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The nature of design and style in music

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THE NATURE OF DESIGN AND STYLE IN MUSIC

by

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APPROVED

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Frequent musical and plastic illustrations, too short and too numerous to be included above are scattered throughout the body of the text.
INTRODUCTION

The problem of the "appreciation of music" is generally approached by three main methods, historical (and biographical), analytical and programatic. These methods in current practice are the only approach to the musical experience; yet, necessary, even vital, as they are, they give but a meager and incomplete account of the musical experience. This appears to be due to the fact that the objective nature of music is not clearly understood. This thesis investigates the objective nature of music and its relation to felt experience.

Analogies are drawn between the visual arts and the auditory art of music in order to present in a concrete manner the "reality" of tonal form, the objective nature of Music.

The investigations begun in this thesis open novel approaches to the interesting and necessary problem of the meaning of music. For the present, this thesis merely touches upon the approaches to be followed; it is intended that what is given here is to be foundation for continued investigation.
I wish to acknowledge my debt to Prof. M. J. Bailey, who, in the field of Fine Arts, opened the door of deep appreciation for me and but for whom this investigation would never have been undertaken. I have drawn freely of his material, manner and method. To Prof. A. H. Meyer, who is mainly responsible for whatever ability I possess in the technique and theory of music; who makes me attain the most of my latent possibilities. I wish to acknowledge a personal debt of long standing to Dean J. P. Marshall, my teacher and friend, whose faith in me has been a constant source of inspiration.

************

Many of the experiments discussed were performed at the Central Square Centre in East Boston; these were made possible by the then director of social activities, Mrs. Dorothea Powers, who also aided me in carrying out the experiments.

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CHAPTER I

PRIMARY CONSIDERATIONS

"Art reflects deep-lying, persistent, ever-actively sought human values: it is one of man's ways of taking and reshaping his world." 

The above quotation contains for our purposes two important points. First, a work of art is a man-made thing, a product of his activity. Man takes something in his world and fashions it. He may take a hammer and chisel and fashion stone, or with brushes and paints make forms on paper; with the use of words he may bring to mind any thoughts given to human experience and arrange them in any sequence and combination he chooses. He may fashion instruments to produce sounds, then arrange and combine those sounds as he pleases. The work of art then, is an objective thing, its objective nature being captured in Form and Design.

Secondly, the art activity is a vital activity of man, reflecting "ever-actively sought human values". The concept value, brings up the problem of kinds and qualities of experience. Value is in some way the object of an exclusive interest; it has to do with desire, with experiences we like or dislike. Thus the work of art is an

(2) R. B. Perry, GENERAL THEORY OF VALUE, Chap. V.
objective thing reflecting certain qualities of man's experience. Before discussing the nature of design, the kinds of reflected experience, we must first examine the nature of the human organism. Art is a human experience.

**Conditions underlying perception**

When something is seen or heard, our senses are being stimulated and a degree of interest is usually aroused. This is the first sign of awareness, of something going on about us. However, mere stimulation of the senses and a sign of awareness constitute a very primitive kind of experience which is common to animals and humans, alike. It constitutes the first contact between the human organism and the external world. Experience is here reduced to a minimum.

**The Visual Sense**

In fig. 1 we see a quartz crystal and a coal. Let us compare and analyze the impressions received. What are their effects on consciousness? What do we see? What is the nature of the interest and attention aroused?

fig. 1
When we examine the objects, we find that they have distinguishing features. One distinguishing feature we call "color". The crystal has a color quality we call "light," "clear," "translucent," while the coal is "dull," "black," - this color difference is the sensory quality.

Another distinguishing feature we call "shape" or "form". The crystal shows a clear-cut, definite set of relationships. The coal is a generally "oval" thing with a very varied surface, somewhat "rough" looking, and appearing amorphous.

When we consider the nature of the interest aroused, we are confronted with two problems. On the one hand, there is the problem of individual differences. We must make allowances for individual differences in such matters as preference and degree of sensitivity. However, there are common kinds of reactions which are fundamental to every normal human being. On the other hand, interest will depend on the combinations of sensory quality and form of the objects considered. The more pleasing stimuli will draw the most attention and will usually be preferred. (1)

As regards the two objects under consideration, the results of my research indicated a general preference for the crystal. The "sensation" effect of the crystal was more attractive and pleasant than that of the coal.

(1) That is, pleasing in its effect on consciousness, since the effect on consciousness is a quality of feeling.
The comparisons and experiments discussed were performed on various groups of students. These groups were composed of grammar school children between the ages of 8 and 14, and average college students.

Thus we find two conditions underlying perception, sensory quality and form. This is the nature of "something seen".

The Auditory Sense

When we carry a similar experiment over into the realm of sound and our auditory sense, we must make allowances for the fact that the eye and ear perceive different kinds of stimuli, and their characteristics vary accordingly.

There are, however, many points of similarity. Both organs are capable of receiving impressions ranging from extreme simplicity and delicacy to extreme complexity. The fact that the auditory and visual senses have their beings in the same organism, indicates that there is a common neurological perceptual basis.

We shall compare the auditory impressions in fig. 2.

fig. 2

(a)

(b)

(1) E. Gurney, THE POWER OF SOUND, (1880), Chap. 1. Not a recent book, it nevertheless contains a practical, interesting account of the visual and auditory senses.
What are the effects on consciousness? What is the relation of the conscious effect to the objective nature of the sounds? What kind of interest and attention is aroused?

Here, too, we find distinguishing features. One such feature is the quality of the combined sound; that is the sensory quality; in music it is the "harmony". The effect of (a) is "harsh," "unclear," "dissonant," "unpleasant," "confused"; the effect of (b) is "clear," "consonant," "pleasant".

The other distinguishing feature lies in the kind of heard relationships, the auditory form. While an experienced ear will distinguish certain tonal relations in (a), nevertheless, the effect will lack clearness and definiteness. To the untrained ear (a) will represent utter chaos, a "jumble" of sounds. On the other hand, (b) shows a definite, clear-cut set of auditory relationships. Each tone is "clear," one tone sounding above and below another. Interest and preference will be given to (b).

In regard to interest and attention, it must be remembered that we are considering only the effect of the impression on consciousness. We are not considering the relation of sounds to the utilitarian plane of life, where certain sounds or noises may be associated with definite meanings, such as, "watch out" or "something broke". On the level of experience we are discussing, a noise will attract attention but we must be concerned with the affective quality of the attention.

(1) As opposed to visual relationships.
Thus we find that the two conditions underlying visual perception also apply to auditory perception, sensory quality and form -- this is the nature of "something heard".

Here is the basis of the double nature of art, embodied in perception is an objective thing, a form, and a subjective quality of experience.

We shall have need to return to these primary neurological considerations lying at the basis of our aesthetic and qualitative experience. Modern art presents works and theories that leave us confused. Many theories are built on shifting sands, others on fertile soil. We should have some means of evaluating them.

This thesis does not advocate any one phase or theory of art. The principles sought here will enable us, it is hoped, to keep our minds and hearts open and to take in that which reason and feeling tells us to be good.

Meaning

Since all things must somehow have their roots in our inherent structures, let us examine the nature of meaning and emotion on the very primitive level of experience we have been discussing.

As far as I can empirically see, meaning and emotion are fused and are limited to a degree and quality of effect. This applies to the two senses under discussion, vision and hearing. What is the meaning of a vivid color, a dull one,
a noise, a musical tone? They are merely effects on our consciousness. They make us feel something, a quality of pleasantness or unpleasantness. They make us aware of something.
CHAPTER II
MEANING IN FORM

Visual Form

When the group of grammar school children were presented with the crystal and the coal, they were not told what the objects were. Having expressed their preference for the crystal, they were asked what the objects considered might be. Each child recognized the coal, none knew the crystal. When asked what the crystal object might be, the answers were varied. However, they did try to associate it with things having similar characteristics. They were trying to find the place the crystal object might have in their experience. They were thinking of classifications, of names. The children were going beyond the primitive level of experience, where they merely considered the conscious effect of the objects. They were on a higher experience level which is not common to animals and humans alike. All their mental powers were being employed. This is the recognition level of experience. Objects must be classified and named.

When the children were told about crystals, this knowledge made the light, translucent object meaningful. It had a place in their experience, they could relate it to other things. The crystal, and all objects given in experience assume a practical meaning. The meaning of an object depends on what and how much is known about it.
Looking at fig. 3, we recognize four lines and a parallelogram.

fig. 3

The total impression of these elements is not very meaningful. Each element exerts its effect on consciousness, but the total impression does not resolve itself into a practical, meaningful whole. Form in itself is empty, our minds insist on meanings.

However, if we arrange fig. 3 this way, the impression becomes immediately meaningful.

fig. 4

Fig. 3 is an abstract form, while fig. 4 is a representational form. In abstract plastic form, actual meaning is limited to a recognition of the structural elements and a degree and quality of effect. In representational form meaning goes beyond a recognition of elements and a quality of effect; it becomes related to our external experience.

(1) For the possibilities of meaning in abstract plastic form, see W. Abell, REPRESENTATION AND FORM, (1936).

(2) That is, an effect on consciousness.
Musical Form

Music is a non-representational art, it cannot describe objects external to us. Music is not a stationary art, hence it cannot describe static things. "The fact indeed that music - like love, electricity and other elemental forces cannot be defined is its special glory." What then is music?

It does seem a paradox, that though we know the elements of music, we cannot define it, we do not know what it means. Combarieu writes that "every good melody carries within itself its sense and its explanation." A less definite attitude is taken by Spalding; "the message (meaning), even when received is suggestive rather than definite."

What then is the nature of the meaning of music?

Let us hear the melodic fragment in fig. 5.

This melodic fragment is composed of three tones, each tone different in pitch and in time value. What does it mean?

(1) Music is non-representational, but may be imitative. This is discussed towards the end of the chapter.
(2) W. R. Spalding, MUSIC: AN ART AND A LANGUAGE, p. 1.
(4) Spalding, op. cit., p. 7.
Let us rearrange fig. 5 this way:

fig. 6

What does this mean?

Fig. 5 and 6 do not describe any external objects. Each of these melodic forms merely exerts its effect on consciousness. However, we notice that there is a different effect in fig. 5 than in fig. 6. The difference is due to the objective arrangement of the tones.

Thus the actual meaning of a musical form is limited to an effect produced by the objective nature of the attitude, the inherent positions, directions, rhythms. Music can have meaning only through the effect produced by these various elements on consciousness. "Music, in fact, is a presentation of emotional experience, fashioned and controlled by an over-ruling intellectual power." (1)

The problem of meaning and emotion in music is a vast one. A complete answer to the problem is not attempted here. We are attempting to find principles which will enable us to reach a better understanding of the problem.

Music should be appreciated for its own sake. Any explanatory remarks about a work should be to this end. "The 'appreciation' of music is usually made to appear as an acquaintance with forms and technicalities...." (2) This approach is necessary, but we must not forget that the "appreciation" implies something more than the technicalities.

(1) Ibid., p. 3.
Music affects us deeply; the very significance of our experience escapes definition. "We appropriate ...... the symphony, ...... and it so stirs our spirit that for the moment we are isolated in our rapture and self is all in all." (1)

Attempts are made to reach the experience quality which lies beyond the mere technicalities of music. Explanatory notes are furnished at symphony concerts. There is the well known story of the music lover who suddenly discovered that at a given place in the music he felt sad instead of happy because he turned an extra page in his program. Oft-times the description of a work will tend to make lovers of music either not attend concerts, or wonder what is wrong with their powers of feeling. One regular concert goer told me that he did not want to hear a certain symphony because he read somewhere that, "the Fourth (symphony) is the outcome of a process of sheer starvation, of a fakir-like asceticism and self denial; the Fourth is gaunt, spectral, emaciated ---- the very bones protrude." (2)

Indeed music can be and is a profound experience; yet how accurate is such an explanation? What is the basis for such an opinion? The sincerity of such an opinion is not questioned, yet can it be attributed to the objective nature of the music? Is this the kind of experience the composer sought to reflect?

(1) Ibid., p. 87.
(2) C. Gray, SIBELIUS, (1931) p. 141.
The following experiment in regard to "the meaning of music" was performed on a group of grammar school children. With no previous explanatory remarks, the Rimsky-Korsakoff "Scheherazade Suite" was played. Many things interested them; they liked the sensuous sounds; bits of melody caught their fancy; fortissimo and climactic passages excited them; changes of mood were sensed.

When they were asked what the music meant, their youthful fancies ran riot and some of the meanings given were perhaps more imaginative than the original program.

The children then heard the Cesar Franck "Violin Sonata". This indeed was a contrast. Coming as it did after the colorful orchestral work, it appeared to them as being "weak, lifeless". When asked what this music might mean, the answers were vague, rather than imaginative or eager. One naturally expects a limited reaction from children in such a matter, yet the problem of the meaning and emotional content of music is here made acute. The Suite somehow represented something they could relate to their experience; this was not the case with the Sonata. Could they be made to "appreciate" the Sonata? Could they be made to "appreciate" the music for its own sake, or would a story be necessary?

The question arises as to whether or not musical experience must be translated into suggested meanings. There is a great danger in following such a procedure. The music is
apt to become "incidental music" to a mental picture. This kind of thing does not constitute true "appreciation".

A work of musical art "reflects" qualities of man's experience. In the chapter on Style, we shall try to find clues as to what kind of generalized experience is revealed in Design, the objective nature of music.

Program Music

"Since music is divided into pure and program music, our response is by necessity either purely dynamic or mixed with conscious elements. All appreciation must fall into these two categories." (1)

Music has been written to stories. Since music remains but an effect on consciousness, the composer merely describes his own conscious reaction to the story. The hearer may or may not agree with the composer's musical idealization of the story. However, "on repeated hearings, we are inclined to abandon our own interpretation bit by bit until we fully agree with the composer ...." (2) It might well be added that on repeated hearings the music loses its association with the story and is appreciated "dynamically", for its own sake. A story is never enough to justify a musical work, - the music must be intrinsically good.

(1) L. Flaccus, op. cit., p. 221. The section on music is by Paul Krummeich.

(2) Ibid., p. 205.
We do not mean to infer that there should be no program music or that it is not necessary to know the story of a programmatic work. The point we wish to make is, that the story should not be a barrier to the musical experience, nor an attempted justification for poor music.

Some program music may intentionally describe (suggestively, of course) a story so well that the total experience would be incomplete without a knowledge of the story. Where the composer intended a story, we should by all means know it. However, the music is not absolutely bound to the story and it may on repeated hearings, be valued for its own sake rather than for its story association. Where the music seems dependent on a story, we must look for a different kind of art experience, since it is not purely a musical experience.

**Imitative Music**

Music occasionally makes more or less successful attempts at imitating sounds given in experience; the sound of birds, thunder, bleating of sheep; even the sound of an iron foundry and a train. However, such music is not particularly emotional nor narrative; it merely imitates a given sound in its natural medium. A man is not a duck because he can "quack" like one. Word formations have as yet not been adequately reproduced by musical means. When and if this becomes possible music may indeed actually relate a story.

Several further considerations must be mentioned at this point. Sound, in our routine daily experience, is used
chiefly for purposes of utility. Habitually we do discriminate between sounds in the form of words and noises. These word sounds and noises, as we use them in everyday life, have the character of symbols by which definite things are referred to, ideas are transferred, and certain adjustments made in environment. Train whistles and auto horns have definite uses and under given circumstances, approach certain definite meanings.

Words consist of groups of sound forms, each sound given singly. They are utilitarian in the sense that they refer to definite things. On the utilitarian plane of life we can only comprehend sound in single sound groups; that is, we may understand one man speaking, but two or three men speaking different words at the same time would leave us confused. Combined word sounds (two or three men speaking at the same time) do not exist as recognizable or harmonious sound patterns or forms.

Combinations of sounds exist as a natural entity in music. We may hear all the instruments of the modern orchestra playing at the same time and the composite sound may be harmonious and satisfactory. These sounds are not utilitarian in the sense that they do not refer to definite things. When we leave the practical field of utility we find that auditory impressions, whether grouped or single, become merely effects on our consciousness; except for the possibilities of imitation, they have no definite subject matter.
"By Design I mean Order in human feeling and thought and in the many and varied activities by which that feeling or that thought is expressed."  

Man takes something in his world and fashions it. In the case of music, he takes sound and fashions it in time; music is a temporal art. In the case of architecture, man takes stone, and fashions it in space; architecture is a spatial art. This chapter investigates the objective nature of music.

When we look at a building, we see it a completed thing. We are not able to see it in its entirety, however, it is there for us to examine bit by bit, front, sides, rear, inside and out, until we know every part of it. A building appears absolutely "real" to us.

Listening to music is quite a different experience. A symphony (in sound, not on paper), does not exist in its completed state except as it exists in memory; it is not there for us to examine leisurely. Rather, it comes to us bit by bit, each bit making its impression, leaving immediately, and becoming a remembered experience. This is a dynamic kind of experience; it is as seeing "fireworks".

(1) W. D. Ross, A THEORY OF PURE DESIGN, (1907), Introduction.
Thus the musical impressions become assembled in the imagination -- it is here that the actual musical structure has its being.

Written notes are the symbols for tones, - the two must not be confused.

fig. 7

As written symbols fig. 7 exists in its completeness. As an experience in sound, however, it exists group by group, i. e. (1) followed by (2) followed by (3), etc.

"Musical 'events' are more abstract by nature, so that the act of pulling them all together in the imagination is not so easy ...." Because music exists only as a present experience, a symphony does not seem as "real" as a building. In a sense this, of course, is true. Yet the very words we use in everyday life have exactly the same kind of existence as does music. Music is as real as speech; both are made of the same medium.

The objective nature of music is its form; this may mean any combination of sounds from the simple interval to the symphony. Writers have generally confined their discussions of form to mean certain specific musical structures, such as

(1) From a 4-voice Madrigal by Gesualdo Don Carlo (1566-1614), quoted in A. Casella, THE EVOLUTION OF MUSIC.

(2) A. Copland, WHAT TO LISTEN FOR IN MUSIC, (1939), p. 6.
the sonata form, the rondo form, etc. The term may also be used in a much broader and conclusive sense to indicate everything that the mind perceives of precise musical relationships; it is in this sense that we shall use the term in this thesis. By design we mean the manner of using the units of definite recognizable sound patterns which make up the completed structure.

The single tone represents all the elements of musical form. Any single tone expresses three ideas: 1. Idea of tone-quality (timbre). It is this difference in tone-quality which enables us to distinguish between the various kinds of instruments. Tone-quality may be considered as auditory "color".

2. Idea of pitch. It is the degree of highness or lowness of our sound experience. We use the terms high and low as regards pitch metaphorically; it is due to the fact that the sensation of pitch is analogous to facts in our experience. It gives to the tone its place in the "space realm" of sound.

3. Idea of duration in time, which also implies the passage of time.

"There is another idea, however, which is expressed by the dot or point (in our case, tone), -- an idea of position, that is, its proper meaning or its signification. There is presumably a reason for giving the dot (tone) one position rather than another."

(1) This is derived from the definition of form which Prof. Bailey of Boston University gives in his courses in Art.
(2) See also the discussion of harmonic effect as "color" farther on in this thesis.
(3) Ross, op. cit., p. 2.
This note, symbol for a tone, represents then, 1. a color (tone quality), depending on the instrument that plays it. 2. pitch - which in this case is about the middle of our range of sound experience. 3. duration in time - which depends on the speed it is to be played, very slow (adagio), to very fast (presto).

A succession of single tones is the essential idea of melody in music.

Here we have the relation of two tones in succession, that of A to B. The relation is one of direction and interval (distance). The direction in 1 is up; the interval is a 5th; in 2 it is down a 4th; in 3 it is horizontal.

The combination of two or more tones sounding at the same time is the basis of the harmonic idea in music.

(1) The difference in pitch between two tones, whether in combination or succession, is called an interval.
Here we have the relation of tones in combination. The relation is one of combined directions and intervals. Every note in each combination (unit) must obey a two-fold law - 1. each note must properly belong to the unit, and 2. each note must properly be connected with its corresponding note in the following unit. Thus the combined sound is the harmony (designated $\text{\textbullet\textbullet\textbullet\textbullet}$ in fig. 10) and is composed of lesser melodic lines (designated $\text{\textbullet\textbullet\textbullet\textbullet}$).

Rhythm in music is four-fold. 1. the length of time each tone is to be played. 2. the regular divisions and grouping of accents, 1. e. 2-4, 3-4, 7-4, etc. 3. tempo --- degree of speed, adagio to presto. 4. amount and degree of accentuation.

**Melodic Design**

The musical idea or melodic unit consists of any given relationship of tones. It is from such musical ideas that composers fashion their works.

Musical ideas often come to a composer by way of inspiration; ideas are also worked out consciously, objectively. However, whatever their origin may be, their objective nature is recorded and therefore lends itself to analysis. The structural elements (tones) may be noted as to directions, intervals and rhythms.
Let us take the following relationship of tones which we shall call a musical attitude.

fig. 11

"Whenever two or more impressions or ideas have something in common that is appreciable, they are in harmony, in the measure of what they have in common." In the first measure we have a harmony of direction and interval; each tone is upwards and the distance between tones is a 3rd. In the 2nd measure each tone is downwards, the distance between tones is a 2nd. The time value of each tone is also noted. The complete attitude should be played and its effect on consciousness noted.

This attitude is as concrete a thing for our auditory sense as the plastic attitude in fig. 12 is for our visual sense.

fig. 12

As definite forms, both are subject to much the same kind of treatment. Since form is infinite, the possibilities of even such a simple attitude may assume vast proportions. We shall only illustrate a few kinds of treatment.

(1) The term attitude is used for the purpose of showing the parallelism between auditory and visual design. The musical and plastic attitudes are recognizable forms.

(2) Ross, op. Introduction.
The attitude may be repeated in exactly the same space realm.

fig. 13

Here we have a harmony of attitude.

Its space realm may be changed.

fig. 14

Here we have a harmony of attitude plus a harmony of direction and interval.

Its being in space or time may be augmented.

fig. 15

Its being in space or time may be diminished.

fig. 16

The attitude may be inverted.

fig. 17
Because of the difference in mediums the tonal attitude lends itself to purely musical treatment, just as the plastic attitude may be further (though not here) developed along purely plastic lines.

The rhythm may be shifted.

fig. 18

The rhythmic idea may be extracted and used as a basis for further development.

fig. 19

Following are quoted several musical ideas taken from standard works. The structural elements in each attitude may be noted as to directions, intervals and rhythms, as will the kinds of treatment in design.

fig. 20
"By the order of Balance I mean some equal opposition and consequent equilibrium, as it occurs at some moment of Time or at some point of space; an equilibrium which induces, for the moment and in its place, a suspension of all change or movement, and causes a pause or a rest." (1)

The plastic attitude may be balanced with a reversal of the same attitude.

This is a simple illustration of the principle of Balance, and is by no means to be considered as complete. There are many kinds of balance, depending on the kind of attitude, kind of design, the number of attitudes used in a given work.

Musical balance differs from plastic balance because of the objective beings of the mediums. Sound patterns do not exist side by side as do plastic patterns. Balance in sound is a more subjective experience, for one effect on consciousness must be balanced with another. This, I think, is what Mr. Copland means when he writes, "A beautiful melody, like a piece of music in its entirety, should be of satisfying proportions." (2)

(1) Ross, op., Introduction.
(2) Copland, op. p. 50.
Every beautiful melody, no matter what its length may be, is a balancing of one attitude with another, until "it gives us a sense of completion and inevitability." The effects on consciousness are felt to be from degrees of significance to commonplace; thus everything depends on the effects on consciousness of the attitude, and how they are balanced.

The principle of balance in music will be illustrated, simply, to show how it functions in design.

An idea is given (opened up) and balanced (closed), as illustrated in fig. 21.

There is one great difference in the balancing of a plastic and musical attitude. In plastic design balance is invariably brought about by a similar attitude, as shown in fig. 21. Musically, balance may be brought about in two ways; by a similar attitude and by a contrasting attitude.

Following is a balance of the attitude given in fig. 10.

![Fig. 22](image)

(1) Copland, op. p. 50.

(2) This principle may be expanded to apply to the larger forms, and musical sections.
Attitude A is balanced with a similar one, B.

fig. 23

Here A is balanced with a contrasting attitude, B. In each case the mind will accept B, B, as a definite close to the musical idea of A, A; both sound final.

The balance in fig. 24 manifests a sense of semi-finality, a need of continuation and completion.

fig. 24

Here B extends the idea of A with a similar attitude, the idea is not completed however, it does not sound final.

fig. 25

Here B extends A with a contrasting attitude.

Figs. 24 and 25 manifest a need of completion; they do not sound final. As they stand, they are part of a larger unit.

What we have been describing as a musical attitude may be called a motive. The motive (or attitude) constitutes the smallest unit of musical design.
The next unit of design we shall consider is the phrase. A phrase, generally consists of a balance of two or more motives.

This Beethoven phrase consists of a balance with a similar attitude.

In this Mozart phrase the attitude A is balanced with a contrasting one B.

Phrases taken as a unit are balanced in accordance with the principles already given. We shall now summarize with an example from the Beethoven Symphony No. 2.

The basic musical idea consists of a contrast of positions and rhythms.
The idea is developed as follows:

Here motive A is repeated a tone higher B. Motive C is based on the second half of the original idea; D is an inversion of the idea, and the final measure (of D) retains the same character but is changed for purposes of emphasis. Thus phrase 1 is balanced by phrase 2, both phrases being based on the same idea. Phrases 3 and 4 balance phrases 1 and 2.

**Harmony**

A painting, generally speaking, comes to us in a series of lines, masses and colors, which describe and define (represent) forms given in experience. A painting states facts, it speaks of houses, people and trees, etc.

A musical work comes to us much the same way; harmony supplies "mass" and "color" (see p. 4-6) giving design substance and body; melody is tonal "line", it gives outline to the design. Tonal design does not state facts given in experience.
In fig. 30 we find a melodic line, an attitude (motive) played by the oboe. The bassoons and horns sustain a combined sound (harmony), while the line moves. This is a simple illustration of tonal design. The harmony supplies the "mass", it gives the design "body"; the melody is the outline.

The "color" in fig. 30 may be changed instrumentally. That is, while the design remains the same, we may have a flute play the melody and strings the harmony; this combination will give the design a different "color" effect.

We shall now examine several ways harmony may be treated in design.

Harmony may act as foundation for melody (see fig. 30). Attention here is primarily focused on the melody. The harmony serves as substance and color, and does not move until a new "mass" and "color" must be defined (change of chord).

A quite different use of harmony is apparent in fig. 31.
Here the design is a shifting one. There is considerably movement in the harmony and it seems fused with the melody. This is a more elaborate kind of design.

Harmony may be the principal element in design.

Here the role of melody is subdued. Attention is focused on the harmony. In this example the harmonies are repeated in contrasting space realms, and instrumental colors.

Harmony and melody may be equally important.

Here the effect of the melody and harmony seem a complete unit.
A work of art is an objective thing reflecting qualities of man's experience; the value we attach to it depends on the kind of experience reflected. Some works of art are capable of offering significant experiences time after time, year after year; these are acknowledged masterpieces.

When man has an experience which seems to him valuable, he wishes to record it. Since actual experience is fleeting, he must record the essence of that particular experience; he must somehow isolate it from the transient world and make it permanent. Man can only accomplish this through art; he must create a form which captures the spirit of an experience. It is because we react and respond to form that a work of art transmits its message.

Visual works of art may record factual experience; portraits, historical events, are recorded in painting and sculpture. However, underlying the representation of the physical fact is an emotional response in us, without which that physical fact would not be significant. Our most valuable experiences are those which evoke pleasurable emotional responses.

What the artist generally tries to do, is to idealize his subject matter in the attempt to bring about a kind
of experience and consequent emotional reaction that actual life offers but rarely.

The experience of exaltation is not a common occurrence. It does not matter what the actual experience may have been, the feeling of exaltation is the thing that gives it importance. The experience of something "graceful" is another example of what is valued. Man experiences so many difficulties in doing things, that when something is done with a sense of freedom and ease, a graceful feeling results.

The feeling of strength is a valuable experience. Man has to deal with forces that many times are stronger than he; to be weak means if not complete defeat, subjection, inhibition and other things that repress his development. We shall not enumerate the various emotional reactions; they are facts in human experience. The important point is, that these emotional feelings need not refer to definite situations. They are qualities of experience that afford us pleasure; they are qualities of experience with which we should like to combat all life's problems; they give us assurance.

Visual art must present these qualities of feeling either in decorative design or by embodying them in objects given in experience. Music has the power to isolate these feelings of reflected experience to even a greater extent than visual art. Music captures the feeling proper, divorced from any external object and presents it dynamically, for music is a vital experience.

(1) This statement must be qualified when evaluating modern art.
Thus out of the more or less accidental and chaotic states of experiences we find in life, art captures the essence of what is valuable, extracts it from actual experience, organizes it and takes away all disturbing elements. That is what we can go to music for; it offers us an environment (form) to which we may react with all the significant and pleasurable feelings given to human beings. We can give ourselves completely to this environment, for here are no disturbing or extraneous elements; experience has been ordered; we may draw upon it for whatever needs we wish.

The realm of pure reaction, which of all the arts music can best offer, is what we commonly call "spiritual" and "aesthetic". Certain writers state that in an aesthetic experience we leave behind "earthly matter"; we are "shut off from human interests". Indeed, such an experience opens the door to the most vital and significant of "human interests", - his well being. Because emotions are so deep is this the special glory of music, for when we penetrate into ourselves we are penetrating Nature. If one is incapable of experiencing such emotional qualities as exaltation, strength, grace, he cannot "appreciate" any art, and indeed is reduced to an automaton. To such a person, a portrait would be a portrait and nothing more, - and one portrait would be as another.

All art then comes to us in a series of lines, masses, and colors. Man fashions his forms according to his temperament, purpose and technique.
Line is movement; we are so constituted that our minds and bodies respond to it. Life as we know and experience it, has movement as its expression and essence. We experience a degree of activity comparable to the degree of vigorousness with which stimuli are presented.

In representational plastic art, line defines objects. As we "follow through" the movement of a line, it strikes corresponding reaction patterns in us, evoking emotional responses which, in turn, correspond to generalized feelings we experience in actual life. The emotional response evoked by a particular line becomes in representational plastic art associated with the object it defines; this is the way the artist reflects "a quality of experience". This emotional reaction to line is oft-times more important than the emotional response to the actual meaning of the subject matter.

Compare the Harunobu print (p. 37) with the Holbein woodcut (p.38). Both works are "linear"; the subject matters are different. Notice the quality of line; we react quite differently to the print than to the woodcut. The lines in the print are light, graceful and delicate, they are continuous and have a considerable curved movement. How different are the lines in the woodcut; here are no smooth

(1) See Chapter V of this thesis.
flowing, delicate lines; rather, they seem haltingly continuous. The effect is rugged and suggests crude strength. The effect of the qualities of line is sometimes referred to as the "musical" quality of art.
THE DANCE OF DEATH: THE PLOWMAN; THE YOUNG CHILD (Woodcuts)
Fogg Art Museum, Cambridge

THE UNIVERSITY PRINTS
BOSTON

HOLBEIN THE YOUNGER, 1497–1543
GERMANY
Thus we may compare "The Girl with the Flaxen Hair" (by Debussy) with the Minuet of the Mozart G minor Symphony, and note the different effects of the lines. The line in the Debussy work is flowing, graceful and delicate - the line in the Minuet is vigorous, determined and strong. We find that qualities inherent in form, correspond to qualities of feeling in us. Music gives us the essence of experience dynamically, that is, the quality of the line is not bound to any object; we experience the energy of that essence.

[Musical notation image]

fig. 34

[Another musical notation image]
Every tonal line has its own particular "feeling" quality and evokes a particular kind of response in us. Following are a few simple illustrations:

A flowing unbroken line is made by a gradual connection between tones.

\[ \text{fig. 35} \]

A more or less rugged, broken line is made by tones which are not gradually connected; rather there is a slight pause between tones.

\[ \text{fig. 36} \]

The character of line may be mingled somewhat as follows:

\[ \text{fig. 37} \]

\[ \text{fig. 38} \]
The effect of musical "color" - harmony - is determined by the manner of combining tones. Fig. 33 sounds "clear" and "unmixed"; the tonal relationships have an effect called "consonant".

Here we are aware of quite a different effect. Irrespective of any assigned meaning, one must judge the effect of the sound pattern. This pattern evokes a peculiar, vague, not unlovely kind of response. The "color" does not appear as clear as the "color" in fig. 33. In fig. 39 the "color" appears "mixed". In regard to color quality, fig. 33 is analogous to the clear use of color in the Bellini portrait (p. 43). In the Titian portrait (p. 44) the colors are more mixed, that is, there are no "pure colors"; this is comparable to fig. 39.

Where the mind clearly perceives relationships which sound natural and consonant, it feels a sense of assurance. Where the relationships are not natural, or for the most part consonant, the mind feels a sense of vagueness; compare figs. 33 and 39.

Rhythm governs the complete tonal pattern. The effects on consciousness must be noted as to the four aspects of rhythm (see p. 21).
Thus a musical structure may be a relatively simple thing as the Franz "AUS MEINEN GROSSEN SCHMERZEN", or a very complex affair as the Brahms First Symphony. In any case, listening to music is not a simple process; intelligent listening demands complete attention.
DOGE LOREDANO
National Gallery, London

THE UNIVERSITY PRINTS
BOSTON, MASS.

BELLINI
1428-1516
CHAPTER V

THE TECHNIQUE OF DESIGN AND STYLE

When we listen to the Beethoven Fifth Symphony, we are in the presence of a gradually unfolding tonal structure. When we look at the Reims Cathedral, we are in the presence of another kind of structure, one made of stone. As different as these two structures are, they have one common quality, namely, that the medium of sound and stone have been fashioned in a particular kind of way.

A Gothic Cathedral looks different than a Romanesque one. Though this difference is one of style and design, the medium stone, is the common element. This means, that a medium may be used to make structures that are radically different from each other, also, that it lends itself to various kinds of treatment. This analogy is easily apparent in music. One symphony sounds differently than another, yet they all have many things in common. Structurally, the medium of sound as employed in music lends itself to three specific kinds of treatment.

Principle of Polyphony

By polyphony, we mean design brought about principally by tonal lines, with little or no harmonic background. This technique in some degree is common to music of all
periods - from the early times of organum and discant up to the present. The principle of polyphony naturally applies to the music of the Polyphonic Era.

Polyphony in music is a technique; it is not limited to any one period or style. It applies to the great fugue in the last movement of the Mozart "Jupiter" Symphony, as well as to the "Swing" fugues in modern dance music. Certain musical forms such as the fugue, invention, canon, are based on this principle.

**Principle of Monophony**

This principle applies to the most familiar and fundamental elements of all music, that of melody. Some kind of melody almost always predominates and identifies a musical work. By the principle of monophony, however, we mean that kind of design which is defined and brought about by the single tonal line. The song, "DU BIST WIE EINE BLUME" by Liszt is a fine example of monophony. In this song there is but one line which defines the design; and the underlying harmony serves to give the design "mass" and "color".
In structures of a larger scope, the techniques are combined. The first movement of the Beethoven First Symphony is primarily monophonic; that is, we are aware that the design is brought about by concentration on and development of the single line. We sense a design which is intrinsically different than the Bach Invention. In the second movement, however, particularly in the first 18 measures, we do sense that the design is made up of two similar lines.

Monophonic music may be traced to the obscure past. When man first began to express himself musically, crude melodies were fashioned which later developed into folk songs; these were monophonic. As a technique in the modern art of music, however, it began with and indeed was the cause of the transition between the Polyphonic and Classical periods of music.

In the development of modern music, harmony grew out of polyphony. Counterpoint is the art of combining melodies, which technique dominated early music from the Plain Song Period, through Bach. It was previously pointed
out that when we have combined melodies we also have a harmony; harmony referring to the quality of the combined sounds. With the development of monophony, harmony ceased being a chance affair and became intentional. Harmony began to play a specific part in tonal design (see section on Harmony, p. 30). This leads us directly to the third principle which refers to a general role played by harmony in the building up of tonal design.

**Fused Technique**

By fused technique we mean a harmony that not only serves to give body to design but which is intrinsically active and appears welded to and intimately joined with line or lines, monophony or polyphony.

The Brahms First Symphony is an excellent example of this kind of technique. Here is music the technique of which must necessarily have come late in the development of the art. The design is brought about by elements, each of which plays an important part in the structure as a whole. There is little concentration on the single line with harmony acting merely as quiet body to the design. Here every element is vital, the harmony is a shifting thing, having shapes and forms of its own (one may rightfully speak of harmonic "attitudes"), fused with the various lines.
**Style**

The term style covers a multitude of things. Individuals differ in ways of doing things; so, too, do schools of art, countries, eras. These differences are revealed in design. Style usually involves the "whole nature of man". We must endeavor to put on a firm basis these differences in style which Wölfflin calls "Modes of Imagination". This is not only important for the art historian, it also is important for that field of teaching and study known as "Appreciation".

To find clues that will enable us to understand a mode of imagination which "is no outward thing" ...... but a "manifestation of life", is indeed a step nearer to a truer appreciation of art. This discussion of style arose from the need of an approach to the appreciation problem which would enable us to understand more about music for its own sake instead of the programatic, historical or analytical approaches which methods are largely employed at present. Thus, instead of referring to a musical work as programatic, historical or analytically, we shall try to discover what mode of imagination we have before us. Though the mediums are different, we shall correlate the differences in style in the visual arts with the art of music.
Linear and Painterly

The following is an adaptation of Wölfflin's definition. By linear and painterly we mean the use and development of line and harmony as a mode of imagination in design and guide for the ear; in more general terms, in the former case stress is laid on outline, on the limits of things, on the isolated individual design; on the other hand, stress is laid on the auditory appearance of things, the merging of design, the apprehension of the world as a shifting semblance.

From the standpoint of design and style there is a close similarity between the Bellini portrait and the First Movement of the Beethoven First Symphony. Both works are primarily linear. "The beauty of things is first sought in outline ...... the eye is lead along the boundaries and induced to feel along the edges ......" (2)

Looking at the picture the linear type of imagination may be easily noted. Every line, every design is clearly brought out. The designs of the headdress and cloak are made clear. The features of the face are given distinctly. There are no shadows to obscure the vision so that things may be intimated rather than clearly perceived. The colors in

(1) H. Wölfflin, "PRINCIPLES OF ART HISTORY", (1932), Introduction.
(2) H. Wölfflin, op. Chap. I.
the picture are constant; that is, each color is clearly defined and does not vary; color has no intrinsic life, or movement.

From the standpoint of auditory design, we may note that every line (melody) in the symphony is clearly defined. The harmony acts to serve body to the design and although it has some rhythmic movement, it acts principally as foundation for melody. Melodically the technique is principally monophonic. One may actually "hear along the edges and boundaries"; that is, each attitude, each phrase, the beginning and ending, is clearly marked off. Here the beauty of the thing is indeed sought in outline.

So, too, in architecture, we may see in the Palazzo Rucellai in Florence (p. 52) the idea of clarity of every line, form and proportion. Forms are at rest within themselves, they are self-existent. Here each bay, arch, pilaster appear in perfect equality and articulation.

The concept "painterly" is in direct opposition to "linear". The painterly"uses the same system of forms, but in place of the perfect, the completed, gives the restless, the becoming; in place of the limited, the conceivable, gives the limitless and colossal". The ideal of proportion remains, but "interest concentrates not on being, but on happening". (1)

(1) Wölfflin, op. cit., p. 10.
FACADE
Palazzo Rucellai, Florence

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RENAISSANCE. XV CENT.
ARCHITECT, ALBERTI
If the Bellini portrait is "linear", the Titian portrait may be described as "painterly". Here (in the Titian portrait) there is little clarity of outline; details exist not independently, but as part of a larger whole. Observing the forms the eye loses itself long the boundaries and edges. What we cannot see we intimate; this makes for suspension, anticipation and mystery.

Contrast the form of the eye in both portraits. In Bellini the eye is given in complete detail, nothing is hidden and it is not interlocked with any other form. Is this not a kind of vision, a mode of imagination? In the Titien portrait the form of the eye lacks the clarity of detail, it is restless, it ends in a shadow which connects it to the next form, the nose. The painterly technique is apparent in the cloak. In Titian the exact nature of the cloak is not given, only its appearance, its restlessness. Lines are not given in complete clarity, rather they melt into one another. Colors are not "pure", but mixed; color in Titian not only gives body to design, it has an inherent activity and life of its own.

"Buildings do not run away and a wall remains a wall, but there subsists a very palpable difference between the finished look of classic architecture and the never quite assimilable picture of later art ......"

(1) Wölfflin, op. cit., p. 63
When we look at the Palazzo Rucellai (p. 52) the eye almost immediately takes in the complete pattern. The formal elements are neatly arranged and one element does not run into or overlap another.

How different does the Reims Cathedral (p. 53) appear. Here the number of elements make it impossible for the eye to grasp the detailed pattern. The eye sees the general outline - the arches, much ornamentation, etc. The eye first grasps an "effect".

This principle applies very neatly to auditory design. From the "painterly" standpoint of design and style we shall examine the first symphony of Brahms; this is in contrast to the generally "linear" mode of imagination in Beethoven's First. What has been said of the Bellini and Titian portraits may be transferred to the discussion of these symphonies, for in fashioning the different media, aspects of man's experience and reflected in the same way.

In the Brahms symphony we note a more complicated kind of design as compared with the Beethoven. In Brahms, line interacts with a continuously shifting harmony, and an accented rhythm. This makes for a more stirring effect on consciousness, it becomes more difficult to grasp the total design at once - it is as the Reims Cathedral. Structural elements in Brahms do not appear at rest, rather they have a restlessness that lead on; structural elements do not stand clear and free, but are interlocked with one another; only
the larger units of design stand clear. It is as the impres-
sion of the Gothic arch, while the number of smaller forms
make for obscurity of detail (see reproduction p. 54).

The analysis is far from complete; however, it is
as far as we shall carry it in this thesis. What has been
described as "linear" and "painterly" indeed constitute "modes
of imagination". Both modes of imagination are capable of
offering a true picture of the forms in which aspects of man's
experience are reflected. From such a foundation may we begin
to understand what goes on in the mind and heart of an artist.
This kind of understanding leads to a deeper "appreciation"
of the meaning of art, particularly of music, for it goes
beyond any intimated subject matter.
At the outset it is pointed that art is a human activity. Man fashions his work of art from a medium - hence we have an objective thing (form) which reflects qualities of his experience.

Since a work of art must be experienced, experience is reduced to a minimum and the effect of visual and auditory stimuli are noted as to the effect of a stimulus on consciousness (the quality of experience) and its objective nature, (form). It was found that stimuli which possessed a recognizable form produced a different effect from apparently amorphous stimuli. Meaning on this level of experience is limited to a degree and quality of effect on consciousness.

On a higher level of experience, the recognition level, it was found that visual forms assume a practical meaning, for they deal for the most part with facts in our physical world. Though sound is moulded into forms, these forms remain but an effect on consciousness; they do not deal with facts in our physical world. Sound, in the form of words and noises (train whistles, etc.) do serve a utilitarian purpose.

The principle of design is the same in all the arts. Forms come to us in a series of lines, colors and masses. The manner of fashioning the medium of sound into lines, colors and masses is discussed.
Visual art may record factual experiences. However, in addition to the practical meaning of the subject matter, a visual work of art embodies a feeling quality apart from the subject matter which adds to the total meaning of the work. Tonal art records only the feeling quality of man's experience.

The manner of fashioning sound is resolved into three principles - (1) polyphony, (2) monophony, (3) fused technique.

Two principles of style are given - (1) the linear type of imagination, glories in the clarity of detail; (2) the painterly type of imagination, glories in a kind of design which reflects the changeable, the shifting semblance of things.
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