

AN EVALUATION OF MAITLAND GRAVES'
PRINCIPLE OF AESTHETIC ORDER

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A THESIS
in
The Department
of
Fine Arts

Presented in Partial Fulfillment of the Requirements for
the Degree of Master of Arts in Art Education at
Sir George Williams University
Montreal, Canada

April, 1972

ABSTRACT

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The purpose of this thesis is to contribute to an evaluation of the validity of Maitland Graves' concept of Aesthetic Order as objectified by his Theory of Unity and graphically represented in the Graves Design Judgment Test.

The population in this study consisted of 101 year ten students enrolled in four year ten classes, taking the art option for one credit.

One evaluation was accomplished by observing the relationship between the Graves Design Judgment Test and the quality of the ability to produce unified structures as measured by the Mark in Art.

A second evaluation was accomplished by observing the relationship between the Graves Design Judgment Test and the ability to appreciate art as measured by the Meier Art Judgment Test.

As an additional aspect of the study, an attempt was made to determine the extent to which the Graves Design Judgment Test together with variables of the student's background, explained the Mark in Art.

ACKNOWLEDGEMENTS

I wish to express my thanks to my director, Mr. Alfred Pinsky, for his assistance during this study; and to committee members Dr. Pierre Gregoire and Mr. Stanley E. Horner.

The co-operation of Dr. R.A. Martin in helping to assemble the sample is also gratefully acknowledged, as is the aid of the school administrators, teacher and students who took part in the study.

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CHAPTER I

INTRODUCTION

The purpose of this thesis is to contribute to an evaluation of the validity of Maitland Graves' concept of Aesthetic Order as objectified by his Theory of Unity¹ and graphically represented in the Graves Design Judgment Test².

The need for this study is motivated by a current reemphasis in art education towards studies in aesthetics. The current reemphasis on aesthetic quality or artistic merit is encouraged by an interest in the linguistics of art and the notion that both the art critic and the art historian should assume a greater role in the development of art education curricula (Smith, 1968; Anderson, 1971; Berleant, 1971).

One theorist, Maitland Graves, has attempted to conceptualize the nature of the basic principles of aesthetic order. The objective of Graves' research was to provide an orderly, clear and simple analysis of the elements and the principles upon which all visual art is built. One result of his research has been the development of a measure to

¹Maitland Graves, The Art of Color and Design, (New York: McGraw-Hill Book Co., Inc., 1951), pp. 66-79.

²Maitland Graves, Design Judgment Test (New York: The Psychological Corporation, 1946).

assess the degree to which a subject perceives and responds to the basic principles of aesthetic order.

In his research, Graves has attempted to establish more or less universal criteria (principles), against which his theories may be validated. Graves states that the "fundamental pattern of normal human behavior", provides the required universal criteria. According to Graves, the fundamental pattern for man is to strive after "Unity" in all his endeavors. The relationship of the "fundamental pattern of normal human behavior" to the appreciation and production of art structures is that man strives to establish "Unity" when he is appreciating and producing art structures.

Art educators consider that an understanding of the concept of Unity¹ is fundamental to the successful production and appreciation of coherently expressed ideas (Read, 1943; McFee, 1961; Kepes, 1964). Whether the art structure is considered as an end in itself or as an indication of the development and interest of an individual, educators consider that the unique character common to all art structures is a degree of clarity or Unity. The art structure is a document of the degree to which a person is capable of expressing an idea in aesthetic-visual terms (Eisner, 1966; Gaitskell, 1970; Munson, 1971).

¹UNITY: ... the total impact of all the elements and their relationships to each other (McFee, 1961, p.254); ... producing a wholeness or oneness (Gaitskell, 1970, p.72); ... a synthesis of the visual elements as they operate to create aesthetic effects ... a fusion of the impressions into an organic whole (Eisner, 1966, p.41); ... to organize all the physical elements into a coherent pattern, pleasing to the senses (Read, 1943, p.274).

As educators have claimed that an understanding of the concept of Unity is important to the successful articulation of aesthetically visual ideas, Graves' theories should be examined. Graves has based his theory on the assumption that man's basic need is to attain Unity. The primary construct of Graves' proposal is that persons who are able to identify or recognize unified visual structures, are more likely to be able to produce and appreciate unified visual structures.

In the second phase of an attempt to establish universal criteria Graves states that, persons who are able to recognize aesthetically unified structures are more capable of producing and appreciating aesthetically unified structures than are persons who are not able to recognize aesthetically unified structures. Therefore, Graves assumes that the greater the ability to recognize Unity, the greater the ability to produce and appreciate unified works of art.

A measure of the ability to produce and appreciate Unity in art structures was designed by Graves and is in the form of a standardized Design Judgment Test (Graves, 1946). This measure purports to assess the degree to which a subject perceives and responds to the "fundamental principle of aesthetic order".

This study will examine the relationships among unity recognition, production of unified structures, and appreciation of unified structures. Also, an attempt will be made to determine the extent to which the Graves Design

Judgment Test together with selected aspects of a person's background explain the degree of success achieved in the production of art structures.

FORMATION OF GENERAL RESEARCH HYPOTHESES

This study focusses on the Theory of Unity as developed by Maitland Graves. Graves postulates that a person's ability to recognize Unity in art structures is related to his ability to produce and appreciate unified art structures. An evaluation of the validity of this postulate will be carried out by testing the following hypotheses.

H₁ : There is a positive relationship between a person's ability to recognize Unity and the person's ability to produce unified art structures.

H₂ : There is a positive relationship between a person's ability to recognize Unity and the person's ability to appreciate unified art structures.

By examining these hypotheses, this study focusses on two of the many relationships between aspects of Unity recognition and a person's success in the production and appreciation of art structures.

A brief outline of the chapters of this thesis will conclude this introduction.

Background information related to Graves' theories is presented in Chapter II. The information in this Chapter

describes Graves' theories of the "Fundamental Pattern of Normal Human Behavior" and the cyclical nature of the "Fundamental Principle of Aesthetic Order". The supportive aspect of the "Fundamental Pattern of Normal Human Behavior" is described in relation to the associated theories of Art Structure and Aesthetic Order.

The instruments and the assumptions lying behind the use of these instruments are described in Chapter III.

Chapter IV commences with a statement of the specific hypotheses of the study. The specific aspects of Graves' theories to be investigated in this study are outlined. The sample selection, the data collection, procedures and results conclude this Chapter.

Chapter V is devoted to a discussion and evaluation of the data analysis. An overview of the study is presented with specific reference to the problems encountered in the general use of standardized tests. This Chapter concludes with a brief comment on the prevailing art attitudes held at the time of the Graves' Test construction.

A brief summary of the results of the data analysis is presented in the first part of Chapter VI. In the second part of the Chapter, recommendations based on the results of the data analysis are presented. This Chapter concludes with the proposal of a Multi-Media-Multi-Level Measure.

An overview of this study is presented in the first part of Chapter VII. In the second part of the Chapter, the conclusions and limitations of the study are discussed. Finally, several implications of this study for the practice

of education and for future research are presented.

SIGNIFICANCE OF THE STUDY

This study should make useful contributions in several areas. First, the study should help in further conceptualizing the linguistics of aesthetics by identifying important structural aspects of "aesthetic order" as objectified in the Graves Design Judgment Test.

Second, for the study of curriculum development in art education, this study will constitute a further assessment of the relationships among the ability to recognize, appreciate and produce art structures. Few empirical studies have investigated this aspect of curriculum design.

Third, this study will constitute a further attempt to refine the objectification and operationalization of the meaning of "aesthetic order".

Fourth, in the field of educational practice, this study may be of use in conceptualizing and dealing with the objectives related to aesthetic education.

Also, no published studies have appeared and little data are available on the effectiveness of the Graves Design Judgment Test by itself or in relation to other tests (Ziegfeld, 1968, p. 337). Moreover, there is a lack of follow up data to indicate the validity of the Graves Design Judgment Test in the prediction of success in vocational and educational activities in which aesthetic judgment is thought to be important (Mitchael, 1968; p. 337). As further

validation studies are needed this paper should contribute to the evaluation of an instrument for which additional supportive data are required.

The information provided by this study may be of value to the designers of art curricula, or in suggesting new frames of reference for further study. However, the ultimate value of any study should be in its contribution to the improvement of the teaching-learning situation.

CHAPTER II

A SYNOPSIS OF GRAVES' THEORY

Graves states that the time arts and the space arts are built on principles of order. The aesthetic validity of these principles, according to Graves, is based on their psychobiological and sociological origins in the "fundamental pattern of normal human behavior". Graves states that the principles provide the basis for the formation of universal criteria that will promote a keener perception and a broader, more integrated concept of "aesthetic order". Graves uses his theory of the Fundamental Pattern of Normal Human Behavior to construct two additional theories. The first related theory is "The Basis of All Art Structure", which contains the laws and application of elemental relationships. The second related theory is "The Fundamental Principle of Aesthetic Order". This chapter will present the inter-connected theories of Maitland Graves in the following sequence:

- (1) The Fundamental Pattern of Normal Human Behavior
- (2) The Basis of All Art Structure
- (3) The Fundamental Principle of Aesthetic Order

Related points of view will be presented when they are applicable to Graves' theories.

THE FUNDAMENTAL PATTERN OF NORMAL HUMAN BEHAVIOR

Graves' Theory assumes that the basic attitude of man is to strive after Unity in all his endeavors. In this assumption Graves receives support from the Gestalt therapists when they propose that healthy personality functioning is generally dependent upon the ability of an individual to form configurations in which there is a fluid alteration between those sets of experience that are in the focus of awareness and those in the background. Hopefully, man is able to integrate these aspects of awareness into a meaningfully configured whole. The process of integration which is vital for the survival of man, mirrors Graves' belief in man's need of complete integration to achieve Unity. (Perls, Hefferline, Goodman, 1951)

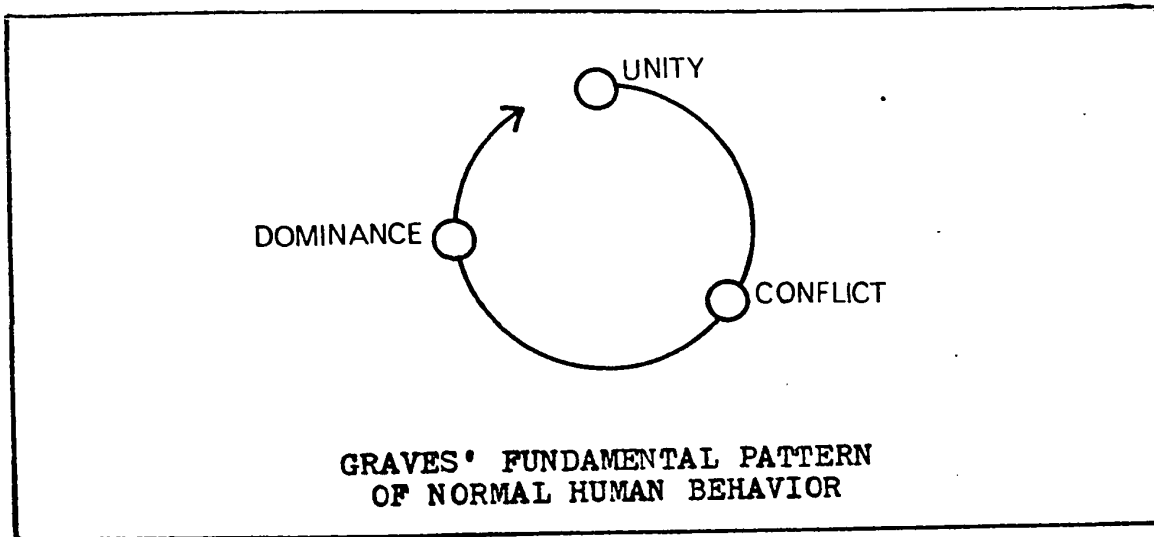
Also, Abraham Maslow (1968) has propounded a theory of human motivation that differentiates between basic needs and metaneeds. Some of the basic or deficiency needs are hunger, affection, security and self-esteem. The metaneeds or growth needs are justice, goodness, beauty, order and unity. The metaneeds, including unity, have no hierarchy and are as inherent in man as are the basic needs. When these needs are being fulfilled, persons are undergoing peak experiences where they feel integrated, in harmony with the world, autonomous, spontaneous and perceptive. When these needs are not fulfilled the person may become sick, or in Graves' terms, lack Unity.

In his theory, Graves considers that the need to

form meaningful configurations or to undergo peak experiences is a basic attitude of man. Graves declares that the need to strive after and to attain Unity is, and always has been, a basic attitude. Graves supports his assumptions in three areas; the sociological, the biological and the psychological.

Graves states that sociologically man strives to maintain the Unity of his social groups. For example, man strives after Unity in defense of the family, religious organizations and the nation. Also, man strives to maintain the Unity of his biological or physical self. Man struggles to satisfy his physical needs and he searches for ways of combating the viruses and bacteria which might destroy him. Psychologically, man dreams and invents fantasies which protect the Unity of his mind. Thus, Graves states that man strives after Unity in all aspects of his life.

A second assumption lies in the nature of the search for Unity. In searching after Unity man encounters Conflicts. In order to survive, Conflicts must be resolved. Graves defines the principle of Dominance as the principle through which Conflicts are resolved. The extent to which a person successfully uses the principle of Dominance will determine the extent to which he achieves Unity in a Conflict situation. For example, to maintain his physical Unity, man must resolve the Conflict between his hunger and his fear of killing an animal for food. Thus, the Fundamental Pattern of Normal Human Behavior is cyclical in nature. In this structure striving after Unity creates Conflict, and Conflict is resolved through Dominance to achieve Unity.



Human Behavior and Art Structures

Graves believes that the Fundamental Pattern of Normal Human Behavior is applicable to artists when they are in the act of producing their works. During this cyclical pattern of the production of art structures, the artist is continually assessing the Unity of his work. Persons who are able to recognize unified visual compositions are more likely to be able to produce unified art structures than are persons who are not able to recognize Unity. Thus, by equating the ability to recognize Unity with the ability to produce unified art structures, Graves assumes that the Fundamental Pattern of Normal Human Behavior is applicable to both the appreciation and production of art structures. However, with all the variables that are in force during the appreciation and creation of art structures, it is dangerous to assume that a successfully unified art structure is the result of a sequence of successful production stages or

events.

As stated by Graves, the continuous search by man for Unity is a basic human attitude. Also, the artist is concerned with the establishment of Unity in his art structures. Implicit in Graves' Theory is the notion that there is an acceptable standard of Unity for both the artist and the observer. The search for the acceptable standard or a universal aesthetic often has been sought. Graves' belief in the existence of a 'one right way' to appreciate art has been echoed by other writers (Greenberg, 1968). It has been stated that the "cultivated" of mankind has generally agreed to what is "good" art and what is "bad" art. Although taste has varied, but not beyond a certain point, the values found in art are fairly constant. Some writers (Wölfflin, 1932; Higgens, 1970) limit their view of the quality of art to art structures and appreciation. However, Graves declares that the preferred qualities of art are mirrored in all of the activities of man. Rather than developing universal criteria or a 'one right way', the theories of Graves appear to be a format and a justification for the presentation of his personalized, culturally conditioned view of the fundamental qualities of successful art structures.

If our intentions are to locate universal criteria, then we should consider the findings of a recent UNESCO report (Zacks, 1970). The findings of this report revealed that although contemporary art was increasingly looked at, most people will reject it while some will accept it. This

indicates that there may be some doubt as to the existence or acceptance of a universal or 'one right way' to appreciate art. Some consideration should be given to the possibility of divergent attitudes between "mass" taste and "artistic" taste. The sample questioned in the UNESCO survey indicates that a void does exist between the artists' working theories and the public acceptance of the structures resulting from the application of the artists' working theories.

Graves states that the Fundamental Pattern of Normal Human Behavior is applicable to the construction-assessment cycle of artistic production. According to Graves' Theory, this cycle provides the base for the selection of universal criteria.

THE BASIS OF ALL ART STRUCTURE

According to Graves, the principles of design form the basis of all art structure. In Graves' Theory of Unity, a principle of design is defined as a law of relationship among the elements of line, direction, texture, proportion, value, colour, space and form. Graves states that there are only three laws of relationship that are applicable to the static visual arts. The laws that are applicable to all art structure relationships are: (1) The Law of Repetition; (2) The Law of Contrast; and (3) The Law of Harmony. Graves accepts these "Laws" as part of the structure for the development of universal criteria.

Before describing the "Laws of Relationship" that

control Graves' principles of design, it should be noted that artists and educators (Rodman, 1957; Smith, 1968; Qualley, 1970; Ecker, 1971) consider that there is more than 'one right way' to analyse the process of creating or the structures created. The production and appreciation of art structures may be approached in several distinct ways accordingly: through the subjective description of the content or subject matter; by analysis of the components, elements or details; through evaluation, summation, or assessment of the structure; or by any combination of the preceding. These approaches provide, or at least allow, for divergent attitudes and thoughts, rather than the objectification of a 'one right way' to appreciate and produce art structure.

The Laws of Elemental Relationship

The first part of this section describes Graves' three laws of elemental relationship. The second part of this section will consider some of the influences that affect the application of these laws. The sequence of description will be: (1) The Law of Repetition, (2) The Law of Contrast; and (3) The Law of Harmony.

The Law of Repetition

The Law of Repetition is concerned with one element which is space. The only difference between identical units is their position in space. The degree and kind of

repetition is measured in space intervals. Graves identifies three forms of repetition as subsections to this law. First, there is exact or monotonous repetition: 1,1,1,1,1, ... etc.; second, there is alternate repetition: 1,2,1,2,1, ... etc.; and third, there is varied repetition. Varied repetition is produced by repeating one or more aspects, qualities, or attributes of a unit, theme, or motif, while changing one or more of its other aspects. Varied repetition is also considered to be harmonic repetition.

The Law of Contrast

The Law of Contrast concerns all of the elements. Contrast is any combination of unrelated units. Maximum contrast is attained through maximum variation in the kind and arrangement of the elements. In Graves' Theory, Contrast is synonymous with opposition, conflict, and variety.

The Law of Harmony

The Law of Harmony concerns any combination of units which are similar in one or more respects. Units are harmonious when one or more of their elements are alike. Graves assumes that the Law of Harmony is the most desirable and applicable law as it combines characteristics of both the Law of Repetition and the Law of Contrast. The Law of Harmony rests between the extremes of complete repetition (monotony), and maximum contrast (discord).

Graves' concept of Harmony is subdivided into

categories of External and Internal Harmony. External Harmony may be produced in several ways: Harmony of Association, such as a bottle and a cork; Harmony of Function, such as a can and a can-opener; and Harmony of Symbolism, such as a dove and an olive branch. External Harmony, according to Graves, is dependent upon a rational appeal to the intellect.

Internal Harmony, based on the structuring of sympathetic elements and units, without associative values, produces a more direct response and a more unified arrangement than External Harmony. One form of Internal Harmony may be achieved through the use of gradation and contrast.

The use of gradation to achieve Internal Harmony is characterized, in Graves' terms, by the flowing pattern of plant and animal life in all its successive and transitory stages from birth to death. Gradation bridges contrasting extremes by a series of similar or harmonious steps. An example of the transitional worth of gradation is a value scale between the extremes of black and white. Gradation of size, direction and radiation are applicable to linear perspective; and gradation of hue, value, and chroma are applicable to aerial perspective. The use of gradation when producing art structure provides plans of order that may be used in many different ways.

Internal Harmony may also be achieved through the use of contrasts. Graves considers the concept of contrast to be the "dynamic essence" of all existence, and of all art

forms that dramatize the life of man. Contrast is as essential to harmonious art structure as is Unity. A composition with too little contrast is monotonous and insipid, according to Graves.

Thus, by translating his concept of the principles of design into three Laws of Elemental Relationship, Graves believes that he has established a defensible set of criteria to serve as a basic guide when evaluating, appreciating, and producing art structure. However, the universal nature of Graves' established criteria may be questioned when he uses phrases such as: "... too little contrast is monotonous and insipid". One may assume that there are the degrees of 'just right' and 'too much' contrast in compositions. Graves attempts to clarify his concept of the Basis of All Art Structure by describing how the Laws of Elemental Relationship may be applied.

The Application of The Laws of Elemental Relationship

Graves states that the Laws of Elemental Relationship may be applied under a variety of circumstances in at least three ways: (1) The temperament of the artist, (2) the emotions or ideas to be expressed, and (3) the function of the design. As these factors are determined outside of the production process, Graves states that they are subject to changing fashions and tastes. However, no matter what the circumstances or the preferred style, according to Graves the Laws of Elemental Relationship must be applied in order

for a "good" work to be produced. Also, Graves declares that only the best art possesses the Unity necessary to have "fine form".

In an attempt to clarify his concept of "fine form", Graves selects "recognized" and "accepted" art structures of different stylistic periods to substantiate the validity and the universal nature of his theory. The mad, erratic, gestural qualities contained in works by Van Gogh are set in contrast to the clean, pure, intellectual structures of le Corbusier. Artists such as Courbet and Manet, along with Van Gogh and le Corbusier are used to illustrate art style, time period, and subject-matter that have been unified by the temperament, emotion, idea or personality of the artist.

Other writers (Greenberg, 1968; Higgens, 1971) have suggested that art is realized or "creates itself" through relations, proportions and experience. Moreover, the "quality" of art depends on "inspired, felt relations or proportions" as on nothing else. These assumptions find their counterparts in Graves' Laws of Elemental Relationship. Also, these writers state that the "quality of art" or art values are those only to be found in art itself, and are therefore presumably of a different order from other values. On this point, a different order of values for art, Graves disassociates his theory. Graves believes that the values of art structure are based on the Fundamental Pattern of Normal Human Behavior. These values are not unique to art structures, but are found in all the endeavors of man. Graves completes his dissertation on the Basis of All Art

Structure by stating that a unified structure - one that is constructed according to the Laws of Elemental Relationship - will possess the "fine form" necessary to transcend modes.

In summary, Graves identifies the Basis of All Art Structure as three Laws of Elemental Relationship which are: Repetition, Contrast, and Harmony. In the following section the ways in which these Laws may be applied, according to Graves' Theory, are described.

THE FUNDAMENTAL PRINCIPLE OF AESTHETIC ORDER

The Fundamental Principle of Aesthetic Order is Graves' cyclical pattern of "Normal Human Behavior" of Unity, Conflict, and Dominance. Through the description of the Fundamental Principle of Aesthetic Order, Graves locates a process - construction, assessment, reconstruction, reassessment - which man must go through to achieve Unity. During the production of art structures, artists encounter Conflict and through the application of the Laws of Elemental Relationship achieve Dominance, which results in Unity. An artist may stop at any time during this cyclical process and assess the specific way in which the principle of Dominance may be applied to resolve Conflict and to attain Unity.

Also, Graves states that in the visual order of art structures, Conflict, Dominance, and Unity exist simultaneously. As an extension of this concept, Graves assumes that the viewer, by examining the art structure, will be able to determine the way in which, and just how

successfully, the principle of Dominance has been applied to resolve Conflict and thus establish Unity. However, it is possible to consider that if the principle of Dominance has been applied successfully, the viewer will not be able to identify the original Conflict but only will be able to determine how the artist has manipulated the elements to achieve interest and tension.

Graves assumes that the Fundamental Principle of Aesthetic Order is sequential in nature and is the same sequence for both the artist and the viewer. This section will describe the sequence and nature of the three parts, and present some implications related to the Fundamental Principle of Aesthetic Order. In turn, the sequence of discussion will be: (1) The Principle of Unity, (2) The Principle of Conflict, and (3) The Principle of Dominance.

The Principle of Unity

The Principle of Unity is described as the cohesion, consistency, oneness, or integrity that is the prime essential of art structures. To achieve Unity, Conflict or tension between competing visual forces must be resolved and integrated. This integration is effected by subordinating the competing visual attractions to an idea or plan of "orderly arrangement". The Principle of Unity, as developed by Graves, embraces the 'masterpiece' ethic or an attitude that places all of its values on the uniqueness of the art structure.

It should be noted that current discussions on the nature of the art structure (Krauss, 1971; Seitz, 1972), suggest that major painters have recently felt and responded to the "inauthenticity" of a kind of composition which required the balancing of units and the relating of parts. Instead, the search for a medium which would be both about the art structure and about the making of art structures is considered desirable. This search has encouraged the development of an attitude that has rejected the uniqueness of the individual art structure and has encouraged an attempt to deepen the meaning of the art 'production-appreciation' experience that a single statement can not make. Several attempts have produced art attitudes and structures resulting from these ideas which in total do not coincide with Graves' theories of the unique, universally appreciated art structure. The 'limited' acceptance of serialization, deterioration, and participation as valid art attitudes has shifted the emphasis away from the unique art structure. As Graves was not able to anticipate the development of these diverse art forms, he therefore concentrated his energies on the development of a "universal aesthetic" which perpetuated the "one ideal - fine form" object theory.

Graves compensates for a variety or diversity of art styles within the context of his 'universal code' by defining the nature of "Static" and "Dynamic" Unity. At the time of the development of Graves' theories, there was a greater preference for the "dynamic asymmetrical structure" as opposed to the "static symmetrical structure". This

preference may be noted in the item structure of the Graves Design Judgment Test. The 'two unity' concept provides Graves' theories with the flexibility necessary for the acceptance of new modes of expression. For example, in the 1960's, preference among artists such as Stella and Noland shifted towards symmetrical art structures, and away from asymmetrical art structures of the abstract expressionists. Although one 'kind' of Unity (Static-Dynamic) may dominate a given period, the characteristics of the other 'kind' of Unity (Dynamic-Static) are present in that period as well. (McFee, 1961; Kepes, 1964)

Static Unity, in Graves' Theory, is analagous to the regular rythmic patterns of heartbeats and is found or characterized in simple primitive ornament. Structures such as regular geometric shapes, the equilateral triangle, the circle and their derivatives exhibit Static Unity. Any structure that seems passive, inert, fixed, without motion and based on regular repetitive patterns or uniform unchanging curves is considered to be static. Natural inorganic forms such as snowflakes and crystals are structural examples of Static Unity. According to Graves' definition of Static Unity - formal balance and symmetrical structure - some of the art products of contemporary artists such as Frank Stella, Ernest Trova, and Robert Indiana may be placed in this category.

Dynamic Unity, as defined by Graves, is characterized by structures that are fluent, expressive of a becoming, a crescendo approaching a climax, a crescendo-dimundo, or a

harmonic sequence culminating in a climax. Dynamic Unity may be found in plant and animal life or appreciated in the flowing continuity of a logarithmic spiral with its generating nucleus. By applying this definition, the works of Georges Mathieu, Larry Rivers and Robert Rauschenberg - exhibiting the characteristics of informal balance and asymmetrical structure - are examples of Dynamic Unity.

In conclusion, Graves declares that the type of Unity most appropriate to its purpose, either Dynamic or Static, will be determined by the idea, the style, character or personality of the artist, and the function of the design.

The Principle of Conflict

In Graves' Theory, the Principle of Conflict is met by producing stimulus or interest in a structure. The Principle of Conflict may also be called tension, opposition, contrast or variety. According to Graves, visual evidence of Conflict is frozen into an art structure to relieve the work of monotony. Graves insists that all opposing visual elements must be organized according to an idea or plan to form a unit that dominates its subordinate and conflicting parts. For Graves' Theory to work, it is imperative that all conflicts or tensions between competing visual attractions be resolved or integrated by a process of synthesis to achieve structural Unity. This process of synthesis, as defined by Graves, is known as the Principle of Dominance.

The Principle of Dominance

The Principle of Dominance is met by applying the Laws of Elemental Relationship which are: Repetition, Contrast, and Harmony. The Principle of Dominance may be exercised by making one of the competing units larger, stronger in value contrast, stronger in chroma, or stronger in colour intensity. A dominant interval or differences among shapes, areas, textures, hues, tones or directions, will further strengthen the Unity of a structure. Dominance may also be developed through repetition. The Principle of Dominance will organize the opposing visual elements according to the idea or plan to form a structural unit that will dominate its subordinate and conflicting parts. However, when Graves uses the terms "too much" and "too little" application of the Principle of Dominance, the suggestion is that this Principle, the key Principle of the Theory of Unity, is relative and based on a personal value system.

According to Graves, disorder or extreme contrast can co-exist in the same structure if the Principle of Dominance is enforced. In the context of Graves' Theory, this "co-existence" provides the same process of participation for the viewer as experienced by the artist during the production of the art structure. The insertion of a 'clean rectangle' in the work of Hans Hoffman or the fluid paint application over a repetitive sequence of numbers in the work of Jasper Johns, are specific examples of how an artist may apply the Principle of Dominance to achieve Unity in art

structure.

Thus, through the use of art, advertising design, and student project examples, Graves illustrates that his Theory of the Fundamental Pattern of Normal Human Behavior - Conflict, Dominance, Unity - is applicable to the production and appreciation of art structure.

Overview

The foundation of Graves' Theory of The Fundamental Principle of Aesthetic Order is based on the assumption that the successful application of the Principle of Dominance will result in the solving of Conflict and in the production of a unified structure (Unity). While this may be valid in some instances, the fundamental error in this Theory is the assertion that there is only a 'one right way' to apply the Principle of Dominance. The Fundamental Principle of Aesthetic Order assumes the existence of a universal 'one right way', based upon the Normal Pattern of Human Behavior, to produce and appreciate art structure.

Although it is a minor point, Graves does not consider the process of application as being different from the results of a successful process. One can not assume that the quality of a product is the mirror image of the quality of a process. Therefore, the scope of Graves' Theory is limited, to some extent, by assuming that there is congruence among the making, the appreciating, and the product.

By confining artists to the production of completed items, Graves' Theory neglects art attitudes which are dependent upon viewer participation (happenings, minimal), or structures which are in the process of becoming (kinetic, conceptual). As some art structures - happenings, kinetics, disposables - were considered to be acceptable, or at least of some value after Graves developed his Theory, their 'unique qualities' were not built into his Fundamental Principle of Aesthetic Order. Moreover, any theory based on a single 'one right way' can not anticipate and allow for all of the varied cultural, geographical, religious, economic and social factors which may tend to place different values on artistic processes and products.

Before summarizing Graves' Theories, a quote from William Seitz (1972) seems appropriate:

What we have witnessed in the reductive, minimal art of the '60s is, precisely, the disintegration and absorption of the relational gestalt image under many environmental pressures, both constructive and subversive. Abstract art has been assimilated by new perceptual, philosophical, and technological systems, and artists born after 1935 see very differently from their predecessors.
(p. 72)

Summary

Graves' Theories state that man is continuously striving after Unity and that this is a fundamental aspect of human behavior. The striving after Unity for the artist takes on a definite form as expressed in the Fundamental Principle of Aesthetic Order, which is Unity-Conflict-

Dominance. There are specific rules man uses when applying the Principle of Dominance to progress from Conflict to Unity. The rules to follow, when applying the Principle of Dominance, are stated as the Laws of Elemental Relationship such as: Repetition, Contrast, and Harmony. Using his definition of the Fundamental Pattern of Normal Human Behavior, Graves presents his Theory of a 'one right way' for the production and appreciation of art structures.

CHAPTER III

INSTRUMENTATION AND ASSUMPTIONS

In this chapter, the instruments and some of the assumptions involved in the use of the instruments in the data collection are described. In turn, the five sections of the chapter deal with: (1) The Graves Design Judgment Test; (2) The Meier Art Judgment Test; (3) A comparison of the Graves and Meier Tests; (4) The student's Mark in Art; and, (5) Student Background Information.

THE GRAVES DESIGN JUDGMENT TEST

The Graves Design Judgment Test has been devised to measure the degree to which a person can recognize and respond to the Fundamental Principle of Aesthetic Order - Unity, Conflict, Dominance.

The Test accomplishes this measurement by evaluating the selection of a preferred design in each of ninety test items. In each item one design was organized in accordance with the Fundamental Principle of Art Structure, while the other designs or design violated one or more of the Laws of Repetition, Contrast or Harmony.

In this study, the Graves Design Judgment Test will be used to obtain a measure of the ability to recognize Unity

in art structures.

There were three criteria for the selection of the correct design in each item: (1) agreement among teachers of art as to the better design; (2) greater preference for the design by art students than by non-art students; and, (3) greater preference for the design by those who achieved high scores on the entire test than by those receiving low scores, (internal consistency). There is no time limit for this test. It has been found that most subjects complete the test in twenty to thirty minutes.

The Graves Design Judgment Test has been established as a valid instrument in distinguishing between art students and non-art students (Ziegfeld, 1968, p. 336). This should be anticipated when the criteria for the retention of the test items are observed. Also, specific data are not available on the ability of the Graves Test to predict educational or vocational success.

The Theory of Unity as developed by Graves has led to the development of test items which tend to require the use of the Principle of Dominance in order to resolve Conflict. Also, Graves states that the use of representational art was avoided in the construction of the test items because of the possibility that ideas and prejudices associated with the objects illustrated might influence a subject's decision. Therefore, to insure an aesthetic and direct response unaffected by factors foreign to pure design, abstract or non-objective elements were used. While these items are valid in terms of the testing of Graves' theories,

aesthetic evaluation could consider a greater range of principles, such as symmetry; contrast of colour, texture, value, and shape; and content or subject-matter.

In this measure, Graves theorizes that the degree to which a person has the ability to recognize the fundamental principle of Unity, is matched in degree to his ability to appreciate and produce works of art. However, the Graves Test does not distinguish between the productive and appreciative aspects of art judgment, but is designed to measure aesthetic value of art judgment in terms of the ability of a student to select good organization in a static art object. Because the Graves Test is presented in a two-dimensional format of completed items, the student does not have the opportunity to participate in the construction-assessment-reconstruction-reassessment cycle which is a key factor in Graves' Theory of the Principle of Aesthetic Order.

On the basis of the information given by Graves, one may assume that a flaw in the test is that it could have very little relevance to people of cultural backgrounds who have art experiences and definitions of what constitutes Unity in art structures, which differ from those favored by the test. In developing a test that relies upon either-or responses that have a purely aesthetic frame of reference, Graves has developed a test based upon his acquired cultural experiences. In doing this, the importance or the validity of an individual's personal experience and learning process, which may not be the experience and process Graves considers to be correct, are neglected in the design of this measure.

In other words, how can you expect to test for a measure of the ability to produce and appreciate art structures by confronting a person with items dealing with objects of which he has had no experience? That is, you can not expect a person to select the answer which you feel to be correct when there is a good chance that he is using principles based on experiences which are different from your own.

Summary of Graves' Test

The Laws of Elemental Relationship and the Fundamental Principle of Aesthetic Order, according to Graves, provide the basis for the "universal criteria" that were used to design the items of the Graves Design Judgment Test. Graves considers that the evaluation of the responses of an individual to the test items provides an objective measure of a subject's aesthetic perception and judgment. However, in attempting to isolate universal criteria for use in the construction of test items, Graves may have developed items based on current acceptable art experiences and values. Many of the items may appear foreign and uninteresting to a subject with few 'acceptable' art experiences. The importance to have had the same or similar culturally acquired experiences as those favored by Graves, intensified through the use of non-objective items, may be a flaw in the Graves Design Judgment Test. One other factor that must be considered is that the Graves Test does not provide for the participation in the construction-assessment-reconstruction-

reassessment cycle which forms the basis of his Fundamental Pattern of Normal Human Behavior.

THE MEIER ART JUDGMENT TEST

The Meier Art Judgment Test was designed to measure aesthetic judgment in terms of the capacity to sense good organization in a work of art. This test is used to obtain a measure of the ability to 'appreciate art', for the study in this paper.

The test items of this measure have been designed on the basis or within the context of works of "established merit". Each of the 100 hundred items consists of two black and white compositions. The two designs in each item are based on the same work, only in one design the structure has been manipulated to weaken a principle or principles of design. A principle has been singled out in each item so that the subject is presented with two versions almost identical, except that one composition is considered to be more or less better than the other. The problem is to choose the composition in which the selected principle functions to make for a greater "aesthetic value". The record sheet informs the subject as to which aspect of the composition change has affected some principle, but the principle is not named. There is no time limit for the test, but most subjects complete the test in about forty or forty-five minutes. Norman Meier (1942) states that the test is as much a test of appreciation as it is a test of ability.

The reputability of the work used in each item was one of the requirements in the selection. Many of the items appear dated, and very few samples of contemporary art are included. In the light of artistic thought in recent years, one may question the reputation of some of the items. The correct items were selected by the agreement of experts in the art field, and thus the subject attempts to match his judgment against that of the expert.

A COMPARISON OF THE GRAVES AND MEIER TESTS

Both the Graves and the Meier Tests are based on similar concepts of the principle of art structure. Also, each is based on an either-or response, or a correct-incorrect format. However, they differ in the nature of the item type. Graves uses non-objective items and Meier uses representational subject-matter based on works of "accepted" merit. Both Tests state that they measure the ability to appreciate and produce "aesthetically pleasing" works of art.

The Graves and the Meier Tests consider that both design and art judgment are measures of aesthetic intelligence. Aesthetic intelligence, according to Meier, refers to segments of general intelligence which permit the artist to profit from past experience. The individual who has a high general intelligence arrives at results probably sooner than does a person of less intelligence and probably develops a higher level of performance (Meier, 1942).

Meier cautions that the Art Judgment Test is

measuring only one of six possible factors related to the successful production of art structures. However, Graves states that his measure, as it is based on the Fundamental Pattern of Normal Human Behavior, is a 'complete' measure. As stated by Meier, the six factors attributable to successful art production are: manual skill, volitional preservation, aesthetic intelligence, perceptual facility, creative imagination, and aesthetic judgment. According to Meier, his test measures aesthetic judgment alone, the most important of the six factors contributing to successful art production. Therefore, Meier advocates the use of caution when drawing conclusions as to the level of artistic potential from the score on the Art Judgment Test. However, Meier does suggest that his test may give an indication as to how well a person may produce as well as appreciate art structures, because Artistic Judgment is the most important factor of the six that contribute to success in art.

THE MARK IN ART

The Mark in Art was selected as a measure of the ability to produce art structures. A student's Mark in Art was based upon his participation for one semester in an art programme.

The Mark in Art for each student was collected from one art programme directed by one teacher. The Mark in Art, decided by the teacher and discussed with the student, was determined in relation to the degree of achieved success as

exhibited in the student's art structures.

The guidelines for the Mark in Art are based upon a similar cycle of events as described by Graves. Specifically, a problem solving cycle requiring a construction-assessment-reconstruction-reassessment process. Upon completion of this cycle, the art structure is evaluated in terms of the clarity or coherence of the idea expressed. The means and ends are considered as well as past and present student performance, when deciding upon the Mark in Art.

One factor that could not be controlled was the method by which the student attained the degree of Unity in his art structure. If the student attained Unity in his structure by means differing from those favored by Graves, the Mark in Art would not be congruent with Graves' "universal criteria".

It was assumed that the variables of teacher preference and programme differences were kept as constant as possible by collecting the Mark in Art from one teacher and from one programme.

It was assumed that the student's Mark in Art and the score on the Graves Design Judgment Test were measures of the Mark and Score reliability; not measures of teacher, programme, or student value.

STUDENT BACKGROUND INFORMATION

Data in the form of S.A. Scores and the occupations of the father were collected from the school records. A

student's scholastic aptitude measure was his score on the Dominion Group Test of Learning Capacity which each student had completed at the end of year nine. Father's occupation was converted to a socio-economic measure by means of the Blishen Index (Blishen, 1968, p. 741). This index rates 320 occupations on a scale ranging from 25.00 to 77.00.

It was assumed that the Dominion Group Test of Learning Capacity was a valid measure of the student's scholastic aptitude. This assumption is supported by previous tests of the instrument's validity and reliability (Traub, Tuppen, and Hambleton, 1967).

It was assumed that the Blishen Index for father's occupation was a valid indicator of the socio-economic status of the student's family. This assumption is supported by the manner in which the index is constructed. Kahl and Davis (1955, pp. 317-325) factor analysed nineteen measures of socio-economic status of two hundred men in a variety of occupations. Two strong factors emerged. One factor was labelled "education" and the other "income". Thus, education and income appear to be two of the main underlying dimensions of the notion of socio-economic status. The Blishen Index for an occupation is a weighted combination of the average income and education for people in that occupation. The weights were determined from a multiple regression of the prestige ranking of 320 Canadian occupations on the income and education of persons in these positions. Thus, the Blishen Index appears to be a valid index of socio-economic status.

To obtain an indication of the degree or level of 'art awareness' of the home environment, each student was asked to estimate the number of framed paintings in his home. As most art structures have, with time, a tendency to merge with their surroundings, the quality and content was not considered to be significant. The frame requirement was imposed as it was assumed to place a personal value on the work.

The selection of 'framed painting' as background information data, was assumed to be more indicative of the 'art awareness' of the home environment, than the quantity or quality of magazines, journals and books that were in the home. Also, the 'art' significance of a framed painting, established by the specific act of being framed, was assumed to have a more direct influence on an individual than unframed material.

In Appendix I, four samples of the items included in the Graves Design Judgment Test are listed. Also, four sample items of the Meier Art Judgment Test are listed in Appendix II. The student answer sheet for the Graves Design Judgment Test is included in Appendix III.

The use of these instruments in the data collection is described in Chapter IV.

CHAPTER IV

FORMULATION AND TESTING OF HYPOTHESES

FORMULATION OF SPECIFIC HYPOTHESES

As stated by Graves, persons who are able to recognize Unity, are more likely to be able to appreciate and produce unified works of art than are persons who are not able to recognize Unity. An attempt was made to validate Graves' concept of Unity recognition.

One evaluation was accomplished by observing the relationship between the student's sense of Unity as measured by the Graves Design Judgment Test and the quality of his ability to produce unified structures as measured by his Mark in Art.

A second evaluation was accomplished by observing the relationship between the Graves design Judgment Test, and the ability to appreciate art as measured by the Meier Art Judgment Test.

Research Hypotheses

These evaluations were carried out by testing the following hypotheses:

H₁ : There is a positive relationship between the Graves Design Judgment Test and the student's Mark in Art.

H₂ : There is a positive relationship between the Graves Design Judgment Test and the student's score on the Meier Art Judgment Test.

As an additional aspect of the study, an attempt was made to determine the extent to which the Graves Design Judgment Test together with background factors of S.A. Scores, S.E.S., and the number of framed paintings in the home, explained the Mark in Art.

DESIGN OF THE STUDY

Sample:

The population of this study consisted of 101 year ten students enrolled in four year ten classes, taking the art option for one credit in an urban southern Ontario Secondary school.

Data Collection:

Four sets of data were collected from each student: (1) the student's response to the 90 items of the Graves Design Judgment Test; (2) the student's response to the 100 items of the Meier Art Judgment Test; (3) the student's Mark in Art at the completion of one semester; and, (4) student's background information consisting of the student's S.A. Score and father's occupation from the school records; and from

the student, the estimated number of framed paintings in the home.

In September, 1971, each student completed the Graves Design Judgment Test and the Meier Art Judgment Test. At the completion of the testing, he estimated the number of framed paintings in his home. The Mark in Art of each student was collected from the art teacher at the completion of the first semester in December, 1971. The S.A. Score and Father's Occupation were collected from the school records in December, 1971.

Ideally, the Graves Design Judgment Test should have been given in September and December so that the effect on the Mark in Art of any increase in the ability to recognize Unity between September and December could be assessed. However, this was not done for three reasons. First, it was assumed that the student's ability to recognize Unity in September was more important in explaining his Mark in Art than any increase in his ability to recognize Unity during the first semester. Second, it was impossible to arrange a testing time at Christmas. Third, the groups of students tested in September were participating in different programs during the second semester.

The student's score on the Graves Design Judgment Test was used to establish a measure of his sense of Unity. The student's score on the Meier Art Judgment Test was used to establish a measure of his ability to appreciate unified art structures. Also, the student's Mark in Art was used to

establish a measure of the quality of his art structure production.

PROCEDURE

The Alpha Coefficient of Reliability was calculated for each of the Graves and Meier Tests. The hypotheses were tested by computing the correlation coefficients among: The Graves Design Judgment Test Results and the Marks in Art; and The Graves Design Judgment Test Results and the Test Results of The Meier Art Judgment Test.

Also, by means of a regression equation, an attempt was made to explain the Mark in Art. The Graves Design Judgment Test, together with the background factors of S.A. Scores, S.E.S., and the number of framed paintings in the home, were the four variables used to predict the Mark in Art.

RESULTS

The findings of this paper must be considered within the framework of uncontrollable variables and the limiting conditions set forth by the study. Under these conditions, a number of findings were accepted as valid and significant.

The results of the statistical treatment are reported in two categories: (1) correlation coefficients among the variables - Table 1; and, (2) regression weights of four variables in predicting student Marks in Art - Table 2.

TABLE 1

CORRELATIONS AMONG THE VARIABLES

(N = 101)

	ART MARK	GRAVES TEST	S.A. SCORE	S.E.S.	PTG.	MEIER TEST
ART MARK	1.000	.068	.429**	.158	.148	.058
GRAVES TEST		1.000	.277**	-.042	.122	.381**
S.A. SCORE			1.000	.350**	.124	.273**
S.E.S.				1.000	.226*	-.039
PTG.					1.000	-.162
MEIER TEST						1.000

** r = .254, p ≤ .01

* r = .195, p ≤ .05

TABLE 2

REGRESSION WEIGHTS IN PREDICTING MARKS IN ART

VARIABLE	RAW SCORE WEIGHT	STANDARD WEIGHT
1. S.A. SCORE	.225	.434
2. S.E.S.	.000	.000
3. PTG.	.077	.099
5. GRAVES	-.066	-.060
CONSTANT	45.41	
MULTIPLE CORRELATION: $R = .444$		$R^2 = 0.197$

Investigations considered correlations to be significant at the .05 level of probability ($r = .195$, $p \leq .05$, for a sample size of 101) among the variables used in this study.

The coefficient of reliability of the Graves Test was .82 and for the Meier Test was .61. Although the coefficient of reliability of the Meier Test is relatively low, it is still high enough for initial studies of this type (Nunnally, 1967, p. 226).

(1) Correlation Coefficients Among the Variables

Table 1 shows the correlation of the Graves Test and the Mark in Art as 0.068. The correlation coefficient is not above the 0.05 level of significance, therefore, H_1 which stated: There is a positive relationship between the Graves Design Judgment Test and the student's Mark in Art, is not confirmed.

The correlation coefficient of the Graves Test and the Meier Test, as shown in Table 1 is 0.381. The correlation coefficient is above the 0.05 level of significance, therefore, H_2 which stated: There is a positive relationship between the student's score on the Graves Design Judgment Test and the student's score on the Meier Art Judgment Test, is confirmed.

An investigation of specific interest to this study revealed that the correlations between the student's Mark in Art and both The Graves Test ($r = .068$, n.s.) and the Meier Test ($r = .058$, n.s.) were not significant at the .05 level

of probability ($r = .195$; $p < .05$).

Further investigations considered the significant correlations at the .05 level of probability among the variables used in the study ($r = .195$, $p < .05$): The student's S.A. Score correlated at the .05 probability level for each of the following: The Graves Test ($r = .277$); The Meier Test ($r = .273$); The Mark in Art ($r = .429$); and, The Measure of S.E.S. ($r = .350$). The measure of S.E.S. correlated at the .05 level of probability with the number of framed paintings in the home ($r = .226$). Of all the variables in this study, the number of framed paintings is of the least significance.

(2) Regression Weights in Predicting Marks in Art

Table 2 shows that the group of predictor variables - S.A. Score, S.E.S., Number of Paintings, Graves Test - accounts for approximately 20% of the variation in the student's Mark in Art. The standard weights show that the S.A. Score is the most important variable in predicting the student's Mark in Art.

CHAPTER V

DISCUSSION AND EVALUATION

In this chapter, Graves' theories will be discussed with reference to the results obtained in the data analysis as revealed by the correlation coefficients among the variables of this study and by the regression equation in which four variables were used to predict the Mark in Art. This chapter concludes with brief comments on the 'universal art concept'; general problems related to the use of standardized tests; and, the dominant art values objectified in the items of the Graves Design Judgment Test.

Measuring the Ability to Produce and Appreciate

Using the Meier Art Judgment Test as a criterion, the Graves Design Judgment Test does seem to be predicting, according to the values of Graves, the ability to appreciate unified art structures. Using the student's Mark in Art as a criterion of the ability to produce unified art structures, the Graves Design Judgment Test does not seem to be predicting one educational outcome it purports to predict, namely the ability to produce unified art structures. As Graves states that his test is an indicator of the ability to produce as well as to appreciate unified art structures, the

measure of the ability to produce has yet to be substantiated. In the sample measured for this paper it was found that the Graves Design Judgment Test was not measuring, according to Graves' definition of Unity, the ability to produce unified art structures.

One other aspect of the study that should be considered is the nature of the coefficients of reliability for the Graves and the Meier Tests. The median coefficient of reliability for the Graves Test in 1948 was .86 and in the 1971 sample of this study was .82, indicating an acceptable degree of consistency. However, the Meier Test in the 1942 examiner's manual indicated a reliability coefficient of .81 while the reliability coefficient for the sample in this study was .61. In view of the lower reliability coefficient established with the 1971 sample, it was assumed that the Meier Art Test was not as reliable a measuring device in 1971 as it was in 1942. Also, the lower 1971 reliability coefficient may indicate that tastes have changed. That is, parts of the Meier Test which were judged 'good' in 1942 would be judged 'bad' now; therefore, producing lower inter-correlations among the test items; therefore, lowering the reliability. Also, the significance of the correlation between the Graves and Meier Test as obtained in this study, would suggest that caution should be applied when using the Graves Test alone as a measure to predict the degree of a student's success in art appreciation.

The lack of significant correlations of the Meier and Graves Tests with the student's Mark in Art, substan-

tiates the assumption that caution is required when drawing conclusions as to the level of artistic potential from the score on one art or design judgment test alone.

It may be that Graves' greatest error was in attempting to establish universal criteria for the formation of a measure to obtain one score of ability. No single score should be used in isolation. The Graves Test as it stands is a valid measure of how closely a person conforms to Graves' assorted theories. It is conceivable that a student may select different criteria to establish Unity in his art structures than those favored by Graves. Therefore, it is assumed that the Graves Design Judgment Test is a document of selected values which may or may not have any bearing on the ability to be able to produce art structures. As a value based test it will not have any relationship to a culture or a time period which accepts different values.

The significant correlation among the S.A. Score and both the Graves and Meier Tests indicate that there is, as stated by Meier, significant relationships among general intelligence, art judgment and design judgment. Also, the significant correlation of the S.A. Score and the student's Mark in Art together with the results of the regression equation which illustrated that the S.A. Score was the most important variable in predicting the student's Mark in Art, substantiates the assumption that there is a relationship between intelligence and ability in art.

The Universal Art Concept

If, as some writers contend (Shultz, 1968, p. 618), that there are no absolutes in art, it would be impossible to develop exact criteria against which abilities could be evaluated and potential could be estimated. Thus, one assumption would be that the use of the Graves Design Judgment Test as a predictive or diagnostic instrument has limited application, except with persons who embrace Graves' theories. The conclusion, drawn from this assumption, is that there is doubt about the use of the Graves Design Judgment Test as an instrument for the prediction of a person's ability to produce unified art structures.

Standardized Tests

The basic structure of a standardized test may be working against Graves' theories. Taking the test by itself is an emotional experience and the person taking the test may be unnerved by the surroundings in which he is taking the test, the need for completion, or the presence of the testor. While the person being examined may not be able to show how he is being affected by the examiner and the test, a very strong effect may be taking place.

Dominant Art Values

Graves' theories were developed in a time period when value was placed on the unique work of art functioning as a complete unit. The attitude that the artist was a

producer of the 'masterpiece' did not provide for the notion that the making of structures was a means of developing art theories, attitudes and abilities. The foundation of Graves' theories, it is assumed, may have been based on Renaissance attitudes or on a Bauhaus based value system of form, function, and integration. However, Graves' theories, regardless of their origins, leave little room for the acceptance of art structures which deviate from his undefined norm of "fine form". The 'style' of the test item construction, reveals the time and values of the period in which it was designed.

CHAPTER VI

RECOMMENDATIONS

In evaluating the predictability of the Graves Design Judgment Test it has been found not to be valid as a single instrument for the measuring of an individual's ability to produce unified art structures. The student's Mark in Art was used to establish a measure of the ability to produce unified structures. However, it is possible that the student might use some other principle than Dominance to solve Conflict and thus achieve Unity. That is, if the student could 'solve' an art problem without the use of Graves' principles and still get 'good' art marks, then one might expect no connection between the Mark in Art and the Graves Design Judgment Test. As Graves' Test has kept within the limits of a style - non-objective abstract - and reflects the acceptable art attitudes of the time in which it was designed; it is conceivable that art might be judged 'good' on some other stylistic or time basis.

Also, there is a possibility that Graves' concept of Aesthetic Order, derived from his theory of the Fundamental Pattern of Normal Human Behavior may be valid and that it is the manner in which it is objectified in the Graves Design Judgment Test that is at fault. If this is the

reason for the lack of significant correlation between the Graves Design Judgment Test and the student's Mark in Art, then a different type of measure should be considered.

The process of art production provides the practical application and response cycle that the Graves Test attempts to simulate. The basic nature or character of an art curriculum, by providing the practical problem solving, construction-assessment-reconstruction-reassessment opportunity, attempts to develop and evaluate the values that the Graves Test purports to measure.

As stated, the Graves Test appears to be measuring the ability to appreciate unified structures, when the Meier Art Judgment Test is used as the criterion. The basic assumptions upon which the tests are based and Meier's recognition of other factors that may contribute to art appreciation and production, makes this information less than reliable.

If, as some educators consider (Eisner, 1972) that, the design of an art curriculum should be matched to the needs, abilities, and potential of the individual, a measuring instrument should be devised as an alternative or supportive device to existing measures. A type of process or performance measure might be developed to replicate the activity of production that is not measured in the Graves Design Judgment Test. This instrument may take the form of a Multi-Media-Multi-Level-Measure that would provide opportunities for both the appreciation and the production of art

objects. This instrument, as the criterion measure, would consider the individual's performance in relation to the objectives or expectations of the curriculum.

Donald Jack Davis (1971) points to some of the concerns that art educators may have about measuring devices:

Aside from the progress we are making in the development of standardized instruments, there is a growing need for performance referenced tests for use in research and evaluation. In approaching the problem, it becomes clear that specific objectives for the performance must be precisely and clearly delineated, and this presents some real problems and concerns to visual arts educators.
(p. 9)

Although there is difficulty in isolating universal criteria against which the test might be validated, and perhaps the search for universal criteria should be abandoned, it should contain opportunities for the student to become actively involved with the interrelationships of the components, elements, or details that contribute to the formation of art structures, within the context of a given problem situation. As well, the instrument should provide opportunities for the student to exhibit his awareness to color, texture, shape, line, value, content and subject-matter. This instrument, if it is to be used for prescriptive and diagnostic purposes, must measure the same qualities and respect the same criteria that the art curriculum intends to develop and evaluate. In this context, the curriculum format may become the measure of production and appreciation. Whatever assessment device is developed, the objectives or expectations must be stated.

A Multi-Media-Multi-Level-Measure

As an alternative to standardized testing and as a summary of this chapter, the following guidelines are presented for the formulation of a Multi-Media-Multi-Level-Measure.

Any measure of art awareness should provide the individual with opportunities to participate in the same problem solving activities provided by the art curriculum. As well as focusing on completed items, attention should be given to the manner of participation. Provision should be made for variations in an individual's experience and cultural background. Also, the temperament of the subject in terms of convergent and divergent problems should be considered. A more valid instrument would assist the subject in the accumulation of knowledge as he progresses through the measure, rather than placing emphasis on previously acquired cultural experience. However, no score should be regarded as the ultimate criterion or used in isolation. Any instrument is just one tool in a wide range of diagnostic devices. Also, if a score is low, greater emphasis should be placed on learning why it is low.

Whatever values, objectives, and expectations are built into any Multi-Media-Multi-Level-Measure, efforts should be made to determine their relative worth and validity in relation to the cultural, social, and economic components of the individual's environment. Care should be taken to avoid values that emphasize terminal learning. Rather than

the evaluation of terminal performance, formative or process assessment would emphasize the ways and means of expectation achievement. Also, great consideration and justification should be given for the reasons and the implications inherent in the design of any measure.

CHAPTER VII

AN OVERVIEW OF THE STUDY

The original proposal states that currently there is a reemphasis in art education towards studies in aesthetics. The interest in the linguistics of art and the assumption that the critic and the art historian should assume a role in the development of art education curricula was considered to be responsible for the reemphasis.

The theories of Maitland Graves were selected for examination as they purported to provide universal criteria for the identification and selection of the "basic principle of aesthetic order".

The theory of the Principle of Aesthetic Order, derived from the Fundamental Pattern of Normal Human Behavior, was objectified in the Graves Design Judgment Test. This study attempted to validate Graves' theories by examining the nature of the Graves' Design Judgment Test.

Graves' Theory states that to attain Aesthetic Order, man strives to attain "Unity". An aesthetic structure is a unified structure. Graves assumes that the ability to recognize Unity is matched in degree to the ability to appreciate and produce aesthetic structures. For this study it was assumed that the greater the ability to recognize

Unity; the greater should be the Mark in Art.

The Mark in Art, as a measure of the ability to produce and the score on the Graves Design Judgment Test were tested by computing the correlation coefficients and were shown not to be significant. The score on the Meier Art Judgment Test, as a measure of the ability to appreciate, and the score on the Graves Design Judgment Test were tested by computing the correlation coefficients and were shown to be significant. The most important factor in predicting the Mark in Art was the S.A. Score.

As the Graves Test did not provide the student with the opportunity to actively participate in the assessment-reconstruction cycle, a different instrument was suggested. A performance reference measure was defined.

A Multi-Media-Multi-Level-Measure would allow the student to actively participate in the same problem solving activities provided by an art curriculum. In the construction of an instrument to measure the assessment-reconstruction cycle, the objectives and expectations of the art curriculum must be considered, precisely specified, and clearly defined. The concepts of current art attitudes will emerge in the items, but the practical application of the elements of line, shape, value, color, and texture, should be included in the instrument. The instrument should be constructed to provide a measure of the individual's ability to solve similar problems that would be encountered in the art program. Also, the instrument must respect diverse

cultural experiences.

A more remunerative approach to research of this nature, at least in the initial stages, might be to focus on the manner in which the student participates during the testing period as the key factor rather than focusing on the completed item.

This project attempted to find a relationship between a person's ability to evaluate art structures and his ability to produce unified art structures as reflected by his Mark in Art. No strong relationship was found. Future research should attempt to develop an instrument capable of measuring, through an activity test, art ability and interest so that art curricula may be developed and matched to the specific requirements of the individual. Also, this measure should illustrate the values of the participant rather than the values of the instrument designer.

DISCUSSION

As indicated in Chapter II, the theoretical basis for this study was found in the work of Maitland Graves. For the framework of this study, one important part of Graves' theorizing lies in his contention that the Principle of Aesthetic Order is derived from the Fundamental Pattern of Normal Human Behavior. This assumption has been considered and used recently in the conclusion of a paper: "The Learner's Search: Beginnings of Structure in Art" by David E. Templeton (1971).

Without question there are gaps in these thoughts about how the human begins to structure bits and pieces of phenomena he eventually labels art. ... Trying to understand art is, in the final analysis, an attempt to grasp the meaning of man in a particular way. (p. 30)

Briefly, the line of Graves' reasoning is that as a result of certain unique social, psychological and biological arrangements, the basic attitude of man is to strive after "Unity" - to strive for and attain Unity in all his endeavors. The implication of this reasoning is that if the search for Unity is fundamental, then man will strive after and achieve some form of Unity in his art structures.

However, Graves establishes specific ways in which man can attain Unity in art structures. In doing this, Graves mirrors Greenberg's belief (1968) that art has an order that is unique to art. If art does have an order that is unique, and perhaps if it does not, then Graves' Theory of "Aesthetic Order" may be valid and the only error is in the way the Theory has been objectified in the test items of the Graves Design Judgment Test. The objectification may be based on the favoured style or the "creative look" of the period, than on any "fundamental principle". Also, it may not be the test items but the test format that is responsible for the lack of some significant correlations in this study. The results of this study indicate that the ability to appreciate and produce aesthetic structures cannot be understood fully through a study of one norm of aesthetic order, at one point in time, or at one grade level.

With respect to the more detailed aspects of Graves' theorizing, which were discussed in Chapter II of this paper, the regression analysis in the second part of the data analysis revealed that the S.A. Score was the most significant factor in explaining the student's Mark in Art. Of all the factors considered, the S.A. Score had the most significant relationship to the recognition, appreciation, and production of aesthetic structures; providing added support to the Theory of Linkage (Meier, 1942) between artistic ability and intelligence. In future research, if the understanding of Aesthetic Order was considered as a factor of intelligence, this may be of considerable importance in explaining the ability to recognize, appreciate and produce the quality of Unity in art structures.

Prior to this study the Graves Test had not been correlated with intelligence tests. Some writers (Bryant, Schwan, 1971) have suggested that: "Artistic ability probably does not correlate highly with intellectual ability." However, the results of this study seem to indicate that a significant correlation does exist among intelligence and the ability to recognize, appreciate, and produce art structures. But the lack of significant correlations in this study between the measure of production and the measure of recognition and appreciation, suggests that further research is required and that artistic ability is dependent upon more than intelligence.

Because of the findings in this study, it was

recommended that considerable attention be given to the improvement and refinement of instruments used in the assessment of the characteristics of production and appreciation. One suggestion was the Multi-Media-Multi-Level-Measure of Chapter VI. Moreover, it is suggested that additional studies should be undertaken to establish relationships between personality characteristics and artistic achievement. This was based on the assumption that one type of measure might not be capable of measuring both divergent and convergent attitudes in relation to the understanding of aesthetics.

In this study, aesthetic recognition, appreciation, and production have been examined in gross variables such as Marks in Art, the home environment, and economic status. Further studies could examine a greater range of student background variables in greater detail in order to understand the way in which aspects of student experience implicate the ability to recognize, appreciate and produce aesthetic structure. Also, a greater diversity of personality types would contribute to an understanding of the variable of culture as an influence on aesthetic comprehension. Future research should attempt to locate the cultural, environmental, social, economic, and experience variables which influence the development or comprehension of aesthetic awareness.

In theorizing about the ability to recognize aesthetic order - "Unity" as described by Graves - this study suggested that as an alternative to the Graves Design

Judgment Test Measure, the attitudes of a performance procedure during the creation of art structures should be considered. A performance referenced measure, rather than the measure of an ability to select "good organization" in a static structure, may provide an acceptable alternative to the correct-incorrect measure design.

IMPLICATIONS BASED ON THE RESULTS OF THIS STUDY

From in-school observation before and after the data collection it was noticed that little attempt, if any, was made to present the "principle of aesthetic order" in a formal sequence.

With respect to the outcomes of this study, the Fundamental Principle of Aesthetic Order - Unity, Conflict, Dominance - as defined by the Graves Design Judgment Test, appeared to have little relationship to the student's Mark in Art. Therefore, it was concluded that the Mark in Art may have been achieved by means other than those acceptable to Graves' Theory. Also, since the ability to appreciate Aesthetic Order was determined by the ability to do well on the Meier Art Judgment Test, future research in this area should define and analyse the validity of the measures to determine their acceptability for the attainment of a measure of any ability.

Several possible explanations might account for the lack of a significant relationship between the ability to

recognize and appreciate aesthetic structures and the ability to produce aesthetic structures. First, the Graves Test does not distinguish between aptitude and achievement. Second, the student's Mark in Art is not based on the same value system as the Graves Test. Whether these particular suppositions are sufficient to explain the results of this study remain to be shown by future research. However, the results of this study may be interpreted as supporting Graves' speculation on the ability to recognize Unity; that is, the affects of Unity recognition are extended to the affects of Unity appreciation.

The production of art in this study had little relationship to the values endorsed by the Principle of Aesthetic Order. That is, the Mark in Art had significance in explaining the extent to which the students in this study accepted Graves' Theory when producing their own structures. The validity of Graves' Test is based on its ability to separate art students from non-art students. The implication of this measure of validity is that, the 'more art' a person has experienced, the higher his score on the Graves Design Judgment Test. This may be a naturally occurring development of art education as well as a by-product of art production. However, other educators (Kannegieter, 1971) consider that aesthetic awareness may also be a specific objective for which one may teach:

Through training, the child learns the cues to which he must attend if he is to comprehend and interpret adequately the pattern or images impinging upon his retina. Whether he can

transfer this knowledge to art expression depends in part upon whether the instructor teaches specifically for transfer, since transfer occurs more readily when concepts and generalizations in one area are made directly applicable to another area. (p. 27)

From the above speculation and the results obtained in the first data analysis, it may be reasonable to assume that the student's attitude towards the items in the Graves Design Judgment Test has been conditioned by factors projected in the student's previous art programs. It is suggested that future research should consider the extent to which the Fundamental Principle of Aesthetic Order was 'accepted-rejected' by persons who 'rejected-accepted' the values of the art program. If the concept of Aesthetic Order is considered to be relevant and future research considers the suggested study to be of value, then the aims of the art program relevant to Aesthetic Order should be stated with greater clarity than was the case in this study. The implication of this for the educator lies in the opportunity to experience and consider ways in which the concept of Aesthetic Order may be transferred in a variety of curriculum approaches.

Further validation studies are proposed by suggesting the examination of each of the appreciation and production factors with the view of determining whether or not each of these dimensions could be split into several sub-factors. This could be done for example, with the appreciation dimension by altering the items to include samples of both contemporary and traditional items as well as represen-

tational and non-objective content. In the productive dimension, a performance measure could include problems requiring several manipulative and response skill levels.

Such studies are justified in light of the fact that individually, most of the items in each of the Graves and Meier Tests deal with one style or 'kind' of work structure. As more detailed knowledge of the factor structure of Aesthetic Order is developed, other studies could determine the point of development where the individual accepts a position and then subsequently changes his position with respect to each dimension of the norm of Aesthetic Order.

To determine whether aesthetic preference changes in relation to some stage of developmental change, a longitudinal study would be required. A longitudinal study of students progressing through school and beyond, would contribute to an understanding of the acquisition of certain aspects of the factors of recognition, appreciation and production of aesthetic structure.

The longitudinal studies of students would be a valuable contribution as no studies of this nature have been made using a norm of aesthetic order or judgment. Most studies have been terminal in nature. A longitudinal study of aesthetic development could contribute to the understanding of the development of aesthetic criteria as viewed in relation to the number of years of art instruction, the reasons for the acceptance or rejection of art style, the importance of intelligence, and the influence of the

individual's environment.

Also, in this kind of study, information may be obtained concerning the methods of evaluation and appreciation of traditional, contemporary, and personal art structures, and whether the same aesthetic base is used or whether one requires a broader aesthetic base than another. If a different aesthetic base is required for different works, do they include varying degrees of quality and are they consensually or expertly derived?

Summary

The purpose of this study was to contribute to an evaluation of the validity of Maitland Graves' concept of Aesthetic Order as objectified by his Theory of Unity and graphically represented in the Graves Design Judgment Test.

This evaluation was carried out by examining the relationships among Graves' concept of Aesthetic Order and the nature of the ability to recognize, appreciate, and produce aesthetic structures. These relationships were considered together with selected aspects of individual background information.

The findings based on the examination, evaluation, testing, and extrapolation of the information presented in this study has led to the following conclusions: It may be assumed that Graves' Theory of Aesthetic Order is valid. However, the objectification of the Theory of Unity, as represented by the Graves Design Judgment Test, may be in

error. Further studies are required and justified.

If further studies support the relationships found in this study, then practicing educators will have one more piece of information, which may help in the designing of curricula.

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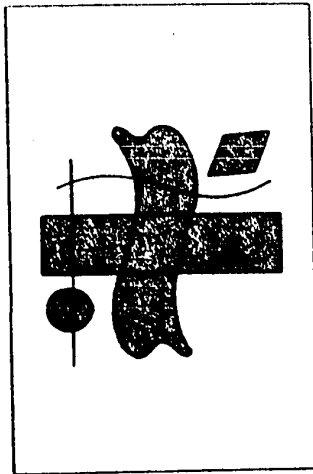
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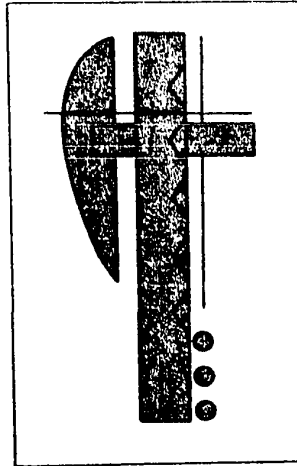
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APPENDIX I

THE GRAVES DESIGN JUDGMENT TEST

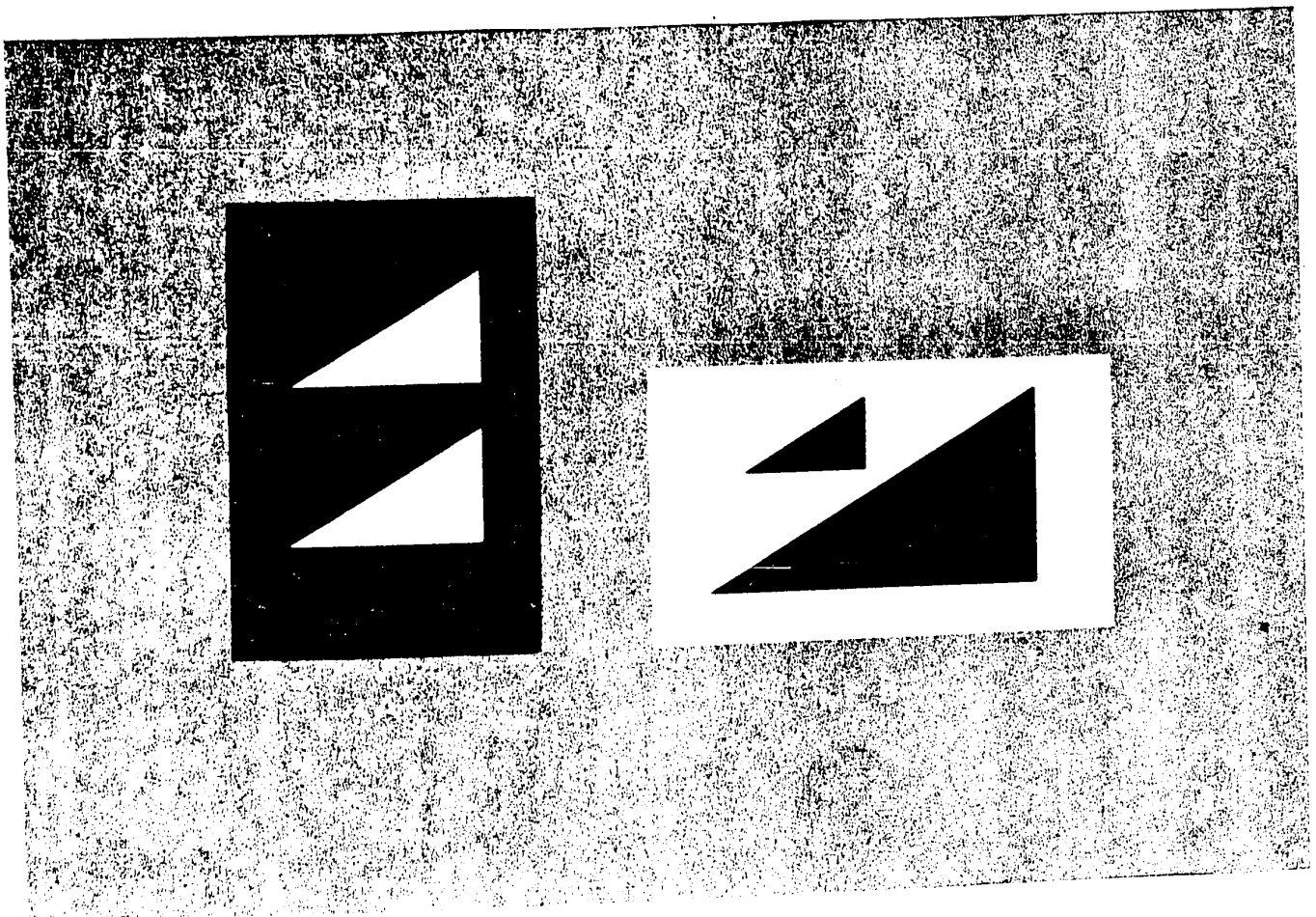


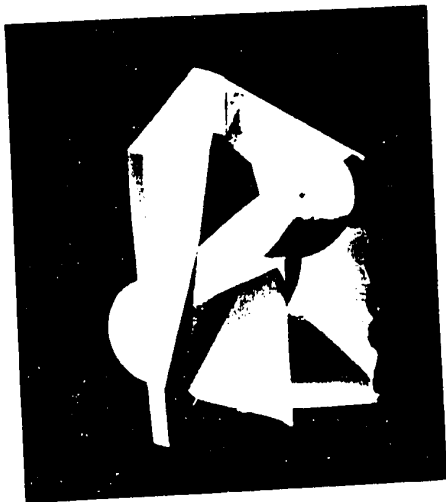
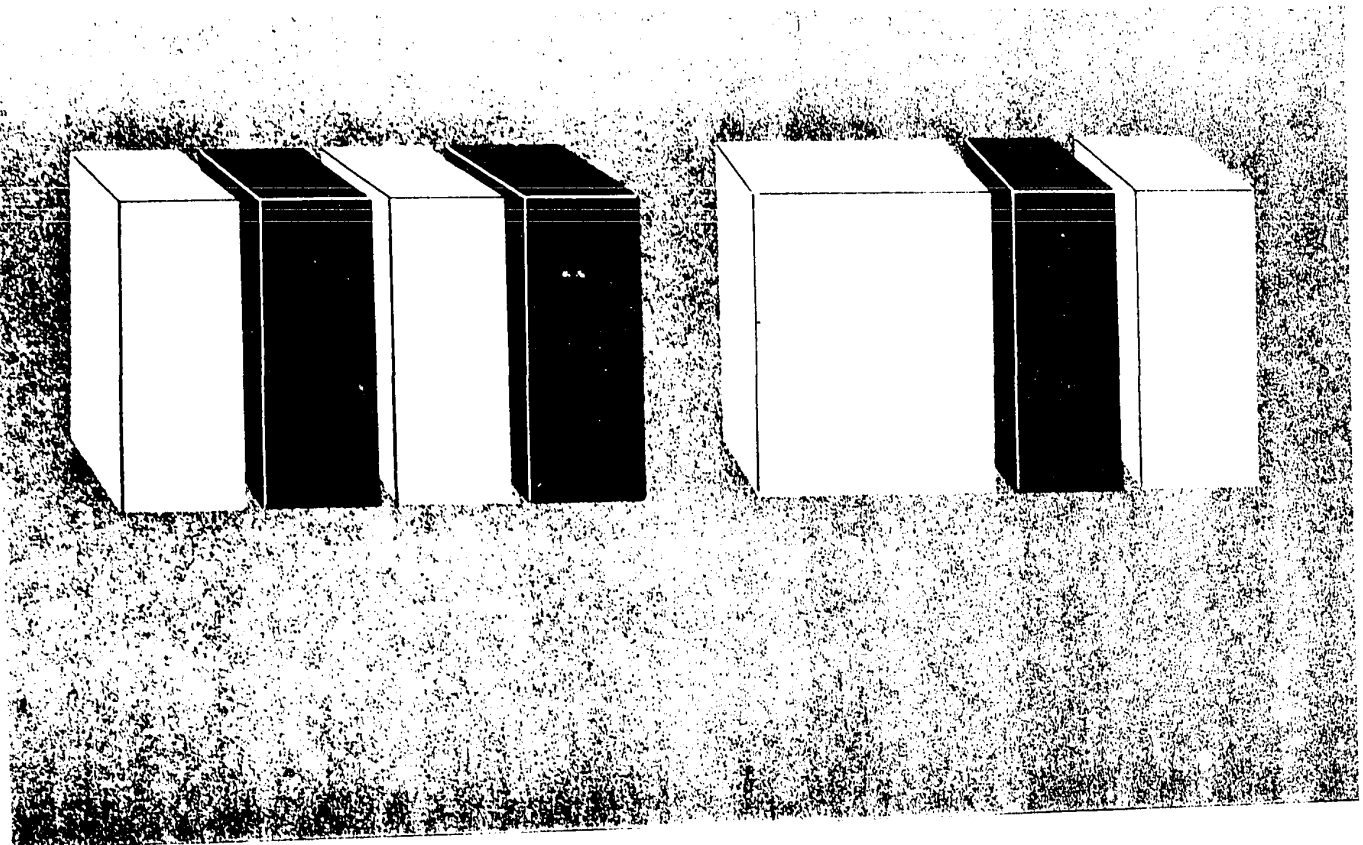
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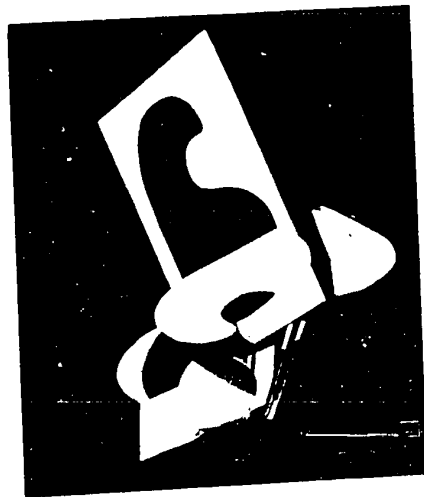
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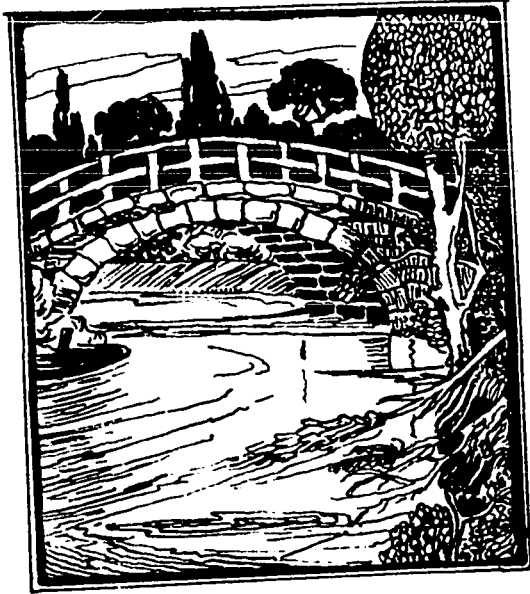
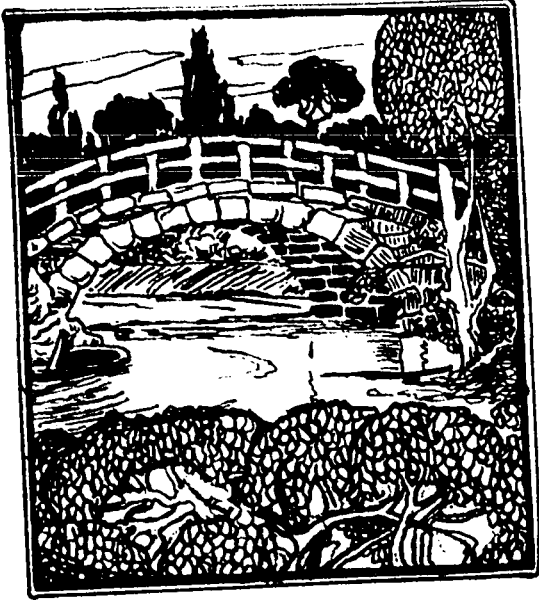
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APPENDIX II

THE MEIER ART JUDGMENT TEST



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APPENDIX III

STUDENT ANSWER SHEET FOR THE
GRAVES DESIGN JUDGMENT TEST