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This essay is addressed to those concerned with the application of linguistic models or analogies to paintings.[1] It contends that linguistic models are applicable to the analysis of styles of painting. Accordingly, it rejects the view of those who oppose the use of a linguistic model or analogy for the analysis of paintings. However, rather than to apply the linguistic model directly to paintings as such, I propose the examination of styles of painting as language-like systems. The main task of the paper is to analyze and show the limits of certain obstacles to application of a linguistic model or analogy to paintings. By showing that certain obstacles posed by Hofstadter and Langer are insufficiently supported, I will attempt to clear the way for a viable application of the linguistic model to paintings.

There is interest in the question of painting as language on the part of artists, art historians, and some philosophers. The discussions

by painters stress the importance of finding the rules or laws of "picture language." Poussin, in the seventeenth century; Seurat, in the nineteenth century; and Kandinsky, Mondrian, and others in the twentieth century have approached the question of the language of painting through compositional factors.[2] Representative of these is Kandinsky's *Concerning the Spiritual in Art*, an essay in "pictorial grammar." The grammar is in terms of form and color based on analogies with music and language.

These discussions of "the language of painting" by painters suffer from certain difficulties. They try to develop a language for all paintings. My own investigation suggests that the search for a universal language-like system for all paintings tries to cover too wide a range. The resulting system would be open to objection for its endless multiplicity of rules and elements and for its failure to take account of the diversity found among style groupings. Also, the discussions of painting as language by artists do not distinguish clearly between syntactic and semantic aspects of painting.

Certain art historians have shown interest in the notion of painting as language. Wölfflin introduces two sets of polar categories: linear and painterly, plane and recession, closed and open form, multiplicity and unity, and absolute clarity versus relative clarity of the subject.[3] The first of each of these pairs together form a set of criteria for Classical (Renaissance) style. The second of the pairs together comprise a set of criteria for anti-Classical style. Wölfflin views each of these as the basis of two distinct systems of visual representation which are like two languages. Shapiro also alludes to the notion of styles being like languages consisting of expressive systems.[4] Ackerman attributes to styles language-like features such as vocabulary and syntax.[5] However, none of these art historians develop the notion of painting as language beyond general suggestions that paintings are language-like.

Philosophers too have given attention to the question of painting as language. Charles Morris in his application of the theory of signs to aesthetics argues that the semiotic terms *syntax*, *semantics*, and *pragmatics* are applicable to paintings.[6] However, Morris does not go on to show in what sense paintings have these features.

Briefly, I hold that within the limits of analogy a linguistic model is applicable to styles of painting.[7] If styles are the "languages" of painting, we must attempt to demarcate the notion of a style. This cannot be done by forcing the linguistic analogy too closely. Instead, it must be done by working out independent criteria for distinguishing one style from another. Thus the linguistic model is not taken over literally in terms of words, sentences, subjects, predicates, etc. Rather, the analogy serves to elucidate the grammar-like elements and rules of the languages of styles. Furthermore, the "grammar" of a style of painting is a normative grammar which tells how the elements of paintings in the style are to be arranged and used. Its rules may be broken without resulting necessarily in a "nonpainting" (as a broken rule of syntax may result in a "non-sentence"). Rather, the result of breaking an important rule of a "language" of style is a painting which either fails to be representative of that style, or is recognizably incorrect in that style.

What are the elements of such a grammar of style? By analogy to language these are the concepts of *syntactic* (formal) and *semantic* (referential or representational) aspects of works in a style. Syntax is the notion of formal arrangement of the pictorial-visual elements, particularly shapes, according to rule but in terms of non-semantic considerations. Semantics is concerned with the relations of paintings or their shapes in a style to the objects, events, etc., which they represent or exemplify. Both function through their respective ways of manipulating the pictorial-visual-elements-line, color, value, texture, and especially shape. A shape in the broadest sense is any bounded area on the picture plane which is defined by linear boundaries; or by differences in color, value, texture, or by any combination of these. Shapes function in both syntactic and semantic roles in this analysis. On the level of syntactic analysis shapes are the primitive elements out of which the more complex units (paintings) are constructed. In semantic analysis, these shapes may be assigned representational or other semantic functions. But as syntactic elements they do not yet have semantic import.

In order to sustain the application of a linguistic model or analogy to painting, it is necessary to examine objections to this use of a linguistic model. The obstacles that I will consider arise very clearly

in the writings of Hofstadter[8] and Langer.[9] Hofstadter's and Langer's objections are analyzed as the major opposition because they are representative, well formulated, and deal directly with crucial syntactic and semantic issues. Their arguments also reflect some of the important misconceptions which this essay seeks to clarify concerning the analysis of paintings in terms of a linguistic model. One of these is the contention that semiotic or significance theories, those which approach styles of paintings as sign schema, reduce either the meaning (Hofstadter) or the function (Langer) of paintings to referential meaning or function. In each case, the referential emphasis is said to miss or neglect what is central in the meaning and function of paintings. The other chief obstacle is the contention that paintings belong to another kind of schema than those to which semiotic concepts apply. Langer contends that the two kinds of schema differ in their manner of presenting information and that paintings lack vocabulary and syntax. Both are essential features of schema to which semiotic analysis applies.

I shall contend that the arguments offered in support of these proposed obstacles fail to sustain the notion that a linguistic model or analogy is inapplicable to paintings.

A. Hofstadter's Objections

I understand Hofstadter's main objection to be that significance theories fail to do justice to the meanings of paintings because they regard meaning as being "referential." In his comments on Beardsley's analysis of significance theories of art,[10] Hofstadter suggests that Beardsley's choice of *significance* to deal with the meaning of works of art reduces artistic meaning to "the abstract idea of referring." This is objectionable to Hofstadter because it reduces artistic meaning to what is common to it and non-artistic meaning, which is tantamount to having left the art out of the meaning.[11] Hofstadter's own view incorporates the notion that artistic meaning includes the articulation of "a concrete spiritual attitude-containing elements of feeling, cognition, and conation."[12]

There are really two arguments in Hofstadter's objection, which can be dealt with separately: 1) that significance theories reduce

artistic meaning to mere reference; 2) that significance theories will see in a painting only what it has in common with non-artistic meaning. The weight of Hofstadter's first argument is based upon the questionable assumption that reference in these theories exhausts the "meaning" of a painting. What is overlooked in his view is that a referential analysis of meaning in a painting does not immediately preclude manifestations of artistic or aesthetic significance for the same painting. For Hofstadter to substantiate his claim that significance theories reduce artistic meaning to reference he would have to show that the analysis in terms of one-reference-necessarily excludes the other-artistic, aesthetic-as non-referential features. Or he would need to show that for significance theories the artistic or aesthetic is understood in terms of reference. Hofstadter has not shown that either of these situations exists.

Aside from the fact that referential or representational "meanings" do not necessarily exhaust the analysis of a painting's meaning, I doubt that there is anything in Hofstadter's notion of artistic meaning-described as "concrete spiritual attitude containing elements of feeling, cognition, and conation"-which differs substantially from acceptable denotata of the term representation. For representation when applied to paintings is used not only to designate references to nature in the objective world but includes references to thoughts and emotions. This extension of reference in art is noted in the remarks of an earlier writer on the philosophy of art:

> As thoughts and emotions cannot be heard or seen in themselves, they cannot be presented or communicated to our fellow citizens directly.... They must be *represented* indirectly; i.e., through the use of a medium differing from themselves in that it can be heard and seen. This medium the mind must find in material nature, the sounds and sights of which it can accept, imitate, modify and develop...[13]

There seems to be nothing in Hofstadter's first argument which is not covered either by the counter-assertion that representation in the narrower sense is only one aspect of the meaning of the painting, or by extending representation to include, as it rightly does in paintings, reference to concepts and to feelings as well as to nature in the external world. Either of the above two equally feasible approaches

would render Hofstadter's argument ineffective as a viable support for his objection to a significance theory analysis of paintings. Neither alternative is incongruous with the analysis of styles of painting as language-like systems.

Hofstadter's second argument is that significance theories have the unfortunate consequence of causing one to see in a painting only what it has in common with non-artistic meaning. Contrary to Hofstadter, I suggest that the representational analysis of meaning in significance theories does not abandon discrimination among references made by a noun, a statement in theoretical physics, and a painting. Between references executed in languages and those in paintings there are important differences of purpose and of means.

A representation in a language through the use of a noun is often used simply to designate or to classify. A reference in the form of a statement in theoretical physics functioning as part of a description accommodates the needs of an operational model for accounting for the orderly behavior of some natural phenomena. However, a representation in a painting is hardly ever used simply to designate, to classify, or to present scientific description, but rather, it selects, emphasizes, arranges, and presents its subject for aesthetic attention and enjoyment. While all of these-the noun, the scientific statement, and the painting-are engaged in the common task of referring to something beyond themselves, there is not the absence of discrimination and the reduction of artistic meaning to the abstract idea of referring as proposed by Hofstadter.

Between references made in languages and in paintings there are also important differences of means. Although inscriptions in languages exhibit pictorial qualities such as color, line, value, and texture, these pictorial qualities are rarely the means of representation for the languages. The syntax of a language ordinarily contains no instructions for uses of the pictorial properties. By contrast, the syntax of a style of painting does indicate how color and line are to function in the style. And on the semantic level, line and color, together with the other pictorial elements, comprise the shapes which are the dominant vehicles of representation in paintings. Accordingly, hue, saturation, thickness of line, and other properties of color important in a painting

have not the same bearing on syntactic and semantic functions of written languages.

This is not to overlook the fact that color and other pictorial elements may affect responses to language elements in certain special instances. For example, experimental studies show that the time of response to a color word *blue* is altered when it is printed in red ink.[14] Other possible exceptions are gimmick printing, calligraphy, and lettering or typography used to represent in a painting sense by characteristics of shape, line, or color. However, in these instances the written language is affected by or viewed from the point of view of syntactic and semantic rules more like that of painting than of discursive written language.

Thus, we see that endowing special cases of linguistic signs with pictorial elements does not contradict the assertion that color functioning in a style performs in quite a different way in a language scheme. For syntactic and semantic purposes a sentence reads just as well in one color as another or with thin or thick lines, as long as there remains sufficient contrast to discern the words and their order. But in the case of paintings, pictorial elements such as color and line, operating through the pictorial scheme, are a part of the vehicle of representation. Hue, saturation, brightness in color, thickness, direction, and movement of lines make up the vocabulary of shapes through which the painting refers to something beyond itself. In a painting, reference depends upon the visual elements acting in their assigned roles in a style.[15]

The outcome of this discussion of reference in painting and in languages is that Hofstadter's conclusion that significance theories, when applied to works of art, result in the reducing of artistic meaning to what it shares with non-artistic representation is unwarranted. Differences in purposes and means in the types of linguistic references cited and representation in painting, as noted above, prevent Hofstadter's contention from materializing.

B. Langer's Objections

Langer's objections to the analysis of styles of painting as language-like systems, first, similar to the argument of Hofstadter, purport to show that preoccupation with the referential function of paintings leads to neglect of their more basic function which is the "formulation of experience," and, second, argue that there exist two radically different kinds of schema, discursive and presentational, which unalterably separate written languages (discursive) and paintings (presentational).

1. Representation

Langer's dissatisfaction with the application of *representation* to painting is apparent in her book, *Problems of Art*. Semanticists' preoccupation with reference as a defining property of symbols, she charges, has led to a neglect of the more primitive role of formulating experience "as something imaginable in the first place." This neglect causes some to attribute mistakenly referential function to art symbols as well as to others. Langer proposes that art symbols are symbols only in a special sense which enables them to perform the formulative but not the referential function. Paintings make only direct presentations of experience. As expressive forms, paintings present the form of a feeling in their structures, but they do not denote by pointing to something beyond their presence. They express the form of a feeling by presenting "the fabric of sensibility, emotion, and the strains of more concentrated cerebrations, for our impersonal cognition."[16]

I suggest, contrary to Langer, that the formulative and the referential functions in a painting are not mutually exclusive. A painting may do both. There is a distinction between the act of formulating and the end product of formulation. The act of formulating as illustrated in the making of a painting is the transformation of perceptions, thoughts, feelings into cognitively regulated pictorial elements which present the original events for "contemplation, logical intuition, recognition, understanding."[17] In its efforts to call attention to the "formative-presentational" role of paintings as symbols, however, Langer's analysis dismisses too quickly the representational.

Just as a painting is able to "formulate" the primitive feelings and perceptions from which it arose, it also refers back to the same, thus exercising both presentational and referential properties of symbols. Paintings in many styles also refer outside themselves to persons, objects, or events which they are said to depict. Paintings or their shapes in both of these instances function representationally. Thus, we need not deny the relevance of representation to an analysis of paintings in their role as signs in order to see that a painting may do other things, such as formulate experience. The formulative and referential functions of paintings are not mutually exclusive.

2. Presentational and Discursive Signs

Langer's objections to the use of a linguistic model for analyzing painting arise largely from a proposed distinction between presentational and discursive signs. I understand this distinction to be a differentiation between the schemata of signs and symbols to which semiotic-linguistic concepts apply (discursive-lingistic signs) and schemata to which they do not apply (presentational-art symbol).[18] It is interesting to note how Langer is led to the distinction between presentational and discursive schema. Her own account of this in *Philosophy in a New Key* suggests that the distinction arises out of a desire to free cognitive activity from a limit which follows from the post-Wittgensteinian, post-Carnapian analysis of language. The essence of this limit is that language, including mathematical and scientific signs, plus linguistic approximations in gesture, hieroglyphics, and graphs, is the only means of articulating thought. This is accompanied by the corollary that any aspect of experience which cannot be articulated in a discursive language (Langer's sense) is to be regarded as feelings. In accordance with this distinction, the structures in which feelings are objectified are treated as expressions of emotion, feeling, or wish.[19]

Langer's desire to make a place in cognitive activity for other kinds of semiotic activity, especially that of works of art, prompts her sharp distinction between discursive schema and presentational schema. In the class of discursive schema she places language in the sense indicated above. In the class or presentational signs she includes works of art such as paintings. Her plan was to accept the

prescriptions of the post-Wittgensteinian, post-Carnapian analysis of *language*, but not to stop where it does. Langer sees in art symbols an unexplored area of semantic which goes beyond that already explored in connection with discursive languages. Previous analysis by Carnap and others has failed to comprehend the important distinction between simple cries of "oh" and the articulateness of symbols in the arts. She asserts that art symbols are genuine symbol forms but not those investigated previously by logicians.[20]

Having argued for the extension of symbolic activity to include works of art, Langer then proceeds to distinguish art symbols from discursive language symbols. Consider her remarks concerning painting. Visual form lines, colors, and other pictorial elements are just as capable of becoming symbols as are words. However, languages as discursive sign systems are a special sort which preclude generalizing from them to paintings. The discursive features of language which separate it from paintings are then enumerated.

1. Languages have vocabulary and syntax including word elements with fixed meanings which can be used in connection with rules of syntax to make composite symbols with new meanings.
2. Word equivalencies in a language permit expression of the same meaning in various forms and also permit the construction of a dictionary.
3. Language systems permit translation of propositions and substitution of words without changes in meaning.[21]

In contrast to languages, pictures, including paintings, lack elements with independent meanings, and their shapes are arranged in "quite indescribable combinations." [22] Because paintings do not possess the salient characteristics of discursive signs enumerated above, Langer concludes that paintings are non-discursive. Structurally, this means that paintings do not have vocabulary or syntax. This structural distinction is in addition to the previously noted functional distinction in which Langer claims that signs in discursive systems may represent or denote but signs in painting schemes do not.

I am in full agreement with Langer's desire to recognize the status of works of art as forms of cognitive activity along with languages and other sign schemes. My chief quarrel with her arises from her radical separation of works of art from languages by means of the proposed distinction between presentational and discursive schema. My contention is that neither her arguments for this distinction nor a comparison of the two kinds of schemata, particularly cases of paintings and written languages, will support this strong distinction.

3. Sequentially versus Simultaneously Perceivable Structures

In order to support her distinction between presentational and discursive signs, Langer introduces the notion that discursive signs present their information in sequential order, while presentational signs offer theirs simultaneously. A possible interpretation of Langer's notion is the following: The viewer of the painting has the entire work in front of him and is able to read the signs in the painting simultaneously; however, the reader of the novel can only experience the written signs sequentially in a connected series which is regularly interrupted by the turning of pages. But a message in a written language need not be more than a page long to be of significance. Paragraphs or poems frequently do not exceed the length of a page; sentences almost never do. I presume, however, that Langer is making a more consequential claim, either about the way in which elements in a string of written words and elements of a paintings are arranged, or about the manner in which the respective orders are perceived. Possibly she intends to apply the sequential-simultaneous distinction to both. But I will argue that it applies to neither.

I understand *sequence* as it applies to word inscriptions and to paintings to be the arrangement of visual-cognitive cues which establishes continuity for a perceiver among the parts of the string of words or among the elements of a painting. Sequential order is visual in the sense that it is presented in a medium that is capable of being perceived through the eyes. Sequential order is cognitive in the sense that it entails the arrangement of these elements in human behavioral

acts that are directed toward ordering the thought-experiences to which these elements are related.

Applied to strings of phonemes or words which are "well formed" according to the rules of a language and which have meaning with respect to the semantic relations of the language, *sequential* as Langer uses it refers to the essentially one-dimensional arrangement of the string of words. In written English it is customary to place the words in a sequence from left to right on a surface. Thus far we have established a plausible interpretation of sequential as it applies to strings of words, the example of discursive signs.

Does this definition of sequential order apply to the arrangement of shapes in paintings? In some styles there are approximations of sequential composition, e.g., Eugene Delacroix's *The Arab Tax*, Joseph Turner's *Keelmen Heaving Coals by Moon Light*, and Paul Cezanne's *Mont Sainte-Victoire, 1904-6*.[23] In planning and executing a painting the artist, in many styles, carefully divides the canvas into areas of relatively proportioned size according to mathematically determined formulas. He then uses these divisions of the canvas to determine the basis for the distribution of color, value, and shapes.[24] Division of the canvas in itself is not a sequential order, but it suggests a basis for one. It enables the artist to plan his composition so as to "lead the viewer's eye" through a sequence of important points in the painting based on the distribution of shapes.

There are several means of developing sequential composition. Dominance and subordinance among shapes in a composition is one. A painter may indicate dominant shapes by size variation, brighter color, greater complexity of structure, etc. Systematic gradations in sizes of shapes may also act as a basis for sequential composition. Delacroix's use of bright colors for dominant shapes, together with gradations in shape sizes, sets up a kind of sequential order among the shapes in *The Arab Tax*, illustrating both of these principles. The use of a scaled palette on which the artist arranges the colors into orders based upon systematic gradation of hue, saturation, and brightness is another means of sequential composition. The artist follows the arrangement of pigment gradations on the set palette in order to "lead the eye" in accordance with the sequences of color gradation. Turner in *Keelmen*

Heaving Coals by Moon Light and Cezanne in *Mont Sainte-Victorie, 1904-6*, reflecting the use of a scaled palette, establish a sense of sequential composition based on color gradation. Dominance and the other principles need not always result in sequential arrangement, but these examples suggest they may do so.[25]

Before leaving the issue of sequential order we will consider the relevance of the sequential-simultaneous distinction to the perception of strings of words and paintings. *Sequential perceiving* I will define in terms of the evidence from studies of eye movements.[26] I will regard as symptomatic of sequentially initiated perception eye movements that follow, element by element, the order set forth in the arrangement of a string of words or a painting. Similarly, I will regard as symptomatic of simultaneously initiated perception a situation in which all the elements of the visible string of words or all of the elements of the painting are grasped at the same time.

Studies of eye movements of subjects reading or viewing paintings do not confirm either strictly sequential movements of the eye in reading words or all-encompassing "eye-gulps" in viewing paintings. Buswell's study of how people view paintings, which is based on photographing and charting eye movements of subjects looking at paintings, reports some interesting information pertinent to the sequence-simultaneous distinction. Buswell reports, "in looking at pictures just as in the process of reading, the eye moves in a series of quick jerks and pauses." [27] He notes that the directions of eye movements in viewing a painting do not follow the general pattern of the design by moving from motif to motif. There is evidence, however, for two general patterns in eye movements:

> One of these consists of a general survey in which the eye moves with a series of relatively short pauses over the main portions of the picture. A second type of pattern was observed in which series of fixations, usually longer in duration, are concentrated over small areas of the picture, evidencing detailed examination of those sections.[28]

If we may assume that eye movements are objective symptoms of the perceptual processes, as Buswell does, then Langer's distinction between discursive and presentation signs is not supported. Neither of

these reported patterns of eye movements during the viewing of paintings suggests anything like simultaneous apprehension of the information in the painting. The evidence points instead to a much closer similarity of pattern between the eye movements observed in reading and in viewing paintings than expected.

E. H. Gombrich comes to a similar conclusion concerning the inadequacy of the sequence simultaneous distinction in perceiving written words and paintings. Gombrich writes:

> We believe that we take the picture more or less at one glance and recognize the motif. Our experience with Escher's contradition shows that this account is inadequate. We read a picture as we read a printed line, by picking up letters or cues and fitting them together.[29]

It is thus conceivable that eye movements in both activities follow centers of interest and organize information by linking together the various centers of interest into a coherent view. In paintings the areas of interest consist of concentrations of lines, special color areas, and shapes. In prose writing corresponding area of interest are key words spread over the page.

Therefore, the argument that languages present information sequentially and that paintings present information simultaneously is contradicted by evidence that both may have similar methods for the arrangement and the perception of their elements.

4. The Argument That Paintings Lack Vocabulary

Returning now to Langer's proposed structural distinctions between discursive and presentational symbolic systems, let us consider her argument that paintings lack vocabulary. The first task is to clarify what is meant by vocabulary. Langer's explanation of linguistic vocabulary shows it consisting of a stock of words with fixed meanings, which have equivalents from which a dictionary of meanings may be composed. Also, the vocabulary elements in a language may be equivalent to other single units or combinations of elements into which they are translatable. Paintings, it is argued, do not possess vocabulary because they cannot be broken down into

elements like words. Lines, areas of light and shade, color patches "do not represent, item for item, those elements which have names; there is not one blotch for the nose, one for the mouth, etc." [30]

One difficulty I find with Langer's comparison of vocabulary in language and in painting is that nowhere is it established what should be the units of comparison. Shall we compare words with lines, areas of light and shade, color patches? Or shall we compare letter characters with lines and color patches and leave completed words for comparison with completed paintings? Langer does not clearly delineate the appropriate units of comparison. She seems to assume that the question of vocabulary is to be settled by comparing the function of words with that of lines, areas of light and shade, and color patches. Perhaps this formulation prejudices the case too heavily against the possibility of paintings having vocabulary.

The arguments offered by Langer to show that the vocabulary elements of languages have fixed meanings, that some words are equivalent to combinations of other words, and that the elements of one system can be translated into those of other systems are not conclusive reasons for accepting the conclusion that paintings do not have vocabulary.[31] It has not been shown on their behalf that analogous operations are impossible with respect to paintings. The vocabulary elements in a language have fixed meanings, if at all, only with respect to their membership in a sign scheme in which they are assigned certain meanings. A dictionary will show that the same term is usually assigned a *range* of meanings rather than a fixed meaning and that the same word may be assigned quite different meanings. Thus, if Langer's argument is that elements in paintings differ because they do not have fixed meanings, etc., her argument could as easily be applied to written verbal languages.

More important, it is not necessary that elements in painting parallel in every way linguistic elements in order to say that paintings may have vocabulary. Styles of painting are an alternative kind of symbolic system with their own sense of vocabulary. This essay suggests that phonemes, morphemes, and words are the vocabulary elements in languages and that in styles of painting shapes are the basic vocabulary elements. Are there, then, important analogies

between vocabulary in language and in painting? There are two important parallels. First, elements in both are used in combination with other similar elements to form more complex "units of meaning." Phonomes, morphemes, and words combine into sentences, paragraphs, poems, etc. By analogy, shapes combine into whole paintings or integrated sections of them. Second, a selection of both elements, linguistic elements and shapes, are used as representational vehicles in their respective schemes.

Alternative to Langer's view that painting has no vocabulary, I have proposed that styles of painting have dominant vocabularies of shapes. Elsewhere, a detailed analysis of vocabularies of shapes in terms of three-shape types-motif, theme, and plastic-is presented.[32] Motif shapes are configurations of pictorial elements identified with our visual experiences of objects or events more or less familiar from every day experiences. Geometric shapes and shapes associated with human figures, buildings, trees, animal figures, etc., are examples of motif shapes. Theme shapes are motif shapes which have the additional feature of being associated with classical, biblical, or historical myths, characters, and stories. When a shape is associated with a theme, the shape carries with it the additional meaning attached to the theme in its literary or historical setting. For example, the human figure shapes in Da Vinci's *The Last Supper* do not merely depict a group of men sitting at a table. Rather, these shapes are understood by an informed viewer in relation to the biblical "last supper" narrative. Plastic shapes are the vocabularies in "abstract styles." Because they refer to abstract metaphysical notions, emotional states, or unfamiliar nature phenomena, plastic shapes are not seen as representational shapes in the sense of motif and theme shapes. They are used by painters such as Mondrian and Rothko to represent metaphysical realities and emotional states for which familiar visual associations are not readily available.[33]

The three-shape categories share with words two proposed features of vocabulary: the shapes combine into more complex units in their respective systems. Also, they refer both generally-as when they depict metaphysical notions and emotional states shared by many persons or when they designate a human being but no single person-

and specifically-as when a painting depicts a particular building or person.

5. The Argument That Paintings Lack Syntax

Finally, I examine Langer's claim that paintings lack syntax. Langer holds, and I agree, that syntax provides the rules in a sign system for combining formal elements into composite units.[34] The more complete statement of her arguments against syntax of painting occurs in her book, *Mind: An Essay on Human Feeling*. In *Mind*, the essence of her objection to the use of *syntax* to speak of paintings is: whereas the rules for combining elements in languages are "few enough to be formally known as rules of syntax," the rules of painting are not so few;[35] whereas conventions change less frequently in word usage, they change with greater frequency in painting; whereas the conventions are more binding in word usage, they are less so in painting; and whereas the manipulation of elements in a language according to syntactic rules will produce a sentence, etc., the manipulation of the elements of painting by rules will not result in a work of art.[36]

None of these arguments offer serious substance to Langer's contention that paintings lack syntax altogether. Her reasons for denying syntax to painting make the criteria for deciding whether or not a given schema has a syntax a matter of the degree to which it possesses the stated properties. The absurdity of this becomes apparent when we see what follows from it. If the criteria are as Langer's view implies, the following questions are entitled to an answer. How few rules must a schema have to be syntactic? How much change in the conventions is permitted? How binding shall be the conventions? To answer these questions requires both means for measuring and norms for determining whether a given schema qualifies, and these are not provided. It hardly seems fair to presuppose, as Langer must, that written language, which is only one kind of sign schema, should be taken as the norm.

This is not the only objection to Langer's arguments. Particularly, the first three arguments commit the same kind of error that appears in her discussion of vocabulary: failure to establish

corresponding units of comparison between the schema of language and of paintings. If we are comparing the syntactic rules of "all paintings" with those of "a single language," then of course, the rules for painting will be greater in number, the conventions will appear to change more frequently, and the conventions will appear to be less binding. This is because the comparison of an hypothetical schema encompassing all of the schemata of painting with the schema of a single language does not compare units of the same magnitude. Without the determination of appropriate schemata for comparison, Langer's discussion turns out to be relatively inconsequential in the determination of whether or not paintings can be said to have syntax.

Langer's final argument offered against the possibility of syntax for paintings is that manipulation of line, color, and the other pictorial elements by rules will not produce "a work of art." This argument begs the question. For the issue of syntax or none in paintings is not whether the manipulation of lines and colors according to rule will produce "a work of art." Rather it is, will the manipulation of these elements according to rules be a dominant factor in producing a painting in a certain style? As they are analyzed in this essay, rules of style are indeed useful in making or analyzing a painting.

Alternative to Langer, I contend grammar-like rules of styles in important respects analogous to syntactic rules of language. Both determine formal arrangements of elements in the structures of their respective units. Also, both provide criteria for distinguishing acceptable from non-acceptable units of their systems. For example, the expression "He worded the sentence incorrectly" is accepted as a syntactically correct sentence. However, when judged by the rules of English syntax, the expression "The incorrectly he sentence worded," using the same string of words, is syntactically incorrect. By analogy, stylistic rules distinguish acceptable arrangements of shapes in the works of a style. A comparison of Piero della Francesca's *The Flagellation* and Hogarth's *Satire on False Perspective* with respect to the rules of artificial linear perspective as used in Piero's style illustrates how a painting may satisfy or violate the syntactic rules of a style.[37]

The syntactic rules for styles of painting differ in important respects from both rules of logical syntax and syntactic rules of grammar. Syntactic rules in logical systems describe proper sequences of predicates, etc., and prescribe appropriate transformations, substitutions, and deductions. Syntactic rules of ordinary languages (English, French, etc.) characterize such arrangements as appropriate sequences of subject-object-verb order. The rules of syntax in a style of painting are based on stylistic practices for arranging shapes. Two dominant factors in the structural arrangement of shapes in a composition are color and linear spatial relations. Accordingly, the rules of color arrangement and of linear spatial arrangement are two dominant kinds of syntactic rules. Examples of color rules are: the use of color zones (light, middle, dark) to order shapes in certain Florentine paintings, the system of short daubs of energized color characteristics of Impressionist paintings, and the juxtaposition of "pure color shapes" against pure color shapes in Fauvist style. Examples of different stylistic rules based on linear spatial arrangement are found in the rules of artificial linear perspective use in Piero's Renaissance style, the use of the "serpentive line" principle in Mannerist style, and the principle of standardized units used in the works of the painter Lohse.[38] The rules of syntax cited in these examples describe or prescribe in part the compositional arrangement of shape elements in a style.

In conclusion, Hofstadter limits unjustifiably the sense of referential meaning by arguing that it does not include, or is incompatible with, other kinds of meaning. Langer errs in excluding any referential function from the formative role of paintings. Her contention that paintings belong to presentational rather than to discursive schemata is ambiguous and is incongruous with studies related to eye movement. By failing to specify appropriate criteria of comparison, by limitation of such terms as *vocabulary* and *work of art*, and by vague qualifications for syntax, Langer fails to render adequate support to her contention that paintings lack vocabulary and syntax. Consequently, Hofstadter's and Langer's arguments fail to show either that schemata of paintings lack the features of semiotic schemes or that referential (representational) meaning and function are inappropriately applied to paintings. Finally, I conclude on the basis of the proposals offered here that the notions of *syntax* and *semantic* find

a place in the analysis of styles of painting which is both loosely analogous to their use as applied to language and also distinct.[39]

[1] The linguistic model operative in this analysis is the semiotic model as proposed by Charles W. Morris, "Foundations of the Theory of Signs," *International Encyclopedia of Unified Science* 1 (Univ. of Chicago Press, 1938).

[2] H. L. C. Jaffe, *Syntactic Structure in the Visual Arts*, ed. Gyorgy Kepes (New York: 1965), pp. 139 f.

[3] Heinrich Wolfflin, *Principles of Art History* (New York: 1950), pp. 12 f.

[4] Meyer Shapiro, "Style," in Melvin Rader, *A Modern Book of Aesthetics* (New York: 1965).

[5] James S. Ackerman, "A Theory of Style," *JAAC* 20 (1962), 229 f.

[6] Charles W. Morris, "Esthetics and the Theory of Signs," *Journal of Unified Science* 8 (1939): 137.

[7] I have detailed an application of a linguistic model to painting in "Style, Painting, and Language: A Study of Language-Like Features in Painting," (Ph.D. diss., Boston University, 1971). University Microfilms, Ann Arbor.

[8] Albert Hofstadter, "Significance and Artistic Meaning," *Art and Philosophy*, ed. Sidney Hook (New York Univ. Press, 1966), p. 91.

[9] Susanne K. Langer, *Philosophy in a New Key* (Harvard Univ. Press, 1963).

[10] Monroe Beardsley, "The Limits of Critical Interpretation," *Art and Philosophy*, pp. 62, 63. Significance theories assert that the work of art is "always, in a broad sense, a sign or symbol of something; it copies, or imitates, or represents, or expresses."

[11] Hofstadter, p. 91.

[12] Hofstadter, p. 92.

[13] George Lansing Raymond, *Painting, Sculpture, and Architecture as Representative Arts* (New York: 1909), p. 2.

[14] J. Ridley Stroop, "Interference in Serial Verbal Reaction," *Journal of Experimental Psychology* 18 (1935): 643-61.

[15] Carter, "Style, Painting, and Language," chap. 4.

[16] Susanne K. Langer, *Problems of Art* (New York: 1957), pp. 126-32. A discrepancy in Langer's statement concerning whether or not works of art are representational apparently reflects a change of mind between *Philosophy in a New Key* (p. 95) and *Problems of Art* (p. 132). I will assume that the passage in *Problems of Art* represents her more recent view.

[17] Ibid., p. 133.

[18] Langer, *Philosophy in a New Key*, pp. 79-102. Here Langer uses symbol to refer to works of art and reserves sign for discursive languages. In

Feeling and Form (New York: 1953), p. 26, she drops this distinction and uses sign to refer to both, as I do in this essay.

[19] Langer, *Philosophy in a New Key*, pp. 83-87.

[20] Ibid., pp. 86, 87.

[21] Ibid., pp. 93,94.

[22] Ibid., p. 95. The idea that the arts have no basic vocabulary is also expressed in Langer's latest book, *Mind: An Essay on Human Feelings*, I (Johns Hopkins Press, 1967), 90.

[23] The Delacroix and Turner works are reproduced in Otto. G. Ocvirk, et al., *Art Fundamentals* (Dubuque, Iowa; 1968), pls. LV, LVI. The Cezanne work is reproduced in Max Raphael, *The Demands of Art* (Princeton Univ. Press, 1968), pl. I.

[24] Everett McNear, "Some Thoughts about the Painter's Craft," *Bulletin of the Atomic Scientists* 15 (1959): 62.

[25] It may be objected that in verbal languages there are "canonical" sequential orders, whereas there are not in most styles of painting. While it is true that there are dominant orders for subject, object, verb order, etc., it is also true that most languages provide for some alternative orders; see Joseph H. Greenberg, ed., *Universals of Language* (M.I.T. Press, 1963), pp. 86 f.

In English it is customary to place the major focus at the beginning of a sentence, the minor focus at the end, and the least important element in the middle. However, within limits the writer is free to select which element is placed in these relative positions of emphasis. Furthermore, he may for a reason choose to alter the order and place the most important element at the end. The above considerations suggest that the application of "canonical" to the sequential order of elements in languages may be too strong. But it is probably correct to say that sequential composition is less free in most languages than in most styles of painting. As a result it is also likely that sequential order in a style of painting, more so than its linguistic counterpart, is reconstitutive or interpretive sequential order rather than a compositional order.

[26] When I define perception in terms of eye movement I am referring only to a certain aspect of the operations of the eye as an initial stage of the complicated process of perception. This presupposes that eye movements are symptoms of an aspect of the perceptual process.

[27] Guy Thomas Buswell, *How People Look at Pictures* (Univ. of Chicago Press, 1935), p. 16.

[28] Ibid., pp. 142-43; see also Norman H. Mackworth and Jane Millikan, "Factors Determining the Visual Selection of Information Within Pictures," *Psychonomic Bulletin* 1 (1967): 9.

[29] E. H. Gombrich, *Meditations on a Hobby* (London: 1965), pp. 115, 159.

[30] Langer, *Philosophy in a New Key*, p. 95.

[31] Current dictionary usage clearly recognizes use of *vocabulary* to refer to the elements a formal medium of artistic creation. See *Webster's Third International Dictionary* (Springfield, 1968), p. 2560.

[32] Carter, "Style, Painting, and Language," chap. 4.

[33] Herschel B. Chipp, *Theories of Modern Art* (Univ. of California Press, 1968), pp. 332, 550.

[34] Langer, *Philosophy in a New Key*, p. 94.

[35] Langer, *Mind*, I, p. 102.

[36] Ibid., p. 90.

[37] Carter, "Style, Painting and Language," chap. 5.

[38] Charles Bouleau, *The Painter's Secret Geometry* (New York: 1963); see also Richard P. Lohse, "Standard, Series, Module," in *Module, Proportion, Symmetry, Rhythm,* ed. Gyorgy Keyes (New York: 1966.

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