



ZERZEREX

mIEKAL aND

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BY

mIEKAL aND



A

XXTH CENTURY

AUTONOMOUS ART FORM

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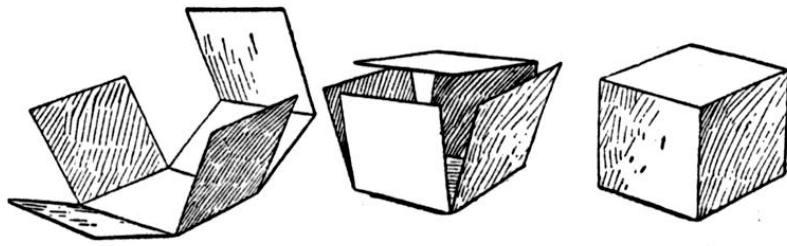


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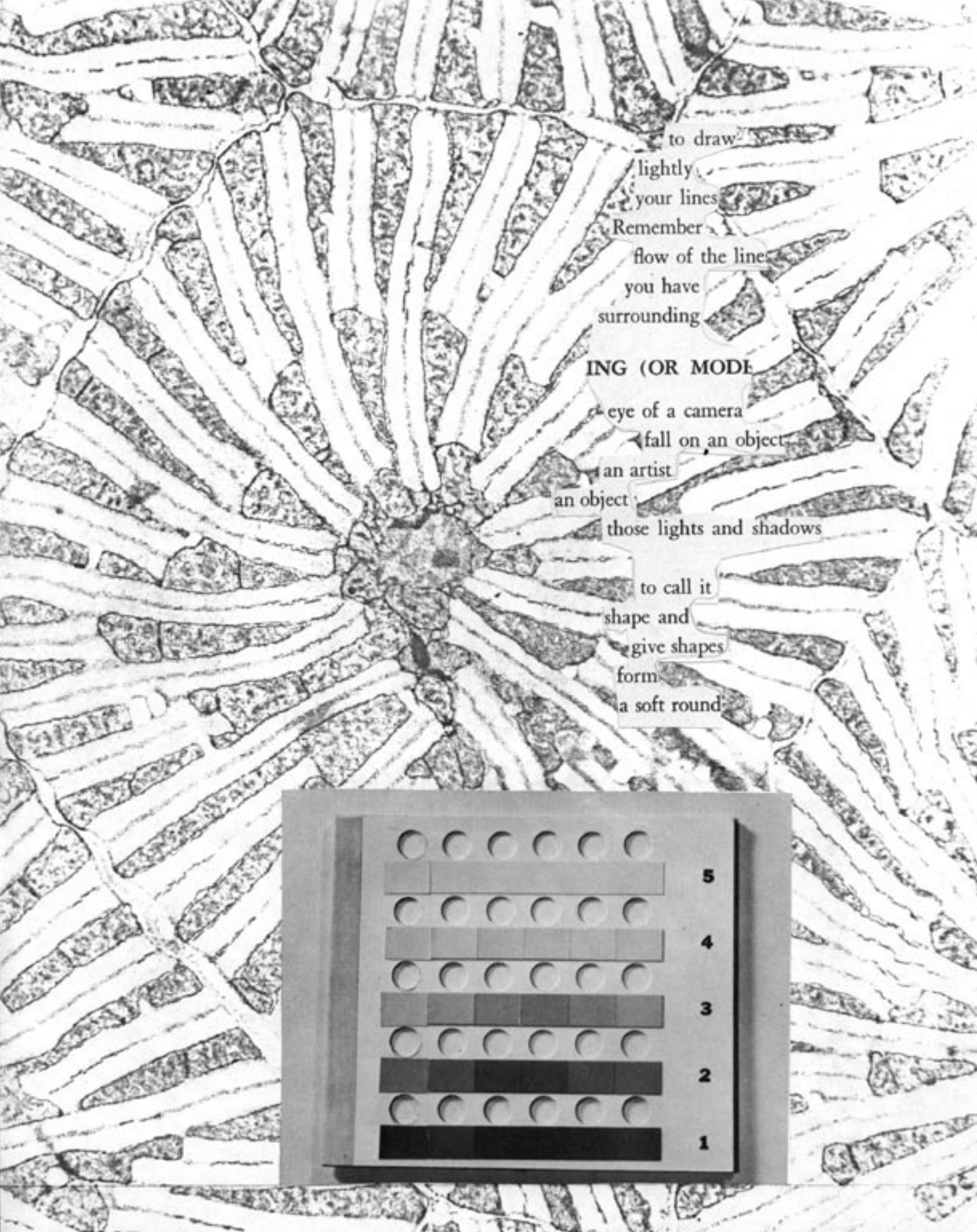
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for Elizabeth Was



CHAPTER 1. Learning to Draw

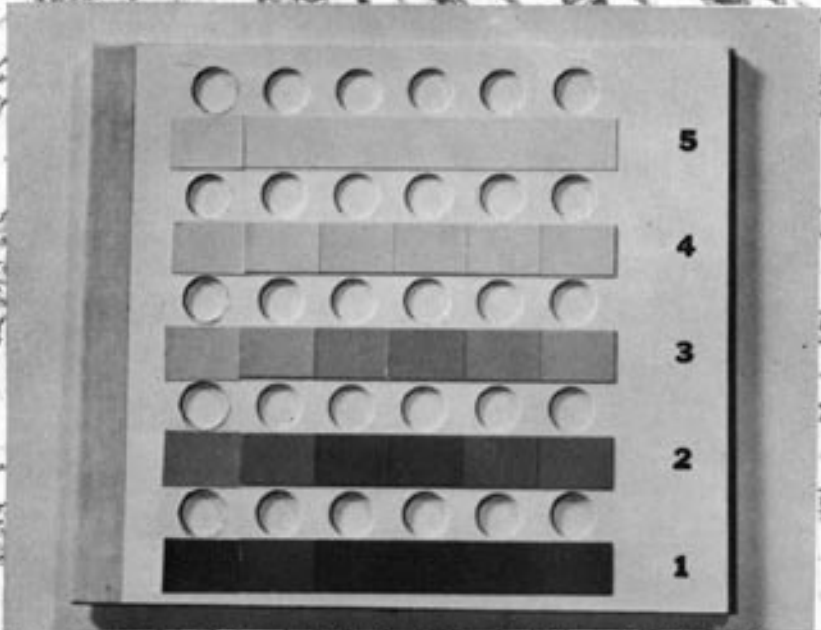
lines surrounding
the source of ^{as} Cornell's work, use
one on the ^{expert}, an amateur radio the
er line. But ^{electronic equipment} elect
should ^{with} people all over the w
ise to use ^{known} to his brother and ofid
ht line on th ^{charming drawings into h}
drawing, use ^{s full of books, archives, m}
ed and rub off. ^{ted by Cornell on his end}
some sticky substance, perhaps shel-
mist of it through a tube onto your
your drawing should stay on the
metal tubes used for blowing it are
expensive

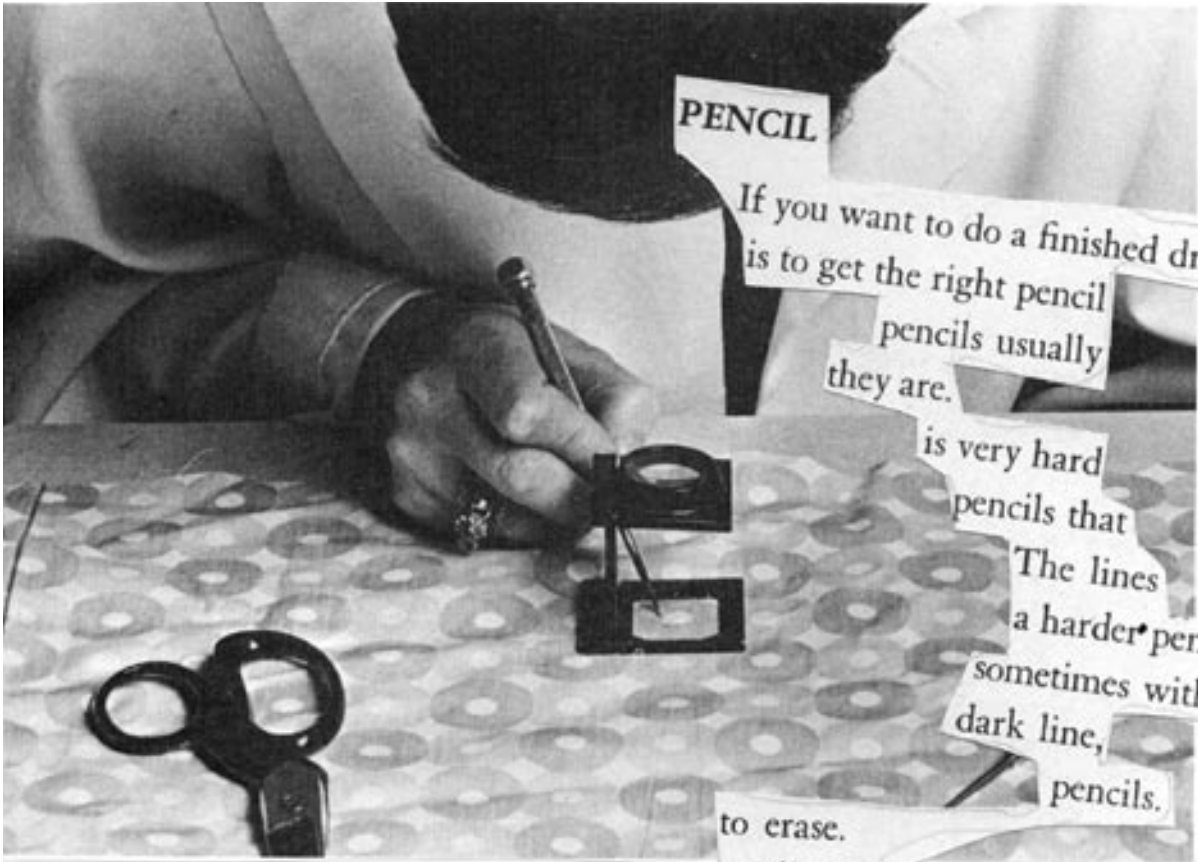


to draw
lightly
your lines
Remember
flow of the lines
you have
surrounding

ING (OR MODE

eye of a camera
fall on an object
an artist
an object
those lights and shadows
to call it
shape and
give shapes
form
a soft round



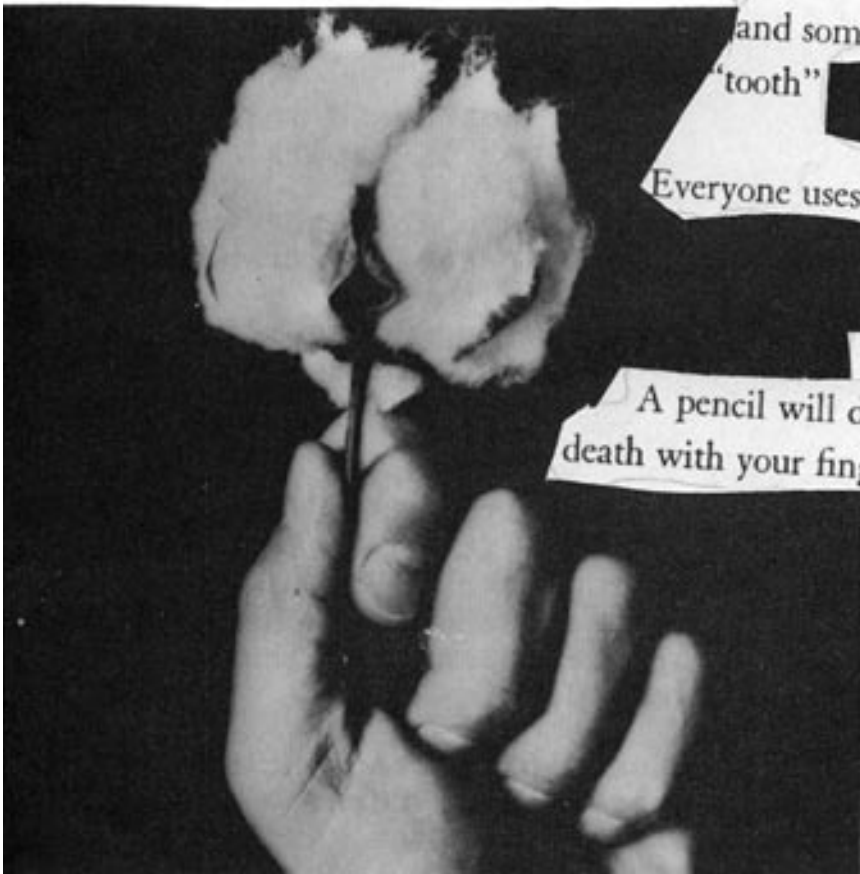


PENCIL

If you want to do a finished drawing
is to get the right pencil
pencils usually
they are.

is very hard
pencils that
The lines
a harder pencil
sometimes with
dark line,
pencils.

to erase.
will also

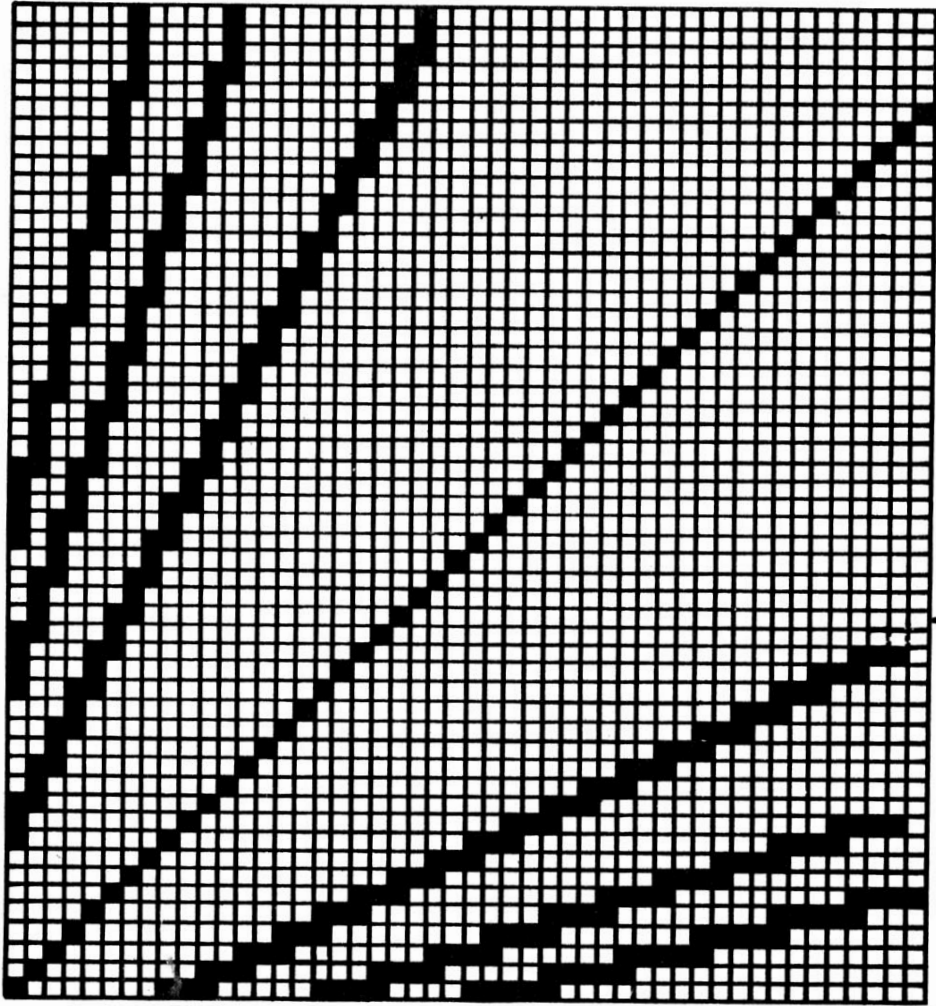


and some heavy
"tooth"

Everyone uses a pencil

But when
Then he either digs
waving line as

A pencil will do anything for you provided
death with your fingers



PERSPECTIVE

we still have a pencil
perspective. Perspective is a scientific
flat surface so that

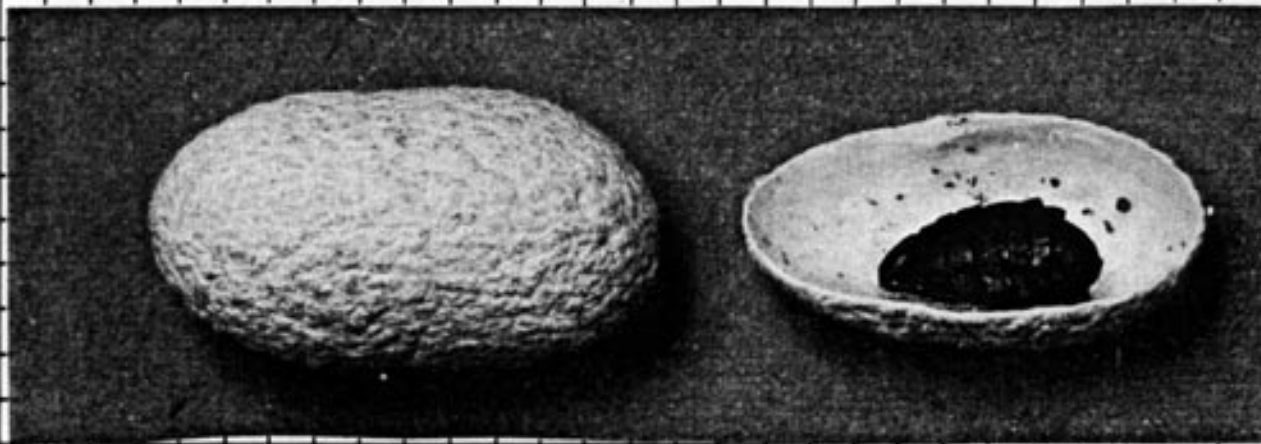
It is a complicated science

You know that things look smaller
You know that parallel lines appear
as they go off into the distance
at this point in your development.

THE HUMAN

Let's
human head.





AND-INK

Begin

lines seem

lines just as you can erase

So —

of hard rubber with little brushes attached

But you will also

With it

strong paper

paint. That is

With it you

now that you have your erasers

use them.

I prefer a crow

point that makes it possible

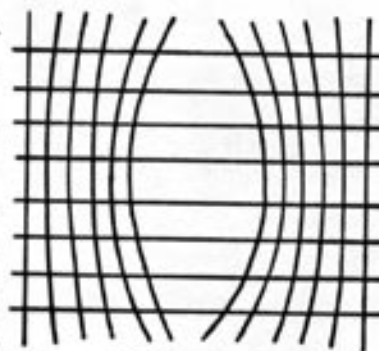
hair line

India

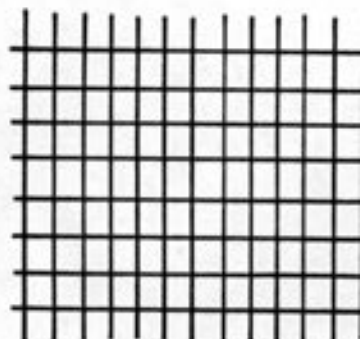
many colored

drawing are the black ones

other colors should be used for painting



Distorted



Undistorted



QUALITIES OF PENCIL

different material with
Pencil lines can be harsh
be almost tender.

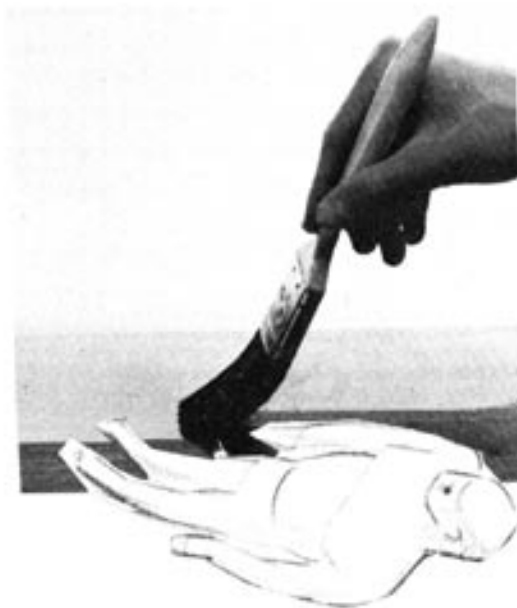
pencil drawing:

dimensional shape

movement

ones

rhythmic, almost poet





COAL DRAWING

coal drawings, or a combination
qualities as any other draw

drawings must

shape. If your drawing does not have it

away, and start

RUSH DRAWING

drawing with pencils.

believe you have the

rush drawing. You must really

expect to get any

number of ways of drawing

(1) drawing directly with a brush

color

(2) drawing

(3) drawing with a brush, using a pen

sable water-color

brush. These brushes

Also get a couple of bamboo

You will want your India

color or a

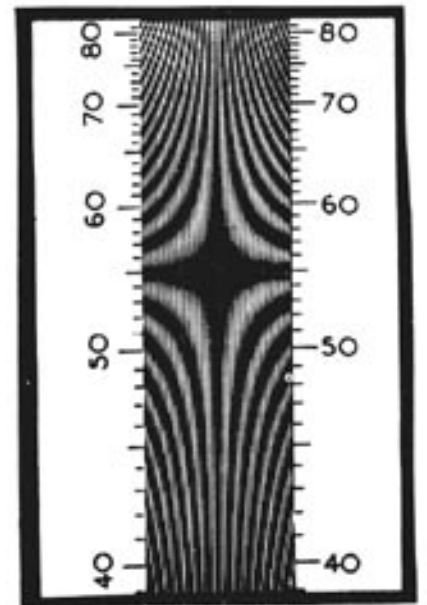
paint, and a water

drawing you can use a brush dipped
completely black areas in the deepest shadows

But be careful not to use your brush
be doing a brush drawing.

pen drawing is about
lines are put down in ink
pencil lines with a soft

ink drawing.
almost finished
lines with your hard
surface of your paper
the ink lines
of your paper



will also spoil the surface of the paper
if you paint out some ink lines
try to draw on top of the dried paint.

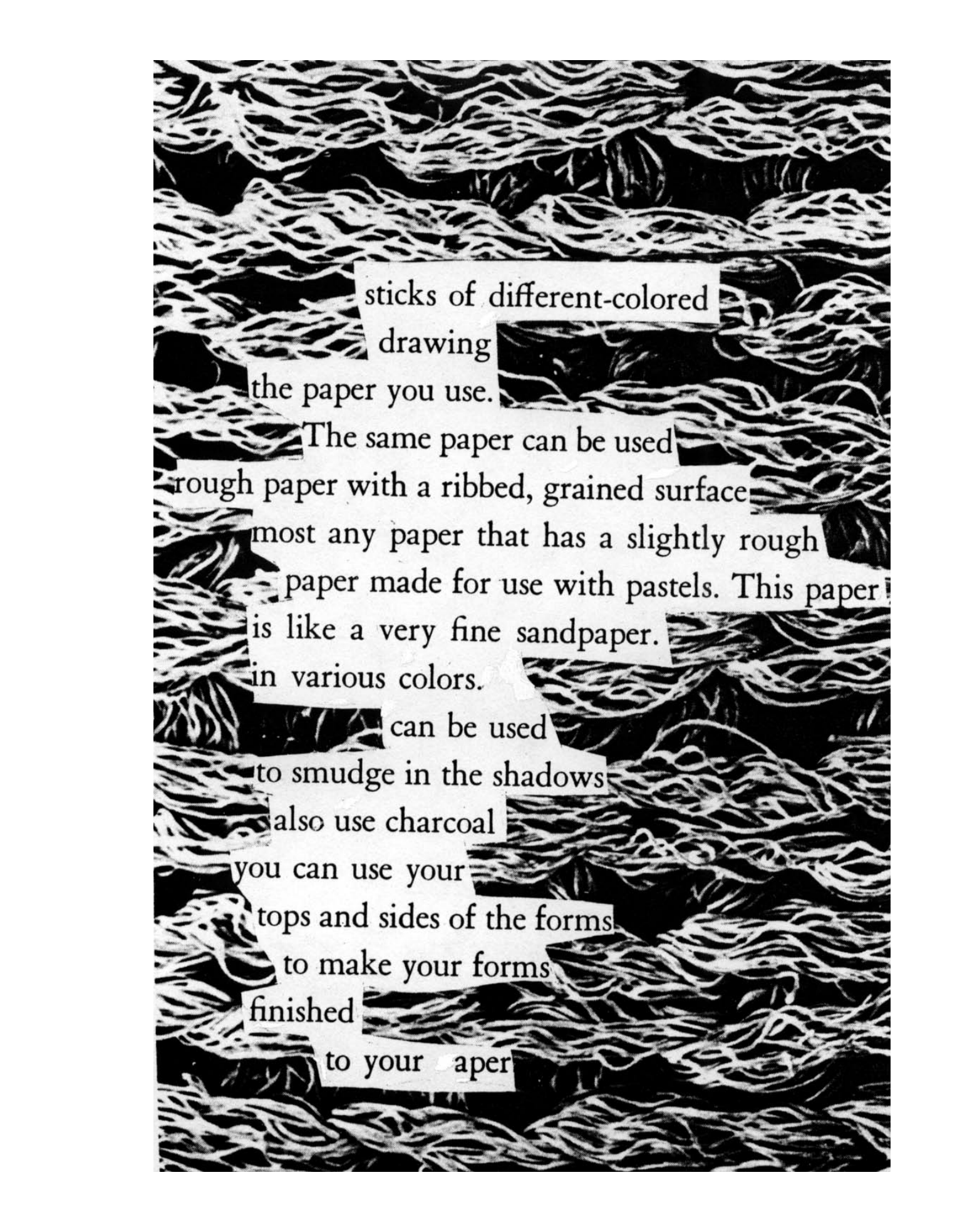
do a pen line drawing
the line you draw must try to stress
you are drawing.

way
pencil drawing.
over your pencil drawing. Hold
then dip your pen in ink and quickly
with a flowing pen line
pencil lines. This

is sketching with a ball
no preliminary pencil drawing
thing and scribble.

scribble drawings with other
competence
drawings and flow





sticks of different-colored
drawing
the paper you use.

The same paper can be used
rough paper with a ribbed, grained surface
most any paper that has a slightly rough
paper made for use with pastels. This paper
is like a very fine sandpaper.
in various colors.

can be used
to smudge in the shadows
also use charcoal
you can use your
tops and sides of the forms
to make your forms
finished
to your paper

ANDRO



you can make it
surround the shape you have made
black line to outline the
one color for studying shapes and
drawing has been in use for thousands of
ways of drawing an object

on paper. One way
with a sheet of tracing or light
again and again
surround it and make

OUT SHAPES



more to learn about
outside surfaces

Or or hard

HOT inner structure

only people and

UNIVERSITY
freres et soeur proprietaires

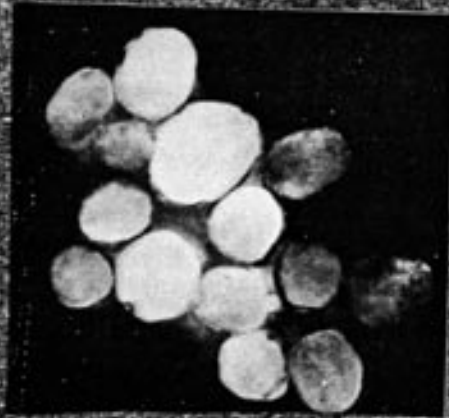
things

five hundred years ago

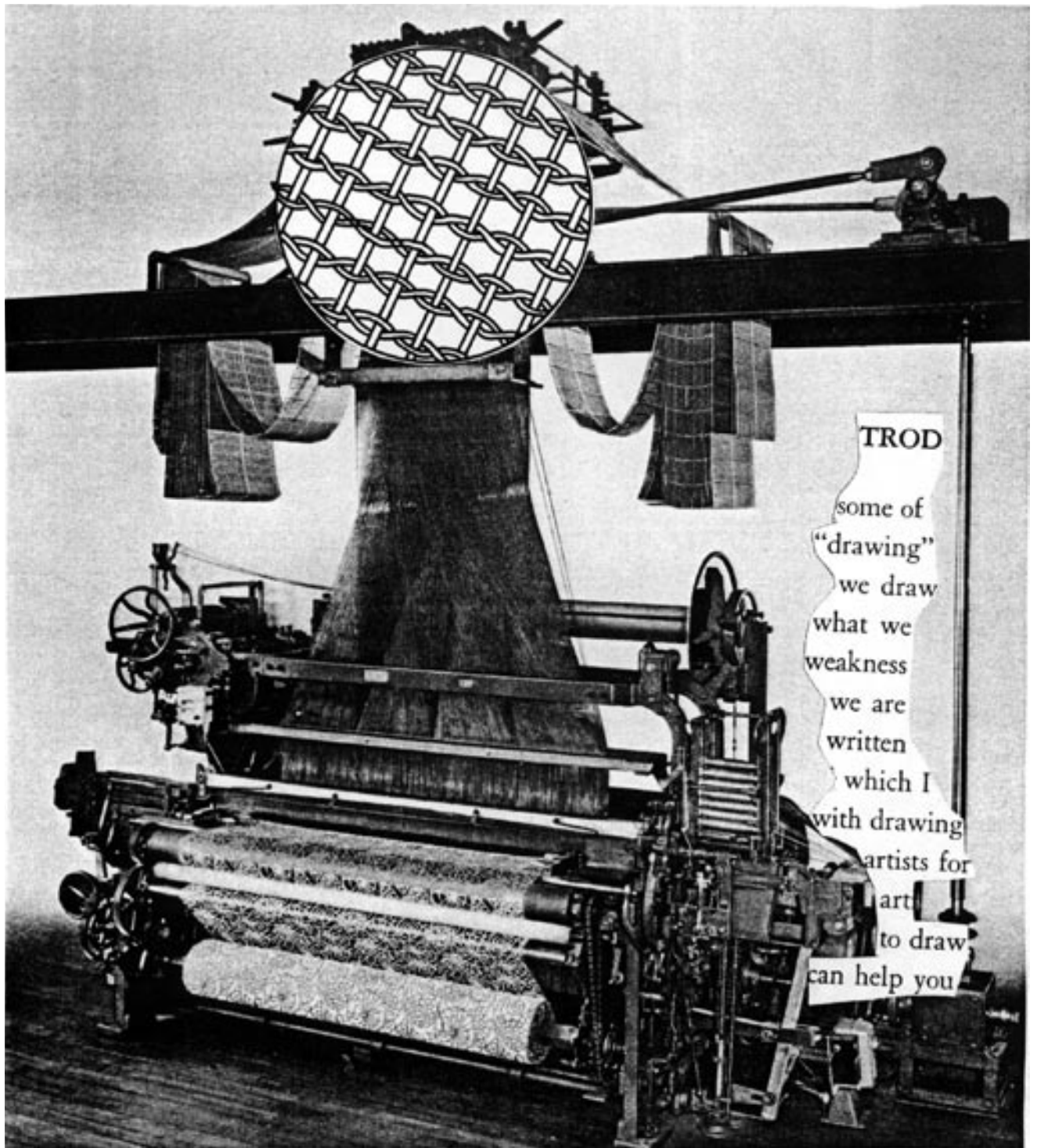
studied the anatomy
thoroughly that they knew more about bones
of those days.



DYING SHAPES

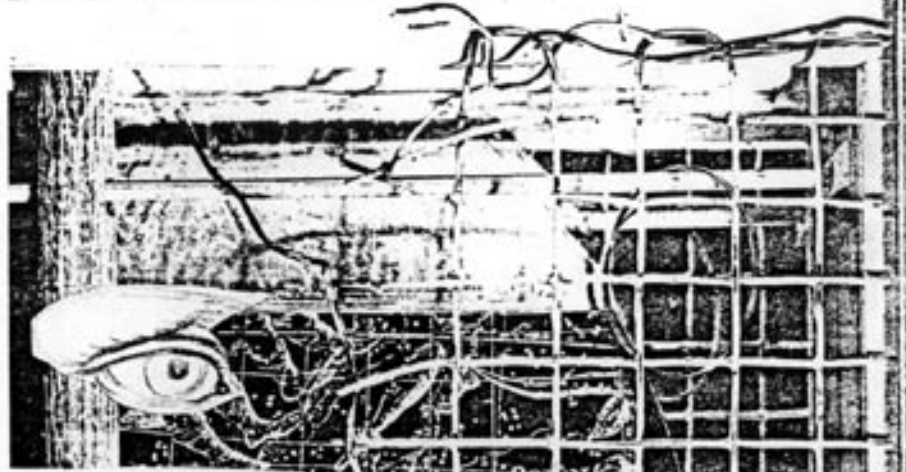


On the opposite page I have drawn
colored pencil and try
Scribble
Forget about
that you are
on the wall
as you work
quickly, and don't
smudge the shapes
Try using the
charcoal. Use
the paper. And keep
are drawing.
work on large or small
and when you
scribble them
something
in any details at
the shapes of things
on paper.

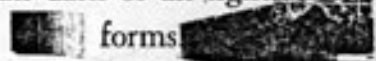


TROD

some of
"drawing"
we draw
what we
weakness
we are
written
which I
with drawing
artists for
art
to draw
can help you

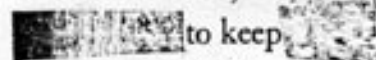


When you put down
a light line on the side
object you
can be drawn with a darker
be all dark or all light



forms

lighter side of the object



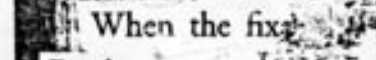
to keep

paper or it will become

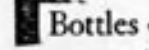


combined

You blow

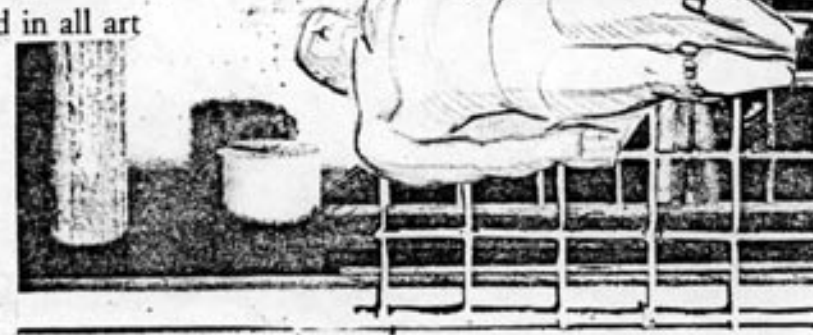


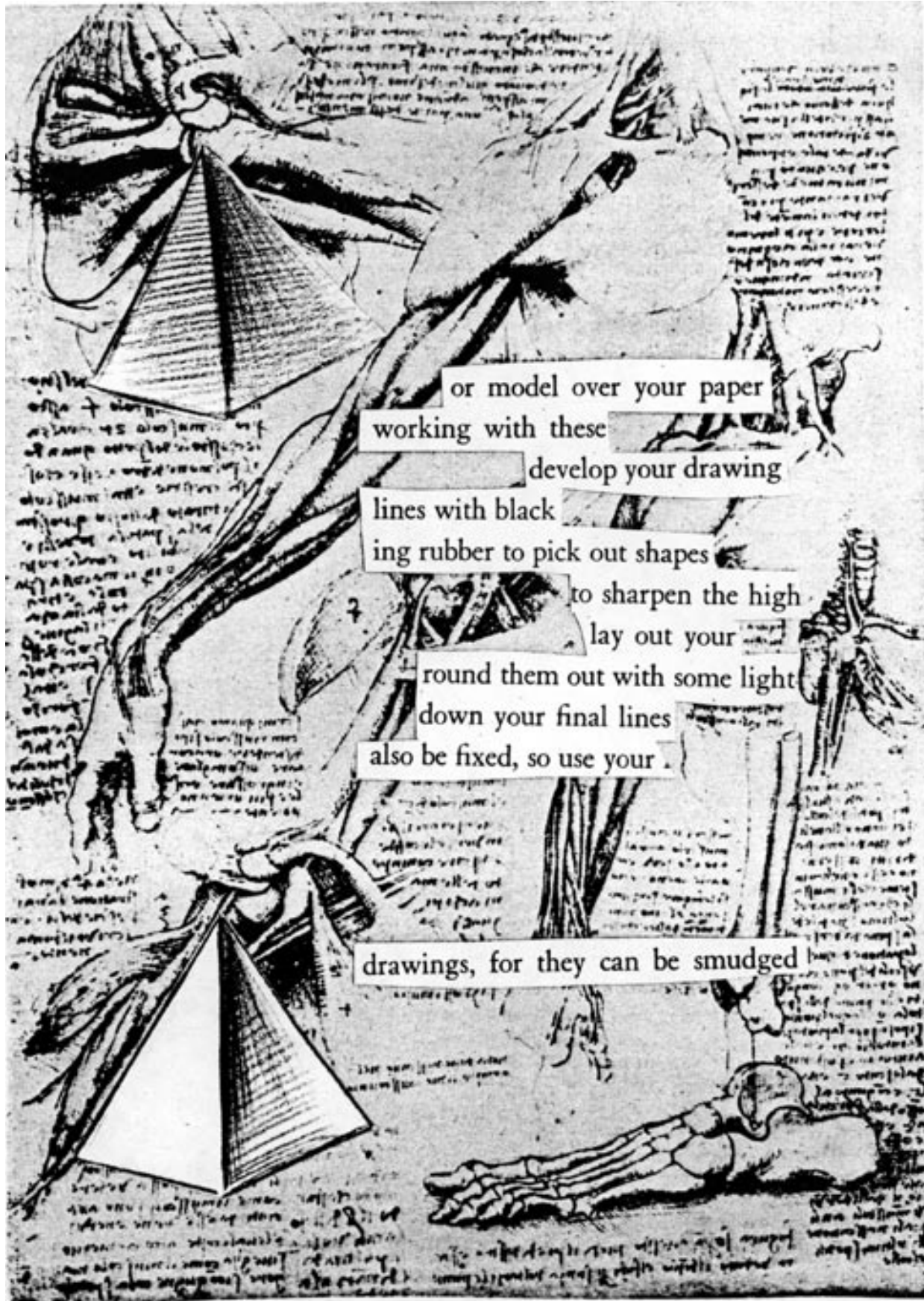
When the fix



Bottles

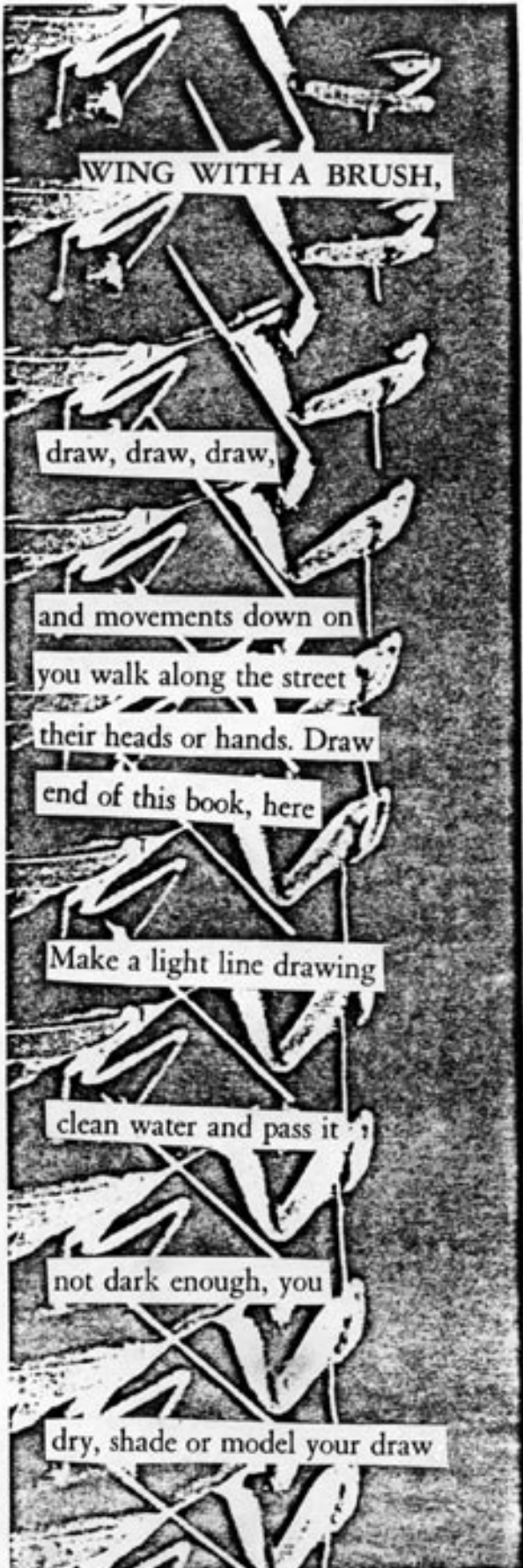
old in all art





or model over your paper
working with these
develop your drawing
lines with black
ing rubber to pick out shapes
to sharpen the high
lay out your
round them out with some light
down your final lines
also be fixed, so use your

drawings, for they can be smudged



WING WITH A BRUSH,

draw, draw, draw,

and movements down on
you walk along the street
their heads or hands. Draw
end of this book, here

Make a light line drawing

clean water and pass it

not dark enough, you

dry, shade or model your draw

PRACTICE

we have

thing to remember:

He practices constantly

So, if you want

everything or anything

in a good light

Make
careful drawings of them

the drawings of great

reproductions

lived. Find them, and

is not drawing he can exercise

them. As

and the things around you

Think

paper. That's

to put them down on paper.





INK DRAWING

the qualities you should try

dimensional shape

movement

rhythm

use

muddy drawing. Ink drawings

must mean

this effect.

RAYON

rayons are sticks
sixteenths of an inch wide
is the man
old in all art
of the best thing
to it has been used by art
rayon will cling
surfaces.

rayon comes in
(called sanguine), and white.
hardness — hard, medium, and soft
to draw with.

way to use dry
sketch in lightly the object you
shape and general movement. Then
piece of dry clean cloth. Snap your cloth
Enough of the charcoal will

take your red
rayon so that
your shapes.
about anything
with the edge of the crayon, crosshatch, smudge in deep





MOVEMENT

you have learned to see
thing is learning
thing, each person
walk in
walks



each in its own way
when the wind
you start to draw
shape moves
contrasting move
own body
or the crouching

paper.



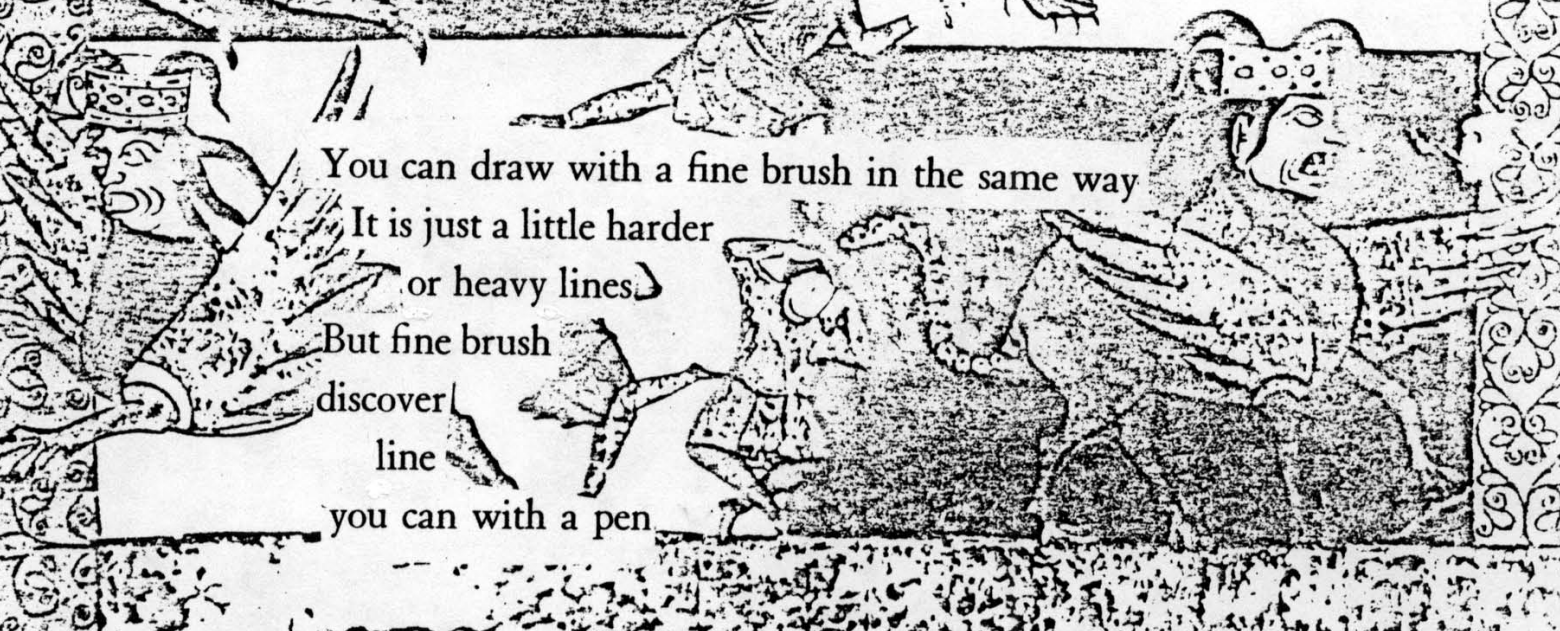


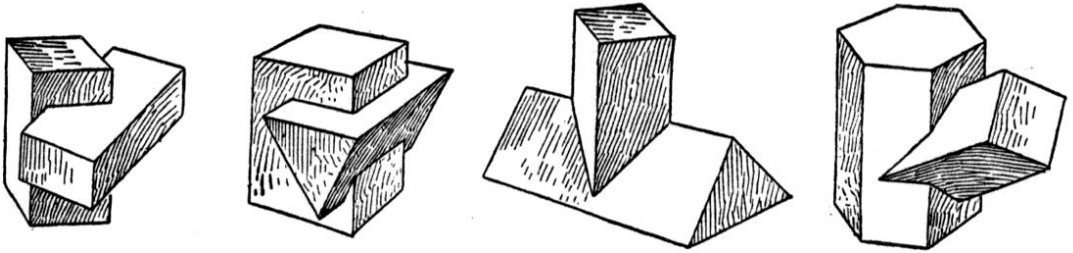
You can draw with a fine brush in the same way

It is just a little harder
or heavy lines

But fine brush
discover
line

you can with a pen





CHAPTER 2

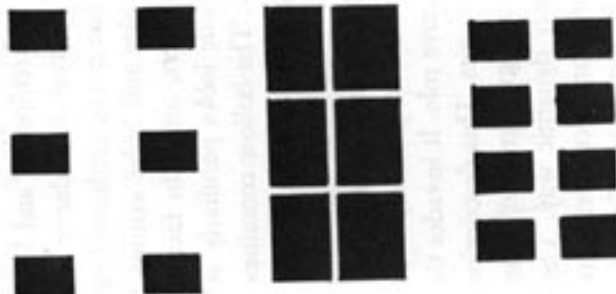
Theory of Shape



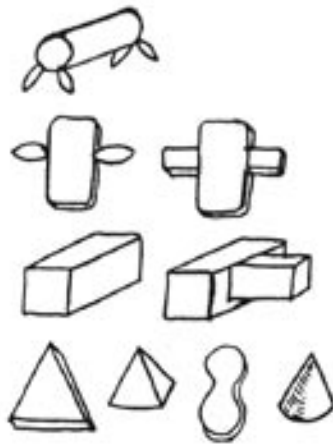
AJANTA, village, India, Maharashtra State, about 200 miles *ENE*: of Bombay. It is best known for the famous Buddhist caves located some 3 to 5 miles to the northwest. The caves are in the side of a steep, 250-foot-deep ravine and contain fresco paintings and sculpture illustrating Buddhist legend. Included are works from c.200 B.C. to A.D. c.600. They provide a continuous representation of the development of Buddhist art and religion during that period.

A MODERN REFERENCE WORK

trying to dismember actual form

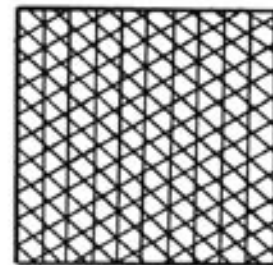


INTRODUCTION AND

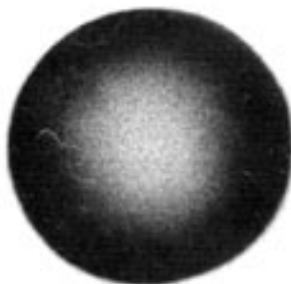


ANGLO-SAXON CHRONICLE, more accurately known as Old English Annals, was initiated by Alfred the Great as part of his program to restore native culture ravaged by Danish invasions. The original version, compiled by a clerk in Alfred's service, was completed in 892. Copies were distributed among church officials, who were directed to keep the records current. No copy of the original had been preserved, but seven manuscript versions embodying and continuing it are extant. One, kept by monks at Peterborough, was carried on until 1154. The first compiler included some information concerning general European history of the early Christian Era; British history itself was considered to have begun with Julius Caesar's invasion. The original was based partly on Bede's Latin *Ecclesiastical History*. As events were recorded over several centuries, the versions became increasingly local and diversified, so that the products may be regarded almost as separate chronicles. Besides their historical information the annals present the earliest sustained and dignified use of vernacular English instead of Latin. See **ALFRED THE GREAT: BEDE**.

PERCEPTION



collapse of a society, its disciplines



instinctive reaction — animating a surface

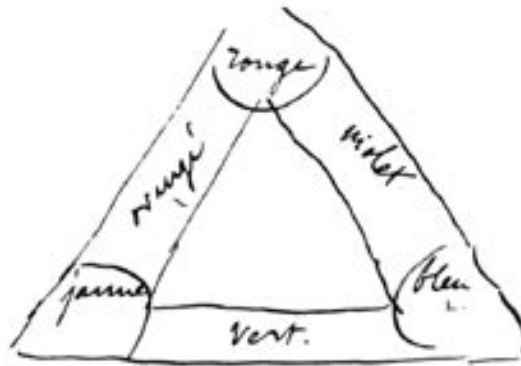
ANTI-PARTICLE, or antiparticle, a counterpart to the elementary particle of ordinary matter. To each known elementary particle there corresponds an anti-particle. The anti-particle possesses the same properties as the particle, except its electric charge and its magnetic moment have the opposite sign. A particle and its anti-particle can combine. The result of such a combination is the disappearance of both particles in a process called "annihilation," in which the energy corresponding to the masses of particle and anti-particle is carried off by other, lighter particles.

The existence of anti-particles was predicted before their discovery. In 1930 P. A. M. Dirac extended the quantum mechanics to include a theory of electrons consistent with Einstein's theory of relativity. The quantum mechanics had been developed a few years before to explain the behavior of electrons and atoms, but in its earlier form it did not take into account the requirements of relativity. The equations in Dirac's theory seemed to lead to electrons with "negative energy," an apparently impossible result. In order to remove this difficulty, Dirac proposed that these "negative-energy electrons" should be interpreted as particles with positive energy but with a positive electric charge, the opposite of the electron's negative charge.

The predicted anti-particle was discovered in 1932 by C. D. Anderson. In photographs of cosmic radiation interactions in a cloud chamber, he found a particle (now called the positron) having a mass equal to that of the electron but having a positive charge. It was afterward determined that this was indeed the anti-particle corresponding to the electron. A positron brought to rest in matter is attracted by an electron, and they annihilate, thus producing gamma rays.

The modern theory of elementary particles indicates that anti-particles exist for all the elementary particles, with the partial exception of some electrically neutral particles that are, in a sense, their own anti-particles. It was not possible to observe the heavier anti-particles until high-energy accelerators were available to create them. In 1956 the anti-proton and anti-neutron were discovered, and by 1963 the last of the predicted anti-particles was observed.

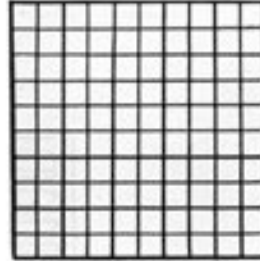
The lifetime of positrons or other anti-particles in the stable matter surrounding us is short because of the process of annihilation. The equations describing particles and anti-particles are quite symmetrical, however; and it is purely a matter of convention to consider ordinary matter as consisting of particles while naming particles in which certain properties are oppositely signed anti-particles. In view of this symmetry it is natural to ask why there should not exist antimatter composed of positrons and anti-protons. We are reasonably sure that there is no large amount of antimatter in our galaxy, but it is not now possible to say whether distant galaxies are composed of matter or antimatter. Consequently, it is still possible that the universe as a whole contains equal amounts of matter and antimatter. See **ANNIHILATION**; **PARTICLE**.



Des 3 couleurs primitives se forment les
3 binaires. — si se au ton binaire vous

author of this reviving movement

ANAXIMANDER, 611–547 B.C., the second, succeeding Thales, of the Ionian school of natural philosophy in Greece. He was born in Miletus. He is said to have discovered that the path of the earth around the sun was not a perfect circle and to have introduced the sundial. The invention of geographical maps is also ascribed to him. His theory of the origin of the world was based on the idea of eternal motion acting on "the Infinite," the divine cosmos, to produce opposites such as heat and cold, light and dark. The conflict and separation of these opposites caused the development of the universe.



flowers, feathers and nude women

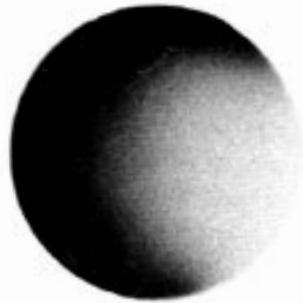
ANIMAL WORSHIP, the deification and worship of certain lower animals, prevalent in many ancient religions and still practiced by some cults. Ferocious animals, such as the tiger, leopard, or bear, were often objects of worship, probably from fear of their great strength and a belief that the animals could be appeased in this way. Other animals have been held sacred because their bodies were believed to be the homes of tribal gods or to contain the soul of a person. Such worship still exists among some Polynesians, Hindus, Siamese, and Africans. Animals held sacred have ranged from the lowly scarab beetle to reptiles, fish, monkeys, birds, cows and buffaloes. See TOTEMISM.



research and invention. In a period



<i>Black</i>	<i>Violet</i>	<i>Blue</i>	<i>Green</i>	<i>Red</i>	<i>Orange</i>	<i>Yellow</i>	<i>White</i>
0	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{4}$	1

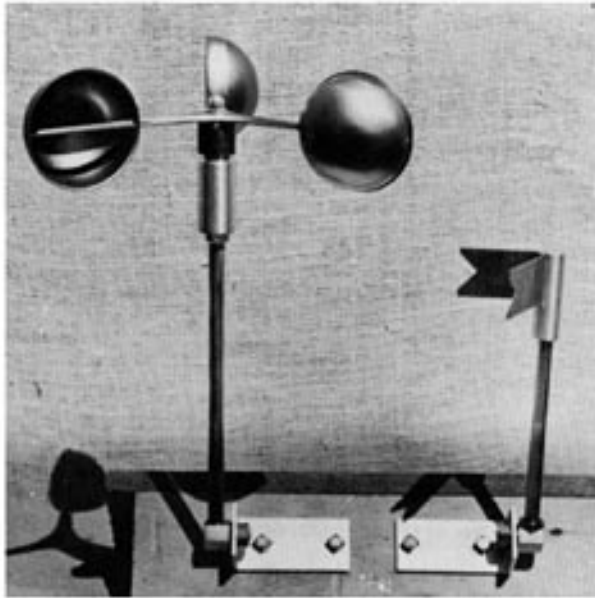


existence of something behind it



ANGKOR, ancient ruins of Cambodia. A city, Angkor Thom, and a temple, Angkor Wat, a short distance to the south, both built by the Khmers, are among the most magnificent ruins in the world. The city is enclosed by a high wall pierced by five splendid barbaric gates. In its center is the Bayon, a huge temple with 50 ruined towers, porticos, galleries, and verandas, profusely ornamented with bas-reliefs. The towers are all four-faced, each adorned with a smiling Buddha. Angkor Wat dates back to the twelfth century. It is a rectangular pyramid rising in three stages, enclosed by wall and moat. Elaborate bas-reliefs dealing with religious, historical, and mythological subjects cover the walls, which are merely rectilinear galleries set on open terraces. A precipitous stairway leads to the holy sanctuary dedicated to Vishnu under the central tower at the top of the temple. Stone blocks, polished to form perfect joinings without the use of cement, are used for the entire structure. The ruins, overgrown by the jungle, were discovered in 1860 by Henri Mouhot.

resembles graffiti, but significant graffiti,



inspiration, accurate observation and subtle sensitivity.



the structural experiments

ANAGRAM, the transposition of the letters of a word, phrase, or short sentence to form a new word or sentence. The Hebrew cabalists attached great importance to anagrams, believing them to possess some mysterious relation to the character or destiny of the persons from whose names they were formed. Plato entertained a similar notion, and the later Platonists rivaled the cabalists in ascribing mysterious virtues to anagrams. They also were known to the Romans and were popular in Europe during the Middle Ages. However, they are now taken less seriously.

The best anagrams are those that, in the new order of letters, have some signification appropriate to that from which they are formed. The medieval anagrammatist found in Pilate's question, "Quid est veritas?" (What is truth?) its own answer: "Est vir qui adest" (It is the man who is here). With equal appropriateness, Horatio Nelson may read "Honor est a Nilo" (Honor is from the Nile), and Florence Nightingale, "Flit on, cheering angel." Marie Touchet, the name of a favorite mistress of Charles ix of France, was read "Je (the old form of *je*) charme tout" (I charm every one). The flatterers of James I of England found in his name, James Stuart, "a just master," and proved his right to the British monarchy as the descendant of the mythical King Arthur from his name, Charles James Stuart, which becomes "Claims Arthur's Seat." Addison classes the anagram and the acrostic together as species of "false wit," adding trenchantly, "It is impossible to decide whether the inventor of the one or the other were the greater blockhead."

improvized and his treatment of his surfaces



ANTHEIL, GEORGE, 1900–1959, American composer and pianist, born in Trenton, N.J. He studied in Philadelphia with Constantin von Sternberg and Ernest Bloch. In 1922 he took up residence in Europe, where his jazz-influenced, avant-garde works first were introduced and were greeted with riots. The orchestral work *Ballet mécanique*, scored for eight pianos, a player piano, electrical implements, and a whirling airplane propeller, raised a new clamor when it was performed in Paris in 1926; the uproar spread to the United States when the work was performed in Carnegie Hall in 1927. He later composed in a more traditional manner. His compositions include operas, ballets, piano and chamber music, and (after 1935) music for motion pictures. He also wrote an autobiography, *Bad Boy of Music* (1945).

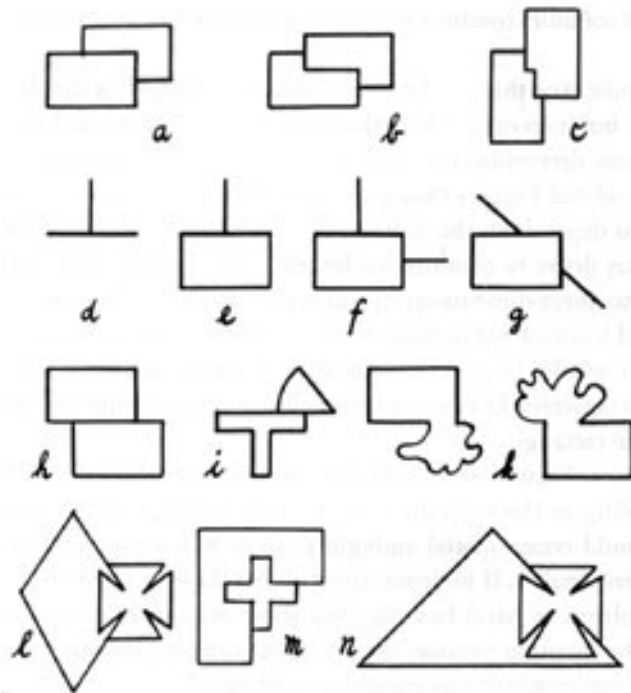




light and shade, in order to absorb

ACCENT, the stress laid in pronunciation upon one syllable of a word—corresponding to *emphasis*, the stress laid in elocution upon a word or words in a phrase. In Indo-Germanic languages accent is either musical (consisting of higher or lower tones, as in Sanskrit and Greek) or expiratory (consisting of simple stress, as in English). In Old English the first syllable of simple words bore the accent, and the inflectional parts remained unaccented, as now, e.g., *love, lovable, loveliness*. Again, nouns compounded with a prefix threw the accent back on the prefix; but verbs similarly compounded retained their former accent. Thus in modern English we say *outcome* (noun), but *outdo* (verb). This principle was extended to words borrowed from other languages, and hence we have such pairs as *accent* (noun) and *accent* (verb), *perfume* (noun) and *perfume* (verb). Words taken from other languages generally conform to the same principles as native Germanic words, i.e., they throw the accent toward the beginning of the word.

add the pathos of an event



ABSTRACT ART, an international style in painting, sculpture, drawing, and graphics, marking the sharpest contemporary departure from the centuries-old concept of representational art. Semiabstraction (e.g., cubism) includes only a remote resemblance to objects in nature; in pure abstraction, however, even the faintest resemblance is eliminated. In place of rendering the appearance of things, the abstract painter organizes shapes, colors, lines, patterns, textures, rhythms, and effects of depth into a pure harmony. Similarly, abstract sculpture presents, in three-dimensional form, shapes and volumes conceived in the artist's imagination. To the abstract artist, colors, rhythms, and shapes are also elements of reality, capable of evoking moods, feelings, ideas, and responses solely through harmonious relationships. By "liberating" a color or a shape from its function as recognizable description, and thus destroying external reality, the abstract artist believes that he achieves the quintessence of feeling through the direct language of art.





extremes. Another, contemporary

AMNESIA, loss of memory. It is not possible consciously to remember everything that has been thought, felt, or done—nor is it useful. But most persons can, with effort, recall most of the important things that have happened to them. Normally, the precision of recall depends upon the person's perceptiveness and intelligence; these, in turn, are determined by the physical condition of the cells of the brain, reticular system, and sense organs. Any physical lesion that damages these cells may cause amnesia. For this reason, trauma to the skull, epilepsy, and prolonged fever may all cause memory loss. Persons suffering from such conditions often cannot remember anything of the experiences immediately preceding or following the causative trauma. When the trauma is more extended in time, as in the hardening of the brain's arteries in senility or in the prolonged damage to brain cells in chronic alcoholism, memory of things long past remains, but the immediate past seems blurred.

Emotional injuries blur memories also, but in a more selective manner. Everyone tends to forget unpleasant parts of important experiences. This is normal and, in its way, useful. However, sometimes the pain associated with psychic trauma proves so intolerable that the mind—to preserve itself—blots out memory not only of the trauma but also of all experiences associated with it. Emotional amnesia then results.

In an extreme state of emotional amnesia, termed amnesic fugue, a person forgets who he is. He becomes an alert, efficient sleepwalker. His sense of identity and conscience asleep, he can act out impulses that his waking conscience prevented from ever coming to the surface. He may wander away from his business or home and assume another identity. Unencumbered by a sense of responsibility for his actions, he need not feel guilty after committing them.

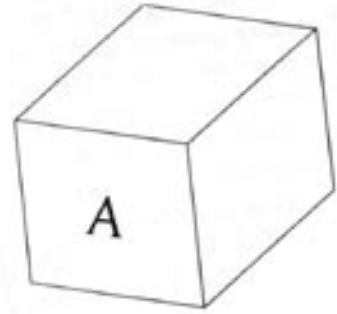




he uses only the sweep of a stroke

Q

ANISOTROPY, or anisotropy, in a substance, the dependence of any physical property upon the direction along which it is measured. Wood, for example, is anisotropic with respect to its elastic properties, because of structural features such as its grain. A cube of wood will have different compressive properties along each of its three axes. Crystals are, in general, anisotropic as a consequence of the regular arrangement of their atoms or molecules. In a typical crystal magnetic susceptibility, cohesion, electrical conductivity, elasticity, the coefficient of thermal expansion, and the refractive index may all vary with direction. In a substance whose atoms and molecules are oriented at random, as is true of most gases or liquids or an amorphous solid, physical properties will be the same in all directions.



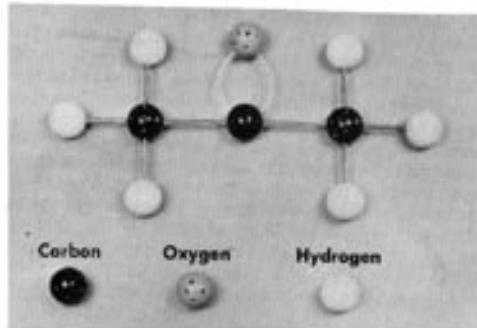
nervously executed, so inventive



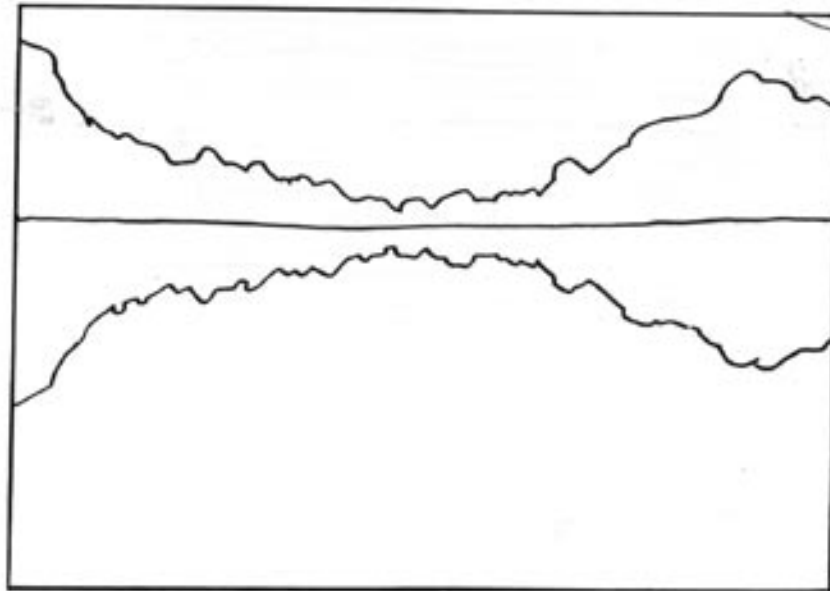
ABORIGINES, the first known inhabitants of a country. The term was originally applied to the Latini of early Italy. It is now also used to denote the flora and fauna indigenous to a region.

The Indians of North and South America are obvious examples of aboriginal inhabitants. The term is sometimes used to refer specifically to the original inhabitants of Australia. These aborigines, like the pygmies of New Guinea, represent a pressing social problem for the governments of their countries. Schemes to incorporate aborigines in modern societies are not easily nor painlessly fulfilled. In many countries where modern civilization has been established by a nonindigenous people, the original inhabitants have become economically and politically the victims of a more advanced society. The fate of the North American Indians illustrates this tendency. See AUSTRALIA; INDIAN, AMERICAN; RACE.

abandoned to the dangers of improvisation.



ADJECTIVE, a word which describes or limits the noun or pronoun to which it refers, as in "the *cool* drink"; "I am *hot*." Adjectives are classified as descriptive (*cool* and *hot* above) and limiting (*the* above). Adjectives directly before or after the noun (I find the book *dull*) are called attributive. Where the adjective is separated from its noun by a verb, it is called predicative. Adjectival duty may also be done by a noun (*chain* lightning), a participle (a *leading* question), a compound (a *down-to-earth* approach), a phrase (the lady *in black*), or a clause (the lady *who spoke to me*). See GRAMMAR; PARTS OF SPEECH.



pressure of the artist's hand



Colliding Beams. The relation between the masses of two colliding particles influences the manner in which the total available energy will be used—whether the energy will go into producing the desired reaction or will be dissipated in another way. In turn, the mass of each particle depends, relativistically, on the velocity of the particle.

this movement with a naïvety,



AMANA SOCIETY, a co-operative religious colony of about 1,500 persons near Iowa City, Iowa, which operated as a communistic community from 1854 to 1932. The history of the colony dates from 1714 when a group of Pietists rebelled against Lutheran formalism and established a "Community of True Inspiration" in Germany. Persecution drove them in 1842 to the United States. They built six communal villages near Buffalo, N.Y., but as that city grew the settlement was threatened. In 1854 the group moved to Iowa, where it secured a fertile tract of land, set up seven villages and several manufacturing enterprises, and incorporated. The colony reorganized as a joint-stock company in 1932 with stockholders as both owners and employees. Church and business functions were separated, communistic tenets were revoked, and religious austerity was relaxed. The colony produces a food freezer and blankets that bear its name.

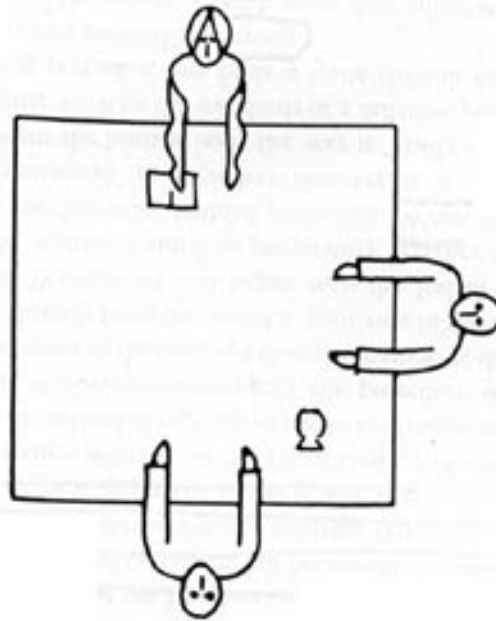
for instance Leonardo's "Mona Lisa"



AGRICOLA, MARTIN, real name Sore, ?1486-1556, German musician, born in Schwiebus, Brandenburg. He is better remembered for his treatises on music, written in the German vernacular, than for his own compositions, many of which are lost. Of humble peasant stock, he taught himself music. His greatest work is *Musica instrumentalis deutsch* (1529), reprinted in Leipzig in 1896.



the reasoned appreciation of initiates



AIR, the mixture of gases that makes up the atmosphere surrounding the earth. Within about 6 miles of the earth's surface this colorless, tasteless, and odorless gas is about 78 per cent nitrogen and 21 per cent oxygen, by volume, with traces of carbon dioxide, hydrogen, methane, ozone, oxides of nitrogen, and the inert gases argon, neon, krypton, and xenon. Water vapor and carbon monoxide are present in trace amounts that vary from time to time and from place to place. Normally present also are solid particles of salt, dust, pollens and spores of plants, and, in the high clouds, tiny ice crystals. Over heavily settled urban areas the air may collect contaminants from industrial and automotive vehicle exhausts. When these contaminants are present in sufficiently unpleasant quantities the condition is called smog. See AIR POLLUTION; ATMOSPHERE; CLOUD.



and intuition, science and instinct.

The practice is attributed to Serenus Sammonicus, a Gnostic physician who lived in the second or third century.

A B R A C A D A B R A
 A B R A C A D A B R
 A B R A C A D A B
 A B R A C A D A
 A B R A C A D
 A B R A C A
 A B R A C
 A B R A
 A B R
 A B
 A

Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it.
 SAMUEL JOHNSON

The legend is more familiar



ACHERNAR, Eridani, a blue-white star of the far southern skies, never visible north of $32\frac{1}{2}^{\circ}$ N latitude. From its small parallax, corresponding to a distance from the sun of about 70 light-years, and from its visual magnitude of approximately 0.6, its intrinsic luminosity is found to be nearly 300 times that of the sun. Achernar, the ninth brightest star in apparent visual magnitude, is in the extreme southern part of the constellation Eridanus. See LUMINOSITY; MAGNITUDE; PARALLAX; STAR.





opposition movements which verged

Distortion is the faulty image shape occurring when the magnification produced by an optical system varies across the field of view it covers. There are two different types of distortion: "barrel" distortion, where the edges of the image bulge outward, and "pincushion" distortion, where the edges bend inward. See LENS; OPTICS.



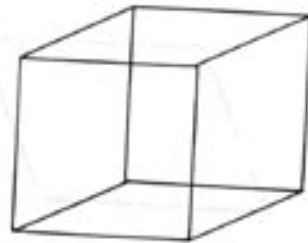


the sweep of transparent colour

ANABASIS, a journey or expedition, from the Greek *anabainis*, meaning "to go up"; especially, the expedition of Cyrus the Younger against his brother, Artaxerxes II, the Persian emperor, in 401 B.C., and the book in which Xenophon recorded the expedition and the retreat of the Greek mercenaries after its failure. Cyrus, who was governor of Asia Minor, enlisted a large number of Greeks for his attempt to take his brother's throne, although his purpose was not immediately revealed. After the defeat and death of Cyrus at Cunaxa, the Persians captured and killed the Greek generals; the mercenaries, about 10,000 in number, chose Xenophon as leader and made their way through hostile country to Trapezus (Trebizond) on the Black Sea, which they reached in 400. The retreat was a notable feat and of considerable significance in showing the ability of a Greek force to march through Persian dominions. Xenophon's account, written much later, is noted for a simple and straightforward manner that heightens its drama.

Partly through the influence of Xenophon's work, other accounts were titled *Anabasis*, especially Arrian's history of the campaigns of Alexander the Great, the *Anabasis of Alexander*. See **XENOPHON**.

relentlessness the search for an unrealistic

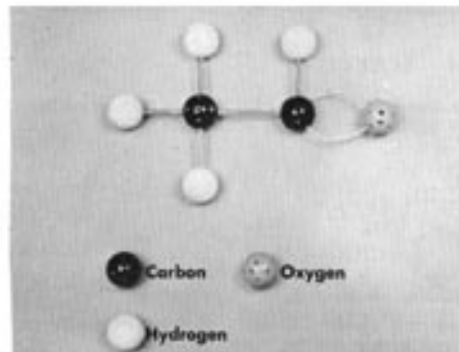


ABOMINABLE SNOWMAN, or Yeti, a probably mythological beast of the Himalayan mountains. Though there seem to be at least three types of Yeti, the most general conception is of a creature half man and half beast, about 5 feet tall, covered with reddish hair, and having a secretive but aggressive disposition.

In 1960 Sir Edmund Hillary, the New Zealand conqueror of Mount Everest, led an expedition to the Himalayas that, as a secondary task, investigated the existence of the Yeti. Evidence fell into three classes: tracks apparently made by a large creature walking on its hind legs; relics (hair and skin) and excrement; and the utter conviction of the local people. Hillary could find no one who had seen the Yeti; the skin he brought back was found to belong to a Tibetan blue bear; a "scalp" turned out to be goatskin; and the tracks may have been the result of the sun's warmth fusing smaller prints (of a fox or wild dog) into one large footmark. Although the status of the Yeti slipped somewhat as a result of Hillary's findings, many people still believe that some strange animal lurks in the fastness of the Himalayas.

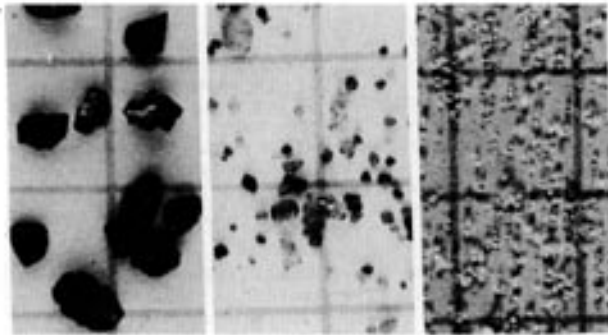


The boldness of his tech-



ALCHEMY, the name given in ancient and medieval times to the study of chemical transformations of matter. The word may derive from *Khem*, the ancient name of Egypt, where practical arts of metallurgy and dyeing were practiced, or from *khemia*, a Greek word for the extraction of plant juices. Alchemy, then, by way of Arabic, would mean "the art of Egypt" or "the art of extraction."

α



Chromatic aberration is due to the physical fact that transparent substances refract different colors of light different amounts. A simple lens forms a series of superimposed images, one image for each color of light present. The result is blurred colored fringes around the image. See **ACHROMATIC LENS**.



monumental feeling in the smallest

In the United States an interest in atonality and the nonrepetition of pitches showed early in such composers as Carl Ruggles (1876-), Wallingford Riegger (1885-1961), and Ruth Crawford Seeger (1901-53). Nonrepetition of pitches involves an ordering to avoid octaves and other relationships that have familiar tonal implications. Sometimes actual pitch sets were not used, in which case nonrepetition was avoided through the emphasis upon particular intervals or other pitch relations. Those composers often used short motives that were developed contrapuntally (e.g., Ruggles's *Pastals*, Riegger's *Study in Sonarity*, and Seeger's String Quartet). During the 1930's, some of the serial composers turned to the 12-tone technique. Many younger composers also turned in this direction, among them Milton Babbitt (1916-), George Perle (1915-), and Ben Weber (1916-).

In his early music, Roger Sessions (1896-) was primarily concerned with possibilities of harmonic movement in large structures. His later compositions combine the 12-tone techniques with a lucid and compelling sense of extended chromatic harmony. Younger composers have similarly integrated both tonality and the 12-tone technique, the most original of them being Elliott Carter (1908-). Beginning with the Piano Sonata (1945), he created a series of works unique in their coherence, flexibility, and brilliance. Other composers who have essayed this compromise between tonality and atonality are Yehudi Wyner (1929-) and Salvatore Martirano on the East Coast and Seymour Shifrin (1926-), Leland Smith (1925-), and Morton Subotnick (1936-) on the West Coast.

interiors with human figures

ANATHEMA, in religion, utter rejection by God and man, a thing cursed; also a term for the severest form of excommunication in the Roman Catholic and Greek Orthodox churches. A Greek word, it originally meant an offering to God. Objects were hung from trees and temple rafters in spiritual sacrifice. Later hideous objects, such as the body of a criminal, were offered, and the word came to mean a thing hated or condemned. In Paul's epistles (Rom. 9:3; I Cor. 12:3, 16:22; Gal. 1:8-9) the word is used for one in opposition to God and separated from him.





a elongation of his figures and his female

AMAZONS, according to Greek legend, a warlike race of women who lived in the neighborhood of the Caucasus and invaded Asia Minor, Thrace, Greece, Egypt, and other countries. They were governed by a queen and once every year met a neighboring race of men, the Gargareans, to propagate their race. They retained only female children, the males being killed or handed over to the Gargareans. They are said to have cut or burned off their right breasts to give them freedom in using weapons, especially the bow.

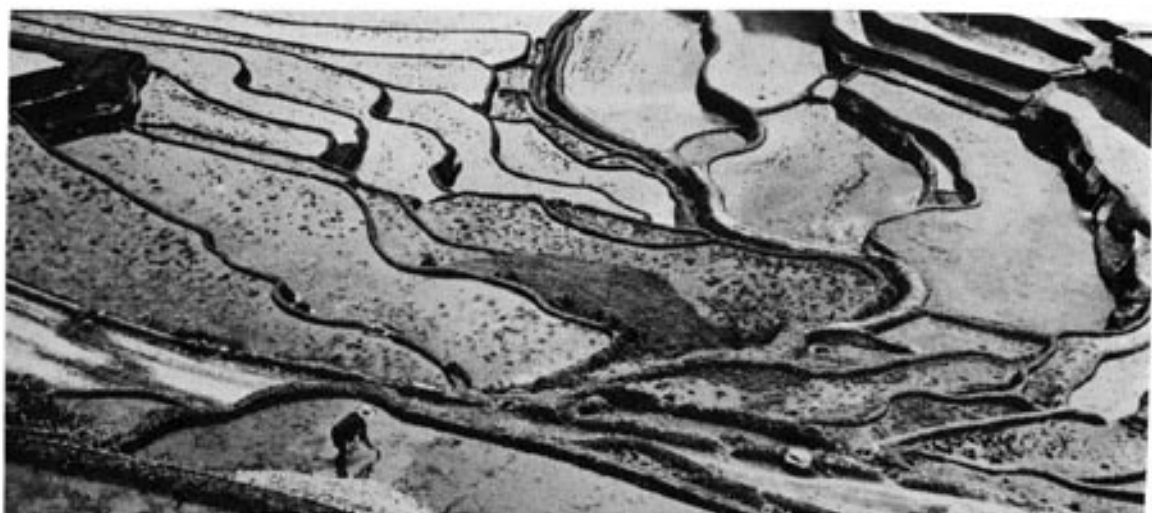
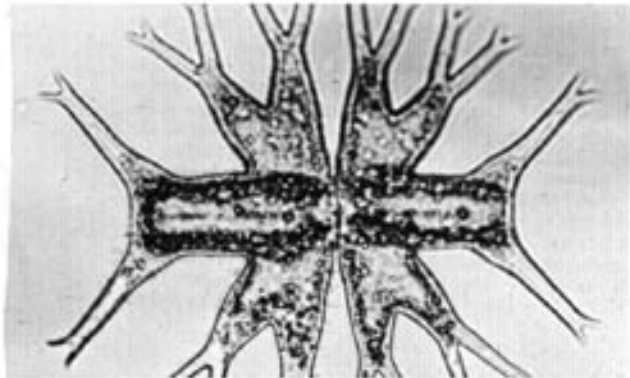
The legend is probably a reminiscence of the conquests of the Hittites, who descended from the Caucasian direction and overran all Asia Minor, founding Ephesus and other cities, and whose great nature goddess, the Artemis, or Diana, of the Ephesians, was attended by multitudes of armed priestesses. In ancient art the Amazons are represented in the Hittite tunic, wielding the Hittite double-headed ax.

There are also tales of Amazons in South America, from which is derived the name of the great river; and an army of women was maintained in the kingdom of Dahomey, West Africa, until its subjugation by the French in 1894.



oneself with everyday life

ALAIN-FOURNIER, real name Henri Alain Fournier, 1886–1914, French writer. Schooled in Paris, he entered military service and was listed as missing early in World War I. His fame rests on his one completed novel, *Le Grand Meaulnes* (1913; Eng. tr., *The Wanderer*, 1946), a probing fantasy of adolescent love, considered a minor masterpiece of modern European literature. *Miracles*, a collection of poems and stories, was published in 1924.





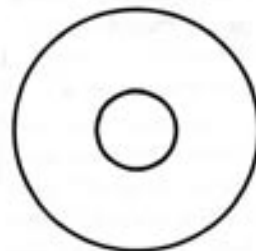
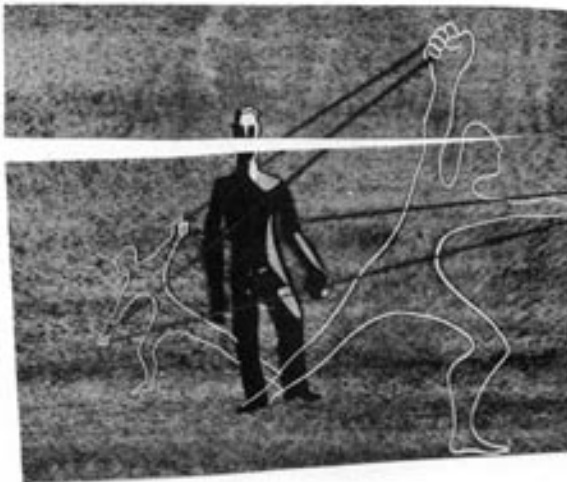
ANCESTOR WORSHIP, reverence for forefathers identified in death with gods or spirits. The ancestor may be an actual forefather or, in some societies, a person who symbolizes an ancestor because of his former position as head of a household, clan, or state. Ancestor worship is ancient and widespread; it arises in part from the conception of a soul or spirit that retains its influence after death, preserving the power it formerly held in social relationships among the living. The belief is intimately connected with animism and polytheism.

Ancient Rome and present-day China and Japan provide outstanding examples of ancestor worship. Among the Romans, ancestral deities (*manes*) were embodied as images, set up as household patrons, and appeased with offerings. They were counted among the gods of the lower world, and tombs were inscribed D.M., "Dis Manibus" (to the *manes*). Roman ancestor worship was closely associated with apotheosis, the deification of a person after death, which was applied to the emperors.

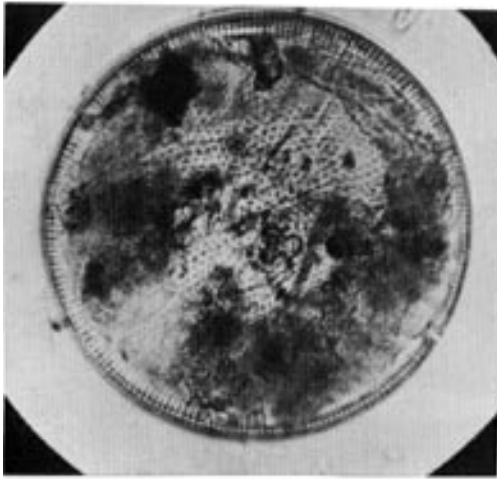
In China, ancestor worship has become a dominant belief with the acceptance of Confucianism as the official faith. Ancestors have temples, receive offerings, and retain such influence that the virtues or crimes of their descendants are considered in relation to the ancestors.

Japanese ancestor worship was at first imported from China. In early times imperial ancestors were associated with nature gods. In modern Japan the interaction of ancestor worship with the Shinto religion has had a strong influence on the national character and has indirectly affected international relations. Loyalty to the god-emperor in Japan was in part supported by the belief in his direct descent from the sun-goddess, the ruler of heaven, a tradition that was disclaimed by Emperor Hirohito after World War II. Although not primarily concerned with ancestor worship, Shinto existed with a national cult of reverence for imperial ancestors and heroes and, as a state-sponsored system, became a worship of patriotism based on the divine origin of the sovereign and the divinity of his people.

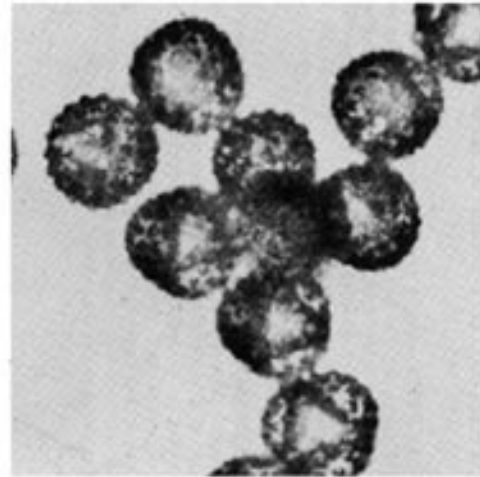
Hindus practice a form of ancestor worship by paying offerings to the *pitris*, or divine patron, and by looking to him for success and happiness. Among primitive peoples today, ancestor worship is well developed only among the African Bantu and certain groups in Asia and Melanesia. The worship of past heroes or leaders among the American Indians and the veneration of idealized historical figures among the ancient Greeks are forms of deference toward ancestors that must be distinguished from true ancestor worship.



geometrical delineation of space



spontaneous act while giving it

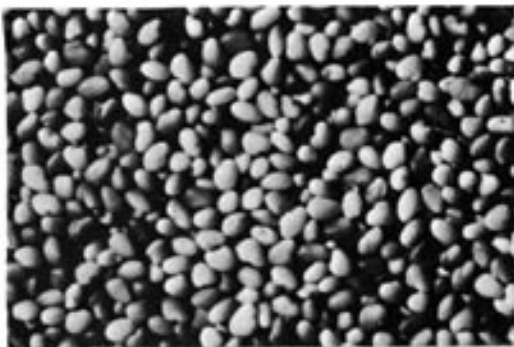


ANDROGENS, male hormones, the most common being testosterone. Androgens are produced by the ovaries as well as the testes and the adrenal glands and are thus found in the bloodstream of women as well as men. However, in women their effects are masked by the very high levels of feminizing hormones (estrogens) simultaneously present.

In men, androgens stimulate the production of sperm, the maturation of the accessory male reproductive organs (penis and prostate), and the development of masculine "secondary sexual characteristics" (deeper voice, beard, rough skin texture, coarse body hair, bushiness of the eyebrows, diamond-shaped distribution of pubic hair, aggressive libido). Androgens are also prerequisite for the most common types of baldness observed in men, including recession of the hairline at the temples. But the most important systemic effect of androgens is on protein metabolism. They cause retention of potassium, nitrogen, and phosphate; an increase in the mass of body-protein stores; and that development of skeletal musculature associated with males.

Androgens are sometimes used to stimulate development in slow-maturing male adolescents. But they may also slow—or permanently stop—the growth of bone. They are therefore not to be sought in haste or administered without caution.

Androgens increase sexual potency in men only when impotence is due to testicular deficiency. In normal men, androgen therapy is ineffective and sometimes harmful; androgens may activate latent prostatic cancer or may, by stimulating protein metabolism and causing retention of salts and subsequent accumulation of fluid, strain the heart.





AILANTHUS, or tree of heaven, *A. altissima* (also *A. glandulosa*), a tree in the family *Simarubaceae*, native to China and naturalized in eastern North America. Because it is unusually hardy and resistant to smoke and dust, growing rapidly to a height of 60 feet or more, it has been used as a street tree. Such use is not favored, however, because the odor of the male flowers may be disagreeable. It has large, pinnately compound, alternate leaves; terminal clusters of small, greenish flowers; clustered small fruits, each centered in a twisted, papery wing; and smooth bark.



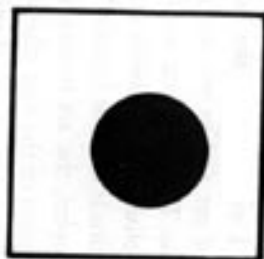
♫ blues and greens in sensuous contrast



AFTERIMAGE, the sensation of alternating light and darkness experienced after the eye is exposed to a brief flash of light. The brightness is referred to as the positive afterimage, the darkness as the negative afterimage.

Positive afterimages are easily demonstrated by placing a black screen before a bright source of light. Upon lifting the screen and replacing it rapidly, the light will seem to be shining through the screen. A simple way to demonstrate negative afterimages is to stare at a bright source of light for about a minute and then transfer your gaze to a brightly lit screen. If the source is white, a black image of the source will seem to float onto the screen. If the source is colored, the negative afterimage will appear to have the complementary color.

Positive afterimages are due to chemical changes in the light receptors of the retina that outlast the stimulus that caused them. Negative afterimages are explained by the law of adaptation, which states that the neural response to a constant stimulus decreases in time. Since there are three kinds of color receptors in the retina, one for each primary color, steady stimulation by one primary color will decrease subsequent retinal sensitivity to that color. When the gaze is then turned to white paper, which emits all three primary colors, the eye will be sensitive only to the two primary colors it has not already seen. These two colors are the complement of the original color; therefore, the negative afterimage is of complementary color to the original image. However, if the original image was white, all three types of retinal receptors will have been stimulated and will have adapted. As a result the negative afterimage will be the complement of white—black.



temporary physical circumstances

spontaneous style he gives the people in

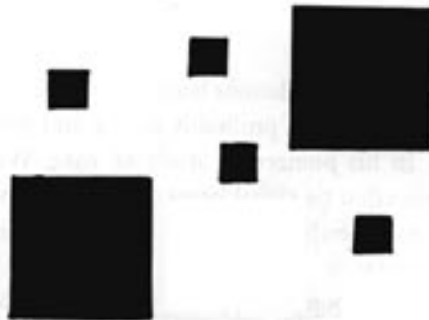
AMENOPHIS, or Amun-hotep, or Amenhotep, the name of four Egyptian pharaohs of the 18th Dynasty.

Amenophis I, who reigned c.1546–26 B.C., extended Egyptian rule over Nubia, Libya, and Syria.

Amenophis II continued to wage successful campaigns in Asia and Nubia during his reign, c.1448–20 B.C.

Amenophis III was the last of the great emperors of the 18th Dynasty, governing an empire extending from Mesopotamia to the Aegean Sea. During his peaceful and prosperous reign, c.1411–1375, art and architecture flourished.

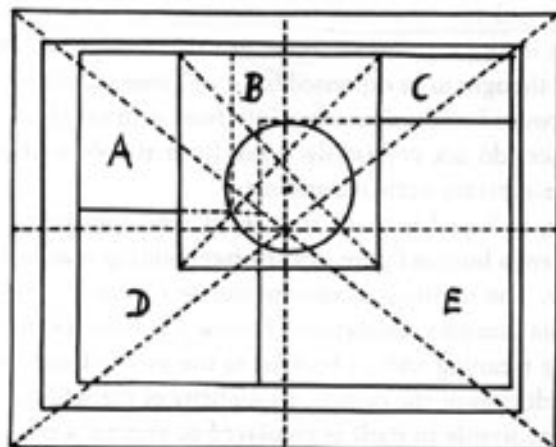
Amenophis IV, known as Akhenaten or Ikhnoton, was the son of Amenophis III and the founder of what was probably the first monotheistic religion in history. During his reign, c.1375–58, Akhenaten established the sun disk Aten as supreme god and father of all men and forbade worship of Amun, the official cult of the Theban pharaohs. In his zeal he attempted to destroy all associations with the cult of Amun, moving his capital from priest-controlled Thebes, changing his own name, and chiseling from monuments all references to the old god. Under the influence of the new religion, a new naturalistic art grew. However, his reign was marked by a shrinking of the empire and by internal strife. See EGYPT; MONOTHEISM.





they discovered formulas entirely suited

AEOLIAN HARP, a musical instrument, formed by stretching six or more catgut strings of various thicknesses, all tuned in unison, over a wooden shell or box. The sound is produced by the play of the wind over the strings, which create by their differing vibrations a series of harmonics of mysterious effect. Known from ancient times, the instrument takes its name from Acolus, ruler of the winds; practical modifications were J. J. Schnell's *anémochord* (1789) and Henri Herz's *piano folien* (1851).



called for the collaboration of artists

AGNOSTICISM, a word introduced by Thomas Huxley in 1869 to designate an attitude of suspension of judgment in matters that cannot be proved or demonstrated in terms of verifiable facts, observations, and experiences. The word was suggested to Huxley by the Greek inscription "To the Unknown God," which the Apostle Paul saw on an Athenian altar (Acts 17:23). It was meant to indicate a theory the exact opposite of Gnosticism, the movement both within and outside early Christianity the adherents of which professed to have knowledge (*gnosis*) of those things that Huxley felt he could not know.

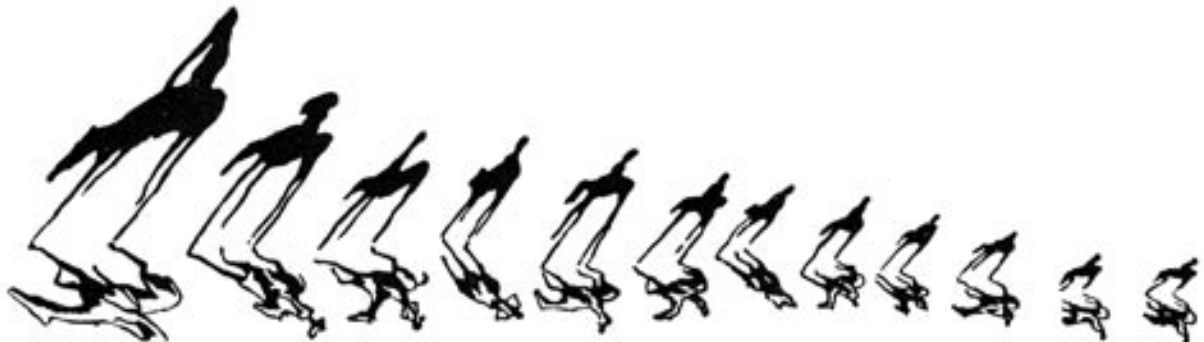


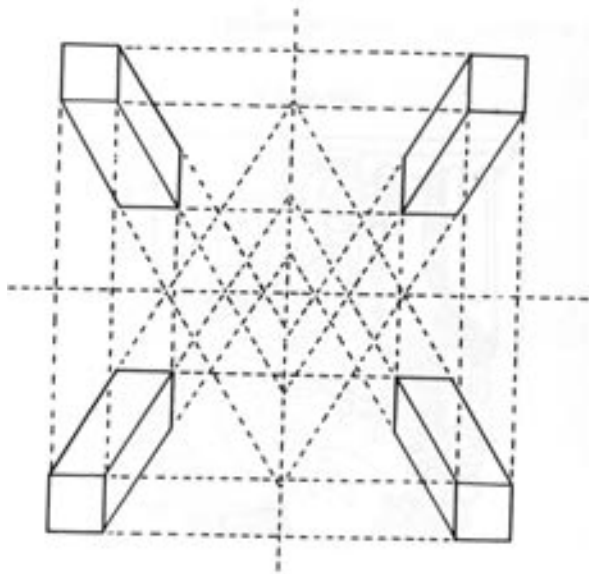
fluidity of form, light and atmosphere.

Agnosticism restricts knowledge to the manifestations and transformations of matter and energy and disclaims all knowledge of spiritual existence, whether of God or man. While accepting the conclusions of science and sensible experience, it rejects, as unfounded conjecture, all assertions regarding the unseen. Agnostics are careful, however, to guard themselves against the charges of atheism on the one hand and of philosophical materialism on the other, inasmuch as these theories desert the purely nescient attitude with regard to spiritual existence. Agnostics do not deny that behind the phenomena of knowing, feeling, and willing there may be a permanent entity or soul; but they maintain that nothing can be proved or disproved respecting the soul's distinct existence, substance, or durability. Similarly, they admit that behind the material phenomena of the universe there may exist a Universal Being; but they hold it impossible to determine whether or not the nature of this Being is conscious and spiritual. To all such questions they make but one answer: we do not know, and nothing leads us to suppose that we shall ever know.

There are many shades and varieties of agnosticism, but all reasoned and systematic forms of it reflect the direct or indirect influence of Immanuel Kant, who distinguished between the phenomenal aspects of reality (the only valid object of human knowledge) and the noumenal aspect (ultimate, unknowable reality). God, the soul, immortality, and the like can be apprehended only by practical faith. The most elaborate and comprehensive agnostic system is probably that of Herbert Spencer. His agnosticism was somewhat more negative than that of Kant in that Spencer believed that even science must lead ultimately to a confrontation with the unknowable. See ATHEISM; GNOSTICISM; PHENOMENALISM; POSITIVISM; SKEPTICISM.

BOOKS.—B. I. Bell, *Beyond Agnosticism* (1952 ed.); G. A. Buttrick, *Christian Fact and Modern Doubt* (1934); Clarence Darrow and Wallace Rice, *Infidels and Heretics* (1929); Sir Leslie Stephen, *An Agnostic's Apology* (1893); E. J. Watkin, *Theism, Agnosticism, and Atheism* (1936).





act, like calligraphy or hieroglyphics

ADY, ENDRE, 1877-1919, Hungarian symbolist poet, born in Erdmindszent. After studying law for a short time he became a journalist and turned to the writing of poetry in his spare time. His earlier collections attracted little notice, but the brilliant *Új versek* (*New Poems*, 1906), considered scandalous by many established Hungarian writers, influenced many younger poets and helped bring about a major literary renaissance in Hungary.



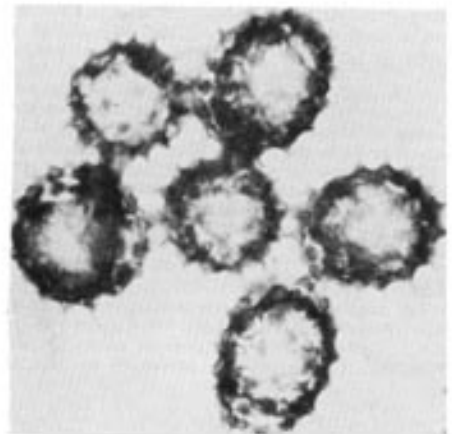
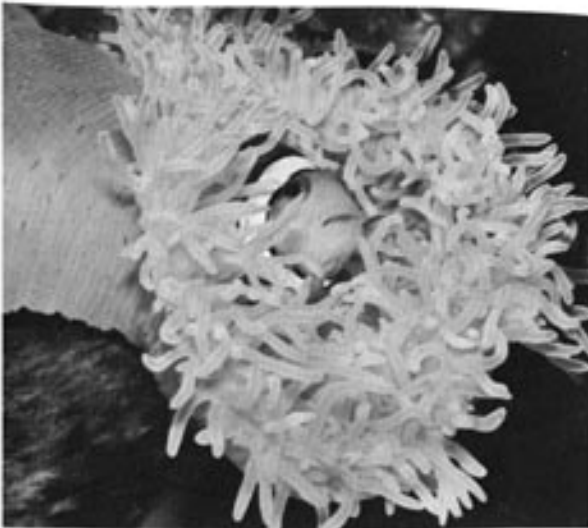


surpassed in violence those

AMPHICYON, a genus of carnivores in the extinct subfamily *Amphicyoninae*, related to the surviving family *Canidae*, containing dogs and wolves. Sometimes called "bear dogs," they were clumsy animals about the size of bears, which evolved later. They ranged the Northern Hemisphere in the Miocene and Pliocene periods.

Simultaneously

ADVERB, a word that qualifies or limits a verb (he runs *swiftly*), an adjective (*fairly* cool), or another adverb (he runs *very* swiftly). In English most adverbs are formed by adding *-ly* to an adjective, as the first two examples show. Comparison of regular forms of adverbs is achieved by the adverbs *more* and *most* (*swiftly*, *more* swiftly, *most* swiftly), but many irregular forms occur, as in *well*, *better*, *best*. Adverbs are classified in terms of meaning: time; place, direction, arrangement; manner; degree, amount, number; cause; inference and result. Any phrase (he stood *at the door*) or clause (they cheered *when she arrived*) functions adverbially when it modifies a verb, adjective, or adverb and satisfies any of the requirements of meaning listed above. See GRAMMAR; PARTS OF SPEECH.





his imagination and to the audacity inherent

Abstractions enable one to think in terms of concepts rather than in terms of innumerable concrete facts. It is probable that without the use of abstractions human thought and discourse would be impossible. Some philosophers, however, have maintained that even the more carefully conceived abstractions ultimately reveal less of reality than can the naive, childlike perception of concrete particulars.

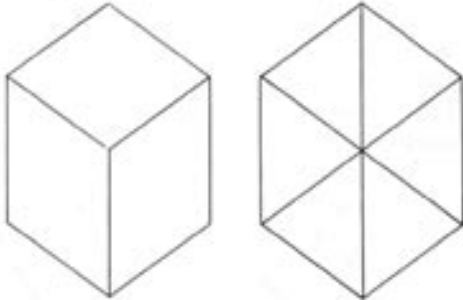
disciplined art-form, not deter



AMULET, an object prized for its supposed occult power to ward off evil, bring good luck, or cure disease. The amulets of primitive man included such objects as colored stones, oddly shaped leaves, and unusual types of vegetation. Originally, these charms were believed to be magical in themselves, but as man developed a belief in gods, the power of the amulets was said to have been designated to them by the gods. Among the primitive tribes of Africa, there were three classes of amulets: those worn around an individual's neck for personal protection; those placed on the walls of buildings or at village entrances to protect the entire tribe; and those placed in strategic positions to ensure success in specific community endeavors, such as fishing, hunting, and farming. Human heads were often taken as amulets by head-hunters of southeast Asia in the belief that each individual had a degree of spiritual power and that possession of a person's head added to the possessor's power.

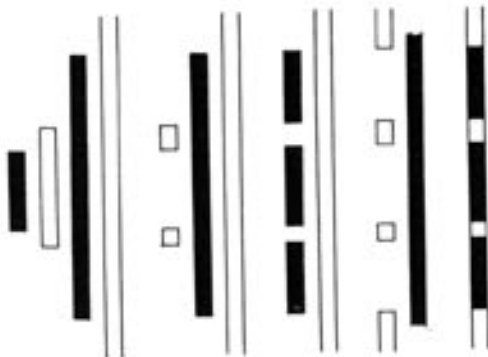


preserve the appearance of improvization



With the spread of the Roman Empire into the eastern Mediterranean area and the absorption into Roman society of Semitic culture, rich in mystic ritual, many new customs were introduced into the Western world, including an increased use of amulets. The Greeks and Romans believed that charms would guard against evil powers attempting to influence the government. Although Mosaic law contained prohibitions against magic and divination, many of the ancient Jews, as a result of Egyptian and Babylonian influence, wore amulets or attached them to their buildings. Amulets were commonly used among the early Christians, although their manufacture and use was condemned by the church.

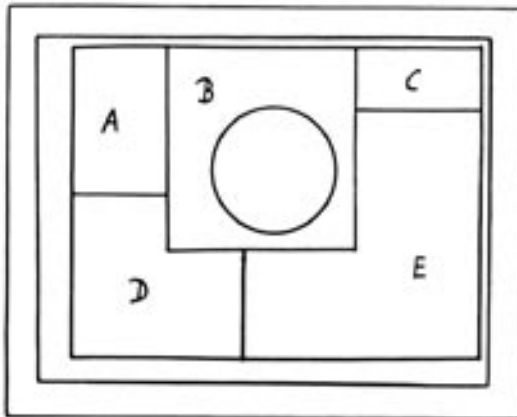
In Western societies, amulets are often used in spite of the fact that their occult powers may be openly denied; but in even the most sophisticated cultures there are individuals who carry a lucky rabbit's foot or coin in their pockets; others may look upon a horseshoe or a four-leaf clover as a sign of good fortune. See FETTER; JEWELRY; MAGIC; SUPERSTITION.





AMUN, or Ammon, one of the great ancient Egyptian gods, worshiped especially in Thebes. His name means hidden or unrevealed, implying that he was a spiritual god. The deity is represented in a number of ways: as a ram with downward-branching horns to symbolize power; as a man with a ram's head; and as a bearded man with two feathers on his head, sitting on a throne and holding the scepter of the gods and a cross.

Amun is identified with various gods. Amun-re indicates a blending of Amun with Re, the sun god. Amun-num combines Amun with Num, the living breath or spirit. Amun's companion goddess was Mut, or Maut, and the two deities, with their son Khons, or Khonsu, formed the Trinity of Upper Egypt. The worship of Amun spread to Greece and then to Rome, where he was identified with Zeus and Jupiter respectively. The ruins of his temple stand at Karnak. See MYTHOLOGY; KARNAK.



abstract and immediately apparent intellectual message

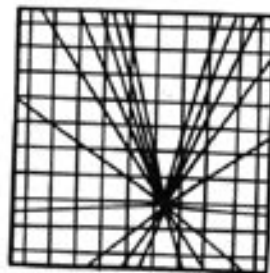


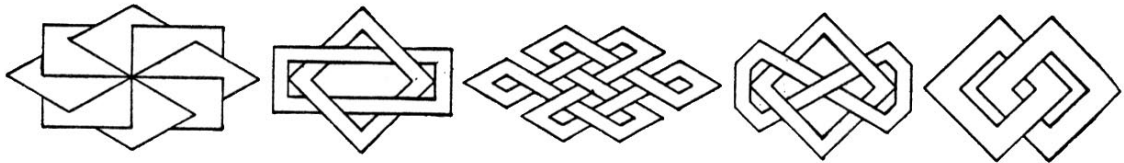
emphatic portrayal of emotion

ANIMISM, a belief common in primitive societies that ascribes to all beings, animate and inanimate, the possession of a "soul" or spirit. In animistic religions it is believed that the "vital principle," or life force, possessed by man is shared by animals, stars, wind, trees, etc.

Such religions possibly start with the conception of the soul existing apart from the body. Investigation, among the aboriginal inhabitants of Australia particularly, has shown the considerable effect that the experience of dreams has had in creating this belief. From there it is a relatively short step to the investment of other creatures with souls and to the belief that an independent spirit can enter a material object and operate from there. In early societies the river that may unaccountably flood the crops, the sun that brings warmth or drought, the tree from which a branch falls to strike down an evildoer—all assume frightening power and perhaps become objects of worship. To one East African tribe the destruction of a coconut tree was the equivalent of matricide; the tree, like a mother, provides food and shelter. Hunters of a Borneo tribe believed the soul of the Bornean panther to be more powerful than man's. Certain North American Indians believed that the spirit of the cottonwood tree possessed great intelligence.

All the great religions of the world developed from origins in which animistic elements were present, and in some cases those elements have survived. Some Buddhists of Thailand hold that everything has a soul; Buddhist monks would not break the branch of a tree any more than they would break a man's arm. Some folk customs perpetuate animistic beliefs. For instance, tree worship like that of the East Africans, above, survives in the European custom of dancing around the Maypole—originally a tree set up in the village to bestow its blessings on the inhabitants.

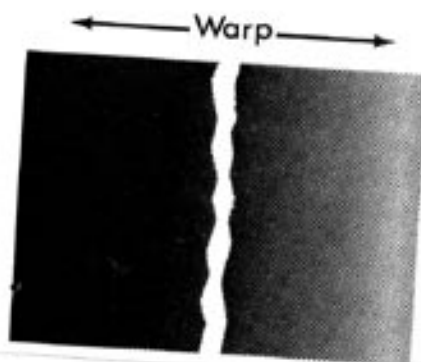
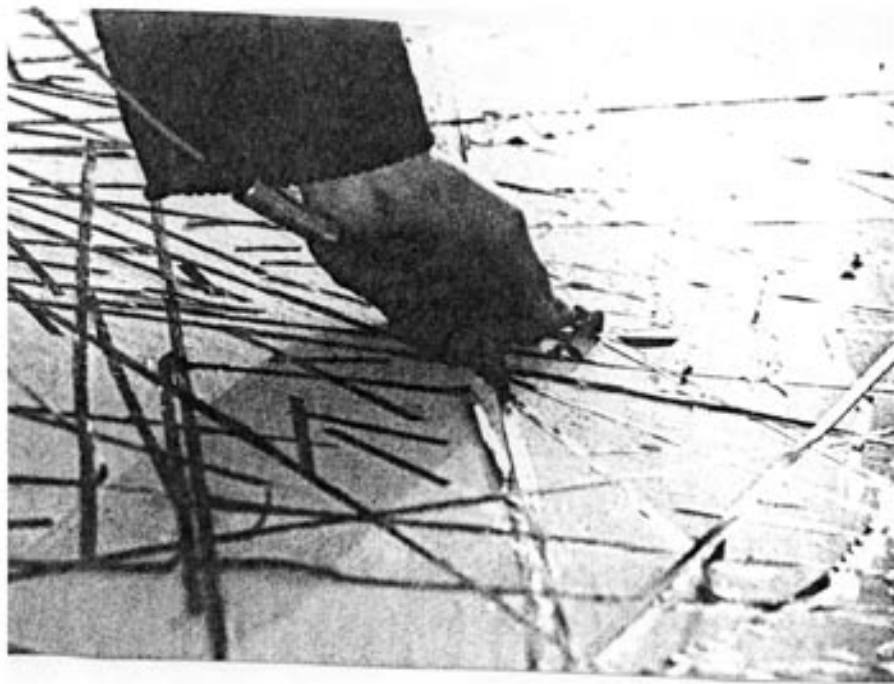




CHAPTER 3

Graphic Solutions

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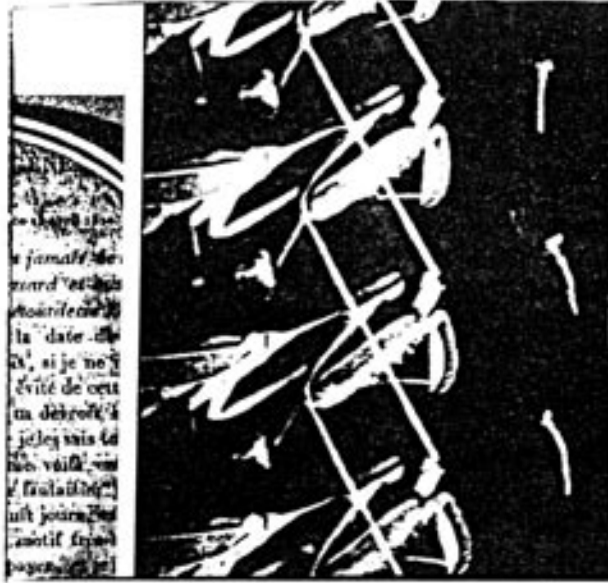
remagnetizer (or Life Ring); a circular electromagnet that alters w
ew York, October 1965. Photo by Peter Moore.



TV News, 1981. Pencil on paper, 21 x 29.5 cm. Hara Museum, Tokyo. "Plato said, the most profound thing can only be expressed in word. St. Augustine said, the most profound thing can only be expressed in listening. Spinoza said, the most profound thing can only be expressed in vision. But, TV News has everything"—Paik.

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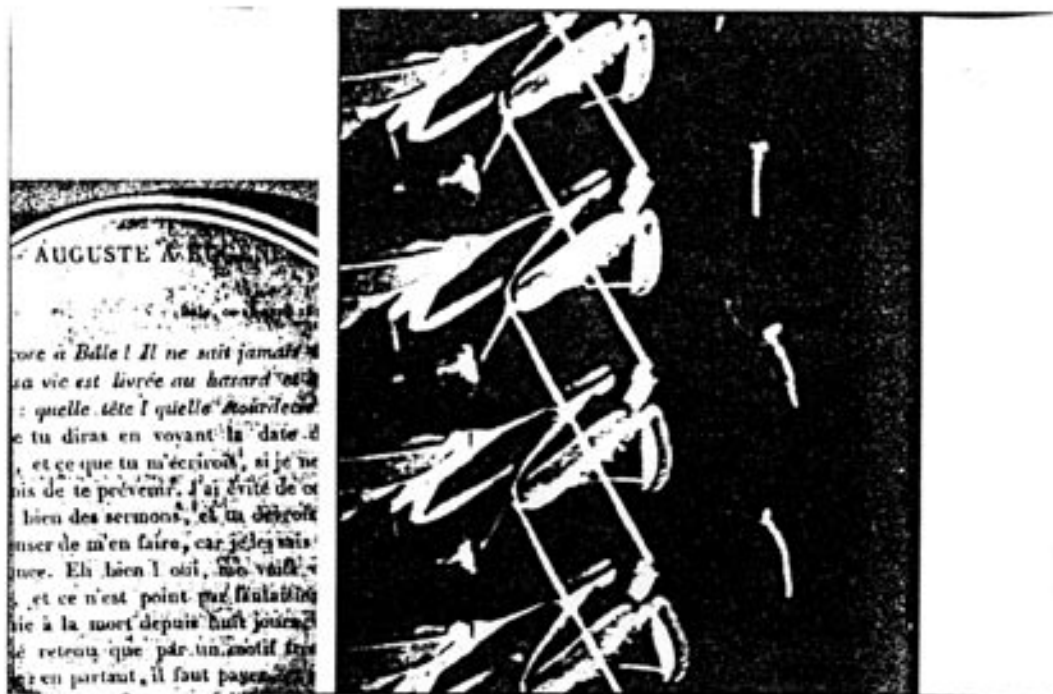
OF THE BODY, OPEN BOOK



demagnetizer (or Life Ring), a circular electromagnet that alters w
New York, October 1965. Photo by Peter Moore.



1965, an old television with a large magnet on top which ca



Paik with his original Demagnetizer (or Life Ring), a circular electromagnet that alters wave patterns on the television screen. New York, October 1965. Photo by Peter Moore.



Paik with his Magnet TV, 1965, an old television with a large magnet on top which can be moved around to affect the image on the screen. New York, October 1965. Photo by Peter Moore.

THE SLIPPERY



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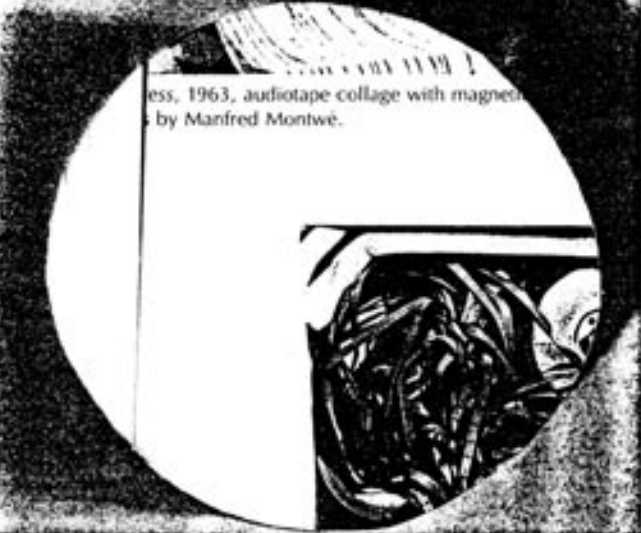
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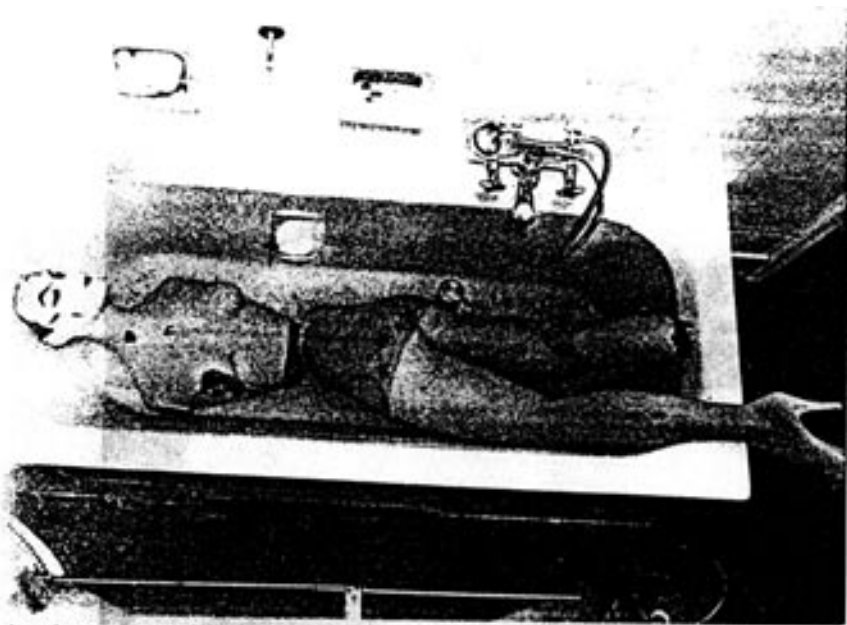


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Ballet [Rosita



Work, 1963, at "Exposition of Music—Electronic Television," March 1963. Photo by Manfred Montwé.



additions, Museum Moderner Kunst, Vienna, 1963.

1963, audiotape collage with magnetic audio heads, at "Exposition of Music—Electronic Television," March 1963. Photo by Manfred Montwé.



Paik and Charlotte Moorman in his Canal Street studio, New York, May 1968.

Paik performing at the piano, "SoHo Quadrat," Akademie der Künste, West Berlin, September 5, 1976. Photos on this and facing page by Peter Moore.

Prepared pianos at "Exposition of Music—Electronic Television," March 1963. Photo by Manfred Montwé.



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Paik performin
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Paik and Charlotte Moorman in his Canal Street studio, New York, May 1968.

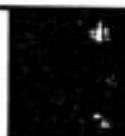
Paik performing at the piano, "SoHo Quadrat," Akademie der Künste, West Berlin, September 5, 1976.
Photos on this and facing page by Peter Moore.



Access, 1963, audiotape collage with magnetic audio heads, at "Exposition of Music—Electronic Te
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Paik and Charlotte Moorman in his Canal Street studio, New York, May 1968.

posite: Paik performing with *Violin with String* ("Violin to be dragged on the street"), 1961–75. "Twelfth Annual New
rk Avant-Garde Festival," Floyd Bennett Field, Brooklyn, New York, September 27, 1975. Photo by Peter Moore.



Theater am Dom,

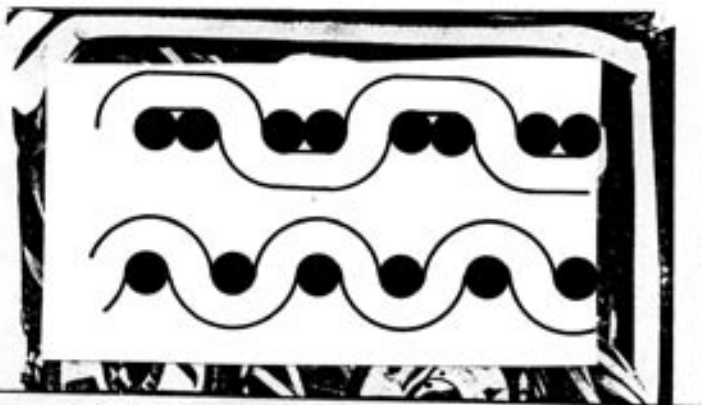


Paik performing
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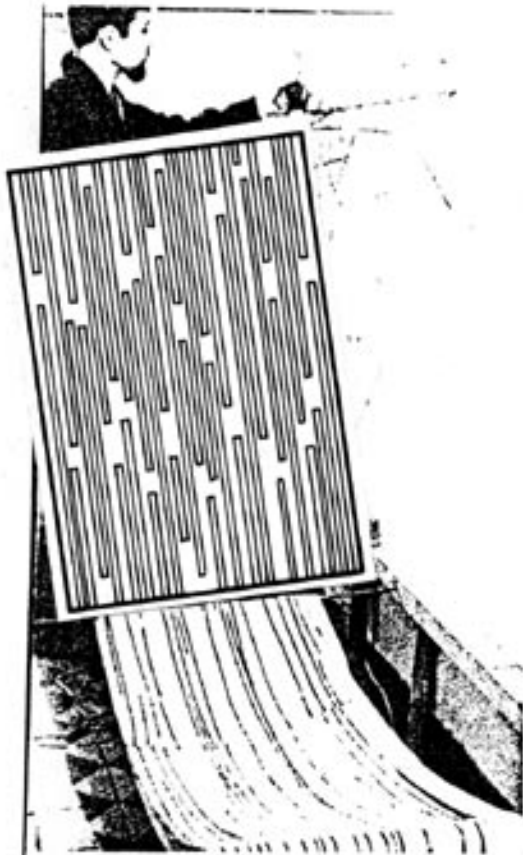
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Access, 1963, audiotape collage with magnetic audio heads, at "Exposition of Music—Electronic Photos by Manfred Montwe.



Paik and Charlotte Moorman in his Canal Street studio, New York, May 1968.

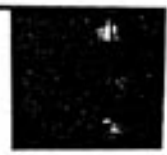
Opposite: Paik performing with *Violin with String* ("Violin to be dragged on the street"), 1961-75, "Twelfth Annual New York Avant-Garde Festival," Floyd Bennett Field, Brooklyn, New York, September 27, 1975. Photo by Peter Moore.



Access, 1963, audiotape collage with magnetic audio heads, at "Exposition of Music—Electronic T
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Paik performing
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Paik and Charlotte Moorman in his Canal Street studio, New York, May 1968.

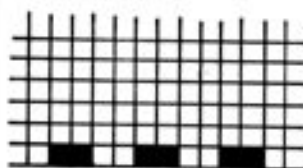


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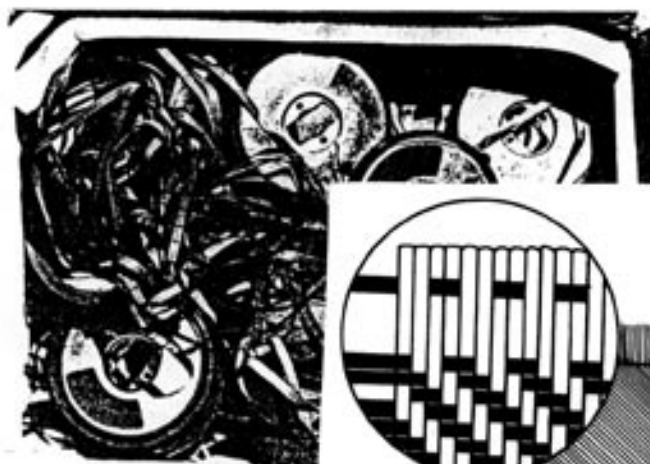
Paik performing in *Ka Originale*, Theater am Dom, October 26, 1961.

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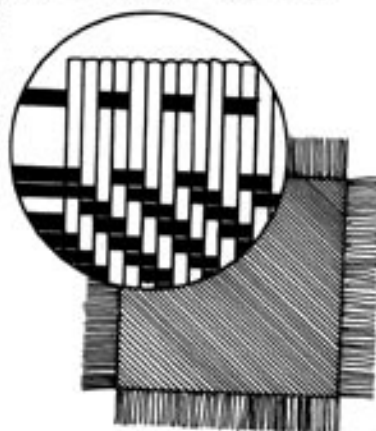


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Random Access, 1963, audiotape collage with magnetic audio heads, at "Exposition of Music—Electronic Television," March 1963. Photos by Manfred Montwé.

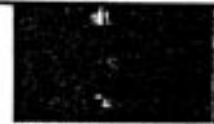


Audiotape Reels, 1958–62. Audiotape collage. *Hommage à John Cage: Music for* [unclear] works. Collection of the artist, New York.





Performance of Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.



Paik performing in Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.

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Klavier Intégral, 1958–63. Upright piano with alterations and additions. Museum Moderner Kunst, Vienna. Photo by Manfred Montwé.



Paik performing *Listening to Music Through the Mouth* at "Exposition of Music — Electronic Television," Galerie Parnass, Wuppertal, March 1961. Photo by Manfred Montwé.



Performance of Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.



Paik performing in *Originale*, Theater am Dom, October 26, 1961.

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Performance of Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.

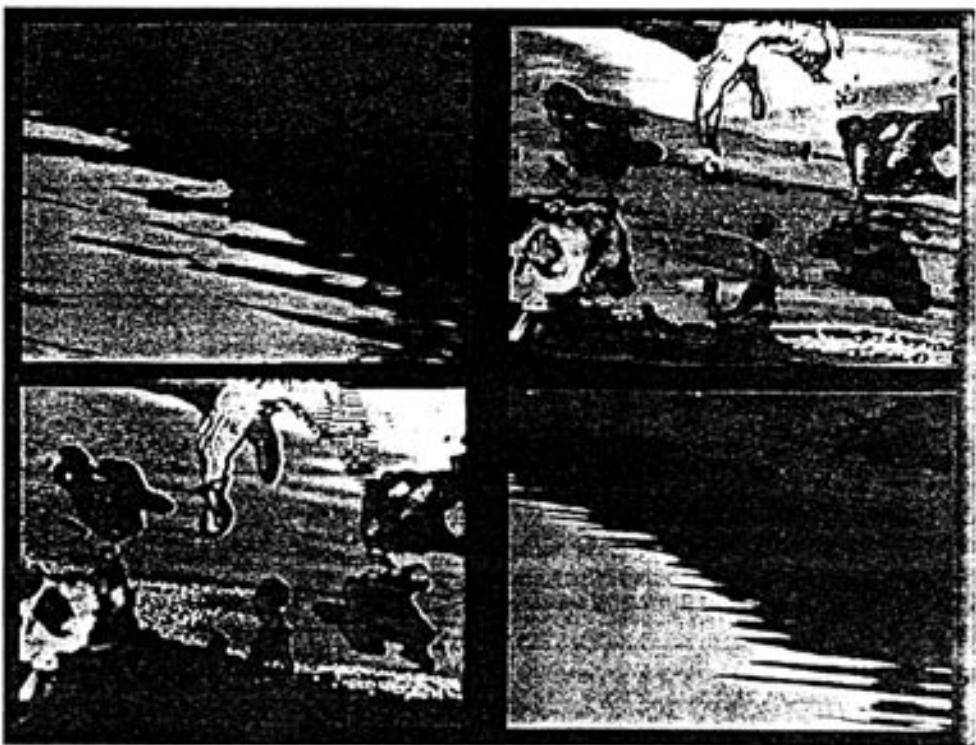


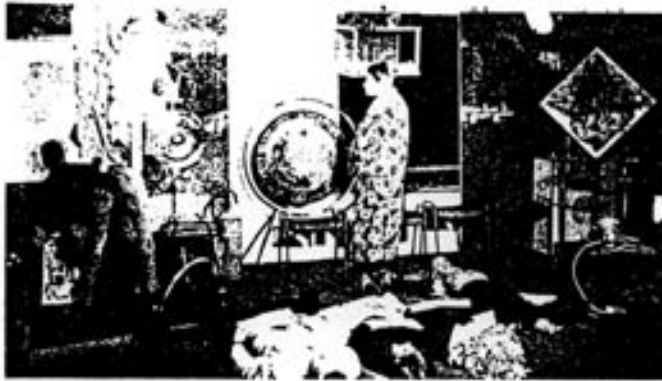
Paik performing in *K*, *Originale*, Theater am Dom, Cologne, October 26, 1961.

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Performance of Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.



Paik performing in Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.

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Paik performing *Sonata quasi una fantasia* in the "New-Dark" program, Kammerspiele, Düsseldorf, June 16, 1962.



Performance of Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.



Paik performing in Karlheinz Stockhausen's *Originale*, Theater am Dom, Cologne, October 26, 1961.

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Paik performing *Sonata quasi una fantasia* in the "Neu-Darla in der Musik" program, Kammerstücke, Düsseldorf, June 16, 1962.

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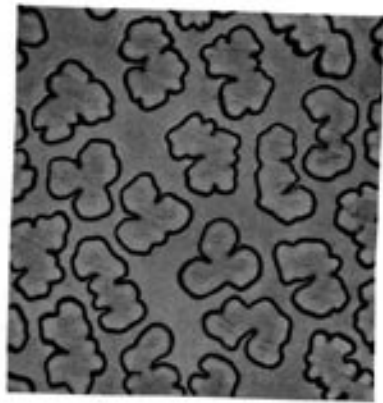
Kramer, Hilton. "A Fast Sequence of Forms Changing

Sakame, Tsuo. "Amerikano Mediano Taikara." *Asahi Shimbun*, December 9, 1976.

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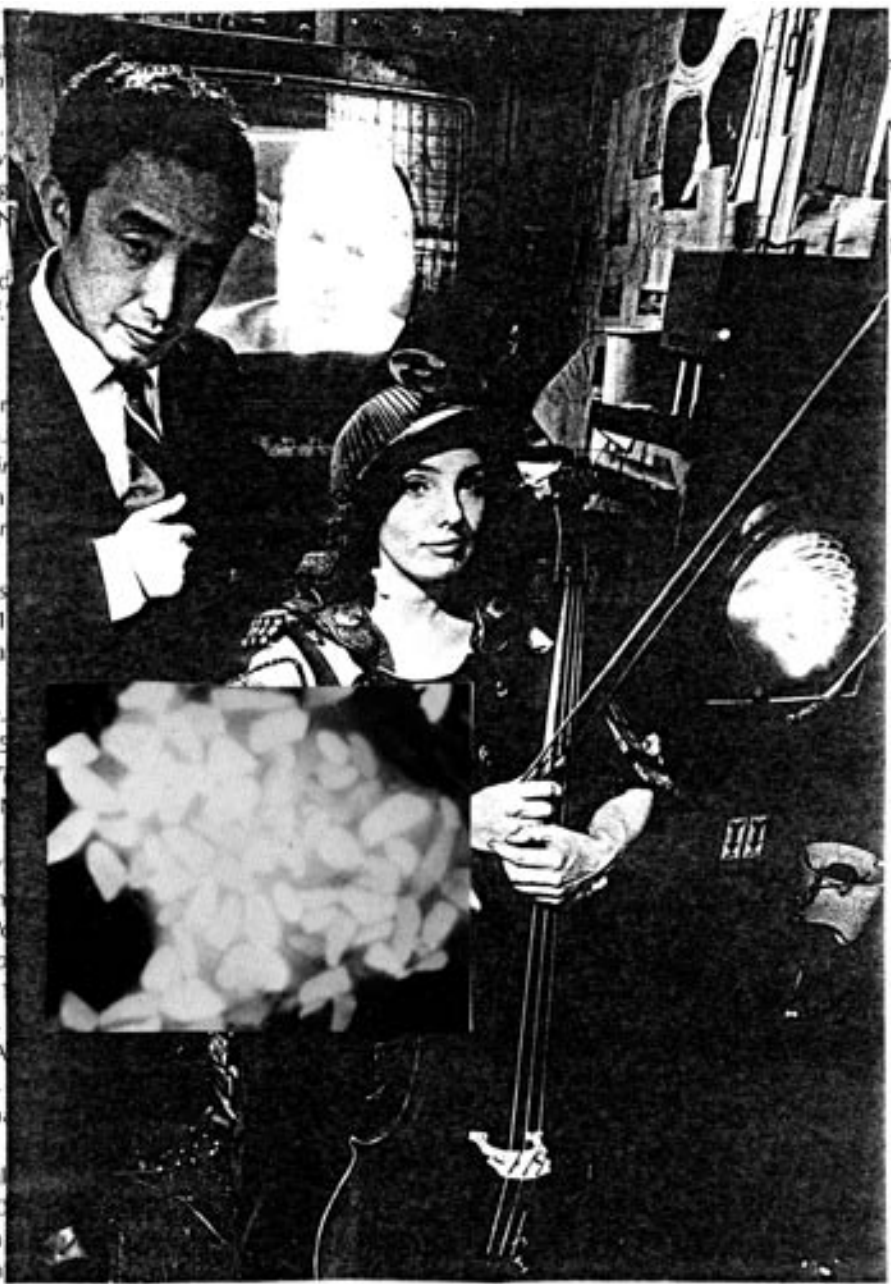
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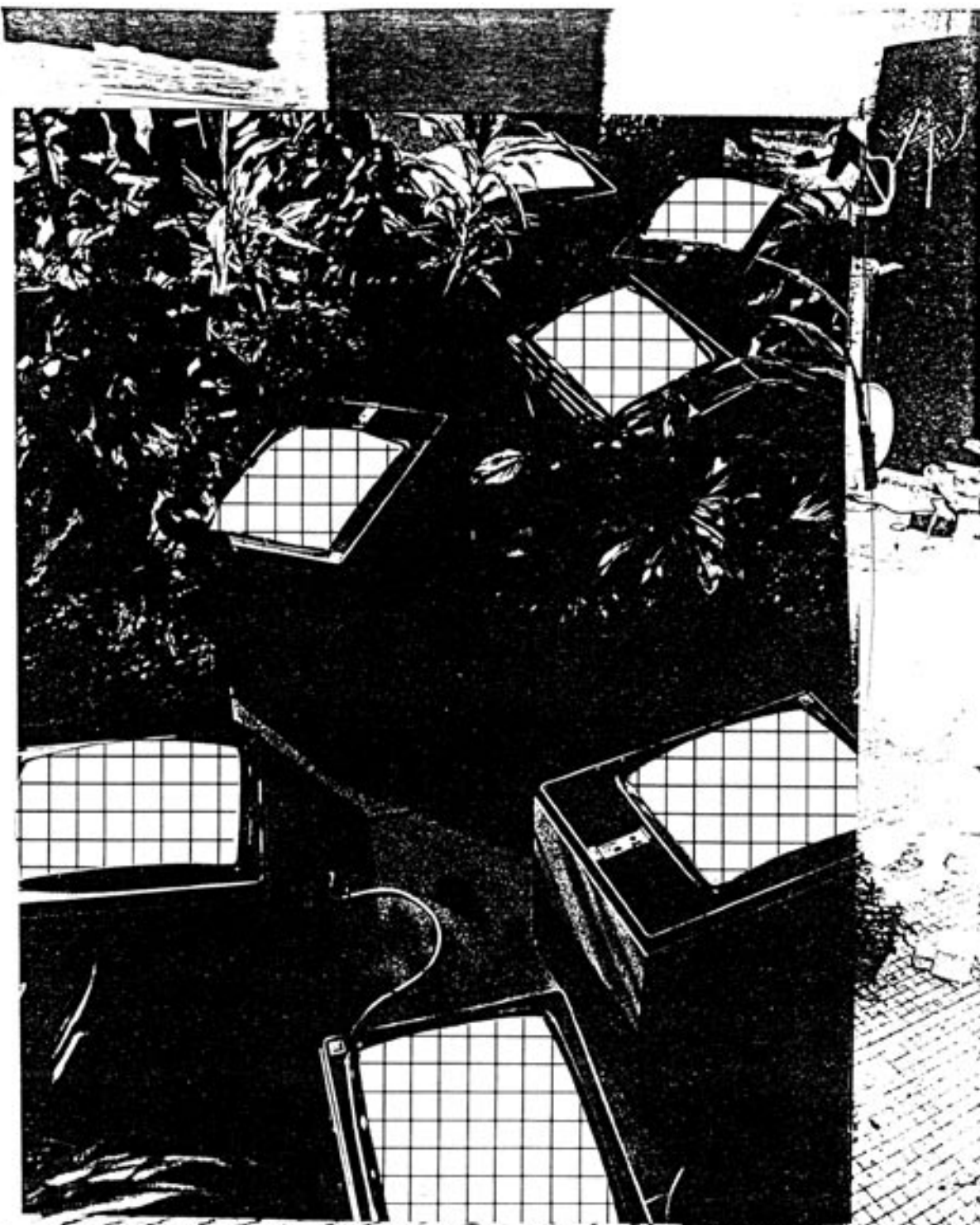


A Tribute to John Cage, 1973, videotape.

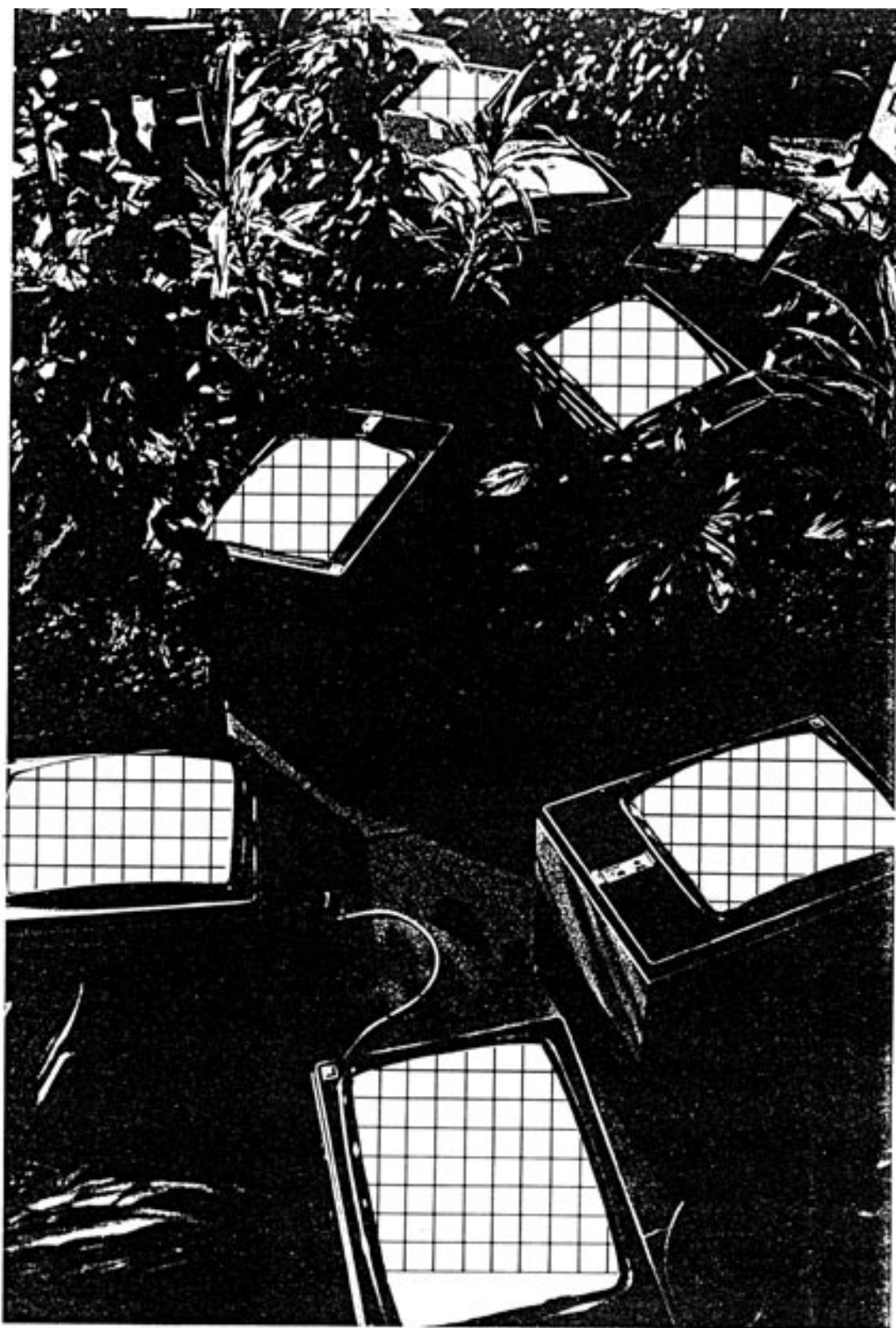
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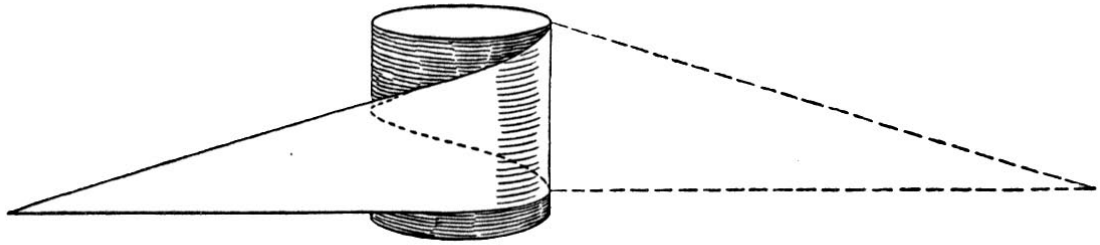


Park performing at the piano, "Solo-Quark", Akademie der Künste, West Berlin, 1972.
Photos on this and facing page by Peter Ansove.



IV Garden, 1974–78, video installation with live plants at Musée d'Art Moderne, Centre National d'Art et de Culture Georges Pompidou, Paris, 1978.





CHAPTER 4. **Auxiliary Views**

MARS PERFORMANCE



Text by *Guillaume Apollinaire is dead*



TRISTAN TZARA

Indian Love Call from Mars



THREE TALKS AND ON MUSIC

ONE

its polyrhythmic intricacies. Minds that conceive such art I practice, instead of which my mind—and not my stimulus of sound waves produced by instruments sound-millions, are a comparatively recent innovation. Even in life, the instinctive life of the emotions? And why, when men mesmerized, as it were, by a silent and invisible Music's incessant movement forward exerts a double and To some African tribes rhythm is music; they have not what the human ear can grasp in rhythmic differentiation. avoid repeating what some other instrument is already sound of eight French horns playing in unison. Their oriental rhythms; the carefully contrived speech-based sentence with that formidable dragon of the opera house, gam of melodies and chords—of independent lines con- vision. We would only find ourselves groping for words, language of sounds. Because of him, music lost a certain a scale never before attempted and of an inevitability that should invite discussion in other than musical terms.

T W O

zer, who once remarked that "of all arts music is that in bareness that reminds us at times of the work of some know anything about the past unless we know about the *second or third try.*" I don't at all mind actively disliking because their abandonment of tonality constitutes a body importance—and then listen to the same pieces enough dissonant counterpoint, nor the unusual forms—has the unfamiliar seem comfortably familiar. There is no right moment, a moment when the big public was ready they called for a music that was to be thoroughly con-jazz serious? I'm afraid that it is too late to bother with the

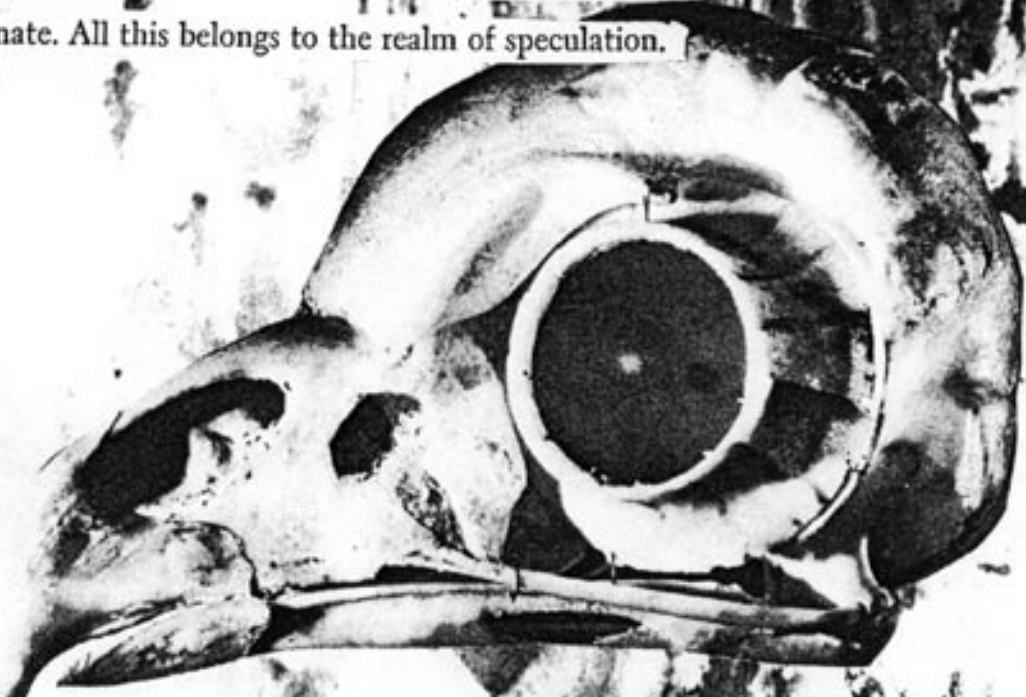
Paul Klee school has invaded the new music. The so-to-action of the teens and twenties to the then-new music of No performers, no musical instruments, no microphones all its disparate elements together, and taking on formal an unusual synthesis for the future. We on the serious

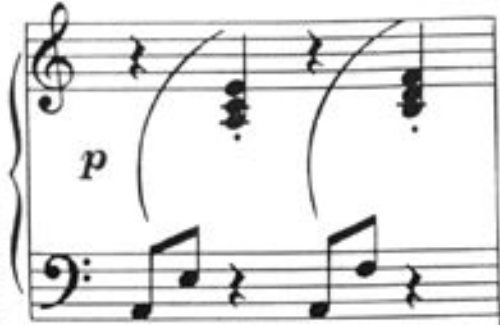
this: $\frac{3}{8}$ ♪ ♪ ♪ $\frac{3}{8}$ ♪ ♪ ♪ ♪ ♪ $\frac{2}{8}$ ♪ $\frac{3}{8}$ ♪ ♪



T H R E E

we say what music is? Over and over again this question sound that has coherence and direction and flow, unfold- and in space. Like life itself, music never ends, for it can evolve a shape and color and content that will most fully subconscious mind. It is, in fact, the immediacy of this a past, a present, and a future, but, unlike the other arts, an athenatic music, that is, a music whose melodic ma- tors of a tonal freedom that is somewhat dizzying, but out winds, and battery superseded by the invention of an divisions of a scale and with totally new sound possibilities, its historical origins. Musicologists tell us that the music decaphonic method of composing has abandoned them such as giving up your seat to a lady in the subway." He leaves the listener indifferent. Musicians react so strongly and enjoy a music whose texture is polyphonic, a simul- existence on the periphery of the musical world. It is a to ruminate. All this belongs to the realm of speculation.





(Optional Instrumental Solo)





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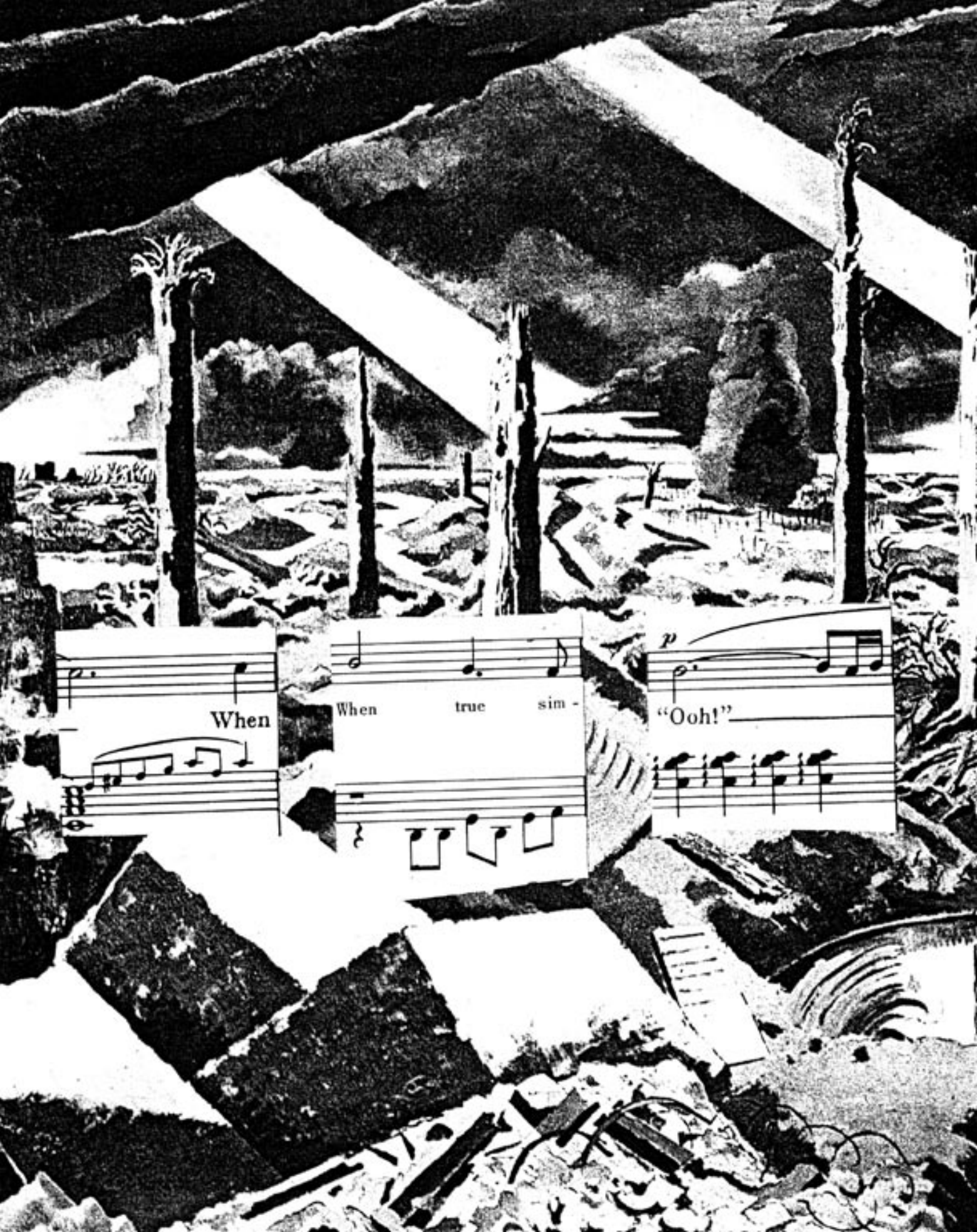
Soft

you — to be your

The first system of the musical score consists of two staves. The top staff is a vocal line in treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and a common time signature. It contains a half note followed by a quarter note, then a quarter note, and finally a quarter note. The lyrics "you — to be your" are written below the notes. The bottom staff is a piano accompaniment in treble clef, featuring a series of chords and moving lines.

In - di - an noon and the year,

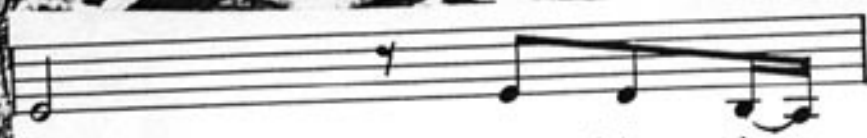
The second system of the musical score consists of two staves. The top staff is a vocal line in treble clef with a key signature of three flats and a common time signature. It contains a half note, a quarter note, a quarter note, and a quarter note. The lyrics "In - di - an noon and the year," are written below the notes. The bottom staff is a piano accompaniment in treble clef, featuring a series of chords and moving lines.



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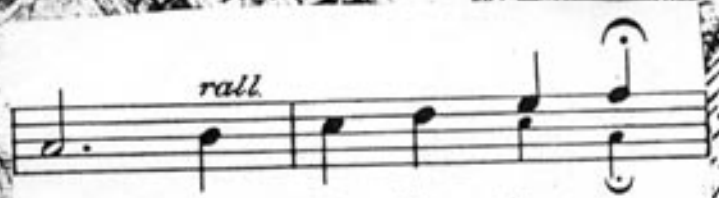
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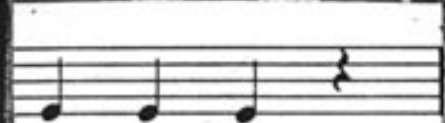




en we find our-selves in the



oo — oo - oo -



come down right.



Handwritten signature or text in the bottom right corner.

Forced and Damped Vibrations

The musical score is presented on a white rectangular background, featuring two staves: a treble clef staff on top and a bass clef staff on the bottom. The piece begins with a dynamic marking of *f* (forte) in the treble staff. The first measure of the treble staff contains five quarter notes, with the number '5' written above the first note. The second measure of the treble staff contains a sixteenth-note triplet, with the numbers '2 1 2' written above the notes. The bass staff contains a sequence of notes that generally mirror the pitch contour of the treble staff, with a '1' written below the first note. The score concludes with a double bar line and repeat dots at the end of both staves.

Forced and Damped Vibrations

And

bow and to bend we

call!

p

(beginning of second verse)

If I had

Detailed description: This block contains a musical score for the beginning of the second verse. It consists of two staves. The top staff is a vocal line in treble clef with a key signature of one sharp (F#) and a common time signature (C). It begins with a whole rest, followed by a quarter rest, and then the lyrics "If I had" are written under a melodic line of quarter notes. The bottom staff is a piano accompaniment in treble clef, also in F# major and common time. It starts with a whole note chord (F#4, A4, C5) and continues with a series of eighth-note chords and single notes, providing harmonic support for the vocal line.

oo — oo - oo - oo?

pp

Detailed description: This block shows a piano accompaniment score. The top staff is a treble clef with a triplet of eighth notes (G4, A4, B4) followed by a whole note (C5). The bottom staff is a bass clef with a triplet of eighth notes (F#3, G3, A3) followed by a whole note (B3). A dynamic marking of *pp* (pianissimo) is placed above the second measure of the bass staff. The lyrics "oo — oo - oo - oo?" are written between the two staves, corresponding to the notes in the accompaniment.



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