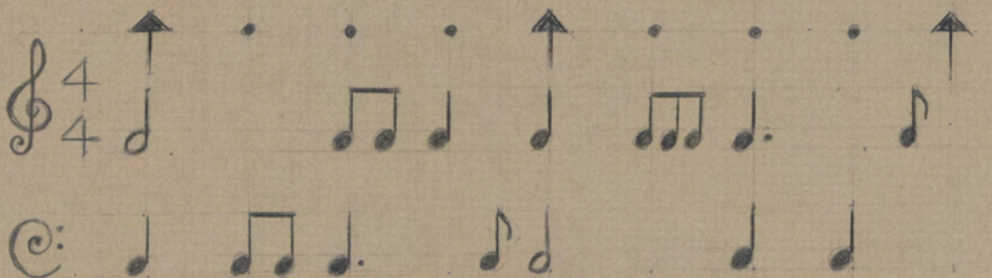
"Counterpoint" and "rhythm" are words borrowed by filmmakers from the vocabulary of music. Both words are mistakenly used when referring to a regular metric beat: ONE, two, three, four, ONE, two, three, four ... The use of visual accents on the first beat of each musical bar has to be used sparingly or it becomes excessively monotonous. "Mickey Mousing" has become a pejorative term denigrating such obvious synchronization.



It is true that a regular pulse underlies all music, just as the heartbeat underlies all bodily activity.



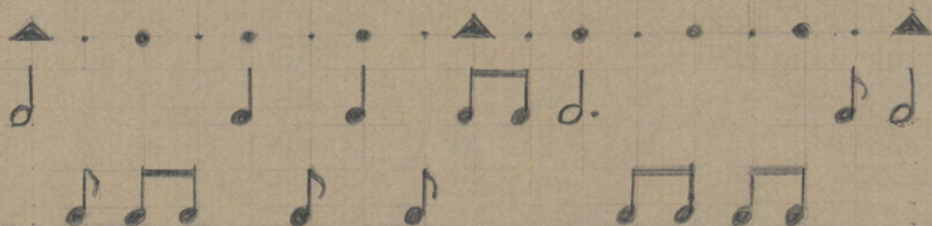
"Rhythm," however, in musical terms means the *variation* of long and short note patterns enclosed, but often contrasting with, the underlying pulse.



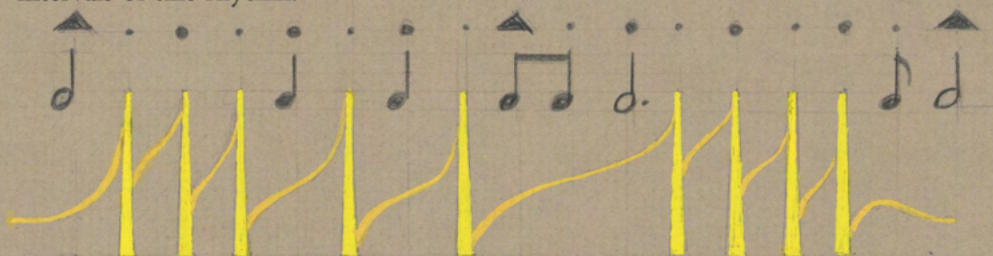
"Counterpoint" is the juxtaposition of two or more patterns simultaneously played against each other enriching the harmonic and rhythmic texture.



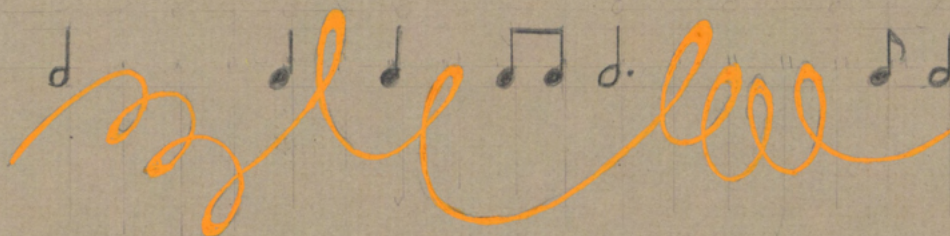
For instance, take a simple rhythm ...



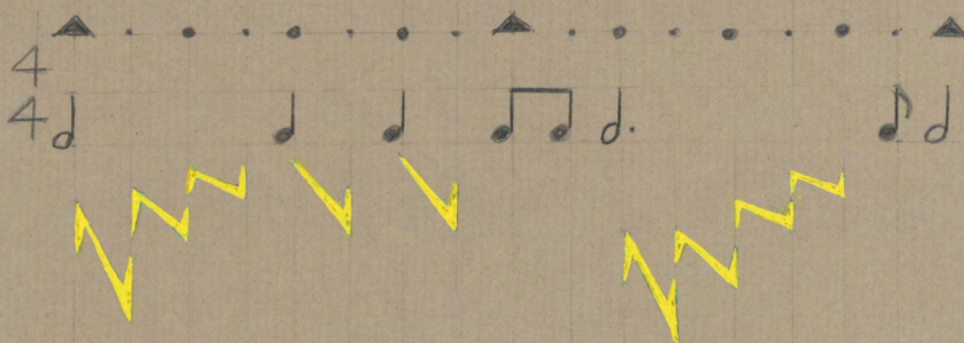
As every musician knows, there is a silent syncopated pattern of eighth notes hidden in the intervals of this rhythm.



A counterpoint between graphic images and music can be made by translating the silent rhythm into a pattern of visual motion. For example, by synchronizing the vertical accents to the silent rhythm -- literally ...



... or, more freely, animating a curving line, its movement synced to the silent pulses between the notes of the audible rhythm ...



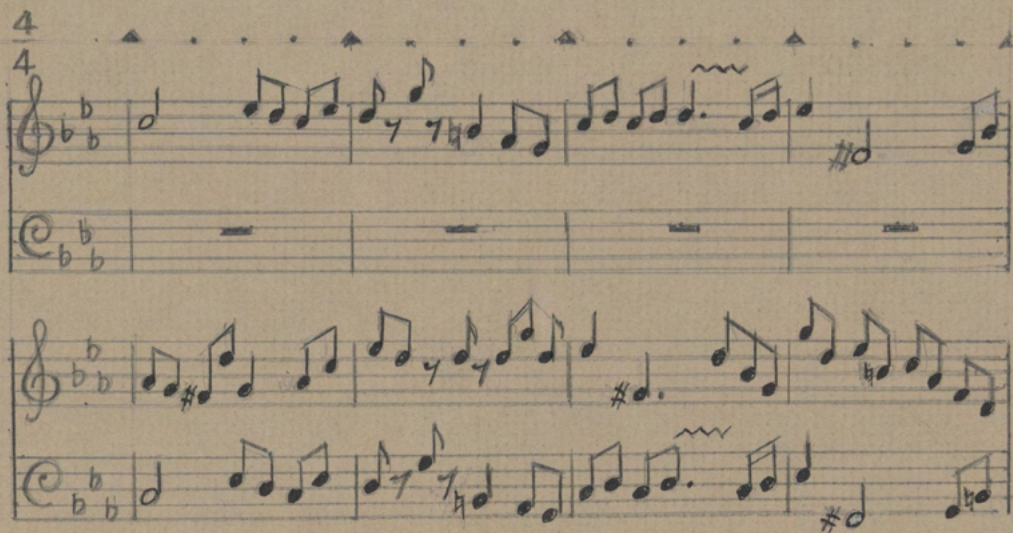
... or a *staccato* progression of linear accents appearing and disappearing in sharp percussive movements ...



... or a tropical fish, accenting sudden changes of direction syncopated with the silent rhythm ...



... or a single figure moving in syncopated action ...



... or, as in a canon or fugue, a theme may be stated and developed. When the theme reappears in counterpoint to the original statement (bar 5, base clef), it may be translated into visual terms using the same melodic and rhythmic impulses.

In this way, a canon or fugue which interweaves sound and sight according to the principle of musical composition can be created.



For example, the movement of a leaf blown by the wind, could replace the musical pattern of the original theme (bars 1-4) ...



... or a dragonfly, with its abrupt change of direction, could be synchronized with the same bars.

Sound Symbols

Random Sounds

Random sounds can be chosen from any of the audible patterns of nature and daily life, or may be made synthetically. Distortion of natural sounds, or familiar noises in an unfamiliar context, can be used effectively for satire. Recordings may be made of such varied sounds as water dripping from a tap, a train whistle, bird song, thunder, a screeching of car brakes, a sneeze, fingers clapping and so on, *ad infinitum*. Random sounds can also be combined in patterns with fragments of human speech.

By composing recorded themes of random sounds into percussive and rhythmic arrangements, a unique form of music could be devised for synchronization with graphic animation. Such otherworldly music could underscore images of improbable beings going about their daily lives on some galactic outpost where every action and gesture is determined by an innate aesthetic harmony and where means of communication are expressed in a language of musical phrases made from random sounds. Such music could sometimes be as delicate as a symphony of insects or sometimes as powerful as the roaring of a pride of lions.

Disillusioned critics say such utopian societies cannot exist (which may be true on this planet) but at least they could be imagined, visualized and listened to in the medium of graphic animation.

Word Symbols

The sound track used by graphic animators is not limited to music. The spoken work may be used instead of, or combined with, music. In recent years, there have been several short films with original juxtapositions of speech and visual images. Frank Mouris in "Frank Film" simultaneously superimposed two speech tracks. A deceptively casual autobiographical monologue about his passage from boyhood to manhood is heard at the same time as a flow of abstract phrases from his own stream of consciousness. For the first few seconds one is exasperated by the verbal dichotomy; but the device is soon accepted by both ear and mind. This dissonant poetic tract is interwoven with a collage of evocative visual symbols, fragments of cut paper photographs assembled into continually blossoming designs -- a visual stream of consciousness.

John and Faith Hubley, in one of their best films, "Moonbird," taped the spontaneous comments and outcries of their two young children as they embarked on a search for an imaginary creature. The sound track, with its sweet-sad words, sudden bursts of tears and gurgles of joyous discovery, was at least as moving as the accompanying drawings. The film is a haunting echo of early childhood.

Sounds of an unknown language, heard but not understood, become abstract. Carolyn Leaf, knowing that viewers of her film, "The Owl Who Married a Goose: An Eskimo Legend," would be unlikely to understand this unfamiliar language, turned words into a delicate *pizzicato* music. Eskimos narrated the conversation of Owl and Goose; however, it was the action of the two characters which seemed to be creating the sounds; acts becoming words. The visual images were animated by the use of sand on backlit glass. This counterpoint of reversed sight and sound, with a granular primitive texture, is hypnotic.

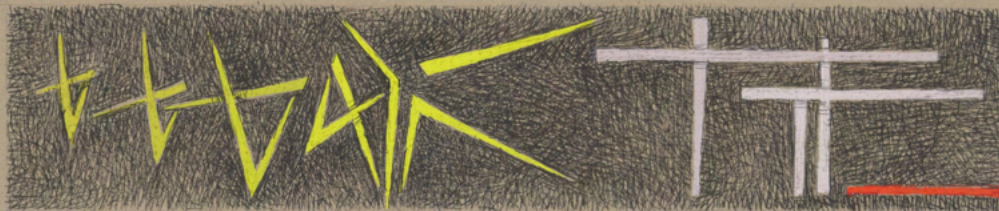
The function of words in graphic animation, therefore, is to provide yet another set of abstract symbols to be interwoven with the visual ingredients. Emotions aroused by unusual combinations of words is the province of poetry and psychoanalysis. Words, in or out of context, may be used to agitate, lull or shock. "Thug" drops heavily; "oleander" meanders; "quark" explodes. The consideration here is with principles which involve the counterpoint of words with visual motion.

In one of her poems, Emily Dickinson wrote:

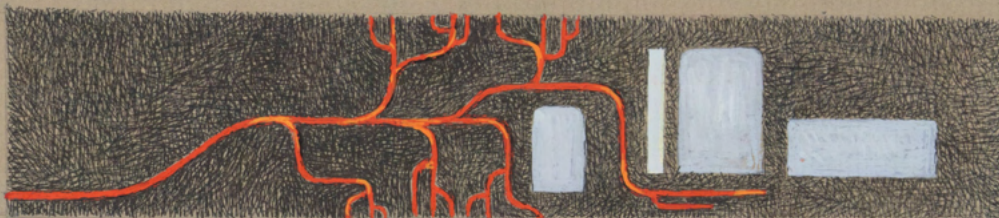
After great pain, a formal feeling comes ...
The Nerves sit ceremonious, like Tombs ...
The Feet mechanical go round ...
This is the Hour of Lead.

There are probably as many individual associations with these words as there are readers of them and as many ways in which these lines could be combined in counterpoint with visual images to use in a film.

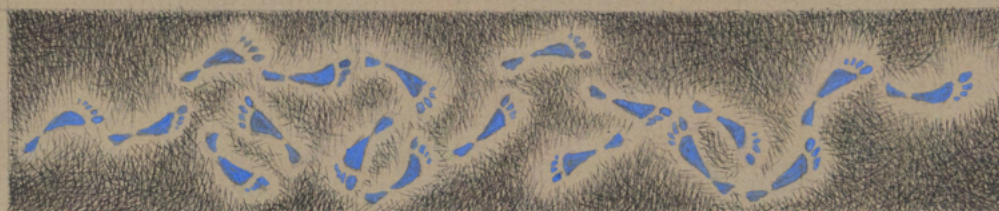
One way might be:



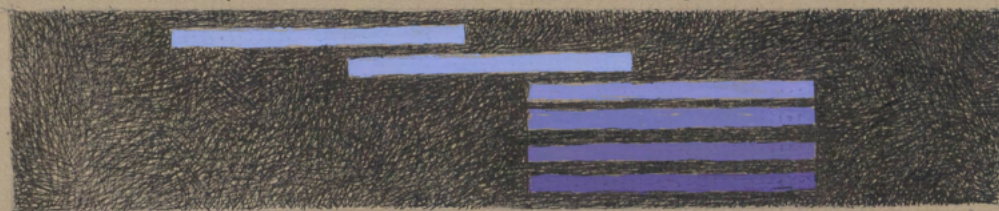
After great pain, a formal feeling comes ...



The Nerves sit ceremonious, like Tombs ...



The Feet mechanical go round ...



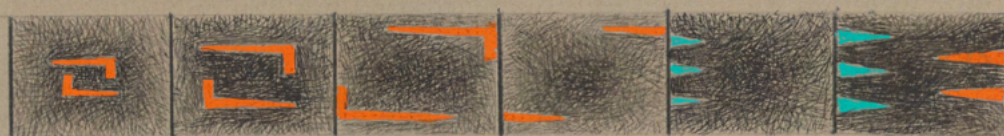
This is the Hour of Lead.

The movement of these symbols would appear and disappear with different speeds and intensities, in measured counterpoint to the words and the pauses between the words.

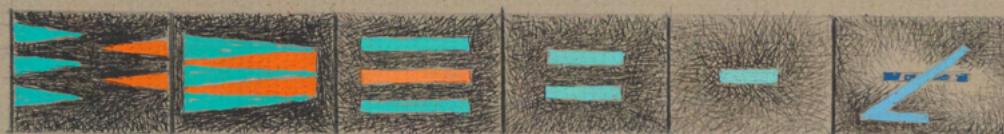
In a lighter vein, a verbal-visual counterpoint could be developed by choosing random words for their sounds more than their meaning and arranging them over a six-eight-note metric beat.

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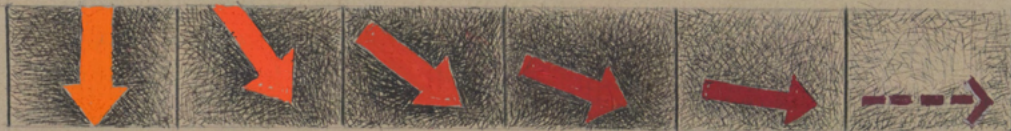


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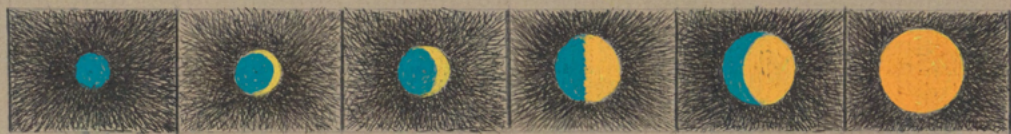


No!



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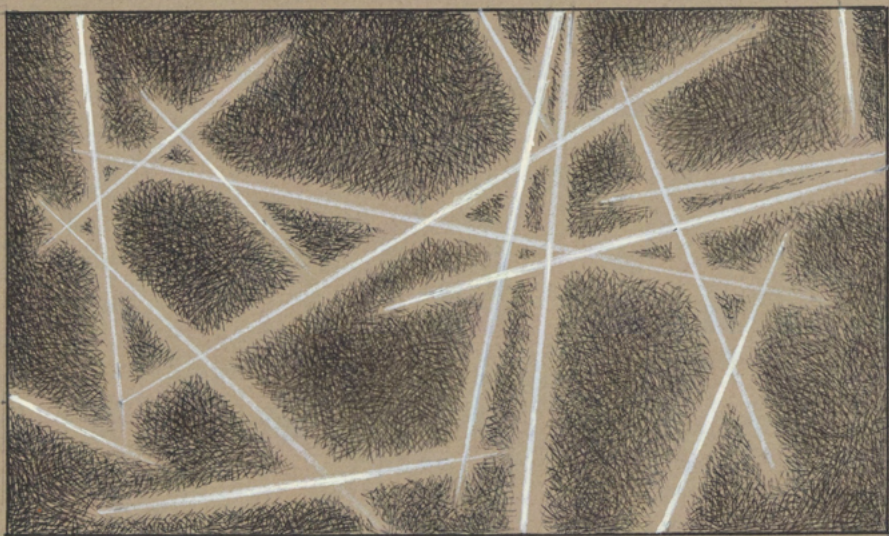
torious

And finally,

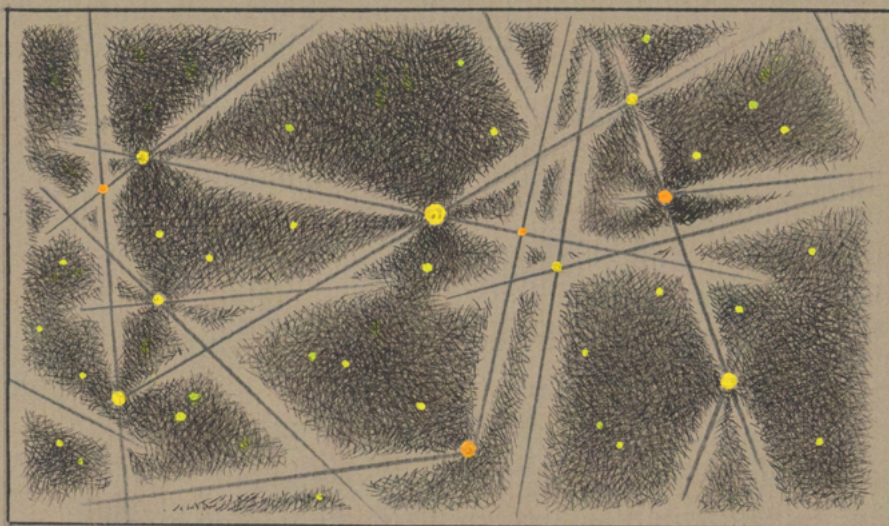
"There is a haunting if deceptive modernity in the notion ...



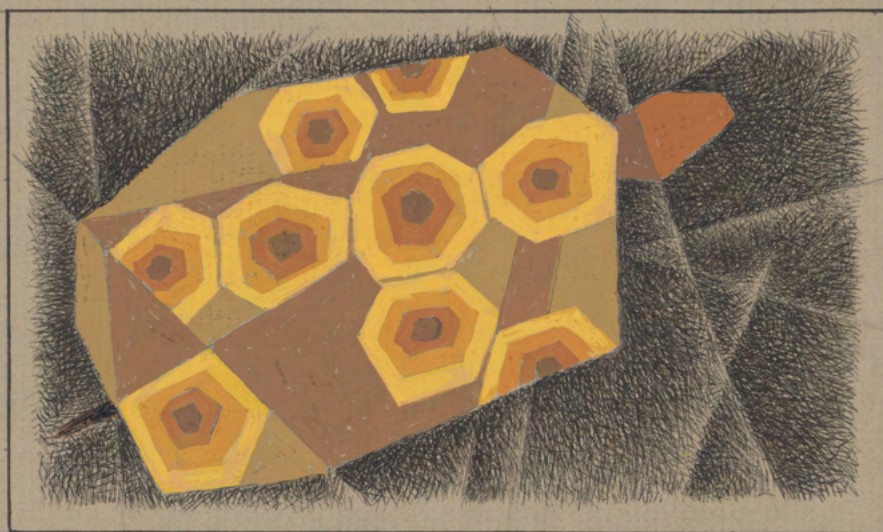
that arteries and branches of trees,



the dancing motion of the microcosm



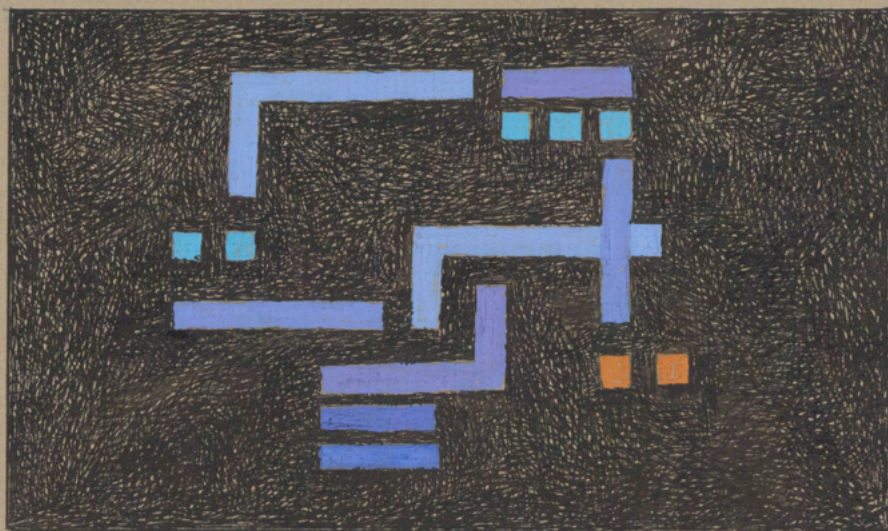
and the solemn measures of the spheres,



the markings on the back of the tortoise



and the veined patterns on rocks,



are all cyphers."

George Steiner

Summary

Graphic animation is a medium made possible by contemporary technology. It has a rich potential attainable through the interwoven disciplines of several more traditional arts. The medium, like any other, can be used for the most stereotyped or the most exalted purposes. Enduring works of music, painting or dance do not grow stale or become dated by shifts of fashion. There is no reason why the same should not be true of graphic animation. It can, and has been, used for short, witty, satiric films which entertain and briefly delight. The medium opens possibilities for works which explore wider, more visionary landscapes of the imagination.

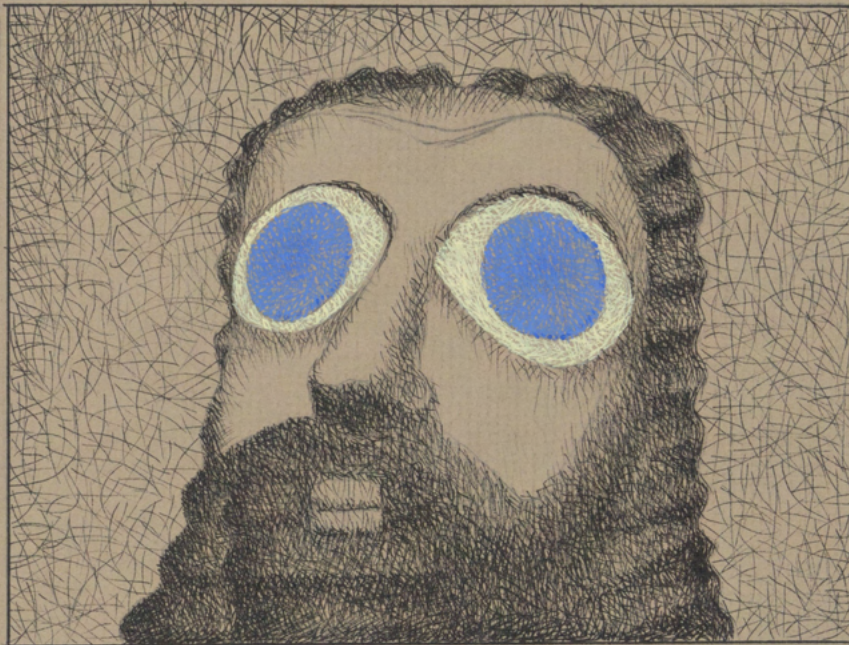
A healthy environment is essential if the medium is to expand beyond its present state. The creeping inflation that menaces our lives today has permeated the arts. Paintings and sculptures have become commodities to be bought and sold like stocks and bonds, many at prices which indicate the valuelessness of money more than the quality of the work. From morning to night, we are inundated in a plethora of visual symbols: in newspapers, magazines and public advertisements. The result is that most people, though continually observing, seldom "see" anything. Indifferent music of the most monotonous sentimentality infiltrates elevators, dental offices and airplanes.

This satiation with ersatz aesthetic fare becomes a relentless "brainsoiling" which dulls any capacity to discriminate. Television has become the true opiate of the masses. The public is invited to recline in comfort while awaiting the newest violent or erotic titillation. This has become the century of the solipsist, of the celebration of celebrity. The unique personality of the artist, symphony conductor, prima ballerina, poet and rock star is inflated by dealer, critic, press agent and television commentator.

One of the most potent functions of a work of art has always been to provide a path of escape from the prison of the ego. All lasting art invites this freedom. The infinite impersonal joy of Bach's music; the elaborate whirling energy of the Book of Kells: the reverently carved stones of Moissac – all map an escape route from the meretricious haunts of personal vanity. Nowhere is this more clearly marked than in the deities of Tel Asmar, whose images reflect in great unblinking eyes staring with fixed intensity into the unknown, the intuition of innocent awe and wonder which we have so easily and cheaply forfeited.

Even the most masterful works of art, to be effective, require a two-way communication - a silent dialogue between creator and beholder. If the imagemaker, choreographer, composer or filmmaker believes without reservation in what he is making and the spectator, all extraneous distractions erased, concentrates with fixed attention, there can be a flow of spiritual energy approaching a state of ecstasy.

The current trend of our culture toward inflation and fragmentation in the arts need not necessarily cause dismay. There are signs of a healthy craving for more substantial aesthetic sustenance, reflected in full attendance at concerts of fine music, recitals of ballet and contemporary dance, poetry readings and museums. In the bleakest periods of history, there have been those with enough independence of spirit to swim against the currents of fashion. The rich ore of graphic animation still offers many unmined veins. Whether it will be exhausted in films which amuse, convert, charm or edify, or whether it will provide works of more lasting value remains a moot question, depending as much on the attitudes of society as the skills of the individual craftsman.



Votive Statue discovered at Tel Asmar, Sumer. c. 2650 B.C.

Interstices

The handscroll which accompanies this essay is called "Interstices," a silent fugue. It is one of a series of scrolls made after my retirement from working with film. As the essay points out, the format of the ancient Chinese horizontal handscroll is an ancestor of the graphic animated film. Both were designed to reveal consecutive images composed, like music, to flow through the dimension of time.

The design of this scroll is not based on any particular musical composition but on the structure of the fugue. A visual theme is stated, repeated at intervals, interwoven in various configurations, until it comes to rest in the form of a balanced resolution.

The interstices, spaces between the meandering of the three linear "voices," are analogous to the silences between rhythmic phrases in a musical composition. In this scroll, these interstices become geometric fields, as essential to the development of this visual fugue as the lines which define them.

Responses to a musical or visual fugue are apt to be quite different. Pure music, without words, is abstract. Its appeal, however, is visceral, colored by the blood memory of ritual dancing and awe of the supernatural. This visual fugue, on the other hand, is based on the belief that an innate grasp of design is part of the shared subconscious of the human race. It appeals to an intuitive longing for coherence and unity.

I hope that students of graphic animation may enjoy watching one single theme, the "voice" of this silent fugue, propagate itself by spaced repetitions into a crescendo of increasingly complicated patterns. These patterns seem to be seeking a resolution which appears finally in a symbol reminiscent of a mandala capable of reverberation to infinity.

After all, it was Simone Weil who wrote, "A fugue is an obsession overcome."

Notes

In my career as a graphic animator, most of my work has been the planning of sequences in short educational films. In only two instances was I able to follow completely the contrapuntal principles described in this essay.

One of these films was "SYMMETRY," a ballet of semi-abstract images designed to perform choreographic movements while progressively displaying precise two-dimensional symmetries: reflection, rotation, translation in a line and in a grid. The film has no narration; the soundtrack is a synchronized musical score. The film can be used for instruction with or without lowering the sound if the instructor prefers to comment on mathematical developments while it is being viewed. Students of art or dance can look at it with no prior instruction in its mathematical content. It will, nonetheless, increase their visual and musical study of color relationships, motion and design. It can also be viewed solely for its aesthetic appeal.

"HOMAGE TO FRANÇOIS COUPERIN" is an innovative two minute film made of approximately fourteen hundred consecutive images. The music is Couperin's *Les Papillons*. It was the first – and so far only – film using a technique of pointillist colored dots in order to produce stroboscopic movement with a scintillating texture. It not only depicts the pathway of a flight of butterflies and dragonflies, but also the image and the memory of the image at the same time. A similar multiple image device was later developed by Norman McLaren, without color, in his film *Pas de Deux*. In it he achieved a fluid stroboscopic effect by using optical printing.

Credits

The original intention of this project was to have been an essay on certain points of view concerning my experiments in the field of animated film.

With time, the project grew into a series of illustrated notes, including reflections on the history of animation in relation to other branches of the arts.

The format was suggested by Ann Taylor, painter and book designer of repute. The contribution she has made to the editing, layout and choice of typography is immeasurable. The actual printing of the book was her work. I am happily beholden to her.

I am also grateful to Eileen Bowser and William Sloan for their enthusiasm with the essay. I hope it may be of interest to future students and those making research in this field.

The chest for the book and scroll was designed and built by John Lumsden of Phoenix, Arizona.

Philip Stapp

Born: 1908

Studies in Design: The Maryland Institute of Fine and Applied Art, Baltimore,
1925-1930

Studies in Music: The Dalcroze School of Music, New York, 1930-1933

Guggenheim Fellowship for Film Making, 1946

Director for Animated Film, Information Division, Office of Economic Cooperation (The Marshall
Plan), Paris and Rome, 1950-1956

Artist in Residence: Ohio State University, 1964

Lecturer: Columbia University, School of the Arts, New York, 1968

Designer for two settings for Martha Graham: *Every Soul is a Circus* and *Columbiad*

Independent Graphic Animation Designer, New York, 1956-1974