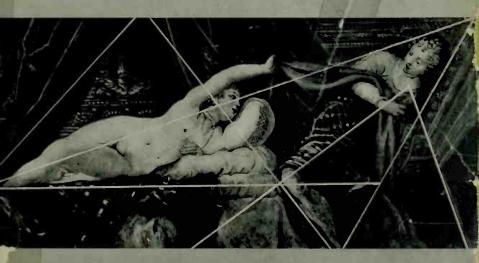
Frederic Taubes PICTORIAL COMPOSITION AND THE ART OF DRAWING

Points out the essentials of draftsmanship and explains the principles of pictorial arrangements. Text is accompanied by examples from some of the greatest works of art from the past. Many master drawings are reproduced and compositions of great paintings are discussed, graphically as well as theoretically.



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PICTORIAL COMPOSITION AND THE ART OF DRAWING

By Frederic Taubes

AUTHOR OF The Technique of Oil Painting,
The Amateur Painter's Handbook, etc.

ILLUSTRATED

Frederic Taubes in his latest book discusses the problem of composition—"the ordered position of objects in space." a problem which has been faced by every artist throughout the ages. He analyzes, both visually and verbally, a number of works of art—"some great, some indifferent—for failure as well as success in painting can do much to tell us which course should be taken and which should be avoided."

The art of drawing is discussed from a practical as well as from a theoretical angle. Techniques, methods and materials are thoroughly investigated and various applications explained.

Generously illustrated with nearly a hundred paintings and drawings, PICTORIAL COMPOSITION should do much to make the reader aware of the basic artistic problem and should heighten his appreciation of its varied solution by artists of all times.



PICTORIAL COMPOSITION AND THE ART OF DRAWING

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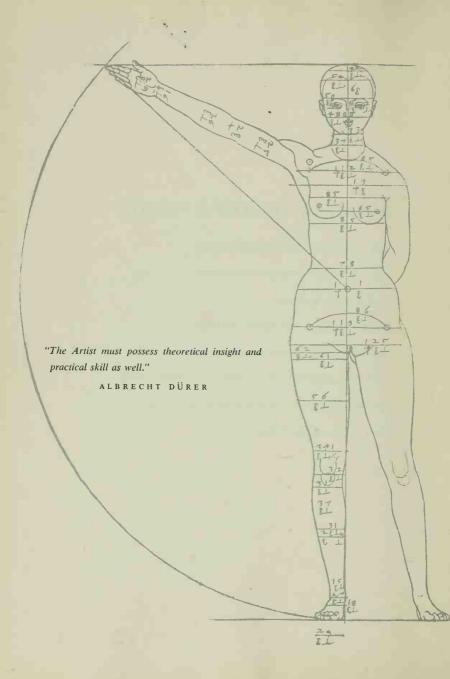
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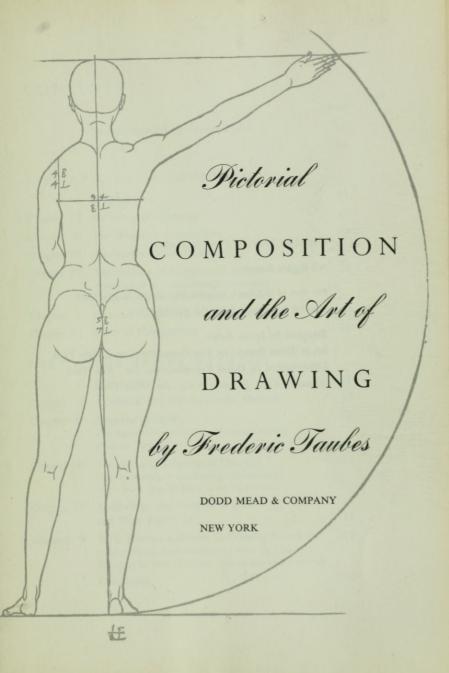
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THE AUTHOR AND HIS WORK: AN APPRECIATION

A new book by Frederic Taubes is always welcome. Among his many books on paint techniques and art in general, *Pictorial Composition* and the Art of Drawing is a most timely one. As a painter and teacher of great ability, he has a first-hand knowledge of the many intricate problems and "secrets" of draughtsmanship and composition which he reveals with succinct lucidity, without bias or partiality.

Especially in our time, when art theories are so full of contradictions, his profound, clear, and intelligent discourses are good to read. It is good to hear the voice of a painter who is not blinded or dazzled by so much confusion with regard to modern art, one who is known for his honesty and his respect for the great classical traditions.

To my mind, the art of drawing and composition have been for long on the decline; art has become a free-for-all, a playground for the dilettante; if someone wants to become an artist, he goes about it in a great hurry. Who, today, would spend seven to ten years' apprenticeship in craftsmanship, as was the practice in the olden days?

As a draughtsman myself, I thoroughly enjoyed reading this book, and I believe that the serious study of it would be of great importance to the art student as well as to the art conscious layman. May this treatise have a good influence on our generation and on generations to come, and may it help re-awaken many to the pursuit of a once-great discipline, which is the very foundation of all art: THE ART OF DRAWING.

George Grosz Huntington, Long Island, New York

FOREWORD

The present book has been written to clarify certain issues of composition and draftsmanship as they have presented themselves in the course of my own experiences in art. I hope that the student of painting, whether he is a practicing artist, a historian or a connoisseur, may profit from reading it.

Just how much theories of composition and draftsmanship can be helpful in practice I do not know; there are some basic rules, however, which govern the construction of paintings, and a few methods of draftsmanship, all of which will be discussed in this book.

It is far from my intention to advise the reader how to compose a masterpiece, or how to draw a good likeness of a horse, or the correct proportions of a child, simply because I consider all such recipes to be inadequate from an artistic point of view.

As regards the art of composition, certain of its premises, I believe, are a matter of a priori knowledge with most of us, whereas the art of painting rests on knowledge of technology, which hardly ever communicates itself to us merely by instinct. It is quite obvious that in painting complex manipulations go into the process of coloring and textural treatment, all of which must not only be comprehended as theory, but must also be empirically known. In pictorial composition, it is manifest that instinct plays some part; in fact, here instinct can be of great assistance, for the essence of good composition lies in harmony and balance, and the feeling for harmony and balance is instinctive.

Good draftsmanship can only be acquired by relentless practice. Of course, most of what is essential in the art of drawing rests on spontaneity, but such spontaneity can only be released and allowed to function by deliberate and most considerate study.

However, no matter whether we are led by instinct and intuition—which are too often fickle and undependable guides—or rely on assiduous application, much can be learned from precedent. In fact, all the plastic arts rely on precedent. Once the paleolithic cavemen established a precedent of drawing, the causality of tradition was set on its inevitable course, and, in following this course charted by so many illustrious examples, much can be added to our knowledge of certain axioms which have governed art throughout the ages.

I shall therefore introduce and analyze here a number of works of art—some great, some indifferent—for failure as well as success in painting can do much to tell us which course should be taken and which should be avoided. This is not to imply that there exists a formula for making good pictures; but we can discover "formulas" which account for bad pictures! And how these bad formulas can wreck the probity of a composition or lead to a dull and sterile draftsmanship will be demonstrated by a few examples. Thus I hope to make the reader more aware and alert in the face of certain artistic problems, and to sharpen his taste for the just and appropriate.

F. T. Banff, Alberta, Canada Summer, 1948.

PART I

PICTORIAL COMPOSITION

INTRODUCTION

Now let us consider the general problem of composition. We face it continually and forever, for composition is simply the ordered position of objects in space—any objects in any space. The manner in which one arranges furniture in a room, or fruit in a bowl-these are matters of composition. The relative position of your fingers or limbs one to another, the arrangement of the mesas in the Grand Canyon and the constellation of celestial bodies—these are all matters of composition. Perhaps, because we are facing these problems continually, our instinct has been sharpened and a recognition developed for what is, and what is not, ordered and harmonious. Perhaps, therefore, we may state that nature gives to all of us a feeling for balance, because most of us, without specialized training, are able to discover and to correctly appraise harmonious proportions and proper position of forms in space. Even most unschooled eyes will be capable of determining that this or the other proportion of a window, for example, and its placement on a façade, is more or less correct from the viewpoint of balance, or whether the relation of the seat of a chair to its legs has been so calculated as to please our esthetic sensibilities. Thus it will be obvious at once—even to one ignorant of the arts—whether a chair, for instance, has been placed in a room in proper relation to other objects; and so, when impelled to move the chair from one position to another, the arranger simply acts upon his instinctive sense of composition.

We have undertaken to define what is understood by the word "composition," and we now ask—what is its purpose in a painting? It is to give form to the painter's thoughts, to engage, attract and satisfy the beholder's eye. By means of composition, the painter organizes his images and brings the elements of his subject matter into logical and formal relation; he establishes a formal pattern which, by its character makes up his style. Without an ordered composition a painting will not mature as a work of art, for composition is the backbone of every painting.

In speaking of composition, it is appropriate to refer to a term which, today, is much used and much abused—Design. Aside from the currently fashionable connotations, in general parlance the words Design and Composition are interchangeable. However, when insisting on specific terminology (in reference to art), we speak of design as a two-dimensional arrangement of lines and planes; whereas composition refers to the presence of the third dimension, which in painting or drawing is provided by the illusion of depth. And when dealing with the third dimension, there enters into play another entity—Perspective. Hence, we do not say that a design has perspective, but in composition the problems of perspective are forever present. The use of one or another type of perspective, more than anything else, may reveal the painter's stylistic allegiances and his inclinations of taste. (The problems of perspective are discussed in Chapter V.)

BALANCE AND SYMMETRY

Balance as such in a composition is quite common; in fact, it is common even in very ordinary paintings, and so its mere presence need not necessarily be extolled. By virtue of a well-balanced composition an inferior painting does not gain in stature. Balance can be produced by various means, and these means can very well be commonplace. It is the particular manner in which a painter arranges his motifs that will account for the degree of harmony, originality and dramatic impact of his composition. Unless the relationship of masses and their organization in space is projected by an original mind, the composition will remain indifferent. A composition can be "correct" and at the same time perfectly inert. Illustration 1. represents such a balanced, but, because of its conventionality, indifferent arrangement.

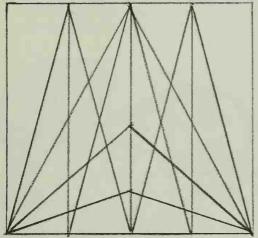
Symmetry is a condition of perfect balance—perfectly dull and inert, to be precise. Although in architecture, symmetry has a definite if narrow function, in pictorial composition it is a bad drug. Absolute symmetry belongs to the realm of mechanistic objects; in artistic design it will neutralize all interest, for nothing is more tedious to the eye than a sequence of regular forms and persistent repetition of identical elements of design. A symmetrical composition paralyzes the imagination, destroys all opportunities for surprise and offers no adventurous exploits for the eye.



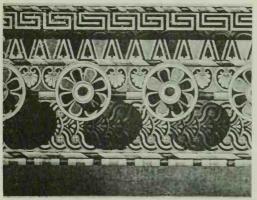
Ill. 1. Willem Kalf (Dutch 17th Century): Still Life. A harmonious but dull arrangement of objects

The beholder, dulled by the monotony of ocular sensations, finds his imagination blanked out. His mind at once precalculates the strategy of the design—it knows: all is repetitious. (Ill. 2 and 3.)

PICTORIAL COMPOSITION



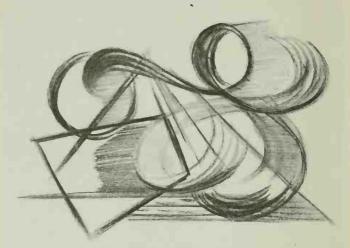
Ill. 2. A symmetrical graph



III. 3. A Grecian ornament

BALANCE AND SYMMETRY

The more subtle the variety and contrast of form elements in a composition, the stronger interest it presents for the beholder; the more it invites his mind and delights his senses. (Ill. 4 and 5.)



Ill. 4. Abstract design of varied forms



Ill. 5. A Peruvian ornament showing irregularities in rapport

Variety and contrast of forms must, of course, be such as to remain within the orbit of the beholder's comprehension and within the compass of his readiness to follow the painter's inventive capriciousness. Just as regularity of forms will contribute to monotony,

PICTORIAL COMPOSITION

so excessive variety will weary the eye by offering too many sensory irritants; instead of sharpening the onlooker's interest, it will neutralize it. (Ill. 6 and 7; also 13.)



Ill. 6. Over-diversified forms



Ill. 7. A high-renaissance ornament, tedious because of over-ornamentation

THE NATURE OF COMPOSITION

When studying the composition of a painting, we become aware that several elements determine its nature. These elements are: Coherence, unity and emphasis.

When a composition has coherence, we say that it hangs together well, all parts serve one end. Not one element could be eliminated without disturbing the whole or leaving a vacuum in the structure. This is to say that coherence refers to the formal relation of elements within the composition and not to their associative connotations and illustrative contents, as can be seen on Illustration 8.

"Judgment of Paris" by Rubens is the work of a great painter who in this case failed singularly in his composition. No doubt there is unity of thought—as far as the beauty contest is concerned—but coherence and emphasis are sadly lacking. The eye of the beholder jumps restlessly from one of the voluble goddesses to another, hitting, as it were, on its tour, the darks of the background and the lights of the flesh, with stark monotony. Although Paris, as the story tells us, was supposed to be in sympathy with the ladies, formalistically at least he is in bitter feud with them. In fact, all the actors are feuding here, each trying to achieve emphasis and none gaining his end. Thus the picture, regardless of its other merits, leaves us dissatisfied.

Coherence in a composition is brought about by the organization of an ensemble in such a manner as to make all parts of a painting a sequence of well-ordered, harmonious relationships. Although, as in music, some parts may appear discordant, their dis-



Ill. 8. Rubens: Judgment of Paris. Composition lacks coherence

sonance should not fight the harmony, but rather, by contrast, bring it out more effectively.

Unity in a composition expresses itself by the integration of all motifs of a picture toward a homogeneous objective; it will be expressed in the logic of thoughts and associations. For example: A top hat and a rabbit are logically unrelated objects, but when placed on the table of a prestidigitator, their proximity will become plausible. We can see such incompatible yet psychologically connected motifs in a successfully treated Surrealistic theme, where, in spite of the apparent incongruity of subject matter, unity is established by means of idea association. Without unity of thought and purpose, the mind will remain dissatisfied; it will lose interest in a picture which is composed of dissociated details.

Emphasis is needed to bring a composition to a dramatic climax. Emphasis depends upon the most eloquent presentation of that part of a composition which has been assigned the dominant position

NATURE OF COMPOSITION

within the painting. All other units of a composition should be subordinated to this dominant motif; they must not challenge, cramp or fight its position. They should not distract the eye or become autonomous, but rather like road signs, lead the attention to the main theme. The main theme, however, need not necessarily be presented by one single object. A group of objects can share the dominant area of the composition and, as a unison, perform the function of a climax. The foregoing maxim holds good in some instances, but when reversed it can nonetheless, in certain circumstances, produce a good composition. Instead of one climax, the entire composition can be made up of a series of climactic expositions. Such a method was especially favored by the early Flemish painters. (Ill. 9.) In this picture the entire field is filled with details grouped into small units within the composition, yet the details do not detract from the monumental whole, nor do they confuse the formal issues of the picture's construction.



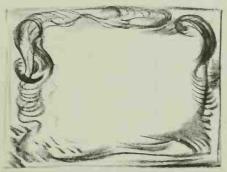
Ill. 9. Pieter Brueghel: The Battle between Carnival and Lent. Co-ordination of multitudinous details into a monumental design

PICTORIAL COMPOSITION

As to the advantage of one method over another—there is no valid answer to the problem. Methods change with changing styles, the preponderance of certain esthetic theories and predilections of taste.

To repeat: The function of composition is to hold the eye within the boundaries of a painting and to lead the attention from one object to another until the work as a whole is taken in. Well-knit construction in a painting not only gratifies our curiosity, but also pleases our esthetic sensibilities.

In the arrangement of a painting, the following considerations are important: if we compare the painter's canvas to a stage—which it really is, by analogy—it is plausible to place the drama on the focal center of the stage and not on its periphery. Consequently in order to attract the beholder's attention to the protagonist instead of to the supporting cast or the irrelevant trappings, it is best to leave the corners of the canvas or the borders inactive and not to clutter them with distracting elements. (Ill. 10.)



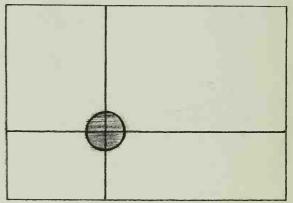
Ill. 10. Activity centers around the picture's edges

Such an arrangement corresponds with the nature of the eyelens which, when focused on a central object, does not register clearly details out of its focus. This principle of composition can be observed in all good paintings of the classical school.

NATURE OF COMPOSITION

Considering the composition by the parallel of the stage scene, it is well to lead the gaze gradually to the object which merits central attention. Thus the importance of this object should be enhanced by emphasis which it receives from the supporting cast.

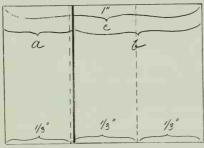
Certain other methods of geometric arrangements were developed by painters at an early time, all of them pursuing one end—the attainment of harmony and balance. It is idle to lose ourselves in mystical speculations concerning the nature of our feeling for the condition of balance and harmony; perhaps this feeling issues from the fact that our universe is dependent on balance. But whether the microcosmos follows the rules which govern and order celestial bodies is a futile speculation which had better be left to certain specialists in dialectics—the philosophers. All we can say is that we have a distinct feeling for, and an innate comprehension of, the condition of balance. Consider, for example, Illustration 11. In this space arrangement, the position of lines appears harmonious. (Of course, the introduction of other lines would radically change the balance.)



Ill. 11. Arrangement according to the Golden Section

PICTORIAL COMPOSITION

Here we recognize at once that the arrangement provides the most appropriate space division. The demarcation—that is, the schematic tree and the line of the horizon—are placed in a position suggesting little more than a one-third division of the whole. Such spacing is referred to as Golden Section. Golden Section is that part of a line or space in which the size of the smaller part is to the size of the greater part, as the greater part is to the whole. (III. 12.)



Ill. 12. Golden Section

I refer here to this geometric equation because it is one of the most ancient and best known. I should like also to add that, for the painter, geometric arrangements of any sort are of little use. As applied to art, all rules of proportion and geometry have had a precarious life. Leonardo, Dürer, Piero della Francesca, have written many treatises on these subjects, but, said Giordano Bruno (in 1585): "All such rules are in vain. There are as many rules as there are geniuses." And Dürer's book on Geometry and Measurements, written in 1525, failed to impress Michelangelo, who agreed with other contemporary artists that "His (Dürer's) labors were futile and a waste of time."

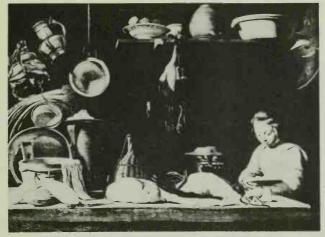
ANALYSES OF PICTURE COMPOSITIONS

Since we have gained some measure of understanding why certain compositions can be considered right in principle and others faulty, let us now examine a few paintings of masters, near masters and just common practitioners. It is not only the ineffable examples of great art which serve as guides and mentors; much can be gained from studying the failures, because it is the false theories responsible for them which we must try to avoid. There are no recipes leading toward attainment of mastery in art, for it is an axiom of mastery that the means differ with different artists. For example, we need only to study the work of the Mannerists who strove to follow "precisely" the rules of *sfumato* as devised by Leonardo and succeeded in producing only inadequate imitations to prove that greatness cannot be achieved by adhering to a formula.

As our first example I have selected the "Kitchen Still Life" by Zurbaran and "Florinda" by Winterhalter. (Ill. 13 and 14.)

Both compositions show similar weaknesses resulting from quite different errors. The restlessness of the Kitchen Still Life is caused by the clutter of over-diversified forms, which, instead of receiving proper emphasis and attaining coherence, quarrel one with another. Although the assembled paraphernalia are logically connected—all come from the kitchen realm—their formal relation is at odds, they lack harmony. Moreover, the accumulation of objects at the extreme

PICTORIAL COMPOSITION



Ill. 13. Zurbaran: Kitchen Still Life. A confused composition



Ill. 14. Winterhalter: Florinda. A restless composition

PICTURE COMPOSITIONS

left of the canvas is not only improperly placed, it also harangues menancingly the dead chickens hanging in the middle of the picture. This all demonstrates that the picture lacks a central point of interest. None of the motifs commands our special attention; none claims leadership in the ensemble or achieves singular importance; hence, the whole does not give us that esthetic satisfaction which is the result of proper order in the picture's formal arrangement. Of course, the nature of the forms alone—their complexity and their repetitiousness—is not solely responsible for the disorder. The manner in which the painter has used his light and shade effects, distributing them with equal potency all over the picture's plane, contributes likewise to the picture's failure as a great work of art.

The restlessness of the Winterhalter composition, on the other hand, does not issue from over-diversified form elements; here it is the repetitiousness of analogous masses—the naked torsi—which creates lack of order. It appears that the painter would not sacrifice any evidence of his industry for the sake of a more solid construction. The light, too, is cast upon the objects in a manner which creates segments of equal volume and intensity. (One should remember that every form gains or loses volume according to the illumination it receives.) Thus the composition fails to hold the

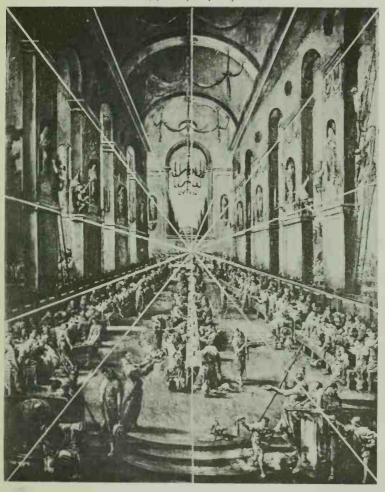
interest. It can be stated without equivocation that it is not the artistry of the composition which invites the eye, but rather the ample curvatures of the fair maidens disporting themselves in various stages of coy deshahillé

Ill. 15 (a). Alessandro Magnasco: Monks at Dinner



Our next example is a work by Magnasco, "Monks At Dinner" (Ill. 15), and Pollaiuolo's "Saint Sebastian" (Ill. 16).

Ill. 15 (b). Analysis of composition



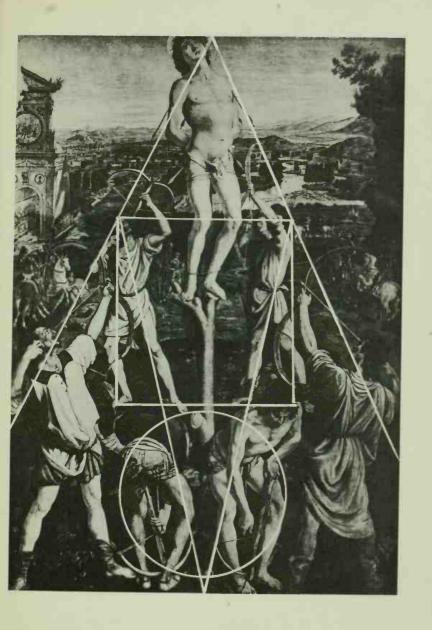


Ill. 16 (a). Antonio Pollajuolo: St. Sebastian

Both these compositions suffer from monotony because their elements are arranged in a somewhat too symmetrical pattern. Although both appear to be greatly animated—as suggested by the illustrative content—the compositions as such are, to a large extent, static and inert. This can be seen from the respective analyses.

In the case of the Magnasco, it is the symmetry of the interior which detracts from the interest of the composition, and the Pollaiuolo again demonstrates that, no matter how much activity a scene proposes—the murderous ruffians are certainly feverishly active—the composition on the whole can still remain static. Here the feeling of inactivity is induced by the almost symmetrical geometry of the picture's arrangement.

Ill. 16 (b). Analysis of composition ->



Our next example represents an especially unfortunate picture composition. It is Poelenburgh's "Annunciation." (Ill. 17.)

A contemporary of Rembrandt, this painter demonstrates that an "old master" need not necessarily be a master in the true sense. In fact, Poelenburgh's composition is so bungled as to wreck any claim the painting might have to be regarded as a work of art. Overbusy around the borders, it shows a hole in the center. Around this central vacuum (the worst possible place to choose for a vacuum) there rotates a mass of disjointed elements engaged in a lively free-for-all. Consequently, after the eye has surveyed in bewildered dismay the riotous disport of the heavenly urchins, it wanders away in tedium.

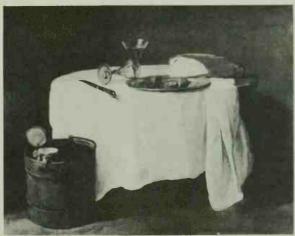


Ill. 17. Poelenburgh: Annunciation. An inept composition

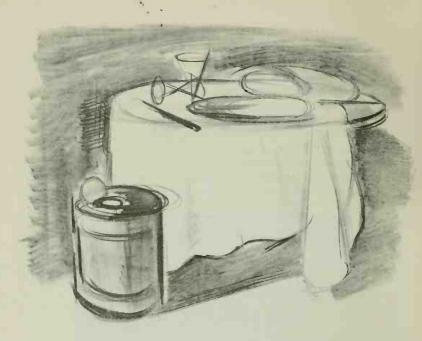
The foregoing analyses show that the same pitfalls of composition beset in some degree all painters—from a very great master like Pollaiuolo to a mediocrity like Poelenburgh.

And now let's turn to a composition of noble simplicity, tranquil harmony and originality, Chardin's "The White Tablecloth." (Ill. 18.)

The arrangement is restful without being inert, varied without being fussy. The gentle animation of the picture's architecture is provided by the slant of the knife which, taken up like a musical theme by the overturned glass, directs our attention to the center of the picture. The motion, traveling along the loaf of bread, turns abruptly, and then vertically, it slides down along the folds of the tablecloth. Now, how, precisely, are the motion and suspended animation counterbalanced? Behold the expanse of the even-tempered tablecloth; nothing happens here, nothing arrests our eye except the wonderful quality of paint. Observe how the cloth holds the array of objects in perfect suspension, how the ponderously dark pail.



Ill. 18 (a). Chardin: The White Table Cloth (Collection The Art Institute of Chicago)



Ill. 18 (b). Analysis of composition

placed on the ground to the left, anchors its lightness and weightlessness. Here the satisfaction conveyed by the contrapuntal strategy of the arrangement is perfect. It induces serenity of mood which comes of the justness, order and completeness of a finished performance.

The composition by Tintoretto, "Joseph and Potiphar's Wife" (Ill. 19), is quite different.

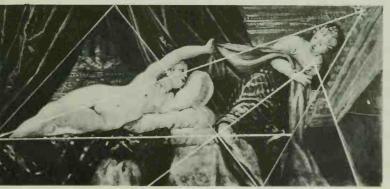
No relaxed calm can be found here; all is motion, drift, excitement, as the theme of the picture dictates. The liveliness of the scene, as can be observed on Analysis 19, is in the capricious interrelations of the various pyramids underlying the composition and in their divergent positions in the design.

Here again it is of the essence to comprehend that it is not so much the suggested illustrative content of a picture which is



Ill. 19 (a). Tintoretto: Joseph and Potiphar's Wife

responsible for the ultimate effects, but the abstract pattern of its design. Animation which is expressed as an effect of closely related rhythmic sequences becomes dull; restfulness which has no counterpoint ends up in rigor mortis. The keenest forms are merely raw material; it all depends on the manner in which the painter plays



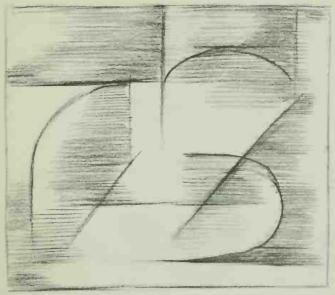
Ill. 19 (b). Analysis of composition

one form element against the other; this manner can exhibit wit, originality, inventiveness, as documented in Tintoretto's painting.

Rembrandt's etching, "Christ Preaching," represents a different kind of arrangement. Here classic harmony is achieved and resolved with logical completeness. All elements of the composition are integrated into one coherent ensemble. The masses (individual figures as well as groups of figures) are arranged in such a manner as to support the entire structure—nothing could be added, nothing taken away. The figure of Christ stands alone, none of the other actors, nor the surrounding space encroaches upon it. To the left of the central figure a group is submerged in shadow, thus enhancing its prominence; to the right a figure is placed in a crouching position, and in front the space is kept uncluttered. The groups of followers surround the central figure in gently curving parabolas, one shallow, the other deep. And all these curved diagonals, horizontals and verticals, contribute to the serenity of the whole.



Ill. 20 (a). Rembrandt: Christ Preaching

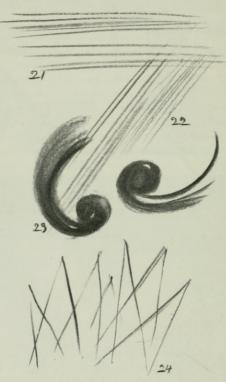


Ill. 20 (b). Analysis of composition

VARIOUS PICTURE ANALYSES

As has been shown on preceding pages, every composition in its final analysis is reducible to a geometric pattern. In establishing the abstract pattern which underlines the structure of a painting, a better comprehension of its composition can be gained. In order to give the reader a method of composition study, a few more picture analyses will be given along geometric (static), and also along dynamic lines.

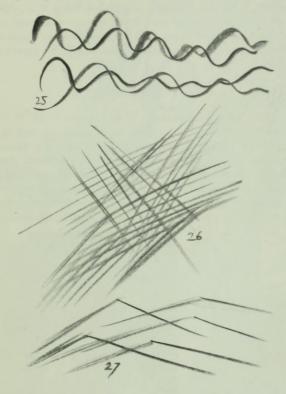
Before going into the analyses, here are a few graphs which illustrate the dynamic principles of design. These graphs have certain



III. 21, III. 22, III. 23, III. 24

empirical validity, because they rely on associational values and are not merely patterns based on some arbitrary conventions. (Ill. 21, 22, 23, 24, 25, 26, 27.)

Thus long, horizontal, parallel or nearly parallel lines suggest placidity; diagonal lines—ordered sweep; short centrifugal and cen-



111. 25, 111. 26, 111. 27

tripetal lines—action and motion; pyramidal, sharp angles—surge; repetition of related, swerving motions—rhythm; criss-crossing lines—disorder; wide, open angles—distance.

The designs can be considered "abstract." But abstract forms can really not be comprehended at all nor can they induce any feeling other than abstractness, meaning precisely no feeling at all. Always we are bound to associate lines, forms and amorphae with some matters within the orbit of our visual experience, for "we cannot comprehend what is not within ourselves and part of our experience." (Plato.)

ANALYSIS OF MOTION

Andrea Mantegna, "Madonna of the Quarries." (Ill. 28.)

How does the abstract, dynamic force objectivate itself in this painting? Starting from the outstretched leg of the sitting figure, the motion pierces the picture's plane, drives into the middle ground, whence in a keen, cascade-like plunge, it sinks into the bowels of the earth, the precipitous quarries. Another force gathers at the base of the rock and swings into the distance, cutting its flight through hills and valleys in steep serpentines. Then again the power-charged



Ill. 28 (a). Mantegna: Madonna of the Quarries



rock climbs upward; as if released by a cosmogenic force, it grows and rises and bursts obliquely across the top of the picture in prongs and crystalline facets, like shooting stars into the billowing sky.

Analysis of El Greco, "Resurrection of Christ." (Ill. 29.)

The more animation, motion and energy a painting displays and the more ostentatious these qualities become, the better it lends itself to graphic analysis. El Greco and Grünewald are thus especially adapted to analytic interpretations along these lines. (There are also other interpretations, those pertaining to light and shade disposition,

or textural treatment, all of which are not the subject of the present treatise.) We can say that both these painters are, essentially, Expressionists, hence their paintings seem to vibrate with emotion rather than to be merely statements of fact. A painting which is an emotional expression and not a detached, objective statement more readily gives ground for analysis, because it elicits immediate, automatic response.



Ill. 29 (a). El Greco: Resurrection of of Christ

Ill. 29 (b). Analysis of composition. -



To demonstrate this point, let us consider the analyses of the following paintings: El Greco, "Expulsion from the Temple" (Ill. 30 and 31); Grünewald, Detail from the "Crucifixion" (Ill. 32); and El Greco's "View of Toledo" (Ill. 33.)



Ill. 30 (a). El Greco: Expulsion from the Temple



Ill. 30 (b). Analysis of motion



Ill. 31. El Greco: Expulsion from the Temple. Analysis of composition



Ill. 32 (a). Mathias Grunewald: Detail from Crucifixion



Ill. 32 (b). Analysis of composition



Ill. 33 (a). El Greco: View of Toledo



Ill. 33 (b). Analysis of composition

THE PRACTICE OF COMPOSITION

The several examples of paintings which were introduced in the preceding chapter, together with the graphic analyses, have given the reader a fair idea of some of the problems of composition. We have seen, also, how these problems were met by various painters and we have discovered that there are many methods of picture organization and that certain rules underlie all these methods. We have also cited an erudite quotation to the effect that there are as many rules as there are geniuses. Instead of trying to dogmatize, we have endeavored to study the works of great painters, to gain from them some understanding of the principles of picture arrangement.

In this chapter we shall apply our acquired knowledge practically; we shall compose a picture from nature, nature being, in this instance, photographs of objects all of the still life variety.

On Illustration 34, the objects are disorganized, placed at random, without plan or thought of composition.

On Illustration 35, objects best suited for the proposed still life were selected and grouped into a harmonious ensemble. In the arrangement of the motifs simple considerations were observed such as selection of large and small forms of variegated shapes and textures. These were grouped so as to suggest animation, continuity, emphasis, in other words, in such a manner as to gratify the eye. In the selection of motifs, colors are unimportant, since colors can be changed by the painter at will; but light and shade effects cannot.



Ill. 34. Objects placed at random (photograph)



Ill. 35. Objects arranged into composition (photograph)

PRACTICE OF COMPOSITION

The choice of a particular way of lighting is of great importance and in this respect the liberties which the painter can take are few. Of course I am referring to a more or less realistic representation. In Expressionistic, or semi-abstract conceptions, realistic aspects of lighting are greatly modified or altogether disregarded.

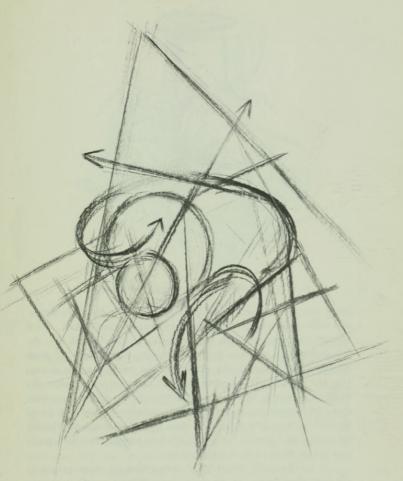
THE DESIGN

And now that the objects have been assembled according to our plan, a tracing paper should be affixed to the drawing board or the stretched canvas, and a piece of charcoal used to develop the composition. A soft vine charcoal is the most appropriate material, because it can be easily wiped off, or its marks readily altered. Before arriving at a final solution even in a simple picture arrangement, numerous changes will have to be carried out. Moreover, it is hard to determine where, precisely, the drawing should be placed on the canvas. Therefore, it is best to draw on paper first and then to place the paper on the stretched canvas and, by moving it up and down and sidewise, find the most appropriate placement.

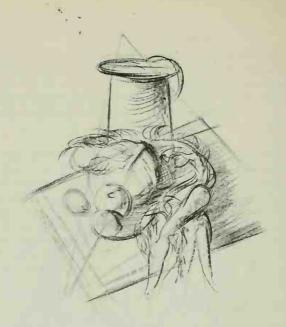
In developing a composition, the main masses and their total aspect should receive first attention, for they make up the scaffolding of the still life composition. (Ill. 36.)

Just as in figure drawing, for example, one would define the general proportions first, leaving out the unessentials, so in starting to design a still life (or any other subject) all details should be left out because details do not contribute anything to the construction of a picture, they merely confuse the main issues and divert the painter's attention from the axiomatic to the incidental. In other words, in focusing one's attentions on details and incidentals, one might easily neglect to establish coherence in the picture's elements.

When looking at the draft of the composition (Ill. 36), it is obvious that one can more easily deal with the principal masses when these masses are reduced to basic, geometric figures. Once the subject matter is encased, as it were, in neutral geometric forms, a distinct pattern of construction emerges. As a rule, this pattern is dominated by a towering climax which shapes up like a pyramid. Practically



Ill. 36. Construction of the composition as seen on Ill. 35. (Direction of movements indicated by arrows)



Ill. 37. Objects drawn into the scaffolding of the composition

every composition can be reduced to one or a series of pyramids, and other characteristic shapes, such as rectangles and circles, which support the entire structure. As we have seen (Ill. 16 and 19), the interdependence of these geometric figures, the shallow or steep inclines of the pyramids, the dimensions and positions of the rectangles and circles, will determine whether the composition offers interest to the eye or tires it with monotony. It is common experience that such impressions are more easily comprehended when all forms are reduced to neutral figures, for these figures are constant, whereas the individual (natural) forms are often so variegated as to complicate the problem of their arrangement.

When the scaffolding of our composition has been perfected, the individual forms can be drawn into their respective positions. (Ill. 37.)



Ill. 38. Conditioning of composition

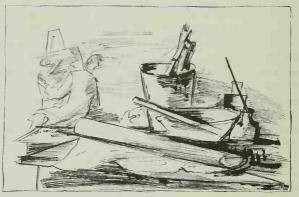
CONDITIONING OF COMPOSITION

Now let us retrace our steps to the point where we were before we began to compose our picture. First, the selection of objects must be considered, and, second, their interrelation. Here, when dealing with realistic objects, we will discover that natural forms as they offer themselves to us, and their natural positions, may not necessarily be suitable for pictorial representation. Motifs as they appear in nature are, more often than not, disorganized, assembled random fashion and by fortuitous circumstance. It is up to the painter to rearrange and alter the motifs as his plan may require. First, the painter will be obliged to shift many of his objects around, to change their size, shape and color. Such changes can be seen on the final drawing. (III. 38.)

PRACTICE OF COMPOSITION

In landscape painting, this pictorial requirement may often necessitate radical changes of the position of mountains, trees, rivers; in other words, of the topography of a landscape as it presents itself to us. An addition of a tree here or there, or the elimination of an entire forest, may be needed in the composition, for nature is not concerned with our artistic needs and premises. Out of a mass of haphazardly grouped elements, the painter selects whatever appears to be suitable for his own purpose—and this, as we all know, is referred to as *licentia poetica*.

Besides the fact that the motifs as such must often be rearranged and properly correlated in order that they may function as a composition, the format of the painting itself will condition the size, shape and relationships of the motifs. These motifs will have to undergo radical changes of proportion if the height and width of the painting be altered. Therefore, careful deliberation must go into the problem of choosing a 16" x 20" or a 10" x 20" size for a composition. Such conditioning of forms and their arrangement relative to the format of the picture is demonstrated in Illustrations 39 and 40.



Ill. 39. Conditioning of composition according to changes in format of a picture



III. 40.

PRACTICE OF COMPOSITION

POSITIVE AND NEGATIVE SHAPES

There is another aspect of pictorial composition which merits our attention, namely, distribution of positive and negative shapes in a picture, which is demonstrated on Illustration 41.



Ill. 41 (a). Positive shapes marked in dark tones



Ill. 41 (b). Negative shapes marked in dark tones

By positive shapes we understand the solid objects which make up a composition; the negative shapes are the spaces around them. The confluence of these shapes plays an important role in the structure of a composition. Although the spaces around or within the objects—that is, the negative shapes—do not have decisive weight, their in-

fluence on the general appearance of a painting can be marked. They can make a design appear flimsy or solid. They can aid the solid objects in their effectiveness, or detract from them. Here, color and its tonal values—its light and dark shades—are all decisive.

Supposing that the solid objects appear too restless and agitated, nevertheless one would not wish to alter them because of a certain idea which these forms may express. Perhaps the objects appear too static. In both cases, by changing the intensity or shade of a color, the activity of the solid forms can be restrained or intensified as the occasion requires.

On the following examples (III. 42, 43 and 44), my points will become explicit.



Ill. 42. Positive and negative shapes on the Mercury. (Italian 16th Century bronze)

PRACTICE OF COMPOSITION

We remember what Michelangelo said, or is supposed to have said, about the principles of good sculpture; in his opinion it should be moulded in such a manner that, if pushed down a mountainside, it would land below none the worse for it. This statement applies directly to the interplay of positive and negative shades. Let's take, for the sake of demonstration, Illustration 42, which represents a famous Italian bronze of the 16th century. What would happen if we tossed this very celebrated opus down a rocky mountainside? It would then become tolerable—for certainly it would land below minus its positive shapes if we may say so, which were previously most obstrusively protruding in all directions. At once the ridiculously flimsy Mercurius would turn into a solid torso. (See the marks on the illustration where, presumably, this happy accidents would occur.)

Illustration 43 represents an example of conditioning a nega-



III. 43 (a). Drawing from life

Ill. 43 (b). Conditioning of design in regard to negative shapes

tive shape in such a manner as to do away with the hole which creates a breach in the solid mass of the design. This can be done (if the anatomic form, for instance, cannot be made to conform with the probity of the design) by means of color or light and shade, depending on the occasion. Of course, anatomy itself can be conditioned in any conceivable direction, but these problems will be discussed in Part II, The Art of Drawing.

As regards conditioning of negative shapes by means of color, let us look at the still life composition, Illustration 44, where the ungainly, narrow corridors (marked with dots) are made to disappear by casting upon them a dark shade. Were these spaces painted in a light color, our gaze would most likely have stumbled into them as into a manhole, and, after emerging again, it would have been a much weakened gaze indeed; in fact, it might have been altogether too tired to enter the composition again.



Ill. 44 (a). Ungainly negative shapes



Ill. 44 (b). Conditioning of negative shapes

PICTORIAL PERSPECTIVE IN COMPOSITION

To speak of a system of perspective today would be futile, because we do not acknowledge any such system as being inevitable. So the discussion of perspectivic systems here undertaken should lead to clarification of thought rather than to persuasion that this or the other method of dealing with the spatial problem is correct. Now let us state peremptorily that there is not such a thing as an old or a modern spatial problem, for identical problems come and go and reappear again, and the old will always coalesce into the new, and the new will always be an adaptation of an old principle.

Usually, mention of the word "perspective" at once conjures up in our mind a situation in space whereby certain empirical phenomena take place, such as diminishing of forms as they recede into the background, and converging of parallels as they move from the foreground onto the horizon, where at one point they meet at our eye-level. The linear organization of space which operates in the way of the phenomena just described is known as empirical or scientific perspective.

With the same system belongs as well atmospheric perspective, which relies on changes in the distribution of colors, their kind and intensity. Within the scheme of scientific, empirical perspective, strong local colors—that is, colors not influenced by atmospheric condi-

tions—will appear in the foreground. Gradually, when these strong colors recede, their intensity will diminish. Eventually, even the glowing vermilion will be toned down into a bluish fade-out.

As I have said, if mention is made of perspective, the empirical system is the one that at once comes to mind, simply because it is empirical, and because it prevailed in pictorial representation for more than half a millennium. But the system was known long before then. The science was first formulated by Euclid (generally so accepted) and some of its principles were said to have been applied by Polygnotus, who used foreshortenings in his figures painted in fresco to suggest depth. Vitruvius knew of the application of scientific perspective; and we find mural paintings in Pompeii, from the first century B. C., where the principles of this perspective were used consciously although without consistency. In medieval times the problems of geometric perspective were treated by various scholastic writers such as Roger Bacon, Vitellio, Perckham. But the first comprehensive description of the rules of perspective was given in Piero della Francesca's book, written between 1470 and 1490 but not printed until 1899. Other descriptions of perspective were made by Paolo Uccello (whose work exploits linear perspective in a pedantic fashion (III. 45), by the architect Leon Battista Alberti, and, of course, by Leonardo da Vinci (III. 46) and Dürer. However, in advance of the Italians, from sheer observation, it was the Flemish painters who had discovered the laws of empirical perspective, even though they did not bother at all about scientific theorems. This, incidentally, throws an oblique light on the value of scientific methodology as applied to art.

Scientific perspective as we know became one of the guiding principles of Renaissance art, where, together with the newly discovered scientific anatomy, it inspired the painters and architects to extraordinary achievements. But already, in the middle of the 16th century, the science had lost its magic and its original purport—it had become a devitalized, stereotyped scheme.

That the type of perspective which relies on empirical phenomena is not the sine qua non in art goes without saying. No matter how

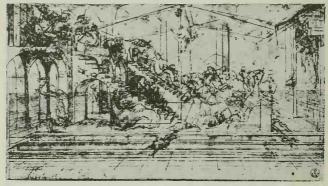
PICTORIAL PERSPECTIVE



Ill. 45. Paolo Uccello: Pedantic use of scientific perspective

correctly the plan of linear and atmospheric perspective may be mapped out, it will not help the painter in increasing his artistic stature. Every doctrine will always be dictated by some ephemeral predilection of taste or by the vagaries of some esthetic partisanship.

Although, as I have pointed out, the system just discussed was known in antiquity, not always did the artists' conception of space



Ill. 46. Leonardo da Vinci: Imaginative use of scientific perspective

PICTURE COMPOSITIONS



Ill. 47. Byzantine style of perspective

conform to it. Whether this principle prevailed for so long because it was s. pported by ecclesiastic or scientific conventions, or for some other reasons, it is not our object of research; suffice it to state that, in



Ill. 48. Lorencetti Entry into Jerusalem. Medieval style of perspective

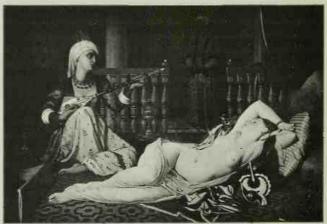
PICTORIAL PERSPECTIVE

Egyptian painting, objects which were supposed to be in the depth of the picture were placed, not behind, but above the objects in the foreground. The early Christian or the Byzantine school, as we call it, likewise considered only two pietorial dimensions—height and width. (Ill. 47 and 48.) And since the moderns cannot go beyond these systems, for pictorial space can be only flat or else have depth, they have to choose this or the other, or variations of one or both.

A modification of scientific perspective of considerable originality can be found in the work of Cézanne, who is generally referred to as the father of Modern Art, or, as I would rather put it, one of the numerous fathers of Modernism, since certain modern thought directions in art in many respects do not follow the Cézannesque system.

Aside from the perspective, Cézanne's method of simplification

Aside from the perspective, Cézanne's method of simplification contributed toward the contemporary style in composition, style, which, in the main, relies on the purely structural, formal elements (often referred to inaccurately by modern esthetists as "plastie"). Consequently, in a composition of this nature, there will be an absence of all illustrative details which might attain a self-purpose.



Ill. 49. Ingres: Odalisque. Composition cluttered up with unessential paraphernalia

These appended ornaments, as we may well call them, are characteristic of the *vieux genre*, the moth-eaten, mildewed esthetics of some of the 19th century art.

An example of a typical 19th century illustrative anti-Cézannesque composition can be seen in Illustration 49, a work by Ingres, a great artist indeed but one whose paintings often suffered from the bad taste so prevalent in his time.

When we accept Cézanne's principle of picture construction, a painting such as "Odalisque" is truly an abomination as regards composition, since all the paraphernalia displayed in it do not serve any purpose other than to "embellish and enhance" the illustrative content.

To repeat, were we to name one characteristic feature of what is generally referred to as "modern design," we would say that it is the co-ordination of all the expositions under the guiding principle of the structural, and the neglect of all details and illustrative expositions which do not serve a formal purpose.

Concerning Cézanne's landscapes (for it is here that the principles of his system of perspective become evident), in these landscapes the horizon—that is, the infinite distance—does not exist. The depth of the picture is always fixed in the middle ground and, since space does not converge into the horizon, the plane of the middle ground. hence all the other planes, remains parallel to the plane of the foreground. Now, with some of our progressive esthetists, this is looked upon as the only orthodox religion, the axiom of Modernism, a complete break with a perspectivic past which has become, in the course of time, ignominious. Of course, all esthetic dogmas, whatever their direction, lead an uncertain life and perish quickly; but the true religion of art—based on no dogmas whatever—stands fast.

Cézanne's arrangement of parallel planes and intersecting of planes had a wide-reaching effect on Modern Art. In fact, it is responsible for Cubism. Parallel planes created through their overlapping a different kind of perspective, as demonstrated in Illustration 51, and the system of intersection of planes gave birth to simultaneity of vision, referred to by some theorists as "dynamic of space."

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It must be said of Cézanne that, unlike his followers, he did not use these devices consciously, calculating his effects in advance, and perhaps for that reason his system is convincing. Always the conscious mind interferes with the process of creativity.

Simultaneity of vision is of great interest in art because it introduces a new idea of space. (New in our time, that is, for in medieval paintings this conception was general, but there it is referred to as "primitive." (III. 48.) As usual, the nomenclature of theorists is unreliable—because it is always custom-made to justify and enhance arbitrary fashions in art.



Ill. 50 (a). Paul Cezanne: Still Life

PICTURE COMPOSITIONS

In Cézanne's "Still Life" (III. 50) some objects are seen from one eye-level and others from a different vantage point. In order to experience or visualize such a situation, the painter would have to change his position—here crouching close to the ground, there ascending high into space, thus he could achieve in his design a tilting or intersecting of planes, to use somewhat esoteric nomenclature, which yields a strange spatial sensation namely, an up-and-down movement. Hence the term "dynamic." (In the graph, III. 50, this condition is made more explicit by exaggerating the position of the various points of vantages.)

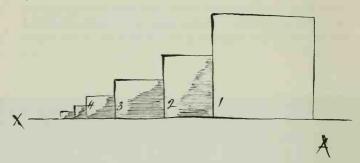


Ill. 50 (b). Analysis of perspective

PICTORIAL PERSPECTIVE

Simultaneity of vision, and with it the effect of action, the "dynamic of space," became the principle of the Futurists and Cubists.

By using overlapping planes (Ill. 51) the painter can create an illusion of depth in his picture without resort to the means which characterize scientific perspective, such as diminishing of objects with progressive distance.



Ill. 51 (a). Diminishing of objects in space according to scientific perspective

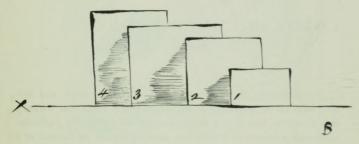
When we accept in this Illustration A that the line marked X is at our eye-level, it appears that plane No. 1 is nearer to us, plane No. 2 farther, and plane No. 3 still farther, and so forth, in accordance with their diminishing size. In Illustration B the planes grow bigger as they recede yet, because they overlap, the illusion of perspective persists. There can be no doubt that plane No. 1 is closer to us and plane No. 4 is the most distant.

After Cézanne started to clip off the expanse of pictorial space, the next step was logical: back to the two-dimensional system. Flat surfaces thus became the principle of a post-Cézanne Modernism and Henri Matisse emerged as one of its chief heralds.

Fashions come and fashions go. The revolution of yesterday becomes routine, establishes itself as the academy of tomorrow, and, since the approach of Paolo Uccello as well as that of Cézanne and the post-Cézanneists had become tired from much use and abuse, something "new" had to take their place. This new approach came

PICTORIAL COMPOSITION

straight from the old, long ago discarded Primitivism—the art of Byzantium, the archaic, Polynesian, Negroid, infantile art and what have you. The one-time Cézanneism and Cubism became thoroughly academicized, but a few variations of the old system still persist. Braque intersects his objects, takes some of the segments out, changes their positions, changes the eye-level, intermixes their frontal, side and



Ill. 51 (b). Overlapping of planes; they grow in size as they recede

rear views. Providing a painter has taste and a good sense of color (and Braque has both in a high degree), he can with these academic means produce decorative compositions of great charm.

COLOR IN COMPOSITION

In our discussion of problems in composition, harmony and balance were shown to depend on the disposition of forms and volumes. But no matter how well a design may be integrated, the particular value and resonance of a color can seriously disturb the balance of a composition. A small area of a high-keyed color can be powerful enough to tip the scale and outweigh a far larger area of quieter, neutral color. This implies that the local colors, that is, colors that are not influenced by distance and atmosphere, will play an important part in establishing balance in composition. When referring to local colors, it is well to remember that such colors usually have high resonance. Hence, cadmium yellow, cadmium red and all the powerful iron oxide reds carry considerable weight, whereas the cool colors and those greatly reduced in hue (by the addition of white, for example) will have little weight even when spread over a large surface.

Of course all such considerations are established by purely associative means. Since, in our experience, faded bluish or greenish tones suggest atmosphere, and are chiefly seen in the distance, they suggest buoyancy; that is, lack of weight. These weight relations of color are demonstrated on Illustration 52 (where, instead of color, white, gray and black were used).

Because the density of a shade is also influenced by its nearness or by its distance in space, it is at once apparent, that the small

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black area in Illustration 52, suggesting more weight, is closer than the larger, grayed field.



Ill. 52. Weight relation of strong (dark) and weak (light) colors

I have previously mentioned that, when arranging a picture, important elements of the composition should not be placed in the picture's corners or at the borders because they may show a tendency to desert from the ensemble or to arrest the eye near the exit and thus hamper its progress and its assimiliation of the whole. The same applies to the use of colors. Strong colors placed in the corners or along the borders of a picture may draw the attention away from the center of a picture—which is to say, its central interest.



PART II

THE ART OF DRAWING

CHIMAN AND THE HIT

INTRODUCTION

I shall not discuss here the science of anatomy and proportions; that is not the field of my investigation. Nor do I aim to tell the reader how to become an expert draftsman in ten (or a hundred) easy—or hard lessons, for this would be sheer folly. But I do propose to clarify the most important issues implicit in the graphic discipline.

References to master drawings of the past have been introduced to illustrate thoughts and esthetic convictions of our illustrious predecessors and thus to acquire understanding of and appreciation for the probity which goes into the making of great drawings. We learn from precedent, for only good precedent can guide us today and suggest possible ways and means for tomorrow. It should be remembered that among the drawings never yet surpassed are those of the prehistoric cave man. May his genius enlighten us and lead us to attainment of better draftsmanship!

In saying this, I do not imply that the safest road to good draftsmanship is by imitation—imitation either of the work of the cavemen or of the work of Michelangelo; on the contrary, imitation will hardly produce anything more than second-rate art, for, as Oscar Wilde put it so justly: "A truth discovered by more than one isn't true any more."

ACADEMIC AND NON-ACADEMIC METHODS

At the time I was going to art academies a generation ago, proficiency in drawing was considered indispensable before attempting painting, and so the hapless student had to spend several years in drawing classes before he was ever admitted into the kingdom of paint. Thus he developed early in life the handicap of divorcing drawing from painting, which was hard to overcome. Another handicap methodically cemented into the path of his artistic progress was the inevitable and most persistent demand for the study of classic statuary. Ah! The awesome world of Praxiteles, Phidias and Polycletus!

Now, I am not trying to deprecate the great art of antiquity, but I do seriously question the wisdom of the mentor expounding a dogma such as this: "Without the knowledge of the art of classic antiquity, artistic perfection and attainment of good draftsmanship are impossible." Even more absurd are pronouncements such as this one: "To the modern sculptor the knowledge of anatomy is entirely superfluous." (Quoted from an art professor of a mid-western progressive college.)

From my own experience and from all the historical and theoretical evidence that can be gathered, I can assure the reader that, although the knowledge of the principles of classic draftsmanship and the science of plastic anatomy will not produce a master, certainly ignorance of them will not make for artistic progress. On the con-

trary, such ignorance will, as a rule, prove to be a retarding element in the development of any painter or sculptor. There are exceptions, however. Some talents belonging to the category of the "primitive" (which can be looked upon as a category by itself) need no academic grounding, simply because their ability to learn from precedent is exceedingly limited.

As for the psychology of the modernistic esthete with regard to progressive art, this psychology is simple; or perhaps we should say, simply crude. He feels, because distortion (according to a popular credo) is the sign token of modernity, correctness in anatomic representation vitiates modernism. This opinion is affirmed by the work of some of the most highly publicized pseudo-masters, who have nothing more to offer than non-compliance with academic rulings. But non-complicance, per se, just as mere conformity to the visual or conceptual, has never sufficed for the creation of masterpieces.

As for the art of antiquity, one must understand that the teaching of the old masters as regards geometry and classic measurements is not the only way to esthetic salvation, although it undoubtedly was a salvation at the time when these sciences were created and when they gave to art meaning, force and beauty.

I should like to add that the classic, although it relies on geometric principles, need not necessarily fall into a conventional mould. Far from it. Some artists still understand how to entice from the old system a new spark, as can be witnessed in the work of Lehmbruck, Despieu, or Epstein, for example.

Besides the ideal realism of the classic conception, there are other approaches which do not conform to this ideal. But, since the ideal measurements are so easily comprehended in fixed formulas, to a too faithful adept those fixed formulas might, more often than not, become fatal. The reason for this fatality is rather simple: all rules carry within their compass—no matter how wide this compass may be—the germ of sterility. However, sterility can flourish where there are no rules whatever! This also is true.

As a demonstration of the effect of the presence or absence of rules, observe Illustrations 53, 54, 55.

ACADEMIC, NON-ACADEMIC METHODS

I made these drawings while at Bauhaus in Weimar thirty years ago. The idea behind this kind of analysis is to "decompose," as it were, the subject, in stages. First, a meticulous rendition of the visual was attempted; in other words, a graphic description of the subject. (Ill. 53.) Next followed a circumscription of one's feelings in the face of the subject (Ill. 54); and lastly, a semi-abstract interpretation was carried out. (Ill. 55.)

It seems quite plain that the first as well as the last conception has the best chance of becoming stereotyped; the first, because it adheres to certain conventions which the model dictates, the third because it establishes a system. And every system, no matter how ingenious, must inevitably end up on the scrap heap of formalism. Such is the fate of abstract art, because it is irrevocably committed to the non-objective.

As to our Illustration 54, the one which has been left out of our discussion thus far, it respects neither the niceties of convention nor the pragmatism of any school of esthetics. It depends on feeling, a feeling which the draftsman experienced when facing the object, and in rendering this feeling, he draws the onlooker into the orbit of his emotions. Providing that these emotions are authentic, and that the artist is capable of communicating them to others, they can, because of the freedom of expression, become highly persuasive.

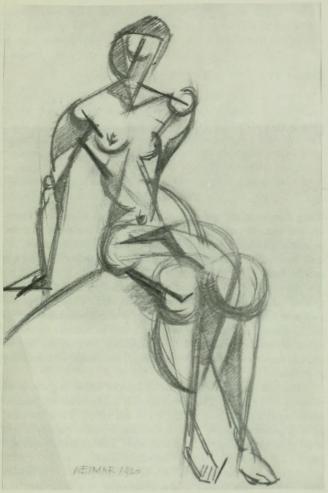
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Ill. 53. Realistic drawing



Ill. 54. Expressionistic drawing



Ill. 55. Analysis of construction

DRAWING MATERIALS

THE PAPER

When discussing the esthetics of a drawing, it is well to remember that material considerations—the paper and the drawing instruments—are always important although often neglected factors. We shall therefore investigate the nature of these materials with due circumspection.

As to the paper, one doesn't need specialized knowledge to determine its quality—the price will express this. Cheap paper will always be inferior. Good quality of paper does not necessarily depend on the manner in which it is processed, that is, whether its fiber is tightly or loosely pressed, whether it contains more or less size, or whether its surface is hard, soft or spongy, but merely on the quality of its fiber.

The best quality fiber is made of linen or cotton rag, hence the reference to rag paper. The trade custom is to emphasize the percentage of rag in a paper, such as 25, 50, 75 and 100%. From the viewpoint of permanence, rag paper is the ideal material, because it possesses great tensile strength, retains its white color (inferior paper will yellow) and can easily last for hundreds of years.

Paper is also manufactured from wood fibers (the latter have been used since the 18th century), or a combination of cotton, linen and wood. Although wood pulp which has been freed from chemical

impurities such as tar and asphaltum (in other words, that which is of the purest cellulose) is not necessarily worthless, it is the linen and the cotton content which will account for the lasting quality of the paper.

SIZING OF PAPER

Paper is sized while in liquid state. Animal glue has heretofore been the chief sizing agent, but nowadays casein, starch and plastics are also used. Some paper is sized on one or both sides after it has been partially dried. Sizing paper is very important if it is to be used for watercolor or pen-and-ink. The softer the paper the less size it contains; blotting paper, for example, is made of sizeless material. (Of course, softness and hardness of paper depend also on the manner in which the fibers are interlocked.)

TEXTURE OF PAPER

Just as in oil painting, where there is the character of a canvas to contend with, so, in drawing, the nature of the paper can be of great importance in its influence on the final appearance; perhaps even more so in a drawing, because the texture of a paper remains permanently all apparent, whereas the deficiency of a canvas texture can be covered up with a heavy impasto. Thus quite often the type of the roller which impresses an arbitrary grain into the paper can have more to say than the artistry of the draftsman's hand. Take, for example, the drawing of Seurat. (Ill. 56.)

As a matter of curiosity, let me say, in passing, that Seurat's drawings are of enormous monetary value on the art market, for reasons which (as often the case) have nothing whatever to do with the intrinsic artistic quality of the work. In fact, the artistic merit of drawings such as these by Seurat are, in my opinion, nil, simply because the draftsman's hand did not have a chance to express itself—it merely smudged the paper, bringing out its mechanical grain and producing some apathetic desultory light and dark effects.

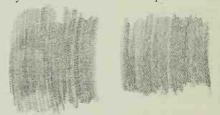
Therefore, in choosing a paper, the draftsman would do well to examine very carefully the nature of the paper texture, always led by



Ill, 56. Seurat. Drawing, An example of insensitive texture.
(Collection Museum of Modern Art)

the consideration that this texture may eventually be responsible for the drawing's final appearance.

In the following example (Ill. 57), various paper textures are represented which are difficult to manage or which should be altogether avoided, because of their too rough or too mechanical texture, all of which run counter to the sensibilities of the draftsman's hand. As a rule, a relatively smooth textured material is preferable because it will



Ill, 57. Textures of papers showing various deficiencies

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neither impede nor too much accelerate the draftsman's progress. Slick or oversmooth surfaces should also be avoided because they may unduly speed up the flight of the lead and this, as a rule, will result in a facile touch.

From the foregoing it may appear that I am, perhaps, too particular or pedantic on the subject of choosing the proper paper, however, one must consider that a line, in drawing, can have or can lack resonance somewhat like a string on a violin, and we all know how much difference the tension of a violin string can make in the rendition of a musical work.

COLOR OF PAPER

Besides the texture of paper, its color, too, can influence the general character of a drawing. Like the mechanical texture of certain papers, so the mechanical perfection of the color of modern paper is unattractive. Especially the darker varieties of toned papers are, because of their monotonous appearance, undesirable. Light gray or light cream-colored papers are, next to the white, the best. However, since, the charm of the texture—any texture—such as suggested by flat color, or by a plastic quality of surface, depends on variability, a hand-stained paper will prove to be far more attractive than the mechanically colored product. This, of course, is self-evident; the manufactured paper receives its color before it is poured into sheet form, hence its uniformity, whereas hand-staining of a paper's surface will produce an entirely different effect.

The best colors for staining paper are such as do not possess pigmental body. A watercolor, for example, does possess such body. First there is the pigment; no matter how finely it is ground, it can influence the quality of the pencil marks (unless the watercolor paint is considerably thinned with water). Then there is the binder—gum arabic in watercolor—which holds the pigment. This, too, can alter the surface characteristic of a paper by closing its pores. It should be understood that paper is far more sensitive to size than canvas (where a size prepared from 7% glue gives the fiber optimum of protection). Depending on the quality of paper, its porousness and the concentra-

tion of the original sizes used in its manufacture, a much smaller percentage of glue will suffice to seal the fiber of a paper, generally speaking, one-quarter of an ounce to about three or five quarts of water. Therefore, when using any kind of size prepared from gum arabic, gelatin, glue, casein and the like, the sensitivity of the paper to these sizes should first be investigated.

Better than watercolor stain for use on paper are, however, some of the dyes, vegetable or others. The lightest ivory color effects or a brownish stain can be produced by immersing the paper in various concentrations of tea brew. Sepia ink obtained from the ink sac of the cuttlefish also provides an extraordinarily beautiful brownish stain. A gray stain can be effected by using a water-soluble India ink. All these color matters can be applied to the paper by means of a large brush or a sprayer such as is used to blow fixative on a drawing, or simply by dipping the paper into a dye-bath.

Immediately after such an application (that is, a thorough wetting) the paper should be flattened on a drawing board and attached to it on all four sides by means of a gummed paper, to prevent it from cockling. It is essential that the entire edge of the paper be well attached to the support, for when even a small fraction of the edge is not immobilized, the paper will wrinkle and form severe folds. Such folds cannot very well be straightened out unless the whole paper is thoroughly soaked in water. Soaking in water does not mean a mere superficial wetting. It can take several hours, with some papers ten hours, before its fiber becomes sufficiently softened. (After such a radical procedure, some papers, especially those used for ink drawings, may require re-sizing.)

I have said that strips of gummed paper are best for attaching the drawing paper to the board, because I have experienced on occasions that when using scotch tape the pull of the paper proved to be too strong, the tape gave in somewhat and the paper formed folds. When the paper has dried completely—one should not be deceived by a superficial appearance of dryness—the tape should be cut off from the board with a razor blade. It is best to leave the paper to dry over night, because even a slight amount of moisture left in it will make it wrinkle.

PRESERVATION OF DRAWINGS

When drawing with any instrument, the paper behaves like an abrasive—its grain takes up some of the graphite, charcoal, etc., and holds it firmly in its fiber. To make the marks left by the drawing instrument more permanent, a protective coat of fixative is used. Fixative is prepared from shellac dissolved in an enhydrous alcohol known as shellac solvent. Commercial fixative is made up of one part of orange shellac (by weight) and 10 to 12 parts of shellac solvent (by volume). Although the orange shellac imparts to the solvent a brownish tinge, this is unobjectionable since, in thin concentration, such as indicated above, it will hardly affect the white paper. White shellac (which is the bleached form of the orange variety) is, because of its turbid appearance, not as desirable as the former. The preparation of a fixative is simple; the orange shellac, which is obtainable in the form of golden-brown flakes, is placed in a jar containing the solvent, in which it dissolves readily.

Fixative is applied to a drawing—any drawing, lead, chalk, charcoal—by means of a blower; the fine spray covers the drawing with a thin, protective membrane. Excessive use of fixative, also fixative in heavier concentration, should be avoided, as this will produce a gloss on the surface and may unpleasantly affect the character of a drawing.

Another kind of fixative can be obtained by dissolving gum mastic in pure alcohol. (Mastic is a resinous exudate from a species of the pistachio tree which grows in some Mediterranean islands; it was at one time extensively used as picture varnish.) A 2% solution of the resin is considered adequate for the protection of drawings. Drawings produced with water-soluble inks can also be protected by either kind of fixative, mastic or shellac, although, thus treated, they do not become entirely waterproofed; for waterproofing, a heavy concentration of the ingredients would be required, such as would produce considerable gloss on the paper.

A fixative made of glue or gum arabic was, according to an old account, prepared by the early masters in the following manner: the paper was first coated with a size, next the drawing was carried out

on top of it. In order to fix the finished drawing, the paper was attached to wooden stretchers and held face upward above a kettle in which water was boiling. When the steam had softened the size, it in turn enveloped the marks of the graphite, chalk, etc., thus providing them with a protective coating.

MOUNTING OF PAPER—FRAMING

If a drawing executed on a flimsy or inferior paper is to be mounted onto a more solid support to give it stability, the reverse side of the paper should first be covered by means of a brush with a white library paste (an adhesive produced from starch). Next, the paper is placed on a strong cardboard, such as an extra heavy illustration board, or any other suitable material. Beginning from the center, roll it with a rubber roller towards the edges. It is imperative to start always from the center, and not from the edge, in order to avoid forcing up of creases. When the drawing has been thus attached to the support, it should first be protected with sheets of tissue paper and the whole then placed between smooth boards (such as Masonite), and weighted down to allow it to dry out flat.

Besides the adhesive prepared from starch, paper cement (made of rubber) can be used. It is important to obtain the best quality of cement, which will not stain the paper. Of course, glue, gum arabic and gelatin, are also suitable adhesives, but they are more difficult to handle and are more likely to invite mold and mildew. Lately there has been introduced a dry mounting tissue prepared with a synthetic adhesive. This too can be used for mounting drawings.

If a drawing is to be framed under glass, care should be taken to keep it at a distance from the glass, because the condensed moisture which may collect on it can seriously damage a drawing. A heavy mat will keep a drawing away from the glass. Papers which are not mounted on a stiff or semi-stiff support should be attached to their backings (when framed or matted) on the upper edge, at two places only, so as to permit free movement of the paper. Because it is quite hygroscopic, the paper will react to atmospheric moisture, and attaching it on all four corners will cause it to wrinkle.

REPAIRS

Badly creased paper should be soaked in water overnight, then affixed by means of gummed tape to a drawing board. In severe cases, a not too-hot, heavy laundry iron should be used to press the paper, which should be thoroughly moistened; next, the paper should be again thoroughly soaked in water, gummed to the board and allowed to dry.

Mildew can be removed from the surface of the paper by exposing it to strong sunlight. Also, moistening of the affected spots with a 10% solution of magnesium fluosilicate is advised. After the application of the solution, the paper should be well washed by sponging with distilled water. Brown stains due to mold can be eliminated by alternate immersion (for periods of from 10 to 20 minutes) first in a chloride of lime solution (one-quarter to one-half ounce to one quart of water) and then in a hydrochloric acid solution (one ounce of C. P. hydrochloric acid to one quart of water). After the disappearance of the mold, the paper should be well washed in running water.

To remove fixative from a drawing, wash the surface with alcohol. From hard-surfaced paper, fixative can be removed by scraping the surface with a razor blade or a rubber eraser.

Brownish spots and tiny specks, as found sometimes on old papers, cannot be removed. They are caused by oxidation of small particles of iron which have come from the rollers used at one time in the manufacture of the paper sheets. In modern paper production, steel rollers are used and these will not affect paper in like manner. Early wooden rollers, as well, had not this disadvantage. However, brownish discolorations should always first be examined for mold. Marks produced by fatty substances are especially difficult to eradicate from the fiber of a paper. Depending on the nature of the fatty residues, a soft paste prepared from chalk mixed with either alcohol, benzol, carbontetrachloride or acetone, should be placed on top of the paper. But a perfect removal of fatty residues is always problematic.

Stains from writing ink should be treated by chloride of lime or a 10% solution of oxalic acid (applied with a glass rod). The paper

must then be thoroughly rinsed with water to prevent later staining. To remove India ink, use alcohol.

When speaking of immersion of a paper in water, one should, of course, first carefully consider whether the drawing executed on it will suffer when treated in this manner.

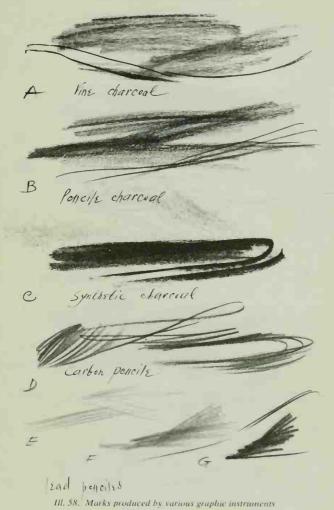
THE DRAWING INSTRUMENTS

Of paramount importance to the draftsman is the nature of the drawing instruments, for they can affect the style of a drawing and they will often account for the artist's approach to the graphic problem.

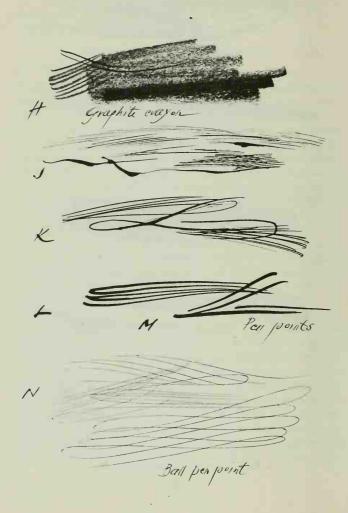
Naturally the student cannot decide in advance which particular instrument would best suit his purpose and aid him in expressing his particular ideas. It is common experience that some artists respond more readily to the working of a hard crisp pen; others prefer the soft charcoal or the brush. Only experience and long practice can eventually establish the draftsman's true affinities in regard to the materials and instruments he uses.

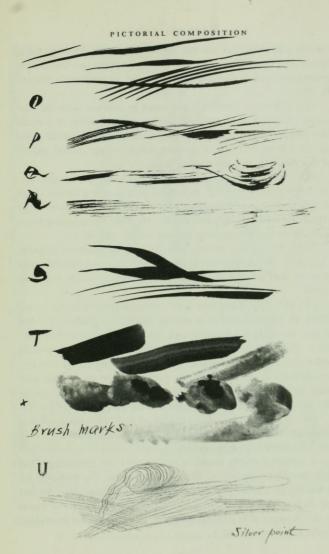
In the following we shall discuss the characteristics of all the commonly used instruments of drawing and analyze their effects on paper:

- (A) Vine charcoal; (B) charcoal pencil; (C) synthetic charcoal; (D) carbon pencil; (E) (F) (G) lead pencils—hard, medium, soft; (H) graphite crayon; (I) sanguine (and bistre); Conté crayon; (J) (K) (L) (M) (N) various pen points; (O) (P) (Q) (R) (S) (T) various brush marks; (U) silver point.
- (A) Vine charcoal is the only material which should be used for developing a composition on paper or canvas, because it can easily be wiped off when changes in the design are required (cheesecloth is best for this). Charcoal lends itself to large, linear and tonal definitions and generally it is the most flexible material for sketching objects where little attention to minute details is required. As a graphic medium in its own right it is not much used today, because it produces mild chiaroscuro effects and certain atmospheric softness generally reminiscent of the academic manner. In fact, charcoal and the characteristic charcoal paper have been for so long the main stand-



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by in art academies that for this reason alone such drawings have, today, a tired look. However, this does not alter the fact that master drawings executed in charcoal always possess an ineluctable beauty. (Ill. 59)

- (B) Charcoal pencil has not much in common with the vine charcoal. Because of its solid consistency and thin body, it is much better adapted to linear rendition than either vine or synthetic charcoal. In texture and tone it is quite similar to the carbon pencil, and like the latter it is not easy to erase.
- (C) Synthetic charcoal is intensely black and has a coarse texture. It is a difficult material; its softness permits only a narrow range and only dark shades. Its coarse body suggests application on large surfaces. Its marks are difficult to erase. However, when intense black shades are desired this material is quite useful. (III. 61.)
- (D) The carbon pencil comes in various grades of softness. Its intense black can, like that of the synthetic charcoal, become quite aggressive, and its marks on paper are somewhat severe and hard to erase.
- (E) (F) (G) Lead pencils of various degrees of hardness and softness are too well known to require description. Suffice it to say that they are really not made of lead, but this is the accepted nomenclature. They are universally useful and perhaps the most versatile graphic instruments we possess. (Ill. 60.) Among the outstanding characteristics is their capacity to glide over the paper with ease greater than that of the carbon pencil, but not too great an ease to make the use too facile. They have a tonal range of great variety.
- (H) The graphite crayon is identical with the lead pencil, but because of its large working surface its usefulness is limited. It is of value only when large surfaces are supposed to receive uniform shading—a condition chiefly found in architectural and commercial, but hardly in artistic, renditions. The graphite can be very well used for the making of transfer paper with which to trace drawings. All one need do is to rub it thoroughly into a thin tracing paper. A traced line can, because of its uniform thickness, hence suggestive continuity, be quite effective. (Ill. 62.)

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Ill. 59. Charcoal drawing by Mathias Grunewald St. Dorothea

(1) The sanguine and bistre crayons (the only colored crayons discussed here) are perhaps the most charming instruments for "painterly" renditions. Many a Renaissance master drawing was executed in these materials. Because of their soft tonality and effectiveness in gentle chiaroscuro, in other words, delicacy, they assume at present an old-fashioned look which, notwithstanding, should not deter artists from using them. Sanguine is prepared from an iron oxide pigment which has the color of a light terra di pozzuoli (light red) and bistre has the color of umber. Both are especially well adapted for the making of transfer papers. (Because the reproductions are printed in black, marks of these crayons are omitted.)

The letters J, K, L, M, N represent the effects of various pen points. J is executed with the finest pen, used for India ink. This small pen is an ambiguous instrument. When used without pressure, its thin line can register very faithfully the sensitivity of the hand. The peculiar thing, however, is, that once enough pressure is exerted to produce a thick line, the continuity of the traveling line is disturbed. The effect of such a line appears jerky and without confluence. It is reminiscent of those antiquated commercial pen-and-ink illustrations so popular a generation ago. It is evident that the small steel pens are made in such a fashion as to require too quick a transition from no pressure at all to relatively great pressure, and in between these two tensions, the mechanism of one's fingers seems to fail. That these deductions are true can be seen from the marks of an old-fashioned goose quill. (Ill. 63.) The characteristics of both these pens are similar, except that the quill responds to the slightest pressure of the fingers. In the analogy, we may liken the characteristic of the steel pen to that of a stiff palette knife. As long as the pressure of the knife is slight, it glides very well over the surface of the canvas, but when more pressure is applied, the response of the blade is such as not to allow the execution of sensitive passages.

K represents the marks of a large pen. It has not the deficiencies of its smaller counterpart and, although it is not as sensitive as the goose quill, for all-around use it is better adapted than the pens L and M. The first has a round point and the second has a flat, wide

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Ill. 60. Drawing in pencil by Degas

point. I do not think that these types of pen could very well be used in artistic drawing! Marks under the letter N were made with a ball-point pen. Like the lines produced by the use of transfer paper, the uniformity of the fleeting ball-point demarcations are very agreeable, but too fleeting, perhaps, to register a line which the artist might really have felt. The facility of its swift movement can, I believe, easily lead to superficiality.

Brush-marks made by various types of hair are represented under O, P, Q, R, S. The first marks, O, are those of a watercolor sable brush with a perfect point. P, Q, R represent brushes which have served their time in oil painting and are thinned and worn from much wear and tear. (The sable hair of these brushes was made longer by filing off a piece of the metal ferrule. The cement which clings to the hair covered by the ferrule was washed out with a paint remover.) The marks which these fuzzy brushes leave are quite capricious; they can vary greatly, depending on the condition of the hair. As compared with the brush marks produced by the perfect point, they suggest more texture, and, although they may easily produce haphazard effects, if used wisely and with restraint their imprint may be preferable to that of the perfect brush. And this, I believe, because their control is not always easy, the artist is forced to apply his hand with greater intensity. One should consider that the brush tip glides practically without opposition, so to speak, on the surface of the paper, hence it invites certain undesirable glibness of definitions. Brush S is one of the oriental family. It is rather large, extra soft, possesses a very fine point and a full body. It permits immediate transition from the most tenuous to the broadest marks. It must be held vertically to function properly. The Chinese are masters in its use.

Example T concerns not linear but tonal effects produced by means of a brush. The tonal values partake, of course, more of painting than of a graphic discipline, but, since the execution is in black and white, it really belongs to the graphic category. The technique as regards tonal values offers the painter perhaps the broadest means of expression, inasmuch as he can combine the linear and the painterly effects. (Ill. 70, 71, 77, 78.)

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Ill. 61. Drawing in synthetic charcoal (Taubes)



Ill. 62. Transfer paper line drawing (Taubes)

The last example, U, reproduces lines made with a silver-point. Silver-point drawings were in favor chiefly during the time of the Renaissance. The drawing instrument is, in this case, a silver rod which tapers to a fine, dull point. (It can be made of a wire and set in a handle used for holding an etcher's needle.) When impressed to a surface coated with a fine abrasive such as chalk, clay, zinc white, etc., it leaves light gray marks on it. A surface suitable for silver-point drawings can also be produced by coating the paper with a white watercolor paint. The marks of a silver-point become darker in time through oxidation. On the whole, the drawing relies on fine, delicate lines. It lends itself more to a deliberate control than to a spontaneous rendition.

And now a word on inks, all of which go into the pen and brush techniques. Three types of media can be used. (1) India ink, (2) water soluble inks, (3) watercolors.

India ink, which, upon drying, becomes insoluble in water, is produced from carbon black bound by shellac and borax, with the addition of water. It can be thinned with water, but once dry it becomes water insoluble. (It will yield, however, to alcohol.) India ink can also be had in a variety of colors. All of them dry with a gloss. When used on broad surfaces this glossy effect is rather harsh and unpleasant.

A much milder tonal character and more delicate gradations, can be produced with a black water-soluble India ink. Other water-soluble media are: sepia (obtained from the ink sac of the cuttlefish, which is of a beautiful rich brown color, and the iron galatinnate inks (writing inks) which, like the former, are not quite resistant to light. (Since a "faded" appearance of a drawing is sometimes desirable, the deficiency of an ink with regard to light-fastness need not always be considered detrimental.) And, lastly, there is watercolor which can also be used for pen and brush techniques. When referring here to watercolor I have in mind only a monotone range, such as black, brown, red.



Ill. 63. Rembrandt: Quill and ink drawing

THE ART AND THE TECHNIQUE OF DRAWING

VARIOUS ESTHETIC CONSIDERATIONS

A drawing can serve two purposes; it can be an auxiliary to painting, or it can be a medium of study and inquiry into the nature of objects, in which case it can become an art form in its own right. Because we are not concerned here about the relationships of drawing to painting, we shall discuss presently the art of draftsmanship as it shows up independently in the graphic medium.

When referring to study and inquiry, I mean specifically study from nature, for it is only the natural forms—forms within the orbit of our experience—whence come to us suggestions for the creation of art forms. Whether we "copy" from nature or "analyze" (Ills. 53, 54, 55), always there will underlie our efforts this urge for research; no matter how far we may deviate from the original subject in our graphic representation, the departure will not lead us to the realm of non-objectivity for the umbilical cord of mental association with natural forms will always be intact. The conception of non-objectivity in art is really a conception of fools, and its popular sophistic justifications amount to no more than flimsy dialectics.

As to copying from nature, the term would seem to imply that mechanistic processes are involved—and quite frequently they are.



Ill. 64. Albrecht Durer Study of hands

Drawings which rely upon literal reproduction (reproduction from nature, other painters or conventions in the graphic traditions) lose, as a rule, their value as art forms, or at least their stature as works of art decreases, for only creative processes implicit in a drawing (or a painting) can elevate it to the rank of art.

From the foregoing, one would suspect that minuteness of rendition and faithfulness of representation, in other words, verisimilitude to nature, would vitiate creativeness and reduce a drawing to a mere copy. This, of course, is far from being the truth. To explain by means of words wherein the element of creativeness in a drawing lies is difficult if not impossible; or perhaps such an explanation calls for eloquence such as this author does not command. At any rate, what words cannot do a picture will, and our picture in this case is Dürer's "Study of Hands," reproduced in Illustration 64.

The study is what one would call "photographic." The artist, it would seem, did not take any liberties with the model's appearance and thus did not leave himself any margin for personal interpretation. In fact, we would call such a drawing a "blueprint"—but how far it is removed from the mechanical—how much of Dürer's own inviolability and creative power reside in it! As I have said, in certain instances the condition of creativity cannot be measured or definitely appraised, neither can we explain in words precisely and effectively in what manner the tone of a violin string touched by the finger of a master differs from that produced by a non-master. In a drawing, it is the melodic quality of its delineaments, the resonance of the graphic syntax, as it were, which accounts for its greatness.

It is quite true that minuteness in rendering the factual generally stultifies the hand, for in putting the nervous apparatus under a rigid control it intercepts its immediate responses; thus the personal touch may be dulled and the manual as well as cerebral reaction may fall into hibernation. It would seem that this is the rule; it is also true, as has been said, that there are as many rules as there are geniuses, and Dürer, like Pollaiuolo, was a genius. (Ill. 65.)

From the drawing of Pollaiuolo, we sense that he might have been actually responsible for the discovery of plastic anatomy. He

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did not use his knowledge on the subject of anatomy for achieving verisimilitude, he actually created the figure without any preconceived idea, learning, as it were, about anthropomorphology as he went along.

Not so Bronzino. (Ill. 66.) He knew quite well before he began where, for example, the sartorious would start its course down the thigh, and there was no doubt whatever in Bronzino's mind as to its course as well as to its port of destiny. Metaphorically speaking, Pollaiuolo was not so sure about it, and if told, he would have



Ill, 65. Pollainolo (15th Century): Study in creative anatomy



Ill, 66. Bronzino (16th Century).
Study in academic anatomy

been skeptical. He had to discover the sciences for himself, and therein lies, no doubt, one of Pollaiuolo's and Dürer's and every artist's secret of greatness: the capacity to discover and not merely the faculty to employ a discovery.

Research and study can go in many directions, and, of course, attain varying degrees of penetration and personal interpretation. Today, inquiry into the science of anatomy seems to be futile, since no new avenues of approach exist. Hence, any information which we may gather along the lines of this science will hardly lead to creative endeavor.

Inquiry can proceed, as I have said, along differing lines; there may also be a diversity of technical approaches. The analyses can be directed at an object's texture, chiaroscuro, or its innate energies. As an example I have chosen one of my early drawings in which an analysis of a form's kinetic growth, so to speak, was attempted (Ill. 67.)

In this illustration the draftsman has built his subject in a series of rhythmic sequences by delicate inclination of the diagonals and their deviations from the vertical ascent. On this ascent the lines move like voices in a musical fugue, and each of them is composed of a number of definitions which reverberate in overtones around the leading motif, and as though to impart their sense of rhythmic flight to the surrounding space, they transgress beyond their naturally restricted boundaries. Between these straight, ascending forces, there float gentle parabolas, semi-ellipses and other variables, some swaying freely, others pivoting around a well-anchored point. The body seems hardly to be made of solid matter. The arm, for example, does not obstruct the vision of the spine directly behind it, nor does the cage conceal the half-globe of the breast turned away from us. Two heads seem to grow on the torso, each one placed in a different direction, and the definition of the limbs is such that, if the attention of the beholder becomes fatigued, he may retrace his steps, as it were, on different avenues, just as his fancy desires.

Now, were you to ask me what, then, are the tasks of a drawing or painting, what is its place in the scheme of things. I should answer: Alas, art as a branch of human endeavor has narrow boundaries; all



Ill. 67. Figure drawing (Taubes)

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it can do is to amuse your eye; to gratify your sense of variety, to awaken your power of association, to kindle your imagination.

The imagination of the onlooker can, of course, be activated by various graphic means. One of these means becomes explicit by the hand of Michelangelo. (Ill. 68.)

It should be understood that Michelangelo, in changing the position of the limbs and leaving the original ("erroneous") positions intact on the paper did it with a purpose. Also, the effects of what appear to be incidental sketches, are hardly products of a spontaneous whimsicality. The esthetic appeal of such marginal fragments assembled, as it seems, at random, was quite prevalent at the time of the Renaissance (and most likely long before then); such sketching sheets were highly valued and eagerly sought by the collectors. To return to the multi-legged figures, the device, as I mentioned, has a definite purpose. It leaves the choice of a certain position of a limb to the discretion of the beholder. Not only is the beholder's ocular vanity gratified by such concessions, but his instinct for making discoveries is spurred and his interest kept awake and alive by the adventurous spontaneity of the rendition. Hence, the advice to the draftsman: Use the eraser sparingly, and with great circumspection, for spontaneity of graphic rendition can become the very life-blood of a drawing.

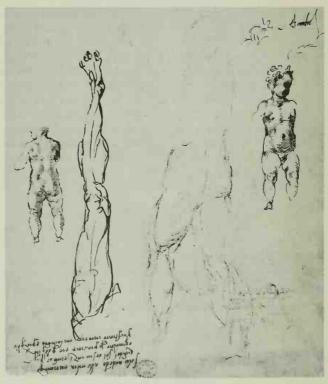
That in drawing, as in painting (or writing, for that matter), "spontaneous" effects need not necessarily be really spontaneous, this is self-evident. Quite often what appears to be the gesture of bravura and sheer inspiration is the result of a laborious process of calculation. Consequently, the inspired draftsman will permit only such "errors" to remain visible on paper as the esthetic of the design requires.

SPONTANEITY

The word spontaneity implies that the action of the draftsman was rapid; spontaneity necessitates concentration on the object's chief characteristics, and a more or less complete lack of details. It evolves a shorthand technique. Absence of detail will permit concentration on the essential form, hence the dominant features of an object will

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remain uncluttered by incidental expositions. This is generally true—bigness in conception and minuteness in rendition fairly exclude one another, but there are exceptions—Dürer for one. In some of his designs a most prodigious wealth of detail is displayed, and all with the most meticulous finish—yet the true nature of the object never becomes obscure.



Ill. 68. Michelangelo drawing

Dürer achieved monumentarily according to his Gothic tradition; Rembrandt's monumental conception rested on different principles. There are reproduced in Illustrations 69 and 70 two of Rembrandt's drawings.

These masterpieces of a very great order (we can say that there are degrees of greatness within the category of masterpieces), are products achieved by the artist's subtraction from his model's features, until there remained nothing but the essence of the inner image. Let us now examine what this means in the realm of art, and how it was objectivated in Rembrandt's drawing.

The popular story of the Japanese court painter and the emperor gives us perfect insight into the essence of draftsmanship which, for lack of a better definition, we may call impressionistic. Now we are told that the emperor ordered from his painter a scroll on which some of his favorite brands of chickens were to be depicted. The work was urgent, said the emperor, and he commanded his painter to hustle. Weeks went by and the picture was undelivered. Greatly annoyed, the emperor came to the painter's shop and asked for the reason of the tardiness. The painter begged his indulgence, and, gathering some brushes and trays of ink, he commenced, before the very eye of his patron, to dash off some amazing images of chickens in a matter of minutes. Then, to forestall the emperor's wrath, he opened many drawers and spread before him countless drawings, minute studies of the birds in all walks of life—detailed "blueprints" of feathers, wings, beaks, claws, seen from all angles and positions. "In order to finish my work as speedily as I did," said the artist, "I had to do all these first."

The lesson of the story, which can be applied to Rembrandt's drawings, is simple. In art, perfect comprehension of an object's inner image without the perfect knowledge of its outer mechanism is impossible. In using the term "inner image" I am perfectly aware that it may sound mystical. But it shouldn't, for art is a matter of visual esthetics alone, and all philosophical, moral, sociological and any other involvements of non-esthetic nature which some people try to read into it make no sense whatever. The philosophy of art is im-

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111. 69. Rembrandt: Tone drawing



Ill. 70. Rembrandt: Tone drawing

plicit in the tension of a line, in its reaction to another line, in the nature of a form, the value of a color.

Coming back to Rembrandt's drawings and the matter of subtraction, this method with him was the result of an all-inclusive knowledge, an understanding of the nature of things. Before arriving at the point where he could abbreviate and simplify, as seen in his mature work, Rembrandt had to go through a maze of trials, rectifying, as he grew in wisdom, the unavoidable errors. Theoretically, one might accept that putting leaves on a tree, for example, would make the tree function, and gathering many trees together would make a forest; in other words, that one might be able to achieve characterization through accumulation of details. In the practice of drawing, however, the reverse, more likely, will be found true. In drawing, eloquence can be better expressed by means of reticence and an utterance becomes more explicit when understated. This is all well known; hence, many a modern artist practices, as it were, understatements before he learns how to make any articulate utterance. Consequently, we see today so much glib reticence, ready-made simplification, synthesized before acquisition of knowledge, and a display of prefabricated understatements acquired at bargain prices.

STUDY FROM NATURE

"But life in nature manifests the truth of these things. Therefore, observe it diligently, go by it, and do not depart from nature arbitrarily, imagining to find the better by thyself, for thou wouldst be misled. For, verily, art (that is, knowledge) is embedded in nature; he who can extract it, has it."

Now, I know, reader, what you may say: "This is old stuff." Did Dürer say it? This makes it still older stuff, and we have heard it repeated in many tedious variations. True enough. He (Dürer) also said: "An artist must possess theoretical insight and practical skill." Old stuff, likewise, and perhaps stale, too; but true just the same. By analogy your author, for example, is bored by Beethoven's symphonies, a fact which does not whittle even a tiny sliver from their colossal format.

And to continue in Dürer's spirit: O painter, before thou, settest out to create a tree, or a man, or a cow, after thine own individual manner, consult with the Lord's creations as they appeared prior to thy sovereign intervention. In other words, draw from nature; and if you think that you know how a limb, for example, moves away from a tree trunk—draw it ten times more, and if you have learned the probity of a tree's formation, then commence to fashion it after your own image. But once you have created your own tree (or two trees, or ten kinds of trees), go back to nature for some more consultation, for otherwise you will quickly and inexorably fall into some patent formulas.

From the above it appears that, without resorting to inquiry from nature, our own inventiveness as regards art forms may become formalized. Or inventiveness may simply run out of all context with our experience; it may become a matrix of the void which can completely overwhelm one's native artistry. Most of the work of Pablo Picasso gives us an excellent example of such a void grown to absurd proportions.

When we do resort to references from nature, our impulses gain in authenticity. Even though the graphic pattern resulting when drawing from nature may be far removed from the model, even though our license with the faithfulness of repesentation may have taken such a course as to obliterate at times the object's original appearance to the point of unrecognizability, there will still be an element of authenticity which has been infused into it through the contact with nature.

The reasonableness of my contentions can be easily approbated by trying a simple experiment, such as inventing a figure, for example, from imagination, and then drawing the figure in an identical position from life. We shall at once become conscious that the delineations, no matter how much they may deviate from those actually seen on the model, will function more convincingly than those freely invented. The same does not apply, however, in painting. Drawing and painting are not governed by identical rules, and what seems to be just in one does not necessarily apply to the other. By empirical evidence as well as from art history one can say equationally, that drawing as an

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art form is to painting as music is to painting—they are related in many ways, yet dwell on different planes.

As regards composing from nature, in painting the reverse seems to be true. The drawing which serves as a scaffolding for the composition should first—it is my contention—be made from imagination. But this subject will be discussed separately in the book which I now weigh in my mind—"Painting—The Art and the Craftsmanship."

THE USE OF DISTORTION

The condition of distortion can be found in every motif which is not amorphous in pattern. And the only amorphous patterns in the realm of the painter seem to be water, clouds, mountains and related subjects. A distortion is nothing other than an aberration from the classic norm. I say "classic" advisedly, because realistic forms are oftener than not distorted in one respect or another. A very common distortion discussed in the first part of this book is that used in the rearrangement of objects in pictorial space, in other words, the conditioning of scientific (classic) perspective. Conditioning of anatomy, that is, distortions of the human body, is the subject of our discussion here.

Distortions can be likened to discords in music, and, as in music, what once was considered discordant later on tends to become accepted as harmonious, so in art, certain kinds of distortion, once they have become familiar by experience, cease to appear to us as strange. Distortions in art are often used deliberately for the sake of emphasis, to heighten the expressiveness of presentation and to dramatize the pictorial motif. For example, were we to modify Michelangelo's forms (which, although of classic design, do not conform to the conceptions of "ideal realism") to normal proportions, they would at once lose their monumental power. Thus Michelangelo's forms can be considered distorted. In point of fact, much of what is considered classic in art shows minor deviations from the norm, hence, often, it does not conform to the principles which rule the well-proportioned.

When drawing spontaneously, that is, rapidly, it is not to be expected that the well-proportioned will come off smoothly. The con-



Ill. 71. George Grosz: Distortions integrated to an effective design

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dition of balanced proportions is not brought about by hastiness and speed, but by deliberate calculation. And, since deliberate calculation is part and parcel of the painting processes, it is logical to accept that distortions are more germane to drawing than to painting. That is not to say that distortions are alien to painting, but in drawing they are more often than not its very life-blood. Distortions in a drawing can be responsible for much of its interest, zest, vitality. Perhaps because we meet so often with all kinds of grotesque distortions in the form of cartoons and caricatures, we take it more for granted in the graphic medium than in painting. For the nature of drawing, we can say, is aphoristic rather than epical.

Spontaneity of rendition has much to do with the capacity to convince. Distortions in drawing easily capture the beholder's attention, they convey vitality, possess suggestive power, hence, they are, if directed by good taste, skill and sensitivity, the draftsman's valuable instruments of persuasion. Such is the drawing by George Grosz reproduced in Illustration 71.

TECHNOLOGY AND ESTHETICS OF LINE AND TONE RENDITION

That the type of drawing instruments is of prime importance in establishing the character of a drawing has been repeatedly stated. As in handwriting, so in drawing, the graphic aspect can be materially influenced or altogether altered by the use of a hard pen point or a soft graphite, for the nervous mechanism of the hand is ever sensitive to the nature of the recording instruments.

If the physical property of the recording instrument is softness, for example, calligraphic rendition—that is, reliance on the purely linear—is not feasible, because the instrument will tend to produce blurred edges in the line. Similarly, in painting the quality of a certain viscous painting medium will produce fusion of paints and will not permit crisp delineations. Blurred, soft lines are considered painterly, hence, better adapted for chiaroscuro than for calligraphic effects. Since the chiaroscuro method of emphasizing light and shade and tonality runs counter to the purely graphic, some quarters (and not without justification) look upon the technique which stresses tone instead of line as not strictly in the drawing mode. It is true, impulses which only a calligraphic line can register are, in chiaroscuro rendition, often reduced in importance and sometimes altogether absent.

But chiaroscuro drawing, although it is considered generally outmoded today, can be responsible for some of the most dramatic



Ill. 72., Guardi: A study in chiaroscuro

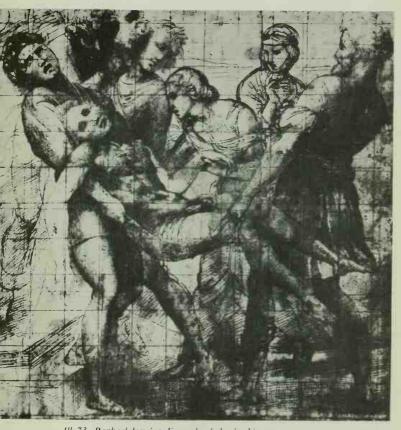
effects, not because it suggests the third dimension, but because it can, by submerging some parts of the drawing in shadow and leaving others in light, incite the onlooker's imagination and create a mood quite different from that induced by a graphic line. (See Ill. 72, also 69 and 70.)

When I speak of mood in connection with chiaroscuro rendition, the specific reference is to its poetic aspect. Of course, there is a poetic aspect of the linear, too, but the particular quality of a line is more closely related to music than to poetry.

In mentioning chiaroscuro as outmoded, I should perhaps qualify the statement. The chiaroscuro method is considered one of the principle features of the classic conception, and the arrangement of light and shade of this conception conforms always to certain rules, such as the choice of only one source of light cast on the object. Consequently the object will show a clear division of light and shade. To reduce the realism of representation, and to add more impact to it, the modern school would destroy the unity of the lighting. It would distribute the darks and the lights wilfully, because it is led not by realistic considerations but merely by the necessity for emphasis and dramatization. (Ills. 73 and 74.)

To return to line and to consider its calligraphic nature—it can rely on a purely meandering pattern, a convolute of definitions having identical tension or it can vary in bulk; the line can attenuate and swell, and these differences, too, will represent impulses emanating from the mind and transmitted through the sensitive antennae of the artist's fingers. Thus a line such as one made by means of a transfer paper or a ball-point pen (the line that does not change in bulk—Ill. 62, also graph Ill. 58) will express a different idea than a line which has been produced, as it were, like a tone on a pianoforte, influenced by pedals, which broaden or dampen the reverberations. (Ill. 61.)

There is another alternate for linear treatment, namely, the "broken-line," a line broken in continuity, especially favored by the French school of Impressionists and Post-Impressionists. But a much more interesting linear technique is demonstrated in Illustration 75 by Vincent Van Gogh.



Ill. 73. Raphael drawing. Example of classic chiaroscuro



Ill. 74. Example of non-classic chiaroscuro (Taubes)



Ill. 75. Vincent van Gogh: Drawing

Here the line has been broken and reduced to small bars and dots, producing a pattern of extraordinary sensitivity. In my opinion, Van Gogh's graphic technique and what it expresses stand apart from anything developed by the Impressionists and Post-Impressionists; in fact, it belongs with the most original conceptions in the history of drawing.

I have already referred to tonal technique and likened it to watercolor painting, the only difference being that the washes are done in monotones. The tones produced with India ink, watercolor or sepia, can be supported by linear definitions, or rely entirely on the increase or decrease of their tonal density. They can be applied to a dry or a slightly moistened paper. The monotone washes, however, can be really considered as watercolor painting in grisaille. An example of tonal drawing can be seen in Illustrations 76 and 77.

TECHNOLOGY AND ESTHETICS



Ill. 76. Goya Tone drawing in India ink



Ill. 77. Tone drawing in water-soluble India ink (Taubes)

SOME BASIC DEVICES AND AIDS IN DRAWING FROM LIFE

Unlike painting, where complex technical manipulations are involved, the technique of drawing is simple. "Beginner's, advanced, expert drawing,"—all such conceptions do not make much sense, for the degree of skill will not of itself make a drawing a work of art. Whereas in painting the degree of skill, expressed in the use of textures, brush-strokes and the treatment of contours—in other words, the paint quality—can make or unmake its artistry. In painting, the use of paints alone can become a formal language in which an artist can find the most eloquent expression. As to mere manual dexterity, "correct" rendition, in draftmanship can become so pernicious as to drain every drop of art out of it—as witness the commercial illustrators. Here the hardened "expert" never commits an error in proportions or anatomy; he composes his picture skilfully and effectively, manages to achieve perfect verisimilitude, and, with inexorable finality, fails to produce art, simply because the sensitivity of his hand has ceased to function, its impulses have become totally mechanical. That is why the drawings of children and amateurs have often more appeal than those of some expert practitioners, for nothing is deadlier in art than slick routine and boredom brought about by worn-out clichés.

I trust that the following devices will not be considered as

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example by cliché, because they are merely elementary aids in drawing. The devices are standard: they have served the artist since the time, perhaps, when the art of drawing was invented.

FINDING PROPORTIONS

When studying from life, the first concern in drawing a figure is the problem of establishing the model's proportions. Proportions are the relative measurements of the body, such as, for example, the size of the head in relation to the rest of the body. Now, providing that we choose the head as a constant measure, we shall try to find how many times it plumbs into the length of the figure, the torso, the arm, etc. (Ill. 78.)

But we can just as well choose some other constant measure, such as the width of the shoulders, or whatever seems best suited for the occasion.

The following simple method will serve in finding the relative proportions. A pencil (or brush handle) is held vertically, arm outstretched, between the object and the eye. (When measuring with the right arm, the right eye should be closed and the left eye open.) Some of the object's proportions are measured from the tip of the pencil to the place held by the thumb. This constant measure is moved down vertically or diagonally, or horizontally—in any desired direction—so as to find how many times it falls into the figure's height or width, etc.

The practical school method just described is not so well suited for finding small proportions as they appear on the human countenance. It is obvious that short distances, like those between the root and the bridge of the nose, etc., cannot very well be ascertained by means of a crude stick, but we can find them with comparative ease by drawing triangles on our preliminary sketch, and then comparing their steep or shallow incline with the triangles which we imagine on the face of the model. (Ill. 79.) The length of a nose and the placement of the eyes will be expressed either in a shallow or in a steep triangle. Once these cardinal proportions are established, other measurements can be found as described below.



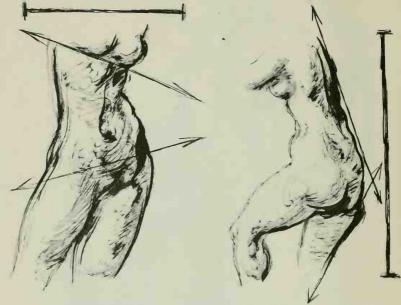
Ill. 78. Aids in finding measurements



Ill. 79. Aids in finding measurements

FINDING THE SLANT OF LINES

Another help in finding the slant of lines in a figure is to compare the slant or pitch of the body or the limbs with a constant vertical line. (Ill. 80.)



Ill. 80. (a) Aid in gauging pitch of lines Ill. 80. (b) Aid in gauging pitch of lines

This constant line is marked in our illustrations (X) and the deviation of other lines from this vertical line will establish the position of various parts of the body.

The same device can be used in fixing a horizontal line (Y) and in like manner gauging on it the various slants. (Ill. 80-B.)

PLUMBING OF LINES

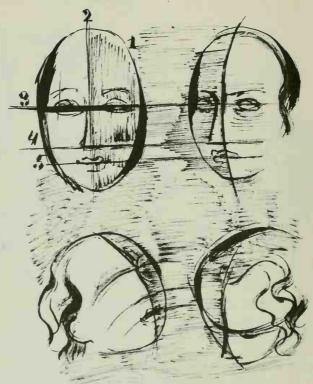
Plumbing the positions of various parts of the body will further aid in our effort to determine correct proportions. This is perhaps the most accurate way of securing proper placement of various parts of the body. It is demonstrated in Illustration 81.



Ill. 81. Vertical and horizontal plumbing

PRACTICAL START IN DRAWING FROM LINES

In my rather long career as a painter, I have experienced and observed some rather curious ways and means of drawing a figure, such, for example, as beginning with the big toe and ending up with the definition of the ear. This can be done. In point of fact, anything leading to good results is acceptable in art. But "anything" isn't a method, nor is it likely to be reasonable. The following method, however, does seem to be, to all intents and purposes, reasonable and practical. When drawing a head from nature, begin: (1) With the general shape of the outer outline as demonstrated in Illustration 82;



Ill. 82. Aid in finding proportions

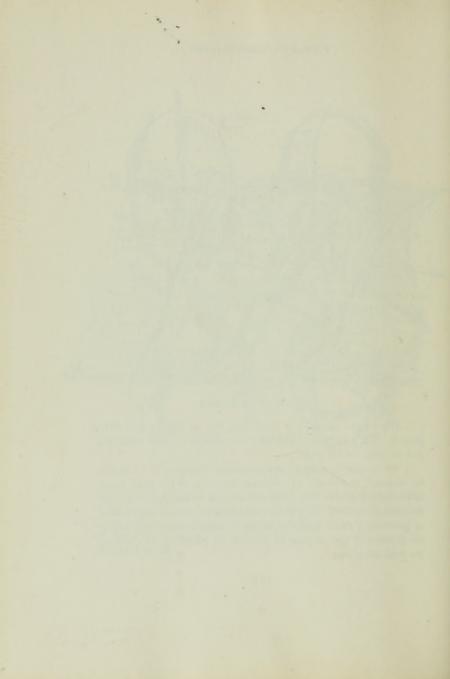
(2) establish a central vertical line which runs through the middle of the face; (3) the horizontal line which runs through the middle of the eyes; (4) the line which demarcates the root of the nose; (5) the line which parts the lips, etc. (Head seen in various positions is illustrated in 82.)



Ill. 83. Aid in drawing a figure

From these examples it is obvious that we do not deal here actually with axes (lines) but with circumferences—like meridians and parallels on the globe.

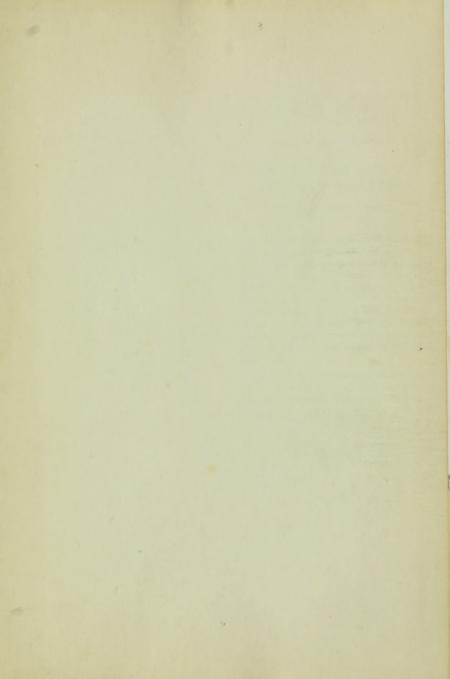
When drawing a figure, the procedures illustrated in 83 should be observed, as follows: (1) General directions of the head, torso, limbs, treated as axes; (2) rough outlines around the axes to indicate the mass of the body. (It is always advantageous to treat these masses as geometrical forms before beginning to particularize.) (3) Taking the position of various parts of the body by plumbing; (4) seeking the final definitions.



CONCLUSION

The aids and devices in figure drawing described on the preceding pages seem to be scant, but aside from the knowledge of plastic anatomy, which should be part of every painter's education, they are all that are worth remembering. In practicing drawing for more than forty years, fifteen of which were spent in a dozen art schools and some of the famous academies, I have never learned yet of an adequate system in drawing—all of them seem to be based on some kind of schematizations. In principle, every system aims to teach one how to foreshorten an eye, or unscramble the intricacies of an ear pattern, or to overcome some such hurdles in drawing. Personally, I am averse to all formulas and would suggest, in the study of drawing, to rely chiefly on observable facts. Assiduous application is all that is needed for acquiring knowledge, and for acquiring a modicum of art, a measure of talent.

Drawing—like everything else in art—should rely on personal experience. Because of the immediacy of rendition, drawing, as I have said, can be likened to handwriting, and handwriting, to be of interest, must always register and express the characteristics and peculiarities of the writer's hand.





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